SUBMISSION TO THE TEACHING AND LEARNING STANDARDS DISCUSSION FOR TEQSA

from the

Australian Council of Deans of Information and Communications Technology
(ACDICT)

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Introduction

The Australian Council of Deans of Information and Communications Technology (ACDICT, http://www.acdict.edu.au) is the peak body representing all Australian universities and the many disciplines comprising Information and Communications Technology (ICT):
- Computer Science
- Information Systems
- Information Technology
- Software Engineering
- Electronic Engineering
- Computer Systems Engineering
- Telecommunications Engineering
- and any other ICT related discipline

Realistically, there is almost no part of work, the economy and society that is not dependent on information and communications technology. The prosperity of a developed nation and its future depends on ICT which runs business, science, engineering, transport, infrastructure of all kinds, and the quality life in general.

ICT comprises many interrelated disciplines and higher education students participate in a range of learning activities and environments. At one extreme students work on software development, service development and delivery, and on the other extreme they build and test computer and telecommunications hardware of various kinds. Learning activities also involve students obtaining workplace experience through a range of means that include industry placements at one extreme and simulated industry experience at the other. The aim of tertiary higher education in ICT is to produce an ICT Professional able to contribute to the many demands and challenges of society, the economy, and the environment.

Discussion points and responses

> 1. *Does the proposed definition of teaching and learning standards provide a firm conceptual base for the development of a framework? Does it provide clarity for the purpose of communications between institutions, TEQSA and other involved parties? Is there a better definition that could be used?*

The working definition (a statement of scope: "encompass") does not include the distinctions made later about internal and external reference points. The scope definition given applies equally to internal or external models.

Since the essence of the TEQSA model includes reference to external reference points, the working definition should include such mention.

> *2. It is proposed that teaching standards and learning standards are conceptually distinct and therefore require consideration as separate sub-domains for TEQSA quality assurance and regulatory activities. Are there any problems with creating two sub-domains of this kind?*

This distinction between teaching standards and learning standards may be convenient, however the concept could be seen as going against the tide of increasing the connections between learning and teaching over recent years. The connections and how they affect the practice of both learning and teaching would seem to be the most important for the benefit of student learning and the attainment of desired outcomes.

Moreover, the connections and influences on learning and teaching are much wider and include the influences of academic research activities, industry requirements and contributions, and professional bodies.

While the teaching-research-industry-learning (TRIL) nexus may be complex, difficult to articulate, and discipline specific, it is a reality and the mutual benefits of this nexus have been shown in numerous publications. It can be argued that the quality of learning and teaching depends heavily on the nexus, and that any measure of quality should include the outcomes of such connections.

ACDICT is particularly concerned about connections between academia and industry and how these affect learning and teaching.

> *3. Are the seven principles for TEQSA's role within a national teaching and learning standards framework appropriate?*

The seven principles appear appropriate particularly since they make reference to national reference points (missing from the definition) and include disciplinary communities (which would include industry) and professional associations (which accredit degree programs). The recognition of change and evolution is important and applies strongly to ICT. This inclusive and dynamic approach is welcomed by ACDICT.

It would seem that the principles are conceptually more inclusive than the proposed practical distinction between learning and teaching. In fact learning and teaching are always mentioned together in the principles.

No principle refers to teaching and learning as being separate sub-domains and begs the question of what is the principle upon which such a proposed separation is based?

> 4. *Does this short review omit key developments or trends that are worth considering?*

From a 360° perspective, there are three additional key perspectives on the value of a tertiary qualification: that of graduates in industry; employers; and students who quit before obtaining a qualification.

Whilst the perspective of employers, especially in a generic sense, may be obtained from the Graduate Outlook Survey (GOS), this may be of limited value to specific disciplines, especially in rapidly changing areas such as ICT.

The feedback from graduates who have been in industry for a few years as to the value of what they learned in obtaining their qualification in relation to their job requirements is a perspective almost entirely lacking.

Students who discontinue their studies from any particular discipline can provide valuable information as to why they quit and help universities address those issues of attrition that are within their purview, such as those concerned with learning and teaching.

ALTC supported ICT projects in recent years (Koppi and Naghdy, 2009; Ogunbona, 2009) have gathered data from employers, graduates in industry, and people who quit their ICT programs. These results are most relevant and informative for curriculum developments and the impact of teaching practices on learning outcomes.

Omission of these three perspectives will provide an incomplete view at best and contribute to erroneous conclusions at worst.

ACDICT would like to support external benchmarking, and note that the external accreditation of ICT programs by the Australian Computer Society (ACS) is of value in maintaining national and international standards, such as mapping of AQF levels with those of the Skills Framework for the Information Age (SFIA, 2011), and the Seoul Accord (2008).

> 5. *For the sake of brevity, the review has presented blunt assessments of the utility of various developments. Are any of these assessments inaccurate or misleading?*

As noted above, the assessment perspectives are incomplete from three key viewpoints, and the direction indicated earlier of creating separate sub-domains for learning and teaching may be a risk unless the links are kept uppermost.

> 6. *Is the broad architecture of relationships depicted in Figure 1 an appropriate basis for the development of a standards framework?*

At the risk of being repetitive, the repeated notion that "Teaching standards (process standards) and learning standards (outcomes or attainment standards) differ in important ways, and require differing approaches within a common framework" further promotes discomfort in that the intimate connection between the two is not explicitly articulated.

Figure 1 without accompanying text does not make clear the complexity of relationships and possibilities for national teaching and learning standards, e.g., neither learning nor teaching are shown in the figure, and few links are shown. It would help to have links with text along the link to show what the link depicted. The dotted lines between horizontally aligned boxes elicit confusion.

> 7. *Is the approach suggested for structuring standards statements in Figure 2 a viable way to proceed?*

Figure 2 suggests that there are several standards categories but it is not clear how many there are, and the "Standards statements" and "Reference points" look like they could be in several different categories such as those concerned with monitoring learning outcomes and the provision of support.

Of particular relevance to ICT is the small proportion of female students; females are a minority group in ICT yet Figure 2 omits that fact when listing the identifiable groups for explicit policies and programs. A gender-inclusive curriculum is an essential component in the provision for student diversity, such as in Engineering and ICT, yet there is no mention of gender in the example. This point illustrates that learning and teaching standards must be discipline based and not prescriptive.

> 8. *What role does testing of generic or discipline-based knowledge and skills using common instruments have to play in ensuring, monitoring and demonstrating learning standards in Australia?*

The discipline of ICT already has external accreditation processes in place (ACS), including that of capstone projects, and schools/departments/units of ICT utilise industry advisory boards with respect to their curriculum. In addition, ACDICT supports education projects in ICT and in partnership with the Australian Council of Engineering Deans (ACED), and undertakes educational surveys of its members the results of which are fed back to members.

There is a danger of survey-fatigue amongst students and staff. Survey reliability is probably inversely proportional the number of instruments applied.

In the case of ICT, ACDICT recommends avoidance or a minimum of testing duplication.

> 9. *Are there other possible measures or indicators that should be considered?*

As noted above, especially for professional degrees such as ICT, feedback from graduates in industry is most informative for determining the value of the curriculum for meeting job requirements. University alumni associations need to be part of obtaining the feedback from graduates in industry.

> 10. *How should TEQSA utilise expert review, both for review of teaching standards and for review of learning standards, in ways that are time and cost-effective?*

The existing professional accreditation processes (based on national and international standards) already in place for ICT will be an efficient utilisation of experts. This will also reduce the negative impact of excessive reviews.

References

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