

Educational equivalence

28 August 2018

Ensuring students are prepared for a global marketplace requires international accreditation of degree programmes. Alex MacLaren considers the challenges of offering courses in different countries and the interpretation of criteria developed for the UK

We have always been global citizens, but current international markets and political machinations are an increasingly potent reminder of this part of our identity. The globalisation of our supply chains and consultant teams, aided by near-frictionless online engagement, has permeated even the smallest construction projects.

This realisation brings with it a challenge for our principal institutions: [RICS](#), the [Chartered Institute of Building](#) (CIOB), the [Royal Institute of British Architects](#) (RIBA) and engineering organisations can no longer assume that their members practise predominantly in the UK. In our professional lives, we have to confront the complexity of suitable behaviours and standards in contexts that may be very different to our own. Failing to prepare individuals for international activity may hinder our position in the lucrative global market.

The UK's construction institutions have a deserved reputation for quality across the globe. However, as we watch other countries make progress in digital adoption, modern methods of construction and innovative education and training, how can we retain this status?

Many of my graduates from Heriot-Watt will take up jobs abroad, while others will work on projects in other countries even if they remain employed in UK offices. Their employers, especially the large firms, are likely to be multinational and based overseas. As a result, there is no longer a single standard for teaching professional exchanges and conduct because there is no homogenous context or set of cultural assumptions that can cover all likely eventualities.

This is a significant change from the workplace for which we used to prepare students, even just a decade ago. Our professional institutions have expanded their operations internationally, commensurate with the activities of their members. We are fortunate that these hallmarks of UK accreditation are recognised globally as indicators of quality and professionalism. However, the accreditation criteria against which such programmes and courses are measured have often remained static.

Using standards globally

Consider a specific element of RICS APC requirements: the core competency in Construction technology and environmental services. At Heriot-Watt, we deliver RICS-accredited programmes from campuses in the UK, the UAE and Malaysia. These very different climatic zones -- temperate, hot-arid and hot-humid respectively -- require very different design tactics for construction and related services.

The industrial context as well as the climate has a strong impact on material choices and strategies for construction and assembly. Both passive and active techniques for environmental control are fundamentally affected by the different climates and cultural perceptions of comfort. For example, natural ventilation might well suit the temperate, breezy UK climate but would be entirely inappropriate for 40°C Dubai, prone as it is to dust storms. Meanwhile, the wide diurnal temperature ranges of the UAE can be effectively mitigated by thermal mass strategies that are rendered impotent by the humid Malaysian monsoon season. The different energy-source profile of each location, such as the carbon-intensity of a national electricity grid, also creates a completely different basis for design decisions. And as cultural assumptions of dress and daily activity provide different tolerances for internal temperature variation, they all lead to different services design strategies.

Our global students sit the same exams. However, their local circumstances fundamentally affect their responses to any complex technical questions we set, and we have to reflect this while maintaining parity and quality of exams across all locations. The rules of thumb that work in one country may be misleading in another, but such assumptions about people's behaviour, comfort and economic activity inform our decisions about cost, time and quality.

Teaching these tried and tested methods is not helping our graduates respond to the global marketplace or the anticipated effects of climate change. Instead, relying on entirely UK-based situations risks reinforcing poor behaviours derived from local, and increasingly misplaced, assumptions. We need to move our frame of reference from testing students' knowledge to examining their capacity for evaluation: that is, assessing their skills in applying their judgement in context, not their ability to recall facts.

Professional membership should include a responsibility for proactive improvement of standards, advocating change where standards are not met

The cultural implications of global professional activity are keenly felt by many of us when working abroad. From uncertainty about the levels of formality to the correct formats for communication, culture has an enormous impact when assessing strategies for defining professionalism in international situations. If we look at RIBA and [Architects Registration Board](#) criteria for qualification as an architect, students are asked to demonstrate 'an understanding of the nature of professionalism and the duties [?] to clients, building users, constructors, co-professionals and the wider society'. Such interdisciplinary relationships are fundamentally informed by the socio-political structures of the country of operation.

For example, the planning system governing UK development -- with its reliance on local plans, community consultations and the enforcement of physical and economic conditions on proposed developments, such as [section 106](#) agreements -- is a world away from the government-led strategic planning of the city state of Dubai.

Incentives may also encourage different behaviours or actions in different countries. In the UK, we focus on minimising domestic energy use in new housing, while keeping an eye on the European success of Passivhaus and highly insulated free-running buildings, and we often require [BREEAM](#) or [LEED](#) accreditation for developments to reward thermal efficiency. Meanwhile, Dubai's Green Energy Strategy 2050 focuses more on the production of renewable energy and diversification from oil to electricity; a sensible decision where high-energy wholesale desalination is essential.

Governing all our practices in UK construction is an overriding awareness of the health and safety of construction workers and end users. We know construction is an extremely

dangerous industry and this is reflected, for example, in the CIOB's [Education Framework for Undergraduate Programmes](#), section 2.5, Health, Safety and Welfare. Again, it is immediately clear that assumptions made in this standard correlate to UK circumstances and may not sit well with practices in other countries.

A widely reported recent example concerns the construction of stadia for the 2022 FIFA World Cup in Doha, Qatar, where operatives' welfare and safety conditions have been found to be far below those expected in the UK. The late architect Zaha Hadid was publicly challenged on her professional reaction to such issues when she agreed to work in Qatar and Azerbaijan; her reaction was to suggest that the health and safety practices and responsibilities of the local contractor overrode her UK-based professional obligations.

Should this also be the case where students are being taught abroad on UK-accredited courses? Or should they be learning UK-based approaches, arguably disseminating best practice across the globe while perhaps being less well prepared for immediate practice in their local professional environment?

My view is that professional membership should include a responsibility for proactive improvement of standards, advocating change where standards are not met, and adhering to an ethical code that transcends local contexts. But the reality is that, in a competitive global marketplace, these values can be socially and economically expensive to uphold.

Contextual judgement

The above examples give instances of professional standards, across multiple disciplines, where local issues can disrupt a given interpretation of accreditation criteria. As international activity becomes the norm rather than an exception, our institutional bodies are developing the means to accommodate local contexts in accreditation procedures for education providers. RIBA, for example, requires a local practising architect to accompany the visiting board during its mandatory two-day on-site assessment of teaching and examination. Although this is costly and presents logistical challenges, the [UK Engineering Council](#) agrees with the approach; in June 2017, it said professional engineering institutions must be invited to visit all centres involved in the delivery of accredited courses, to enable human and material resources to be considered.

RICS takes a different view; while requiring data on graduate destinations and evidence of consulting local employers on desirable graduate abilities, the curriculum accreditation is managed remotely, via paper-based and digital methods. This approach contrasts with that of Malaysia's Board of Quantity Surveying; as a co-accrediting body, it was required to visit our UK campus before it could accredit our Malaysian campus programme. Other accrediting bodies require student work from each campus location to be reviewed, and may need staff and students to participate in a video conference with the accreditation team. These instances show there is no normal international accreditation procedure followed across global construction institutions.

Regardless of method, the challenge remains of how to judge the equivalence of educational experience when knowledge content depends on local circumstances. As a higher education institution with campuses across Europe, the Middle East and Asia, Heriot-Watt has been at the forefront of developing understanding in this area. Our continuous curriculum development involves video conferencing between academics in different time zones, consultation with industry advisory panels local to each campus, and monitoring our graduates' career paths through global alumni networks.

It is important to the university to appoint local teaching staff who reflect the student and

industry demographic

In 2017, Heriot-Watt received The Times' inaugural [International University of the Year](#) award in recognition of its efforts to integrate learning experience on accredited degrees across all campuses. This year, the Heriot-Watt Student Union was also awarded NUS Scotland's University Students Union of the Year in recognition of the first-ever global rep system: while being unrelated to curricula, this indicates the importance of having an integrated student body as one of our core strategies for assuring parity in the student experience. These achievements reward what has been a challenging time for both organisations, developing effective links and integrating technology across time zones and various cultural norms and expectations.

The ongoing support of accrediting institutions such as RICS, RIBA, CIOB, the Chartered Institution of Building Services Engineers and the Institution of Civil Engineers, themselves developing their accreditation practices, has been valuable throughout. They have been our partners when exploring the correct line between knowledge provision and contextual judgement, encouraging us to innovate and develop strategies for assessing equivalency. There is an acknowledgement that our increased global integration is pushing accepted processes into new territories. While right to accept this challenge, all institutions are understandably concerned about maintaining quality and distinctiveness -- a major issue when accrediting varied degree content under the umbrella of a single institution.

Global personnel

Forging this path is not easy. The cultural frustrations and ethical dilemmas of working globally are the same whether in academia or industry. I advise colleagues that their most valuable asset is a willingness to question everything, and to be ready to unlearn assumptions they did not even realise they were making.

Academics and professionals teaching these courses worldwide come from different backgrounds, and may have learned their craft through different professional institutions. It is important to the university, as an employer in a local economy, to appoint local teaching staff who reflect the student and industry demographic. But it is equally important to both university and accrediting institutions that quality standards and course content reflect the professional standards required in the UK: this is most easily achieved by appointing staff familiar with a UK-based educational or professional operation.

These can be conflicting ambitions, requiring a careful balance of staffing and of the approach to course content. Assessors who are already adept at accrediting UK institutions are now required to develop skills to do so internationally, cognisant of this friction.

It is clearly possible for a local practice to diverge significantly from a process recognised in the UK. Throughout the genesis of a project, stakeholders unfamiliar with UK practices may exercise surprising levels of power at different intervals; procurement routes and assumptions about contractual relationships are often based in local law and culture; and practical arrangements about sites, materials and construction techniques are heavily influenced by local norms and employment expectations.

It does not take much variation in these areas to bring UK professionals into potential conflict with the ethical values they have learned. How far should we adapt our teaching to fit local contexts, when the results may affect some tenets of our professional

operation? In my view, teaching students to navigate the ethical impacts of any international activity is a priority and should be our overriding obligation as we acclimatise to global operations.

A global professional

The questions I have raised will be familiar to any readers engaged in practice, policy or academia beyond the UK. While our institutional processes evolve to support us in this global marketplace, we must all individually step up to make professional evaluations in changing our practice.

The clearest and most important lesson we can teach putative professionals is an awareness of, and sensitivity to, the differences between global market circumstances, and the personal ethical judgements required to navigate these differences effectively.

[Alex MacLaren](#) is Senior Director of Studies for [Architectural Engineering at Heriot-Watt University](#)

Further information

- This feature was taken from the [RICS Construction Journal](#) (June/July)