Universitas 21 Educational Innovation Cluster

Position Paper

"Future directions for undergraduate curriculum design in research-intensive universities"

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The Position Statement

1.1 The 10th U21 *Educational Innovation Leadership Symposium* was hosted by The University of Hong Kong in October 2018[1]. The focus was on the **future of undergraduate (UG) education in research-intensive universities (RIUs)**, implications for curriculum design, and identifying a **strategic role for the U21 network in developing new curricula**.

1.2 It was agreed by participants that even a fairly conservative view of the future suggests that RIUs should plan for some **radical changes** to the ways in which they **design and deliver UG curricula to meet the needs of the next generation of students**. Traditional provision will endure, but it is likely to be extended and delivered in new ways, to wider audiences, in a highly competitive landscape.

1.3 A **fundamental curriculum tension** to be reconciled is between the traditional view of curriculum design as a process of providing pre-defined learning outcomes and structures with continuity and coherence, and the contemporary higher education *Zeitgeist* of speed, complexity, flexibility, open-access and potential fragmentation.

1.4 There is a need to design curricula that offer greater opportunities for **interdisciplinary learning**; engage all students in **knowledge creation** (a researcher mindset), **curriculum construction** (co-design) and **authentic assessment** (knowledge application); offer **global learning opportunities** (physical and virtual); and explicitly address **local and global social challenges** and **personal wellbeing**.

1.5 In RIUs, it is essential to conceptualise **learning as research**, and **teaching as the design of environments conducive for engagement in research.**

1.6 There is an urgent need for RIUs to develop an evidence-based understanding of the ways in which **contemporary learners envision and experience the alignment of their online/offline worlds**. This will help to inform the development of a seamless blend of online and on-campus educational experiences.

1.7 There is a danger that the current pace of educational and technological change will result in many **academics perceiving themselves to be, or actually being, 'left behind'.** A different approach to 'staff development' is required, and this should be a priority for U21. The ambition should be to move towards a **system of compulsory, career-long professional development (CPD) in research-intensive teaching**. New promotions criteria can facilitate this change (e.g. U21 Teaching Indicators Framework[2]) and also **international professional development exchange.** This would build logically on local provision and previous projects, and could become a future signature project for the EI Cluster.

1.8 **Implications for the governance, leadership *and financial models*** of RIUs arising from the rapidly changing higher educational landscape **are not trivial**. Well informed and responsive new approaches to effective curriculum design do, however, have the capacity to deliver considerable benefits for student learning and staff engagement and satisfaction with teaching.

1.9 The **U21 Network could add value** by developing a **new framework** for understanding the interface between machines and humans in RIUs. The feasibility of commissioning funds to develop a U21 'open, online curriculum' available to all U21 students could be explored, although there are important lessons to be learnt from previous failed attempts.

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[1] https://universitas21.com/network/u21-network/educational-innovation-steering-group/educational-innovation-symposia

[2] U21 Educational Innovation Steering Group (2017) Teaching Indicators Project Final Report. Avail at https://universitas21.com/sites/default/files/2018-03/U21-Teaching-Indicators-Project-FINAL-Report-MASTER.pdf

Background

The 2018 Symposium was designed to build on the work undertaken in the 2016 Symposium held at the University of Birmingham, the outcome of which was a Position Paper: '[What is the Value Proposition for Students as Learners at Contemporary Research-intensive Universities?](#)'

The 2018 Symposium was framed around the points of consensus in the 'futures' literature which identify a number of 'megatrends' affecting undergraduate (UG) education including:

- rapidly changing student demographics and the need to further enhance accessibility and inclusion;
- the seemingly unstoppable digital-human and machine-human interface where robots and AI are growing in prominence;
- increasingly consumerist approaches driven by international competition and the rise of new knowledge providers;
- changing perceptions of the formal university degree for career preparation and life success, with new developments in:
  - diverse/competing learning pathways (online, part-time, self-directed, work-based);
  - unbundling of qualifications and the growth of micro-credentials;
  - focus on personalization and entrepreneurialism;
  - increased attention on and concern about student and faculty health and wellbeing.

Against this backdrop, it is not unreasonable to expect RIUs to respond by offering more imaginative and flexible provision, and taking steps to ensure they are in the vanguard of curriculum development. This requires critical analysis of the duration, organization, structure, content and delivery of existing curricula. During the Symposium, for example, we considered the possibility that a 'massive online open global modular system' could emerge to deliver, at scale, high quality and accessible basic curriculum content. In this context, the challenge for RIUs could be to reposition and reaffirm their niche as trusted, 'gold-standard' providers.

The Symposium was organized around a series of key questions that evolved through the process, and expert input[3] including contributions from students who expressed clear views on the need to recognize students as adult learners and co-designers of their own learning experiences.

The key organizing questions for this Position Statement are:

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1. What are the major challenges facing the traditional undergraduate curriculum?

2. How can we make our undergraduate programmes more open, accessible and relevant?

3. How can the U21 Network add value to the development of the curriculum of the future in research-intensive universities?

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[3] Full programme: https://universitas21.com/sites/default/files/2018-10/2018%20Programme%20Rundown.pdf

The Symposium Discussions

The Position Statement has been developed from the three main Symposium questions that were themselves adapted through the process. Each section below provides a summary of the challenges identified and discussed followed by proposed responses/actions that represent points of consensus.

> ### 1) WHAT ARE THE MAJOR CHALLENGES FACING THE TRADITONAL UNDERGRADUATE CURRICULUM?

A. ***The new knowledge environment*:** RIUs face an existential challenge. We will need to learn how to position ourselves effectively as 'trusted knowledge brokers' in a global reconfiguration of knowledge producers. The traditional UG curriculum is campus-based and inward-facing, whereas the future curriculum is likely to be more distributed and outward-facing (i.e. through knowledge exchange).

B. ***The time, space and traditional dimensions of curriculum design:*** Traditional curriculum models are facing challenges. There is a tension to be reconciled between curriculum design as a process of providing learning structure, continuity and coherence, and the contemporary *Zeitgeist* of speed, complexity, open-access and potential fragmentation.

   New questions are emerging about programme duration, timing, pedagogies, assessment, and learning environments. For example:
   - Is the curriculum of the future best conceptualized as a system of on-line micro-credentials and/or a set of linked social and campus-based learning experiences, and in what ratio?
   - What is the 'real' competitive risk (beyond the hype)? Realistically, who are our new competitors for delivering content? Is there the potential for RIUs to be 'left behind'?
   - How far should we go to 'decolonise' the curriculum and challenge disciplinary territorialism/silos?
   - How can we provide adequate mobility opportunities and integrate experiential learning at timely, relevant points in the curriculum?
   - How do we reconcile the greater flexibility that becomes possible through digital technologies ('unbundling' of the curriculum), with the need to provide coherent learning experiences?
   - Are we certain that faculty reward and recognition schemes recognise and incentivise innovation in pedagogy, curriculum and programme design?

Proposed Responses/Actions:
To address these challenges, U21 curriculum leaders identified four focal areas for potential action.

I. Addressing **intellectual challenges** should include:
   - Ensuring we have the capacity to offer both structured/ coherent and also flexible/agile curricula that meet the changing needs of contemporary learners;
   - Faster progress towards including significant opportunities for interdisciplinary learning to reflect the needs of contemporary society, alongside the continuing need for rigorous discipline-based learning;
   - Engagement of all our students (throughout their studies) in knowledge creation (a researcher mind-set), curriculum construction (co-design) and authentic assessment (knowledge application);
   - Better evidence on the nature and structure of a research-intensive education and its unique benefits for UG students, better use of research/analytics in designing curricula and teaching, and different forms of support for academic staff to help them to adapt.

II. A refreshed focus on curriculum-related **personal/social development** could include:

- A stronger focus on personal and institutional social responsibility as part of all curricula to chime with the interests and experiences of contemporary youth and the emerging trends in society (using the UN Sustainable Development Goals as a compass);
- Celebration of the global communities of learners and alumni that are characteristic of RIUs, and a further consideration of the potential links with curriculum design.

III. New **professional/employment trends** would require:
- A renewed emphasis on bridging intellectual and practical (real-world) learning and making extensive use of stakeholder partnerships (e.g. business, public sector, NGOs) in curriculum design and delivery;
- New ways to articulate students' achievements, competencies and content knowledge developed at RIUs, including the development of a shared and user-friendly U21 framework or roadmap;
- Taking all opportunities to develop students' professional/employability skills by engaging them as 'professional partners' in curriculum design and delivery, and in feedback processes.

IV. Meeting the needs of **faculty** will require:
- different promotions criteria (in some cases);
- new forms of career-long professional development;
- integrating teaching, learning and research in more explicit ways at all levels.

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2) HOW CAN WE MAKE OUR UNDERGRADUATE PROGRAMMES MORE OPEN, ACCESSIBLE AND RELEVANT?

It was agreed that the changes discussed in section one above were important to **prepare students for their futures**, but that some significant **challenges** remain if UG curricula are to be developed in ways that make them more open and accessible:

A. *Envisioning the graduate of the future.* Leaders at the Symposium agreed that contemporary RIUs strive to develop students as synergistic thinkers with diverse capabilities, who are equipped to be independent, socially responsible, lifelong learners ready to make a valued contribution to the common good in a globalized, technological and fast-paced society. This will require outward-looking UG programmes that offer extensive knowledge exchange opportunities for students.

B. *Intellectual growth.* There is a tension between open access and flexible delivery, while still offering the higher-order learning opportunities that characterize RIUs. There is a strong belief in some areas that flexibility will disrupt curriculum continuity resulting in a fragmented undergraduate pathway (i.e. unbundling also necessitates re-bundling).

C. *Scalability.* Open, flexible curriculum models require additional resources or changes in resource allocation; traditional academic calendars act as a constraint; credit transfer and recognition processes can reinforce silos; institutional *mobility targets* are increasingly being adopted without a clear understanding of the relationship between mobility and deep engagement with curriculum content.

D. *Student wellbeing and equality of opportunity.* There is a pressing need to develop inclusive curriculum structures that also help to build student resilience, and both require new thinking.

E. ***Student access and diversity****.* All RIUs will be focusing on increasing access to education for under-represented learners and many of these aspirations will entail additional cost to support students to succeed, yet in many parts of the world university budgets are being squeezed, regulated – or both.

F. ***Faculty capacity****.* While there is a growing need for faculty who are flexible and agile in curriculum design and delivery, there remains a tension for some academics between preserving disciplinary traditions and decolonising traditional curricula.

Proposed Responses/Actions:
To speed up the development of new, more open and flexible UG curricula the following 4 actions were identified.

I. **Developing new partnerships** would include:
   - Rethinking each of the core partnerships: student-faculty; university-community; online-on-campus; university-university; and network-network;
   - Sharing learning across university networks (such as U21) about the ways to blend traditional curricula into viable contemporary, interdisciplinary curricula, and sharing validation processes;
   - Leading a major rethink of assessment at RIUs to ensure new forms of authentic assessment and promote integration of knowledge rather than fragmentation.

II. **Online/on-campus alignment** requires**:**
   - A better understanding of the ways in which contemporary learners envision and experience the alignment of their online/offline worlds;
   - A seamless blend of online and on-campus learning experiences and new thinking around the on-campus learning experience in a RIU;
   - Increasing emphasis on integrated, inquiry-based, collaborative pedagogic designs facilitated through dialogic approaches to blended learning;
   - New and more ambitious mobility opportunities.

III. **Governance/leadership challenges include**:
   - A need for governance and leadership that can accommodate and support more mobile, flexible and disparate learners (and faculty);
   - A style of leadership that may be different to that experienced by the current leaders of HEIs, and that will require close partnership with leading industries/employers, government and funders, and perhaps most important of all – students; and a cutting edge understanding of the 4th industrial revolution, the digital age, and digital technology as an enabler and a connector.

IV. **Reimagining faculty development** will require**:**
   - A change in focus from early career training and single sporadic and disconnected 'events' through a career to continuous professional development in teaching;
   - New promotion criteria for teaching (e.g. U21 Teaching Indicators Framework[4]);
   - Increased investment in opportunities for teaching faculty mobility and an international network for the professional development of teachers in higher education (U21 is an ideal example);
   - A systematic attempt to end the unconscious bias towards research/researchers in RIUs and the implication that research can be disconnected from teaching and learning in a university context.

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[4] U21 Educational Innovation Steering Group (2017) Teaching Indicators Project Final Report. Avail at
https://universitas21.com/sites/default/files/2018-03/U21-Teaching-Indicators-Project-FINAL-Report-MASTER.pdf

3) HOW CAN THE U21 NETWORK ADD VALUE TO THE DEVELOPMENT OF THE UNDERGRADUATE CURRICULUM OF THE FUTURE IN RESERCH-INTENSIVE UNIVERSITIES?

Discussions in this theme started with two questions: (i) What are the potential consequences for RIUs if we do nothing; and (ii) How can U21 'add value'?

It was agreed that in RIUs we tend to conceptualize the 'degree programme' as the totality of student learning experiences including formal and informal, and curricular/extra-curricular. This model is being challenged by new knowledge providers and pressures on funding. In some parts of the world, the traditional RIU education is regarded as out of touch and something of a luxury in the drive to increase access to higher education and lifelong learning. ***The challenge, therefore, is to reposition the UG curriculum in RIUs, retain the best of the past and embrace the new, and support academic staff in new ways to design and deliver our unique research-intensive learning and teaching offer.***

Proposed U21 Network Responses/Actions:

I. Refresh and action the ***'value proposition'*** for students in RIUs as proposed in the 2016 U21 Position Statement ([What is the Value Proposition for Students as Learners at Contemporary Research-intensive Universities?).](#)

II. Reconsider the role of educational technology and learning technologists, and ***develop a new framework for understanding the interface between machines and humans.*** (NB: the 2019 U21 Education Innovation Symposium theme is: *"The Fourth Industrial Revolution and the Future of the University: Implications for Education Strategies in Research-Intensive Universities"*).

III. Reconsider ***academic and student roles in curriculum co-design*** and foreground the development of outward-facing curricula grounded in knowledge exchange.

IV. A key outcome from the Symposium was the urgent need to develop ***new, ambitious and continuous models of staff development that retain a close alignment between research and teaching*** (rather than viewing them separately).

V. Conduct a feasibility study on developing a ***U21 open, online curriculum*** with/for U21 students, learning the lessons from failed attempts in the past. The feasibility study would include: whether such a programme could be recognized for credit and accepted by contributing partners for relevant degree programmes; and whether a focus on generic capabilities, digital skills, ethics, and ***global social responsibility*** would be appropriate.

Next Steps:

The 2018 Position Statement will be considered at the EI Steering Group meeting in Toronto in April, and the Senior Leaders' meeting in Maryland in May. Suggestions will be made about incorporating the proposed actions into the work plan for the EI Group.