
Conference papers

Engineering: Education and Innovation

2009-11-01

Assessing Third Mission Activities

Mike Murphy

Technological University Dublin, mike.murphy@tudublin.ie

Follow this and additional works at: <https://arrow.tudublin.ie/engineduccon>



Part of the [Other Engineering Commons](#)

Recommended Citation

Murphy, M.: Assessing Third Mission Activities. Dean Conference, Lisbon, 19-20 November, 2009.

This Conference Paper is brought to you for free and open access by the Engineering: Education and Innovation at ARROW@TU Dublin. It has been accepted for inclusion in Conference papers by an authorized administrator of ARROW@TU Dublin. For more information, please contact arrow.admin@tudublin.ie, aisling.coyne@tudublin.ie.



This work is licensed under a [Creative Commons Attribution-NonCommercial-Share Alike 4.0 License](#)

Assessing Third Mission Activities

Theme 3 of the Annual DEAN Conference addresses the topic of the assessment of national and institutional performance. My presentation will address the question as to whether the measure of institutional performance should be broadened to include university third mission activities, in addition to traditional first and second mission activities. The European Commission Lifelong Learning Project on European indicators and ranking methodology for university third mission activities (E3M) will be used as the basis for addressing this question. My biases as an engineering dean may also show in my comments, for which I apologise in advance.

At the keynote address yesterday, Sir Peter Scott addressed the question as to whether higher education needs to play a different role in time of crisis. He argued that the current crisis is not simply a crisis of an international banking system with inadequate risk management policies, but is in fact a crisis with wider social, political and cultural dimensions; one that to some degree universities themselves have contributed to, albeit perhaps for the right reasons, as in the support of social agendas, or perceived economic imperatives.

A salient starting point for this debate might well be an examination of the role of the university. What should be the aims of the university? Or should I say modern university; or research-led institution, or higher education institution, etc. There is great diversity in higher education represented in this room today, and many of your institutions aims may be quite different. Definition and context are important for understanding. Before even beginning to discuss third mission activities, there is already tension regarding the traditional first and second mission activities of teaching and research. For example, the American philosopher Robert Paul Wolff speaking from the context of the Vietnam War, addressed the question of the role of the ideal university. He fundamentally questioned whether the university should serve as a training camp for professionals. Wolff directed his criticism against the ideal type of a university of professions towards its lack of intellectual inquiry and critique.

However, we can argue that *education and intellectual inquiry relate to cultural citizenship, whereas research and professional training relate to technological citizenship. “The fulfillment of these two kinds of citizenship is the social responsibility of the university. To find ways of linking these roles and cognitive frameworks into a communicative understanding of the university seems to be what the university needs to achieve today if it is to be able to take on the task of becoming one of the key institutions in the public sphere and in which citizenship is brought forward to new levels”* Delanty (2002, p. 9).

If we were to begin today with John Henry Newman’s core ideas regarding the value of liberal education put forward in his famous 19th century book “The Idea of a University”, then Newman would argue that the university is a hybrid educational environment which serves to educate students for life by means of “collegiality”, “enlargement of mind” and “acquisition of a philosophical habit of critical thinking”. To use 21st century educational language, Newman is thus concerned with the learning outcomes of skills and competencies and not primarily with the content of what students learn. But where and how should they get these skills within the walls of the 21st century university?

The 21st century world that we live in is quite different than that of Newman’s 19th century. To take the perspective of Rosalind Williams, in speaking on engineering education, she observes, *“What engineers are being asked to learn keeps expanding along with the scope and complexity of the hybrid world. Engineering has evolved into an open-ended Profession of Everything in a world where technology shades into society, into art, and into management, with no strong institutions to define an overarching mission. All ... forces that are pulling engineering in different directions – toward science, toward the market, toward design, toward systems, towards socialization...”* (Williams, 2002, p. 70).

If our current learning environment is serving to educate professionals (for example, engineers) to expertise in very narrow specialisms, with a set of narrowly defined skills

and competencies for pre-established jobs, then perhaps it is time to re-examine that learning environment. For the world that our students live in today, we must educate *“active, rigorous and flexible individuals, rather than skilled workers for pre-established jobs”*. Braslavsky (2002). To provide an example of such transferable skills, consider the European programme outcomes required by EUR-ACE which is an accrediting body for national engineering accreditation agencies. These include the skills to communicate effectively with society at large; the skills to understand the impact of engineering solutions in a societal and environmental context, to recognise the need for, and have the ability to engage in independent, life-long learning. Again, where and how should the student get these skills?

It therefore seems that while many other arguments can and have been made for universities engaging in third mission activities, the modern university choosing to educate students in the professions must question, purely on pedagogic grounds, whether first and second mission activities are sufficient.

To quote the US scholar Ed Zlotkowski, “Over the last fifteen years, much has been written about the need to rethink the role higher education can and should play in building a diverse democracy – a democracy whose graduates are not only capable of participating successfully in a knowledge-based economy but also of assuming their responsibilities as citizens in an increasingly interconnected world. ... Engagement points beyond student academic activities to describe the degree to which all academic activities – on the level of individual students and instructors, modules and programs of study, even entire institutions – have succeeded in creating educationally and socially productive partnerships with community-based organizations, especially organizations that address needs not met by private sector interests. ”

But in engaging in such activities, should the university not be recognised and acknowledged for doing so? These activities carry weight regarding the intrinsic value of the university to its local, regional and indeed wider community? How should that

value be described, perhaps for comparative purposes? The narrow rankings approach taken by Jiao Tong is strongly research biased, and that of the QS-THE also ignores activities outside of first and second mission. Such rankings fail to describe the value of the full spectrum of activities that universities engage in and indeed must engage in today. How can this be achieved?

As a brief aside, we adapt the language from the 2002 Final Report for the Russell Group of Universities, to describe third mission. Third Mission complements the mission of teaching and the mission of research. Alongside their more traditional roles of teaching and research, universities and public sector research establishments need to play a greater role as stimulators and facilitators of knowledge transfer to and with, business and society. Third Mission supports the structures, processes and outcomes of interaction between universities and the wider community. Via third mission activities universities seek to generate, apply and use knowledge and capabilities outside academic environments. The third mission covers not only the commercialization of academic knowledge through collaboration with industry, patenting and licensing, creation of spin-off companies, it also includes participation in policy-making, and involvement in social and cultural life. The complexity of this issue reflects the richness of the bounds linking HEIs to the society at large. (Adapted from the Final Report for Russell Group of Universities, 2002)

I would now like to outline a European Commission project funded under the Leonardo Lifelong Learning Programme titled “European indicators and ranking methodology for university third mission” (E3M). This is a €743K project over 36 months involving ten partner universities from eight countries. The project began in January 2009 and will complete in December 2011.

The specific goals of the project are as follows. (1) To create European standard indicators to measure the effectiveness of third mission provision. These will allow the

governing boards of HEIs, funding bodies and policy makers to share a common understanding of excellent practices. In this way, the third mission can be more effectively promoted.

(2) To validate the standard indicators. This process will allow institutions to further develop their understanding of best practices, and the literature developed will be used to improve the visibility of these services. HEI management will be able to engage with the rankings, ensuring more cost-effective and excellent services.

(3) To create a ranking methodology to benchmark European Third Mission Services providers of HEI. This ranking methodology will allow funding bodies and industry to better understand the third mission and assess institutions based on performance. It will directly solve the need for third mission rankings.

(4) To create good practices for institutional dialogue in a European Area of higher education framework.

In addition to the specific objectives above, the following general objectives are also set for the project.

(1) To improve the quality, efficiency and effectiveness of education and training systems in Europe, improving the global competitiveness of European Higher Education Institutions. The standard indicators developed will enable the management of HEIs to continually assess and improve their performance.

(2) To encourage and improve Higher Education Institution's contribution to society. By developing standard indicators and a ranking methodology, the project will allow higher education institutions to improve the services they offer to society, including industry and to policy makers' strategic needs.

(3) To foster the creation of a European area of higher education by means of increased communication and mutual understanding. The networks developed during the

project will build links between institutions, working towards a common European area.

(4) To stimulate excellence and improve the visibility of university activities focused on services to society and industry. The networks, materials and conferences arranged by the project will serve to promote the third mission.

The project will generate the following outputs:

- Standardised indicators for the following dimensions
 - Continuing Education
 - Technology Transfer & Innovation
 - Social Engagement
- Methodology for ranking third mission activities
- Web tools for benchmarking university third mission activities
- Global web for European third mission providers
- Case studies of third mission activities
- International conference of Third mission activities providers

The methodology to conduct the project involves characterising third mission activities in three dimensions: Technology Transfer & Innovation, Social Engagement and Continuing Education. For each dimension a number of processes are identified. For example, the draft processes associated with Technology Transfer & Innovation are divided into two categories as follows:

Entrepreneurial & Innovation Processes

- Contract-based research & consultancy
- Intellectual property rights (IPRs)

- o Licensing
- o Start-ups/spin-offs/spin-outs & spin-in formation
- o University business incubators /scientific/discovery/ technology parks
- o Social innovation, including non-patent hardware and software innovation

Cooperation & Networking Processes

- o Cooperation in R&D
- o Sharing of space/facilities/equipment
- o Cooperation in education
- o Mobility of people
- o Formal Networking
- o Informal Networking

Each process will be defined and have one or more indicators assigned. Subsequently the indicators will be evaluated for relevance and feasibility. Relevant Indicators will be assigned weights and a ranking generated from feasible indicators. Case studies will be identified for best practices in the three dimensions of Technology Transfer & Innovation, Social Engagement and Continuing Education.

The project recognises the Berlin Principles developed by the International Ranking Expert Group (IREG) founded in 2004 by the UNESCO European Centre for Higher Education (UNESCO-CEPES).

Finally, there are a number of key project activities for which we will be seeking collaboration with interested universities. This includes collaboration to gather data for the final set of indicators from a broader sample of European universities, and collaboration to carry out a survey for collecting proposals about the weights of each indicator.

In terms of best practice, we will be looking to select two institutions per dimension (six in total); to select a small group of specialists coming from partners and stakeholders; to visit the selected institutions in each of the three dimensions; to detect best practices in each institution and finally to compare the indicators with real facts from each institution.

As William Thomson - Lord Kelvin, observed: "If you can not measure it, you can not improve it." Hopefully this E3M project will go some way towards broadening the way universities are measured with regard to their activities in engaging with the wider community, and in doing so improve those activities.

Thank you.