

Global innovation networks: The anatomy of change

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A sustainable environment

Higher education and research are no longer privileged pursuits pursued by high priests in isolated ivory towers. That history and stereotype, itself only partly true, has given way to the increasing catalysis of change. The change is fuelled by rapid development and competition, and by a concert of factors and global dynamics affecting the international research universities that are the subject of this discussion.

The role of networks, formed by groups of universities in order to strengthen their capacity to compete, change, challenge and innovate, is to be experimental laboratories at the frontiers of change, where concepts and instruments may be developed, tested and assessed. If successful and viable, the proofs of concept may be adopted and implemented by their communities. In this paper, we take just three examples of international university networks, each different in scope, ambition and delivery. We ask how these networks adapt, evolve and introduce successful innovations to themselves but also serve as role models to their wider constituents and stakeholders.

In taking a look at the activities of the **Association of Commonwealth Universities** (ACU – founded 1913), the **International Association of Universities** (IAU – founded 1950) and the **Worldwide Universities Network** (WUN – founded 2000), along with the catalytic role of the **National Coordinating Centre for Public Engagement** (NCCPE – founded 2008), we are not promoting these as ideal models. We are testing their performance as examples of a new global teamwork in higher education and research, itself changing rapidly under drivers and change agents that can both encourage and threaten the future. We arrive at a short list of selected factors and features that will be influential now, and as far into that unpredictable future as we can see.

Teamwork time

There are now over 50 continuing international university networks of varying focus and levels of activity. Most have been formed in the past 10–20 years, and they are usually based on the premise that a team will achieve more than can the individual. They can provide capacities and opportunities that transcend and lift individual visions and missions. They can assist in the formation and competitiveness of prepared international citizens and leaders from established and emerging researchers and teachers. In addition, this teamwork allows for rapid group sharing and learning from successful experiments and interventions, while based on the historic strengths and qualities of universities in scholarship, teaching, community and international engagement.

The huge advances in the internet, the international fora for communication and meetings, such as the British Council Going Global conference, and the opportunities for easy and continuing teamwork through Skype and other platforms mean that the pace of change can only increase. That will require the retention of essential **core values and trust**, sometimes forgotten in the scramble for fame and fortune by individuals and institutions.

There are two further important points to make in defining our discussion. The first is that a focus on the three examples of networks represented here includes the many associates, stakeholders, NGOs and international agencies with which they work in flexible team formation to be fit for purpose. The second is that there are very many networks that are regional, national and even provincial and which have essential roles in the overall future of higher education and research, the development of talent, and the discovery and communication of knowledge.

As the world of higher education changes, new capacities and opportunities for **teamwork and service** are constantly emerging. Among these now are the **new overall framework** and transition from the Millennium Development Goals to the **Sustainable Development Goals**, with the vital requirement that knowledge gaps between developed and less developed economies do not expand; the engagement of universities as partners in support of major geopolitical initiatives such as the **Chinese ‘Belt and Road’** and the **Trans Pacific Partnership**; and other regional or national programmes where new knowledge and innovation strengthen economies and improve lives. In the future, international university networks can engage actively, bringing new knowledge, evidence-based policy, open-minded experts and thought leaders to the table, and developing solutions and the best practical practice.

Future history

Networks can take time to build teams, and can review and reform them when opportunities arise that meet their vision and advance their impact. In 1913 the vision of the **Association of Commonwealth Universities** was to bring together the universities of the Commonwealth, whose diversity and distance are overcome by bonds of common language, aligned education systems and a desire to build better societies through higher education. Now there are over 500 member universities from developed and less developed countries across the Commonwealth. The unique mix of countries and institutions, as well as the global nature of the organization, provides fertile ground for **international collaboration and shared knowledge**.

The positive benefits of the association, and its dynamic community of stakeholders, have survived and strengthened through the turbulent histories, conflicts and transitions of the twentieth century from this experienced and tested network. The focus is now on membership, projects and scholarship administration and the ways in which these can impact on and advance wider society. Examples of innovation should include the **mobility of international staff and students** as key to preparing future citizens and leaders. These programmes are enablers to innovation and contribute towards prosperity, employability, human capacity development and international diplomacy.

Opportunities for university leaders, staff and students to benchmark and share knowledge and experience can provide the stimulus and impetus for creative thought and adaptive best practice. The resulting transformations are apparent across socio-economic and cultural barriers, and can be further developed as the **millennium goals** transition to the **sustainable development goals**. One innovation has been broad consultations across all of the members in considering the role and active engagement of Commonwealth universities in developing effective models and tools to influence the formation and implementation of the sustainability goals.

A further initiative is the role of universities as co-creators with the **Research Data Alliance** – a project that builds the social and technical bridges that enable open sharing of data across technologies, disciplines and countries. Further work in supporting **university research management** has led to the formation of associations across Africa to build a better appreciation of management infrastructure. The support of **early career researchers** is a pressing priority, with allied skills in the administration, assessment of effectiveness and impact of scholarships. There are numerous examples of individuals who have **progressed to leadership** across disciplines

and society, including business, politics, academia and the professions. These leaders in turn contribute to growth, development and innovation of their own countries and beyond.

Defenders of the faith?

Since the early days of history, it has been recognized that knowledge is power, whether at individual, institutional, national or international levels. In terms of international higher education and university development, the influence and effects of the various **university rankings systems have had mixed impact**. This is not the place to debate the pros and cons of the rankings, other than to note two relevant points.

First, the rankings have produced positive contributions, in **aligning university performance against a set of criteria and indicators**, resulting in enormous interest and some prospects for improvement and transparency. Among the upper 2–3 per cent of universities who compete to be in the top 500, the indicators developed by the rankings systems are becoming more sophisticated, accountable and accepted, albeit with a wide degree of scepticism about their precision and accuracy.

Second, the negative effects of rankings systems are to **drive uniformity and lose diversity** – the very antithesis of intellectual thought and development. Universities, based in very different countries and cultures, with very different capacities and strengths, talents and resources, should not be slavish followers of fashion. In climbing the rungs of a linear ladder that forces one model, there is risk to diversity, identity, culture and soul. Playing to the imposed rules of others (and even paying to do so) is not always smart.

University networks can provide some datasets that celebrate diversity, and develop communities who learn from the pooled experience of members. The **International Association of Universities (IAU)**, the UNESCO-based higher education organisation, includes over 630 members from around the world. The network is a global forum for leaders of institutions and associations to discuss, reflect and take action on issues of mutual interest. A strong theme of the network is to uphold the values of academic freedom and institutional autonomy, while promoting greater accountability.

The IAU promotes institutional effectiveness and the ideal of knowledge made available to all through collaboration and access to higher education. At the same time, it aims to give expression to the obligation of universities, as social institutions, to promote through teaching and research the principles of freedom and justice, human dignity and solidarity. These goals are achieved

by strengthening international cooperation between universities and through partnerships between key organizations and stakeholders.

The IAU promotes healthy **cooperation and competition**, academic solidarity and the principles for which every university should stand: (i) the right to pursue knowledge for its own sake, and (ii) to promote and uphold the tolerance of divergent opinion and freedom from political interference. It advances equitable access, success and equal opportunities for students, researchers, faculty and staff, and inspires the pursuit of diversity and quality while respecting cultural differences.

Perhaps the emerging power and capacity of the rankings systems could encourage and achieve the ranking of national university systems against the fundamental principles and criteria promoted by the IAU. Governments look at rankings. Convincing data, where the political, social and economic climate and environment fall well below expectations, might convey to governments and agencies the sterility and drag imposed on national intellectual and economic development when talent is wasted or chained.

Evidence-based policies

Although there can be broad recognition of the major global challenges facing the future of human development, including a sustainable planet, the solutions to these challenges may not be uniform and may require a nuanced interpretation of instruments and solutions that can be applied in varied environments and countries. The argument for such international cooperation and comparisons encourage the contributions of research networks that can develop, evaluate and apply evidence-based technical and policy solutions.

Too often, the parallel streams of government, business, academia, international agencies and foundations, NGOs and specialist community groups proceed along their own paths without timely and adequate cross-talk that might conserve resources and build focus. The tools are becoming available to enable better integration of what must now be a multilayered approach to most global challenges. The **Worldwide Universities Network (WUN)** is a player in the search for relevant knowledge, opportunities for established and emerging researchers, communication with communities and policymakers, and the attraction of resources in the form of grants, scholarships and talent. The network has proved that **international teamwork can deliver more than individual institutions**.

The needs list for knowledge is endless. In considering priorities and the probabilities of successful engagement, WUN has focused on the four

pillars of its global challenges: climate and **food security** and safety; **public health** in obesity, heart disease and diabetes throughout the life course; reform in global **higher education** and research; and **understanding cultures**. In some ways, this latter challenge is turning out to be the most catalytic.

WUN is now developing cross-cutting themes across the above pillars. These are in **migration, economics, web futures and big data**; as well as regional networks, with a **Global China Group** and a **Global Africa Group**. In addition, WUN is establishing global platforms in critical zones, farm platforms for intensification of sustainable production in plants and animals, and the development and balance of urbanization and green cities.

The network has restricted itself to a maximum core membership of 25 university partners, as effective research collaboration is complex. However, collaborative links and alliances are built, with over 200 ‘WUN-Plus Institutions’. Overall, WUN engages with the four global challenges and presently has 18 partner universities, 90 international and interdisciplinary research teams and over 2,000 researchers and students. An important current initiative is to build greater opportunity for **mobility for researchers, graduate and undergraduate students**.

WUN has pioneered innovations and instruments as a laboratory and test-bed for international engagement and the internationalization of peer research universities. The successful tools include the **Research Development Fund**, which provides seed funding for competitive proposals; the Sustainability Fund that catalyses major funding bids; 90 global teams addressing urgent challenges; policy engagement with international governments and agencies on key issues (including the Sustainable Development Goals); opportunities for established and emerging researchers to become **global citizens and leaders**; and focused workshops (not talk shops) that deliver research strategies and funding strategies to support the global teams. The WUN Interdisciplinary Research Groups (IRGs) represent global Rapid Research Response Teams, formed with the specific capacities needed to address present or emerging global challenges.

Public engagement

The UK’s National Coordinating Centre for Public Engagement (NCCPE) was established in 2008 to address **university–society engagement**. Leading universities are moving from being relatively peripheral ivory towers to central societal powers. Sometimes they still retain distinct tribal cultures and practices that can appear arcane. There needs to be a greater establishment of mutual understanding and trust, and a joint approach to mutually desired rather than imposed solutions. In a dynamic democracy, where higher

education and research may be undervalued or assumed, the consequences of lack of trust, avoidable misunderstanding, and the distraction and loss of talent is a national threat. The NCCPE brief is to coordinate initiatives and innovations that could trigger greater understanding and facilitate behavioural change – the last bastion of entrenched cultures!

In its approach, the NCCPE has worked extensively through networks. The UK Cabinet Office developed a paper 'Achieving cultural change: A policy framework', which identified four key activities in catalysing behavioural change: enable, engage, exemplify and encourage.

- **ENABLE:** remove barriers, give information, provide viable alternatives, educate and provide skills, build capacity, broker and support.
- **ENGAGE:** use networks, personal contacts, enthusiasts, co-producer teams, media and opinion formers.
- **EXEMPLIFY:** visible figures leading by example, achieving consistency in policies, establishing compelling and consistent messages.
- **ENCOURAGE:** financial incentives, reward schemes, regulations to promote desirable and sanction undesirable behaviours, contracts and codifications to frame expectations about behaviour, recognition and social pressures.

In addition, it is becoming clear that engagement is needed with networks outside of higher education to build common purpose and critical mass. A framework for such activity was developed by the Stanford Centre for Social Innovation, under a banner of 'collective impact', for which there are five conditions. The result is a model for bringing networks together to realize shared goals. This set of criteria can be fundamental to the effective working and success of any international university network, although the specifics will adjust to the vision, objectives and action plan of the network.

The five conditions of collective impact:

1. **Common agenda.** All participants have a shared vision for change, including a common understanding of the problem and a joint approach to solving it through agreed upon actions
2. **Shared measurement.** Collecting data and measuring results consistently across all participants ensures efforts remain aligned and participants hold each other accountable
3. **Mutually reinforcing activities.** Participant activities must be differentiated while still being coordinated through a mutually reinforcing action plan

4. **Continuous communication.** Consistent and open communication is needed across the many players to build trust, assure mutual objectives and create common motivation
5. **Backbone support.** Creating and managing collective impact requires a separate organization(s) with staff and a specific set of skills to serve as a backbone for the entire initiative and coordinate participating organizations and agencies.

Truths and trust

In this discussion so far, we have shown only three examples through very different international university networks. The platforms and capacities exist, and have done for a long time, to impact on discovery, transfer, policy and practice. The British Council Going Global 2015 provoked and facilitated some of the renewed debate. Competition has been core since cave days, but perhaps we are becoming more enthusiastic about cooperation when meeting common challenges. New technologies can assist with the tyrannies of time and distance, but they cannot impose teamwork: that takes intelligence, commitment and a shared vision, mutual respect and friendship.

Higher education and research are so obviously good, especially to us internal stakeholders, that we can risk some serious self-deception and complacency. There are urgent and compelling challenges, which should make us step back and consider that all is not perfect in our educational Garden of Eden. Numerous studies exist on trust in society, which rank politics, banking and other sectors – these often show a gap in the societal levels of understanding and appreciation of these sectors.

Higher education, which thankfully remains in relatively high regard in comparison to banks and politics, cannot revert to ivory tower thinking. While this is not the place for detailed examination, we can finish this contribution on a provocative note, which engages universities and networks in finding reforms and solutions — above all, achieving balance – to the following challenges and questions in higher education and research reform.

1. **The use and abuse of talent.** There is a long way to go before we can reach acceptable levels of equity and access so that bright and qualified individuals can develop and contribute. There is a long way to go to empower and engage women and minorities in higher education and research leadership.
2. **Standards.** Fifty years ago, 8 per cent of the population progressed to higher education in universities. This figure is now rising to 40 per cent

in many countries, at great cost to national investment and the taxpayer. There are benefits to society when managed well; and losses to diversity of career and to practical skills when balance is lost. Fifty years ago, less than 1 per cent of those starting BSc and BA degrees achieved first class honours. Now in many systems the figure rises to 30 per cent. Is the currency being devalued?

3. **Degree cost inflation.** The costs of higher education and degrees are unsustainable and unnecessary. They induce debt, which can blight early career and development of family and society. We must return to core values of scholarship and service.
4. **Glittering palaces.** Do we need to emulate the big end of town in chrome and steel, putting the costs of this bling before real academic talent, and consequently being unable to afford and support established or emerging leaders? A balance of buildings versus brains needs clear strategy and implementation.
5. **Curriculum reform.** Everyone talks about it, but few do it well. The inertia of the same old lectures without the excitement of fundamentals, frontiers and future relevance to each of our lives. New technology can make lectures into tutorials, with basic background available as MOOCs or equivalents.
6. **Interdisciplinary research.** What percentage of teachers and researchers grasp (maybe most students do) the entrancing challenges of working at six levels of interaction? The research grants system and university departmental silos need a balance between depth and breadth.
7. **Managerialism.** The rise of the university bureaucrat, often without experience of, or respect for, research or teaching, threatens and undermines the esteem and capacity of academic thought and impact. This culture results in disengagement of the academic discovery, learning and teaching enterprise from the 'corporate' university executive.
8. **'Strategic' plans.** If you download and read the strategic plans of the 20 universities above and below your peer ranking, they are all much the same: glossy, long, boring and soon forgotten. Save the money and build your own framework, with cut-through strategies to resource and achieve specific goals that have distinct advantages.
9. **International Higher Education.** This is the fastest-expanding part of the higher education universe. At best, it is a wonderful mix of cultures, values and practices that teaches understanding, tolerance and best practice standards to all. At worst, it degenerates into a money game to close budget deficits; injects the distractions of cheating (including easily available internet assignments), and subsidies to support non-competitive

research. A percentage of international student revenues should be invested in student support, language top-up, residences and further international business innovation and development.

10. **Leadership.** Some university executives are masters of establishing lofty and rightly inspiring objectives – and then not providing the resources to implement them. This ‘set up to fail’ delusion wastes time and talent, and can infect whole executives. Of course, we can always wait for the next strategic plan ...
11. **Role models.** Fortunately the above provocations and practices are not universal. There are universities with great leadership, well-engaged researchers, teachers and students who show it can be done – and who address the above challenges and others! These role models and case histories should be the subject of serious intellectual analysis and trail-blazing study, well beyond the vagaries, gambling and gaming of the rankings roulette.

Conclusion

The case for international university networks as experimental laboratories and meeting places that can contribute ideas, new knowledge, comparative approaches and solutions to selected global challenges is real and should be supported. The catalysis and excitement of meeting colleagues in international engagement and environments expands minds and capacities. The development of new technologies and practices that can build and deliver collective impact from disparate networks and groups provides innovation and confidence in future progress. The acceleration of international engagement and internationalization can benefit individuals, institutions and nations and is the way of the future.

Further reading

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