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## **Joint ILO–UNESCO Committee of Experts on the Application of the Recommendations concerning Teaching Personnel (CEART)**

**Maintaining the Professionalization of Teaching in Higher Education: From Entry  
into the Profession to Lifelong Professional Development**  
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## ABSTRACT

With global pressures driving change in higher education, the quality of teaching in universities is increasingly under scrutiny. The CEART meeting in April 2015 will consider a number of issues relating to improving teaching quality across the sector and this paper offers background material for the committee members prior to the meeting. Massification and the demands of the Knowledge Society, along with higher costs of university education, mean that students are demanding better quality teaching. The dominance of research over teaching still exists but the balance is changing. The paper looks at issues of teacher education and professional development, offering examples of good practice from around the world, and it examines the quality frameworks being developed in different countries to bring about improvements in all aspects of university activity, not just teaching. The impact of information and communication technologies (ICT) in university teaching is discussed and the 'connected educator' is defined. UNESCO's ICT Competency Framework for Teachers is examined in the context of higher education and a number of key technology trends are outlined. Finally, a range of possible future strategies are considered that might help higher education globally to flourish with the challenges ahead in these times of change.

## INTRODUCTION

Higher education is at a critical juncture in its evolution as it struggles to come to terms with a new set of global realities that threaten its capacity to sustain previous levels of performance. Universities across the world are under pressure to reform and improve in order to halt and reverse the deterioration that is otherwise inevitable, most especially in the developing world. Universities today know that they have to find the means to take control or they will succumb to the changes as passive victims.

The huge increase in student numbers over recent years, termed *massification*, has put severe strain on the capacity of our universities to cope with, at best, the same resources as before, and more often, diminished resources. Pressure to include previously excluded groups, a situation that varies considerably from country to country, is pushing universities to devise and implement innovative pedagogies suited to a broader range of learning needs than before. Increasing diversity puts pressure too on academic and student counselling services [Altbach, *et al*, p.100]. At the same time, universities in many parts of the world are facing an acute shortage of qualified academics, made worse in the developing world by the 'brain drain' of the best academics from the developing to the developed world, where they know they can earn much higher salaries and command better conditions (although poor pay for academics is by no means restricted to the developing world [see DePillis]). Brain drain is most keenly felt in the world's least developed countries, many of them in sub-Saharan Africa [UNCTAD, Ch.4, pp.86-119].

Alongside massification and the brain drain, the inexorably rising costs of university education mean that students themselves are increasingly voicing their entitlement to value for money and therefore to a better quality of teaching [Light, *et al*, Introduction]. All over the world, students are letting university authorities know that they are unwilling to tolerate indifferent and substandard teaching. As a result, universities are starting to take the question of teaching quality seriously and many are already investing in programmes designed to raise the standards of teaching in their institutions.

Traditionally, universities gave little thought to the teaching skills of staff. They focused more on the quality of research by requiring only that their staff were recognized authorities in their fields with deep and proven knowledge of their disciplines. That focus now has to shift some way, for most universities, from a focus on research to a somewhat greater focus on teaching. They still, of course have to balance their teaching and research functions, and this balance is affected by a range of factors, some of which actively militate against the focus on teaching quality, for instance where the university funding authorities emphasize the research function above teaching as future funding criteria.

Higher education is now an intensely competitive and globalized arena, and universities have to compete with the top institutions worldwide as well as with other institutions in their own countries and regions.

### *Framing the Paper*

This paper offers some background information for the CEART meeting taking place in April 2015. It offers members of CEART an insight into the forces and influences playing on higher education globally today. The aim is to raise some key issues in this context for discussion.

At their 2012 meeting, CEART reported (paragraphs 62 & 63):

...the assessment of the performance of higher education teaching personnel is generally based on research productivity, with little emphasis on quality of classroom performance....(and) there is a dearth of information on the relationship between the academic background of a university teacher and classroom effectiveness.

On the basis of these comments, the Committee made the following recommendations (paragraph 66):

(1) ...request the ILO and UNESCO to assist member States to develop courses and programmes in teaching skills for higher education personnel and, where possible, gradually institutionalize such offerings as prerequisites for entry into the profession, selection to higher positions and promotion.

(2) Request the ILO and UNESCO to commission research on one or more of the following areas that are pertinent to higher education teaching personnel: (i) the relationship between qualification and quality of student learning; (ii) current status of higher education personnel's pedagogical preparation and qualifications; (iii) mobility of higher education teaching personnel; and (iv) teaching/learning practices in universities.

### *The Knowledge Economy*

Almost every country in the world is seeking to develop a high-value, high-skills economy, one that requires a well-educated workforce with the appropriate skills and knowledge required to play a role in the knowledge economy. The flattening of the global economy has seen many of the emerging countries focus heavily on education, creating a steady stream of high quality, highly skilled and, crucially, low-cost, graduates. The big emerging market economies, such as the BRICS countries (Brazil, Russia, India, China and South Africa), are competing head-to-head with the traditionally strong economies, and they are placing a strong emphasis on education to give them the edge they need. We can see an example of this impetus too in a country such as Ghana, where the Regent University College of Science and Technology, established only in 2003, actively promotes in its mission statement the concept of the African 21<sup>st</sup> Century economy:

“...making Africa gain a 21st century push in its social dream and economic development. In this regard, the higher education sector will have to be the nation's pacesetter in innovation, and a major player in capacity building...”

How higher education responds to the demands of the knowledge economy will determine in large part how the future of the university will be shaped, a process that is likely to vary considerably between countries as well as between universities within any one country. Universities are increasingly recognizing that, to create and sustain the knowledge economy they need to integrate *transversal skills* (sometimes called *21<sup>st</sup> century skills*, amongst other terms) into the studies undertaken by every student, across all subject disciplines. These needs are felt the world over, but perhaps most keenly felt in Africa and in other parts of the developing world [see IESE Business School].

Jouko Sarvi, Education Practice Lead at the Asian Development Bank, has spoken about the importance of such ‘employable’ skills:

“Higher education systems and institutions are under pressure to reform to provide adequate skills and knowledge for the evolving labour markets. This is increasingly important in countries which are moving towards middle-income country status and aspiring to become knowledge economies, increasing the demand for higher skills.” [ADB ‘Improving Transitions’, Report Launch]

### *Why We Need High Quality Teaching in Higher Education*

As we have noted, students today are demanding a higher quality of university teaching. The traditional mode of teaching is now being challenged, and increasingly students are demanding to be taught in ways more akin to what they have been used to in school. This has profound implications for the skill-sets that university teachers must bring to the lecture hall, and therefore has ramifications for the training, professional development and pedagogical advice offered to staff.

Higher education, globally, still has some way to go though. As Jeff Jawitz and Teresa Peres noted in their study into the attitudes and expectations of academic staff to improving the quality of their teaching at the University of Cape Town, in South Africa:

“Courses and workshops on teaching development have become part of the culture at UCT, indicated by the widespread awareness of their provision. Emphasis is placed on individuals deciding whether or not to attend these professional development opportunities. However academics are surrounded by mixed messages with the overwhelming dominance of the research discourse requiring them to make difficult choices. As such good teaching at UCT happens despite the institutional culture rather than because of it.” [Jawitz & Peres, *conclusion*]

## Teaching in Higher Education

Historically, teaching was the central preoccupation of the university, but over the centuries, from the Enlightenment through to the development of the German research university model in the 19<sup>th</sup> Century, and onwards into the 20<sup>th</sup> and 21<sup>st</sup> centuries, teaching gradually gave way to research as the core activity of the university.

Today, a new era has arrived in which concepts of accountability and excellence are right at the heart of the university. Some have likened this to an 'Academic Storm' [Light, *et al*, pp.1-2] fuelled by globalization and the forces of commercial advantage. The notion of the 'ivory tower' is giving way to institutions that are today as much a part of the economic landscape across the world as they are still beacons of knowledge for knowledge's sake. Because of this, the need for a much greater emphasis on the quality of teaching is increasingly acknowledged across the sector.

While today demands for higher quality teaching are getting louder, the demands for ever-improving and ever-increasing research output are still as loud as they ever were [Altbach, *et al*, p.97; also see Sharma, 2014 in relation to Ethiopia, Uganda & Malaysia]. The shift towards better teaching has not meant a degrading of the research capacity of higher education – far from it. The demands on individual members of faculty are therefore growing all the time – university staff are now expected to combine high quality teaching with continued high quality research in their chosen fields. However, along with the increasing focus on quality of teaching has come a definite trend, shared with other sectors of education, towards promoting learning over teaching, moving away from the traditional sense of teaching as simply motivating and presenting information to students in engaging ways. New pedagogical skills must now be honed in the knowledge that they will have to focus on the individual learning needs of each student. As UNESCO has reported:

“Recognizing that learning is increasingly happening individually beyond formal educational settings, the role of teachers will have to evolve from dispensers of information and knowledge to facilitators and enablers of learning.” [UNESCO Think Piece, “Education and skills for inclusive and sustainable development beyond 2015”, p.10]

To achieve this higher quality of teaching and of learning, universities are increasingly investing in the development of academic staff to update their professional knowledge and skills enabling them to fulfil new functions in an evolving environment. Universities are now striving to ensure that teaching excellence is properly recognized when hiring and promoting academic staff and that incentives and mechanisms are put in place. As an OECD paper has stated:

“The expansion of higher education, increased emphasis on students' learning outcomes and the advent of new pedagogical approaches – and new pedagogical opportunities afforded by technology – all point to the need for a new profile for teachers in higher education that includes

pedagogical competencies.” [Hénard & Roseveare, p.17]

### *The Teaching-Research Balance*

In the current climate in higher education, as we have noted, students are actively exhorting universities to deliver better quality teaching. Set against the backdrop of higher fees faced by so many entrants to university, the quality of teaching in an institution is becoming a key factor in students’ choices. At the same time, however, as Sue Littlemore pointed out in a Guardian article:

“No academic makes their career by being a great teacher.” [Littlemore]

In other words, there are different forces playing on different aspects of university policy and practice, and for most universities teaching is still the poor relation to research. In questions of quality, the balance between research and teaching need not be a zero-sum game. High quality research can be accompanied in a university by high quality teaching, even where the balance of resource and emphasis leans towards research. The two can, and should, go hand in hand if sufficient priority is given within university policies to the professional development of teaching.

From a 2007 survey of African universities in a report to *The British Academy*, in a list of the greatest challenges facing researchers, the issue of the research-teaching balance came second top, just behind resources and a long way ahead of the management and dissemination of research. [Harle, *passim*] In many institutions, those faculty members who are less successful at winning research funds tend to find themselves loaded with teaching commitments since they are deemed to need less time for research:

“The few who had secured funding, or who had a higher profile within the institution, were able to pass their duties on to others to make time for research, who in turn were then increasingly less able to free up time to investigate possibilities for research.” [Harle, p.18]

With the major shifts currently happening in higher education globally, the difficult, sometimes fraught, balancing act between teaching and research will continue to be a major issue for universities.

## Training and Professional Development

Higher education institutions are taking increasing responsibility for ensuring that new faculty or academic staff have access to meaningful teaching enhancement programmes. Such programmes are designed to support teaching staff especially in the early years of their profession through mentoring schemes, continuing professional development (CPD) and access to online self-directed professional development resources.

Many universities have already put in place formal training to educate staff to improve their teaching capabilities. Where formal programmes of 'training' have been implemented, they tend to consist of sometimes sophisticated programmes based on a range of theoretical models of professional teacher development, following a path in which new lecturers begin by building self-confidence in their own teaching skills, seeking to enhance their 'academic standing' with their students. They then move on to ensuring that they know their academic discipline well, that they are fully versed in their subject matter. Finally, they add pedagogical skills and competence to their thorough subject knowledge. Only at this point should university teachers begin to see themselves as fully developed professionals.

Over time, universities have also recognized the need to shift programmes of teacher professional development away from a 'teacher-focus' to a 'learner-focus'. The importance of this cannot be under-estimated since studies have shown that student-focused teachers are more likely to have students who take a deep approach (making sense of content) rather than a surface approach (simply remembering content). [Gibbs & Coffey, p89]

### *The Challenges*

There are numerous examples where individual universities, or groups of institutions, or whole countries, have been taking steps to improve the teaching quality in their universities. One international scheme, for example, has been set up by the German Academic Exchange Service (DAAD) to enhance the teaching and research skills in universities across Africa, with the aim of providing 1000 high quality lecturers and researchers by 2020 [see SciDevNet website]. The same scheme aims to establish centres of excellence across the continent, as well as strengthen links between German and African universities. They have already set up six Centres of African Excellence across South Africa, Ghana, Tanzania, Congo and Namibia, with plans to provide at least another five if the funding can be found.

The focus of this scheme is on the training of scholars for teaching and research, and includes what they term *rigorous university didactics* through scholarships and attendance at strongly performing universities across sub-Saharan Africa. The scheme will also attempt to increase the number of women going into academia, as well as focus on helping students from economically and politically fragile states.

In November 2014, the meeting of the Educational Research Institutes Network held in Hangzhou, People's Republic of China, heard from a wide range of Asian countries who are taking issues around the promotion and upgrading of academic staff in universities very seriously [see UNESCO/ERI-NET website]. The meeting heard presentations from Australia, Japan, Cambodia, Philippines, India, China and Malaysia that outlined the situation with regard to the status, development and promotion of university teachers. For example, in India, while promotion through the academic hierarchy is supposed to be on merit, in fact there are real challenges. Often there is:

“...simply not enough consideration for quality in teaching & research...”  
[Tilak, website link]

Similar challenges were seen in Malaysia, where great variations were observed in terms of:

“...the quantity and quality of the contributions by the academics particularly in teaching and learning, research, publications and other academic activities and services...” [Omar *et al*, web link]

### *Barriers to Change*

In June 2013, the High Level Group on the Modernization of Higher Education published a report for the European Commission entitled, ‘Improving the quality of teaching and learning in Europe’s higher education institutions’ [EU Commission Report, p.22]. In that paper, they reported their findings on (amongst other issues) the barriers that tended to hinder improvements in teaching quality in European universities. They found that:

- the ‘base line of concern’ for the quality of teaching in universities was ‘worryingly low’ in many countries
- that the focus on research devalued teaching
- a lack of mentions of teaching quality in university mission statements
- few attempts to evolve a parity of esteem within academia of teaching with research
- few real opportunities in many institutions to discuss teaching methodologies
- a need to develop, or further develop in some cases, quality management schemes aimed specifically at improving teaching quality.

Such barriers are replicated in different ways and to different extents across higher education the world over.

### *Balance of Formal and Informal Professional Development Opportunities*

Across higher education, there is a move to recognize the value of informal professional development in tandem with formal arrangements. The notion of self-directed learning is beginning to flourish, and there is an upsurge of interest

in permitting teaching staff to develop their skills in their own time and in ways that they define for themselves without recourse to formal arrangements. It is increasingly recognized that taking an informal and ongoing approach to discussion of teaching quality, methodologies, what works and what doesn't, can be at least as effective, and often more effective, than formal continuing professional development (CPD) in improving the quality of teaching in the classroom or lecture hall. This is by no mean a consistent trend yet, but it is one that is growing.

An example of this can be seen in universities and schools that are deploying *digital badges* as an informal means of recognizing professional development through real classroom practice [EvoLLLution, web link]. A digital badge is a form of *micro-credentialing* that enables an institution to recognize and celebrate accomplishments in any defined activity. The 'badge' itself, as well as being a reminder of what has been achieved, carries within it, as metadata, details of what exactly was achieved, when, where and by whom.

Where passing a formal course might give you a grade and a qualification, micro-credentialing enables access to much more information about what has been accomplished. Meta-data within the online badge links to the detailed criteria met in earning the badge, as well as to descriptions of the assessment tools used to determine if the criteria were met. In addition, the meta-data can include whatever other information might be relevant: feedback from students, links to digital and other outputs from the work completed, and self-assessment comments from the teacher earning the badge.

Digital Badges are based on *mastery learning* and are sympathetic to the notion of self-directed professional development. In future, the good and professional teachers will not depend solely on formal means of development but will take their own growth into their own hands, using digital badges perhaps as just one means amongst a growing list of others.

## Standards and Professionalism

As we saw in the previous section, the picture is mixed across the academic world in terms of the level of concern given to raising the quality of teaching in universities. At least some countries, and some institutions, are seeking to apply more demanding standards for entry into university teaching, as well as a more rigorous monitoring of those standards through robust quality assurance mechanisms either at institutional or at national level. The challenges facing such attempts are considerable however.

A highly detailed and authoritative paper covering this area of concern is from Michael Gallagher, of Sydney University: "Accountability for the Quality Agenda in Higher Education". [Gallagher, *passim*] He looked across a number of countries, developed and developing, for comparative purposes. The most mature frameworks for quality assurance in higher education, covering both teaching and research, are to be found in Europe, North America and Australasia. The British system, for example, includes:

"...subject benchmark statements as references for guiding institutional decisions about curriculum and assessment, and external examiners as a source for institutions to validate the relative quality of student achievement and assessment tasks.

The subject benchmarks refer mainly to minimum acceptable (threshold) expectations of (Bachelor's degree) graduates, although they often identify 'typical standards' and some include higher degrees. The external examiners are a form of academic peer review which different institutions engage to check on their achievement against their particular objectives." [Gallagher, p.4]

The systems in the USA and Australia differ in detail from the UK, but all three countries are very intent in their frameworks on ensuring that universities pursue a rigorous quality agenda in terms of both teaching and research. They all deploy regimes that deploy a mix of internal control and external scrutiny, although in the USA, because all universities operate in a highly competitive environment, each individual institution determines its own mission and objectives, without external influence. The state has a comparatively greater role in the other two countries.

Gallagher notes the existence of an 'internationally converging reform agenda' in higher education, and many countries across all continents are developing and implementing higher education quality frameworks. The OECD has added its thinking on the topic, through a meeting of education ministers in Athens in 2006, where it put forward the following areas of interest in terms of trying to increase capacity and quality across higher education internationally:

- Funding
- More equitable education
- Clearer focus on what students learn

- Responsiveness and Diversity
- Research and Innovation
- Migration and Internationalization

Interestingly, while there is no explicit mention here of teaching quality, the focus on what students learn will push universities to look carefully at how well those students are being taught. As the ministers' noted:

“Students must play a key role in assessing both quality and relevance of learning.” [Gallagher, p.11]

So, not only must the quality of university teaching improve, the learner voice must be central to the dialectic of continual improvement.

Governments around the world are increasingly requiring their universities to meet certain minimum standards. These are defined differently from country to country, but in essence they tend to meet four threshold principles:

- **The probity threshold:** Higher education institutions should be able to demonstrate that they have adequate capacity and integrity to deliver what they undertake to deliver.
- **The effectiveness imperative:** Higher education institutions should have verifiable means for knowing how well students are acquiring the knowledge, understandings and abilities expected.
- **The transparency requirement:** Higher education institutions should publish information about their distinctive offerings and requirements, along with clear criteria and codified procedures for judgements relating to admission, credit, and assessment grades.
- **The comparability challenge:** Higher education institutions should make available reliable information to enable students and employers to see similarities and dissimilarities between different programmes, learning opportunities, expected standards, and graduate attainment and outcomes. [see Gallagher weblink]

## Digital and Networking Technologies

No reputable institution of higher education can envisage managing today without extensive and pervasive deployment of ICT across its campuses, including for teaching and learning, research, and administration. The quality, reach and openness of a university's networks, the range and power of the equipment that lights up and delivers resources across those networks, the software and other platforms thereby made available to all staff and students, and the effectiveness of the policies that drive activity and behaviour on the networks are all regarded as key competitive factors on the global higher education stage.

The digital technologies are no longer a luxury but a necessity for every university and it is important to consider their impact on teaching and learning in particular.

### *The Impact of Digital Technology on Classroom Practice*

The impact of the digital technologies on teaching and learning over the past three or four decades has been highly variable across the world. Countries such as Singapore and Korea have embraced the internet and high speed networks, while in countries across sub-Saharan Africa, the only viable connections are often the mobile networks. But even within countries, it's very possible to find institutions existing side by side where one champions ICT and the other largely dismisses it. The varying levels of enthusiasm from administrators and teachers for introducing technology into the classroom, as well as the varying levels of resource that are applied to it, mean that it is impossible to generalise about the impact across higher education. However, if we look at practice in those universities that have applied technology most vigorously, we can discern a pattern in which there is a distinct shift from teacher-led to student-led learning.

The central effect of ICT has been to enable faculty and students to interact and to share ideas and materials beyond the physical walls of the university. The emergence of multiple modes of e-learning has meant that teachers and students no longer need to teach and learn face to face continually. The process of knowledge construction is no longer confined to small groups of people interacting in real time within the same physical space. The capacity to share ideas, to raise debate, to generate a powerful discourse across any and all disciplines, through the medium of the Web and other Internet-based platforms, means that the production of knowledge is now a much more highly social activity than has ever been the case before. The 'co-construction' of knowledge has always existed, of course – academics have always shared their learnings – but the depth and the extent of this process of co-construction is now much greater than at any time in history.

The advent of ICT in the classroom has also greatly influenced university teachers everywhere to explore new and different methods of instruction, innovative means of interacting with students to help them learn, and varied assessment methodologies. The notion of blended learning – the bringing

together of online teaching, both synchronous and asynchronous, computer mediated instruction, and traditional face to face teaching – is a major shift in education at all levels worldwide. Many universities are now combining online learning, including from MOOCs (Massive Open Online Courses), with traditional classroom instruction. This is an area where academics can no longer depend simplistically on the instructional methods they have been using in the past. The online environment for learning is radically different from the traditional classroom or lecture hall, and the range of pedagogies that can now be deployed – indeed that can be argued *should* be deployed – is vastly greater than has been required in the past.

### *The Connected Educator*

Today's university teacher is a different creature from those of the past. If we attempt to distil what is it that is different, we can offer a number of principles that most connected educators will work within most of the time (though few connected educators will agree with every principle). They will:

- Adapt their own knowledge and expertise, and the technologies they deploy, to continually serve the real and evolving needs of the learner
- Engage and participate in ongoing peer interaction, and they will encourage their students to do the same – mutual sharing, shaping and contributing by teachers and learners produces powerful learning
- Deploy effective and intelligent filters to discriminate between good and bad information on the Web and elsewhere, between relevant and irrelevant information, continually asking questions and challenging data
- Build and sustain a 'personal learning network' by various online (and offline) means that stretches far beyond the walls of their university, and that will usually cover the globe
- Model effective online connected behaviour so that others are able to learn from them how to teach and learn better, and to become connected educators themselves
- Be inclusive, continually seeking to ask questions about what other individuals, groups and interests are not being brought into the discourse and who should be part of the learning if that learning is to be comprehensive
- Work in an open, collaborative and fully networked way so that knowledge is socially constructed, and therefore more resilient and verifiable

A powerful example of an approach designed to advance the concept of connected learning across the developing world and elsewhere, and therefore to promote and encourage the concept of the connected educator, is the Global Knowledge Initiative (GKI). The initiative pursues the objective of equipping:

“....students, lecturers, researchers, policy makers, and science, technology, and innovation professionals with collaboration skills; build the capacity of our partners to use a wider set of tools, optimize content, and improve performance, particularly in scientific fields.” [see Global Knowledge Initiative, web link]

Supported by the World Bank, GKI has taken its training programs into countries such as Pakistan, Uganda, Afghanistan, Egypt, Nigeria and others.

### *UNESCO ICT Competency Framework for Teachers*

UNESCO has seen its own much-respected ICT Competency Framework deployed far and wide since its first launch in 2008 and update in 2011. Intended primarily for K12 teacher education, it is nonetheless a potentially valuable tool that can be amended for the university sector to help train lecturers in the pedagogical use of ICT. The starting point for the framework is recognition that the ICT skills teachers might have do not necessarily confer them with the pedagogical skills to make highly effective use of the technology in their teaching. It posits three levels of development across a range of issues:

- **Technology Literacy:** going beyond the basic skills in ICT to develop the capacity to exploit technology in the curriculum
- **Knowledge Deepening:** Increasing the ability of teachers to use knowledge to add value to society and the economy by applying technology to solve complex, real-world problems
- **Knowledge Creation:** Increasing the ability and capacity of teachers to innovate, produce new knowledge and to benefit from this new knowledge.

The three levels of competency development set out descriptions across curriculum and assessment, pedagogy, ICT, organization and administration, and teacher professional development:

| THE UNESCO ICT COMPETENCY FRAMEWORK FOR TEACHERS |                      |                         |                          |
|--------------------------------------------------|----------------------|-------------------------|--------------------------|
|                                                  | TECHNOLOGY LITERACY  | KNOWLEDGE DEEPENING     | KNOWLEDGE CREATION       |
| UNDERSTANDING ICT IN EDUCATION                   | Policy awareness     | Policy understanding    | Policy innovation        |
| CURRICULUM AND ASSESSMENT                        | Basic knowledge      | Knowledge application   | Knowledge society skills |
| PEDAGOGY                                         | Integrate technology | Complex problem solving | Self management          |
| ICT                                              | Basic tools          | Complex tools           | Pervasive tools          |
| ORGANIZATION AND ADMINISTRATION                  | Standard classroom   | Collaborative groups    | Learning organizations   |
| TEACHER PROFESSIONAL LEARNING                    | Digital literacy     | Manage and guide        | Teacher as model learner |

All of these areas of interest are critical to the university teacher's work towards improving their overall competency with ICT in the classroom. If we look at the

last category – Teacher Professional Learning – we can look at practical illustrations of what this looks like at each of the three levels of development.

|                                      | <b>Technology Literacy</b>                                                                                                                                                                           | <b>Knowledge Deepening</b>                                                                                                                                                                                                                                                                                                                                 | <b>Knowledge Creation</b>                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Teacher Professional Learning</b> | The teacher searches various websites for mother-tongue teachers to find teaching resources on writing skills, including exercises and writing assignments, stimulus material and ideas for lessons. | The teacher regularly visits an Internet discussion forum hosted by the professional association for PE teachers. The forum is a useful source of new ideas on how to get students more interested in PE and exercise. He, for example, posts a question asking for technical advice on an aspect of a new fitness programme the students want to try out. | The geography teacher regularly shows other teachers how the project uses ICT to enable students to generate knowledge while studying their school subjects. She also explains to colleagues how the project, and her own role in it, has developed and improved in the light of experience and experimentation. In this way, she acts as a model learner to both her students and her colleagues |

Universities across the world seeking to use the framework to develop the ICT pedagogical skills of its lecturers and professors will wish to amend some aspects of it to better suit the higher education context. To make best use of the framework, the university should ensure the following are taken into account:

- A strong strategic plan in which the use of technology for teaching plays a prominent role
- Extensive investment in technology infrastructure
- Support from senior leadership for the use of technology for teaching
- Support, in a wide variety of ways, for faculty members who wish to use technology for teaching
- Support for students through computer access, Internet accounts and financial support

### *Skills for Teaching Online*

In 2014, the government of Côte d'Ivoire launched a campaign to recruit 2,500 higher education lecturers. The number is big, but even more interesting than the number is the fact that Côte d'Ivoire specified the need for lecturers with the specialised skills to enable them to teach successfully online. The government was clear that the criteria for quality teaching would be no less rigorous for online teaching than it would be for teaching in 'bricks and mortar' institutions. Their campaign was a recognition of the fact that, across much of the developing world in particular, the upsurge in online courses worldwide – and not just with

respect to Massive Open Online Courses (MOOCs) – is seen by many as a powerful means to extend educational opportunities, at all levels, to more and more people deserving access.

So, what are the skills required for a lecturer to teach successfully online?

In some senses, the least important factor in ensuring successful online learning is the technology. So long as the technology works and the students are able to access the tools, the content and the people they need to access, then the technology should be able to disappear into the background. Once it is clear that the technology works, the key skills of the online university teacher would be [see Boetcher, weblink]:

- **To be present on the course:** it is not enough to set up the content, the structure, the assignments, the assessment regime and then leave students to their own devices.
- **To create a supportive online community:** establish the means for a 'balanced set of dialogues' within the course, which means enabling discussion not only between students and teacher, but also between the students themselves, and where possible, between students and other recognized external experts.
- **Set clear expectations for students and for yourself:** Setting expectation in terms of how you and student will communicate for different aspects of your course, as well as realistic assumptions about time to be spent on the course each week.
- **Use a variety of large group, small group and individual activity:** It is important to mix 'whole class lectures' with activities that give students opportunities to interact with smaller numbers of other students for brainstorming, comparing notes and working through complex concepts. Some students prefer working on their own and should be given opportunities to do so.
- **Use both synchronous and asynchronous activities:** The development in video and audio technologies in recent years has made it much easier than in the past to mix real-time interactions with activities that students can carry out in their own time.
- **Ask for feedback:** Knowing how students are coping with and reacting to your teaching will help you refine the course as it is happening and will also help you make it more effective next time you deliver the course.
- **Prepare tasks that invite questions, discussions, reflection and responses:** It is important to provide open question and answer forums, encourage critical/creative thinking, allow students get to know each other personally and intellectually and support students in their own reflections and inquiries.
- **Make available high quality digital content:** Ensuring that the content is up-to-date and relevant will keep students on-task more effectively.
- **Combine core concept learning with customized and personalized learning:** Identify the core concepts to be learned in the course, and then

mentor students to successfully apply the concepts. Counteract the necessarily linear structure of the course by clustering key concepts in realistic contexts where possible, building patterns of concepts and the relationships between them rather than individual facts.

- **Plan an effective ‘closing activity’ for the course:** This can involve clear reminders of assessment requirements, student presentations, and ‘at-a-glance’ summaries of key concepts from the course.

### *Key Trends for the Future*

According to the 2015 Horizon Report on Technology Trends in Higher Education [see NMC, *passim*] there are six key trends to be considered; these cover the short, medium and long terms. The impact, given that they are in effect predictions, is difficult to discern with any certainty, but when taken together they will have the effect of further shifting universities resolutely away from teacher-led instruction, the passive ‘profession’ of knowledge, towards much more learner-focused pedagogies, the co-construction of knowledge. They are:

#### **Short Term** (within the next 3 years):

- **Increasing Use of Blended Learning:** Using a mix of online and face to face methods for teaching.
- **Redesigning Learning Spaces:** Developments such as using ICT to enable the ‘flipped classroom’ (a form of blended learning in which students learn content online by reading, watching video lectures and using other materials, usually at home, so that the content can be discussed and dissected in detail in small groups or on a non-to-one basis in the classroom), increasing use of networks to allow much more use of remote learning, and the design of classrooms to more closely resemble work spaces and social environments.

#### **Medium Term:** (over the next 3 to 5 years):

- **Growing Focus on Measuring Learning:** Universities will increasingly gather and analyse more and more data on student achievement in order to personalize their learning. Developments in Big Data and the Internet of Things will both play a major part in this.
- **Proliferation of Open Educational Resources (OERs):** These are defined as: “teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others”. OERs will become more and more important to the continued professionalism of university staff since they will be able to take more personal control over where their own teaching materials are stored, establishing how others can make use of it through open licences, and using their own subject-matter expertise to discriminate carefully between good and bad OER resources. The notion of the ‘quality gatekeeper’ for academic content (usually the

big academic publishers) is being replaced over time by open publishing by 'crowd-based' quality assurance.

#### **Long Term (5 years and longer):**

- **Advancing Cultures of Change and Innovation:** Already much in evidence, but predicted to grow considerably, is the impactful role of research universities in bringing technological (and other) innovation to national economies, through incubators, technology transfer, and nurturing innovation, creativity and entrepreneurship.
- **Increasing Cross-Institution Collaboration:** Universities will increasingly enter into national and international strategic alliances with other institutions to support technology-enabled learning. An example today is the Open Cloud Consortium allowing researchers from the universities of Chicago and Carnegie Mellon to share massive data sets via the Cloud.

## **Strategies for the Future**

Higher education, along with the whole of the education world, does not change easily. Longstanding traditions can establish an apparent state of permanence that can easily become a form of complacency, and sometimes stagnation. But the range of external and internal forces playing on the university sector globally at the present time is driving change, whether universities want it or not. Universities that drag their heels run the risk of losing out to those that face the challenges of the 21<sup>st</sup> century head on and that seek to take control of their own destinies rather than capitulate passively to the forces of change.

Preparing and maintaining high quality higher education staff is a central task for every country, particularly in the developing world. It is an ongoing imperative to seek, "...by 2030...equitable, free and inclusive quality education and lifelong learning for all" [see Global Campaign for Education, weblink] and thus build peaceful, inclusive and sustainable societies. Universities across the world will have to explore a number of strategic options to keep the issue of quality of teaching to the fore. These will include, amongst others:

- Continually exploring new pedagogies, new technologies and innovative curriculum design to stay at the forefront of global practice;
- Constantly sharing ideas, resources and good practice with peers within the institution, nationally and internationally by building and sustaining vibrant communities of practice;
- Strategic planning of learning and teaching at subject, department, institution, and sector levels – including both formal and informal arrangements for quality assurance;
- Enabling work-based professional development and giving due regard to informal professional learning using tools such as digital badges;
- Ensuring the learner voice is heard and listened to, involving the students themselves in the development of learning and teaching;

- Always looking to apply learning and teaching, as well as research, to social inclusion and to widening access to higher education;
- Compiling and publishing openly case studies, 'learner journeys', and evaluations of good practice so that university teachers and the institutions can learn from each other.

## Conclusion

Governments and institutions should continue efforts to ensure greater recognition of the value of teaching in higher education by creating supportive teaching and learning environments for students and staff. As stated at the Education International's 9<sup>th</sup> Higher Education and Research Conference (10-12 November 2014, Brussels, Belgium):

“...quality public higher education and research is a public good that can fulfill its role of preserving, transmitting and advancing knowledge only if there is adequate public funding, if institutions are free from outside pressures, and if academics enjoy academic freedom and decent terms and conditions of employment.” [see EI, weblink].

## References

|                                            |                                                                                                         |                                                                                                                                                                               |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| African Higher Education Summit            | Revitalizing Higher Education for Africa's Future: Concept Paper                                        | AHES, Dakar, March 2015                                                                                                                                                       |
| Altbach, PG; Reisberg, L; Rumbley LE       | Trends in Global Higher Education: Tracking an Academic Revolution                                      | UNESCO / World Conference on Higher Education, Paris, 2009                                                                                                                    |
| Anderson, Jonathan                         | ICT Transforming Education: A Regional Guide                                                            | UNESCO Bangkok, Thailand, 2010                                                                                                                                                |
| Asia-Pacific Regional Education Conference | "Asia-Pacific Statement on Education Beyond 2015 – Bangkok Statement"                                   | APREC, August 2014, PDF                                                                                                                                                       |
| Asian Development Bank (ADB)               | Improving Transitions: from school to university to workplace                                           | ADB, Philippines, 2012                                                                                                                                                        |
| Boetcher, JV                               | Designing for Learning                                                                                  | Website, <a href="http://bit.ly/1vyrQq7">http://bit.ly/1vyrQq7</a>                                                                                                            |
| British Council                            | "The shape of things to come: higher education global trends and emerging opportunities to 2020"        | British Council, Going Global, 2012, PDF                                                                                                                                      |
| Brown, P; Lauder, H; Ashton, D             | "Education, Globalization and the Knowledge Economy"                                                    | TLRP / ESRC Commentary, 2008, PDF                                                                                                                                             |
| CEART                                      | Final Report                                                                                            | CEART, Geneva 2012, PDF                                                                                                                                                       |
| Commonwealth of Learning                   | "ICTs for Higher Education"                                                                             | Background Paper for UNESCO World Conference on Higher Education, Paris, 2009, PDF                                                                                            |
| DePillis, Lydia                            | Adjunct Professors Get Poverty Level Wages                                                              | Washington Post, Feb 6, 2015, <a href="http://wapo.st/16zNmPI">http://wapo.st/16zNmPI</a>                                                                                     |
| Education International (EI)               | Higher Education Conference demands quality and equality in education                                   | Conclusions of the 9 <sup>th</sup> Higher Education and Research Conference 10-12 November 2014, Brussels, Belgium, <a href="http://bit.ly/1xfDaIQ">http://bit.ly/1xfDaIQ</a> |
| EU Commission Report                       | Improving the quality of teaching and learning in Europe's higher education institutions                | High Level Group on Modernization of Higher Education, EU, 2013                                                                                                               |
| EvoLLLution website                        | Digital Badges: Catalyst in the Evolution of Higher Education or "Killer App" for Alternatives?         | <a href="http://bit.ly/1LPfBaQ">http://bit.ly/1LPfBaQ</a>                                                                                                                     |
| FICCI                                      | "Higher Education in India: Vision 2030"                                                                | FICCI Higher Education Summit, 2013, PDF                                                                                                                                      |
| Figazzolo, Laura                           | "Terms and conditions of employment of teachers in relation to teacher shortages and Education for All" | Background paper for discussion at the 11th Session of the CEART, Geneva 2012, PDF                                                                                            |
| Gallagher, Michael                         | "The Accountability for Quality Agenda in Higher Education"                                             | The Group of Eight, 2010, PDF                                                                                                                                                 |
| Gallagher, Michael                         | GLOBAL: The challenge of quality assurance                                                              | University World News Website, <a href="http://bit.ly/1JRjCzP">http://bit.ly/1JRjCzP</a>                                                                                      |
| Gibbs, G & Coffey, M                       | The impact of training of                                                                               | ILTH, Active Learning in Higher                                                                                                                                               |

|                                        |                                                                                                                         |                                                                                                                                            |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|                                        | university teachers on their teaching skills, their approach to teaching and the approach to learning of their students | Education, Vol 5(1): 87–100                                                                                                                |
| Global Campaign for Education          | Equitable, inclusive & free: a collective vision for quality education beyond 2015                                      | Website, <a href="http://bit.ly/1BIP0ki">http://bit.ly/1BIP0ki</a>                                                                         |
| Global Higher Education and Research   | “Universities 2030: Learning from the Past to Anticipate the Future – A Collection of Essays”                           | GHEAR / Worldwide Universities Network, 2013                                                                                               |
| Global Knowledge Initiative            | Program Website                                                                                                         | <a href="http://bit.ly/1GwGmQf">http://bit.ly/1GwGmQf</a>                                                                                  |
| Harle, J                               | Frameworks for Africa-UK Research Collaboration in the Social Sciences and Humanities                                   | Association of Commonwealth Universities, for the British Academy, 2007                                                                    |
| Hénard, F & Leprince-Ringuet, S        | “The Path to Quality Teaching in Higher Education”                                                                      | OECD, 2007, PDF                                                                                                                            |
| Hénard, F & Roseveare, D               | “Fostering Quality Teaching in Higher Education: Policies and Practices”                                                | Institutional Management in Higher Education, OECD, 2012, PDF                                                                              |
| IESE Business School                   | One Million African Managers Needed Over Next 10 Years                                                                  | University of Navarra Website <a href="http://bit.ly/1BtJ8Rf">http://bit.ly/1BtJ8Rf</a>                                                    |
| Jaffer, S; Ng’ambi, D; Czerniewicz, L  | “The role of ICTs in higher education in South Africa: One strategy for addressing teaching and learning challenges”    | International Journal of Education and Development using Information and Communication Technology, 2007, Vol. 3, Issue 4, pp. 131-142, PDF |
| Jawitz, J & Peres, T                   | Enabling Teacher Development at a Research-Led University                                                               | Cape Town University                                                                                                                       |
| Littlemore, Sue                        | Higher education must prepare for growing student expectations                                                          | The Guardian, March 2011, <a href="http://bit.ly/1LA3UEM">http://bit.ly/1LA3UEM</a>                                                        |
| McMullen, MS; Mauch, JE; Donnorummo, B | The Emerging Markets and Higher Education: Development and Sustainability                                               | Routledge, 2002                                                                                                                            |
| Manzuoli, CH & Cifuentes, YS           | “Computing Education Competence in Higher Education: Challenges for Teachers”                                           | American Journal of Educational Research, 2013, Vol 1, No 9, 406-412, PDF                                                                  |
| Mbabazi, Penelope B.                   | “Quality in Learning in Rwandan Higher Education”                                                                       | Linköping Studies in Behavioural Science No. 171, Linköping University, Linköping 2013, PDF                                                |
| Mozilla                                | “Expanding Education and Workforce Opportunities Through Digital Badges”                                                | Alliance for Excellent Education, 2013, PDFw                                                                                               |
| New Media Consortium (NMC)             | “Horizon Report: Higher Education Edition”                                                                              | NMC / Educause, 2015, PDF                                                                                                                  |
| Nordstrum, Lee                         | “Impact of the continued economic downturn on education and teachers: Employment, salaries                              | Background paper for discussion at the 11th Session of the CEART, Geneva 2012, PDF                                                         |

|                        |                                                                                                   |                                                                                                                                                            |
|------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | and conditions of teaching and learning”                                                          |                                                                                                                                                            |
| Nusche, Deborah        | “Assessment of Learning Outcomes in Higher Education: A Comparative Review of Selected Practices” | OECD Education Working Paper No.15, 2008, PDF                                                                                                              |
| OECD                   | “Teachers for the 21st Century: Using Evaluation to Improve Teaching”                             | OECD Publishing, 2013, PDF                                                                                                                                 |
| Omar, CI, <i>et al</i> | Presentation to UNESCO/ERI-NET                                                                    | <a href="http://bit.ly/17BjSRS">http://bit.ly/17BjSRS</a>                                                                                                  |
| Sanyal, Bikas C.       | “New functions of higher education and ICT to achieve education for all”                          | IIEP, UNESCO, Paper prepared for the Expert Roundtable on University and Technology-for-Literacy/Basic Education Partnership in Developing Countries, 2001 |
| SciDevNet Website      | German Plan to Boost Africa’s Higher Education Teaching                                           | <a href="http://bit.ly/1o5vsFh">http://bit.ly/1o5vsFh</a>                                                                                                  |
| Sharma, Yojana         | Funding changes demand new research leadership skills                                             | University World News Website, <a href="http://bit.ly/1036XjH">http://bit.ly/1036XjH</a> Dec 2014                                                          |
| Sia, Lucio             | Comprehensive Teacher Education Policies and Quality Assurance Standards                          | ILO/UNESCO, CEART Background Paper, Geneva 2012                                                                                                            |
| Tettey, Wisdom J.      | “Deficits in Academic Staff Capacity at African Universities”                                     | Partnership for Higher Education in Africa, 2010, PDF                                                                                                      |
| Tilak, J               | Presentation to UNESCO/ERI-NET                                                                    | <a href="http://bit.ly/1LMFLwy">http://bit.ly/1LMFLwy</a>                                                                                                  |
| UNCTAD                 | The Least Developed Countries Report 2012                                                         | UN Publications, 2012, <a href="http://bit.ly/1GBPeqF">http://bit.ly/1GBPeqF</a>                                                                           |
| UNESCO                 | “Education and skills for inclusive and sustainable development beyond 2015”                      | Thematic Think Piece, May 2012, PDF                                                                                                                        |
| UNESCO / ERI-NET       | Asia-Pacific Programme of Educational Innovation for Development                                  | Website, <a href="http://bit.ly/1apD1lg">http://bit.ly/1apD1lg</a>                                                                                         |
| Venter, Elsa           | “Good Teacher Education in an ODL Context”                                                        | UNISA, South Africa, 2012, PDF                                                                                                                             |
| Wang, Dr Libing        | “Overview of 2014 ERI-Net Research on Academic Promotion of Higher Education Teaching Personnel”  | Presentation to ERI-Net Meeting, Malaysia, 2014, PDF                                                                                                       |
| Welikala, Thushari     | “Rethinking International Higher Education Curriculum: mapping the research landscape”            | Universitas Position Paper, 2011, PDF                                                                                                                      |