

Integrating work-ready learning into the university curriculum contextualised by profession.

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Abstract

The paper presents the University of Technology Sydney's (UTS) 2007-8 curriculum renewal project '*Improving students work-ready knowledge and skills*' in the Faculties of Information Technology and Business. The project aims to improve graduates' professional attributes and employability skills by designing new subjects, new subject modules and integrating short well-designed work-ready learning activities into existing subjects. The learning activities are contextualized in consultation with the professional societies AACSB, ACS, AHRI, AMI, CFA, CIM, CPA, ICAA and GMAA.

Interviews with these societies inquired into their understandings of professional attributes required of a graduate in the contemporary workplace. These empirical findings informed the design of a matrix of the identified key professional attributes and relevant understandings and skills. Short work-ready learning activities are being designed to align with each work-ready attribute. To maximise student relevance and motivation to learn there is a matrix of learning activities contextualized for each professional area of study. Practical online teacher support resources are downloadable to enable easier integration of the learning activities into the existing curriculum. The beginnings of the collection of professionally contextualized work-ready learning activities can be found at wiki.it.uts.edu.au/workready.

Introduction

Since the early 1990's a series of reports from government, professional societies and employers have articulated an expectation that universities should produce graduates that are more ready for work (Mayer, 1992; ACNielsen Research Services, 2000; ACCI & BCA, 2002; DEST, 2004; Precision Consulting, 2007). However the traditional focus of university curriculum is the disciplinary body-of-knowledge and profession-based understandings. This focus is no longer sufficient to meet industry stakeholder needs for contemporary workplace professional attributes in our graduates.

The importance of developing work-ready attributes has been discussed and hotly debated in academic literature (Clanchy & Ballard, 1995; Finn, 1999; Holmes, 2002; Barrie, 2005; Barrie, 2006). Barrie and Prosser (2004, p.244) observe that graduate attributes "have their roots in the contested territory of questions as to the nature of knowledge and the nature of a university". Continuing pressure is influencing universities to re-think their understandings of graduate attributes and to start mapping the more systematic development of professional work-ready learning objectives and outcomes in curriculum design, change strategies and renewal activities.

The '*Improving students work-ready knowledge and skills*' project is a UTS 2007-8 curriculum renewal initiative that aims to cumulatively improve graduates professional attributes by designing new subjects, new career-envisaging modules and short work-ready learning activities to be integrated into the existing curriculum. In consultation with the professional societies represented in the project's disciplines – Information Technology and Business - criteria for successful careers in the respective contemporary professional workplaces were identified (Nettleton, Litchfield & Taylor, 2008). These criteria for success in the workplace, together with findings from the cited reports, were used to identify eleven key professional

work-ready attributes.

Short work-ready learning activities are being designed by colleagues, educational designers and the project's UTS partners – the ELSSA academic literacy centre, the Careers Service, and the Library. In consultation with our professional societies these generic learning activities are being contextualized for each professional contemporary workplace to maximise student relevance and motivation to learn.

Relevant understandings and skills are being identified for each key work-ready attribute to form the conceptual structure of a matrix to support an online collection of generic work-ready learning activities and teacher support resources to enable easier integration into the existing curriculum.

Methodology

After a preliminary literature review, six professional societies were interviewed to gather specific data. The interviews were conducted during September to November 2007. The societies interviewed were;

- Association to Advance Collegiate Schools of Business (AACSB) International,
- Australian Computer Society (ACS),
- Australian Human Resources Institute (AHRI),
- Chartered Institute of Marketing (CIM),
- Certified Practising Accountants Australia (CPA), and the
- Institute of Chartered Accountants in Australia (ICAA).
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When there was no available society or accrediting body for an award course an alternative professional society was identified and include;

- Graduate Management Association of Australia (GMAA),
- Australian Marketing Institute (AMI), and the
- Certified Financial Analysts Institute (CFA).

The interview addressed the following topics;

- Generic (non-technical) skills essential for a new graduate,
- Generic skills desirable for a new graduate,
- Current weaknesses of new graduates,
- Skills most important in the future for their profession,
- Meaning of professionalism in their profession,
- Skills that would differentiate a particularly professional graduate,
- Ranking of a number of identified work-ready skills (based on the literature review),
- Suggestions on how universities can improve the work readiness of their students, and
- Recommendations on the best way for universities to help develop students' professional skills.

A summary report (Nettleton, 2007) of key findings was sent to all interviewees to confirm the intention and meanings of their comments.

Findings

The interviews were analysed for themes and the identification of key professional attributes. The two key themes common to all the interviews were *professionalism* and *work-readiness* and are discussed in turn below.

Professionalism

The first theme that distinctly emerged centred on notions of ‘professionalism’. Three levels of professionalism were identified;

1. *Superficial* level, which defines appropriate professional appearance,
2. *Compliance* level, which deals with professional conduct and codes of ethics, and
3. *Master* level, which encompasses leadership and transcendence.

Most professional societies interviewed defined professionalism as encompassing maturity, respecting others, honesty, integrity, acting ethically and taking responsibility. Although this *compliance* level is regulated somewhat by professional codes of conduct and ethics, the concept of professionalism also encompasses *how* a person adheres to the codes - a definition of professional conduct. Although not all professions have a defined code-of-conduct and code-of-ethics, similar core themes resonate with each professional body.

While acting ethically, taking responsibility, respecting others and continual learning are essential to being a professional graduate, there is another level encompassing leadership and transcendence. This *master* level is the way a person projects themselves in the world, above and beyond looking the part - *superficial* level - and adhering to the requirements of the code of professional conduct - *compliance* level. Someone who can be a change leader, who is willing to go above and beyond normal requirements, and is proactive suggesting new ideas and better ways of practice.

The professional societies observed that large firms believe that while technical skills are important, they recruit for generic skills because they can train new graduates in technical skills, but often it is ‘too hard’ to train graduates on the generic skills of teamwork, leadership, initiative, communication, ability to develop rapport with clients, analytical skills, making sound judgments and applying their technical knowledge (Nettleton, Litchfield, & Taylor, 2008).

Work-readiness

The second dominant theme discussed during the interviews centred on the notion of ‘work-ready’. These key attribute descriptors were found to be common across all the professional societies;

- *A global perspective;*
- *Communication capacity;*
- *The ability to work well in a team;*
- *The ability to apply knowledge; and*
- *Creative problem-solving and critical thinking skills.*

Although the above list is not exhaustive of the graduate attributes suggested by the professional societies, these are the ones considered most important across all the societies.

A global perspective

All professional societies identified that employers are looking for graduates who have a global perspective - a broad understanding and awareness of the world. To have a broad understanding of ‘the way the world works’ assists understanding the context of clients’ issues and problems. An appreciation of other cultures, how others live and think and being comfortable in new and ambiguous environments is important for a graduate in any business because the workplace today increasingly has a global and multicultural context. Graduates need the ‘big picture’ with an understanding of current affairs and the world of business issues and

pressures. New university graduates' lack of global perspectives was identified as a key weakness. Comment was that the greatest weakness of new university graduates is their lack of worldliness...

Communication capacity

All professional societies highlighted oral and written communication skills as foundational for functioning in any graduate position - the ability to communicate simply, clearly and concisely is critical for contemporary business. Graduates are often required to talk to people with different backgrounds who may not have English as a first language. The ability to listen, question and negotiate is important for all professions. Being able to articulate ideas persuasively and knowing how to communicate appropriately to different audiences is crucial for a new graduate. In all professions graduates need the ability to translate technical knowledge into messages that other people can understand. Being able to write clear and concise emails and formal letters avoiding misunderstanding, ambiguities and mistakes is a necessity of almost every job in business and IT and an attribute which graduates often lack.

All professional societies shared the view that communication skills were a major problem for new university graduates. Many new graduates do not have the confidence to present or to interact well with clients. Poor English and grammar is considered such a major issue for new graduates that some employers conduct English competency tests as part of their recruitment processes.

Teamwork

All professional societies considered that teamwork skills are critical to functioning in organisations as most jobs and projects inevitably involve working with others. Graduates need to know how to work in teams, communicate with others, solve problems and reach a consensus. Adaptability and flexibility to work with different departments and levels of seniority is an important feature of teamwork. Today's business consultant needs to be adaptable to ever-changing teams while working on different projects with different people for different lengths of time.

Applying knowledge

While employers perceive that technical and procedural knowledge is easier to teach than other generic skills, the ability to *apply* that technical knowledge is very important for a new graduate. The basic ability to take technical knowledge and use it in a practical sense is something that employers look for such as assessing the impact of technology on identifying opportunities, solving problems, making businesses more efficient and effective and developing new markets and niches. Professions like IT are dynamic and theories and practices are constantly becoming redundant. Methods taught at university are foundations on which professionals will need to continually build and renew. Recognising when a theory no longer applies, coupled with the ability to adjust the theory, apply it in a different way, or create a new theory, is a sign of a work-ready graduate.

Creative problem solving and critical thinking

The ability to apply knowledge is closely related to creative problem solving and critical thinking which are attributes highly valued in all professions interviewed. Creative problem solving is important to any professional position as understanding the customer, what they are looking for and providing solutions is something that graduates are expected to address. Graduates are expected to actively develop their capacity and skills to be better analytical, critical thinkers taking their technical skills, negotiation and

teamwork skills and translating their knowledge into action. Being able to solve problems in the context of ambiguity is required in the contemporary workplace.

Sound judgment is also wanted from a work-ready graduate as problems always seem unique and clients want creative and innovative solutions with state-of-the-art knowledge, not pre-packaged solutions applied to different scenarios. Clients want the professional to identify the problem and provide solutions, people who can see new opportunities and anticipate potential problems in the future. Creating new methods and solutions is a key feature of work-readiness, and imagination is central to being able to do this. One of the weaknesses of graduates is considered to be their lack of creativity and imagination.

Identification of key professional work-ready attributes

Selection of the key professional work-ready graduate attributes has been informed by the interviews with professional societies and the DEST framework (ACCI & BCA, 2002). The DEST framework consists of eight key employability skills: communication, teamwork, planning and organising, technology, problem-solving, self-management, life-long learning and initiative and enterprise. The professional societies also highlighted these attributes as well as the importance of professionalism and ethics, global perspectives and the ability to apply knowledge. In discussion with colleagues, information literacy and research were also identified as key attributes, and the application of knowledge was incorporated into a number of other key work-ready attributes.

Our identified key professional work-ready attributes are (in alphabetical order);

1. *Communication*
2. *Ethics and Professionalism*
3. *Global and Local Perspectives*
4. *Information Literacy and Management*
5. *Initiative, Enterprise and Creativity*
6. *Planning and Organising*
7. *Problem Solving and Critical Thinking*
8. *Research*
9. *Self-Management and Life-Long Learning*
10. *Teamwork and Leadership*
11. *Technology Literacy*

For each key professional attribute we are identifying and developing sub-attributes and skills to form a conceptual work-ready matrix. Short - 50 minute - learning activities are now being designed to address these identified work-ready understandings and skills by colleagues, educational designers and the project's UTS partners – the ELSSA academic literacy centre, the Careers Service, and the Library.

To optimise student relevance and motivation to learn there is a separate matrix of contextualised work-ready learning activities for each professional course in the Faculties of IT and Business. So each generic learning activity is made relevant for each professions perspective and workplace. To support easier curriculum integration academics can view and download work-ready learning activity outlines and teaching support resources including lecture and tutorial slides, tutorial and classroom activities, case-studies and relevant readings.

The current status of our generic and contextualized matrix's of work-ready learning activities can be viewed at <wiki.it.uts.edu.au/workready>.

Conclusion

The development of professional attributes in the existing curriculum is by no means a replacement for lengthy work-placements or on-the-job training. Nevertheless through curriculum renewal universities can more systematically support the learning of our graduates' professional attributes.

The Work-Ready Project at UTS aims to better support the development of professional understandings and skills within the curriculum through designing new work-ready subjects, new subject modules, and short work-ready learning activities. These activities are designed to develop our identified key professional attributes within existing courses. There is a separate matrix of contextualized learning activities for each profession in the project to maximize student relevance and motivation.

Significant university curriculum renewal and change is notoriously difficult due to the complexity of interests and perspectives. Academic staff involvement in the process of developing and sharing learning activities and experiences is being actively encouraged as the importance of academic ownership of change in the learning of professional skills has been recognized (Scoufis, 2000; Sharp and Sparrow, 2002). The project is developing different Faculty-based strategies for curriculum integration relevant to local cultures and practices.

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