The Synchronised Development of Academic and Employability Skills and Attributes at University

Rebecca Blaxell[*]   Catherine Moore[†]

[*]Edith Cowan University, r.blaxell@ecu.edu.au

[†]Edith Cowan University

The Synchronised Development of Academic and Employability Skills and Attributes at University

Rebecca Blaxell and Catherine Moore

Abstract

In a competitive, culturally diverse and increasingly internationalised workplace students can no longer assume that possession of a tertiary degree will naturally lead to employment. There has been a shift in the mindset of employers, who now seek to employ graduates with "employability" skills and attributes in addition to traditional expertise within their discipline (DEST, 2002). At first glance this appears to have placed an additional burden on universities in preparing students to be active citizens and engaged leaders, both within their chosen field and broader society. This paper discusses the project we embarked upon to compare the skills and attributes that employers consider most desirable with those traditionally required for academic success. We sought to determine to what degree these two skill sets can co-exist in units of study and found that many employability skills are similar to, and have the same underlying principles as, traditional academic skills. By considering these principles we believe it is possible to design learning experiences that support the development of both sets of skills and to embed such learning experiences in the content and teaching of discipline-specific courses, thus developing employability skills while maintaining academic rigour. This will help students meet the twin goals of obtaining a tertiary degree and maximising their employability potential.

The Synchronised Development of Academic and Employability Skills and Attributes at University

Rebecca Blaxell
Catherine Moore
Centre for Learning and Development

Abstract: In a competitive, culturally diverse and increasingly internationalised workplace students can no longer assume that possession of a tertiary degree will naturally lead to employment. There has been a shift in the mindset of employers, who now seek to employ graduates with "employability" skills and attributes in addition to traditional expertise within their discipline (DEST, 2002). At first glance this appears to have placed an additional burden on universities in preparing students to be active citizens and engaged leaders, both within their chosen field and broader society. This paper discusses the project we embarked upon to compare the skills and attributes that employers consider most desirable with those traditionally required for academic success. We sought to determine to what degree these two skill sets can co-exist in units of study and found that many employability skills are similar to, and have the same underlying principles as, traditional academic skills. By considering these principles we believe it is possible to design learning experiences that support the development of both sets of skills and to embed such learning experiences in the content and teaching of discipline-specific courses, thus developing employability skills while maintaining academic rigour. This will help students meet the twin goals of obtaining a tertiary degree and maximising their employability potential.

Background

One of the primary differences, in terms of community perception, between universities and vocational institutions (such as TAFE) has always been the apparent work-readiness of graduates from vocational institutions. Traditionally, universities have focused on the intellectual development of students within the theoretical framework of an area of study, whereas vocational institutions have looked at the development of specific skills and competencies required for gainful employment. However, there is now an acceptance that it is not sufficient for students to graduate without possessing the skills needed to be functional members of an organisation. This has been well documented in research and is summarised by Knight and Yorke (2002) "Whereas the world of employment has, by and large, been satisfied with the *disciplinary* understanding and skills developed as a consequence of participation in higher education, it has been less happy with graduates' generic attainments".

In Australia the Mayer competencies (1992), provided a list of generic and transferable skills that support success in life, education and work (DEST, 2004). These included seven key competencies:- Communicating ideas and information, Using mathematical ideas and techniques, Working with others and in teams, Solving problems, Planning and organising activities, Collecting, analysing and organising information and Using technology. These seven key competencies were then developed further to create the Graduate Employability Skills Framework. It is this framework that has been used to underpin the work in this paper examining employability skills and the link with academic skills.

ECULTURE

While a university education has been traditionally associated with the development of academic skills, the focus in recent years has broadened to embrace the concept of professional learning. "The need for university graduates to be career and work ready has been well documented. Graduate capability and employability skills feature in business programs in Australia, and universities are increasingly mindful that graduates' transition into professions should be supported by a range of preparatory initiatives in the curriculum." (ALTC, 2011, p. 1). In this paper we will argue that traditional academic skills and employability skills are of equal importance and moreover both deserve a position in the development of curriculum.

If it is recognised that both the development of a student's theoretical knowledge base and his/her capacity to apply this theory in a professional context are of equal importance, then there needs to be a focus on the simultaneous development of both academic skills and employability skills. Moreover, these skill sets should not to be seen as opposing, as they often have an underlying common theme that allows greater connections than may first be apparent. There has been much research on this topic and this research supports the notion that both academic and employability skills can be embedded in the curriculum (Cox & King, 2006).

When designing a curriculum, one element to consider is why students are attending university. Research suggests that the majority of students attend university in an attempt to gain skills that will be seen as valuable by an employer and thereby raise their employability prospects. As Stewart and Knowles (2001) argue, "the reasons for students choosing to continue their formal education are no doubt wide and varied, but common to all must be the expectation that their degree and development during their courses will enhance employability in the future". In addition to this, there must be some recognition that jobs, such as those in the professions, are simply not available to applicants without a degree. Furthermore, there are opportunities for advancement that may not be open to those who do not have a degree. This may be related to the skills required in positions of management such as critical, creative and strategic thinking.

Students arrive at ECU from diverse backgrounds: age, socio-economic, academic attainment, prior employment. It is not possible or wise to assume all students need the same inputs to their learning. "In 2009 approximately 73 per cent of ECU's commencing undergraduates entered Bachelor courses on a basis of admission other than ATAR, up from 62 per cent in 2008" (ECU, 2009). In addition to this, ECU accepts and supports the application of students from culturally and linguistically diverse backgrounds. What then needs to be considered in course design is how to provide opportunities for students (regardless of background) to further develop the academic and employability skills they already possess. This is why there needs to be for students both the explicit teaching of certain skills combined with the opportunity to demonstrate to what degree these skills are being developed by the individual over the course.

To provide the underpinning framework for the discussion, it is first necessary to consider the question, "What are academic skills and attributes?"

Employability Skills and Attributes

Employers require both technical and generic skills. When considering what makes someone more employable than another, employers consider a variety of factors. One of these is the discipline knowledge a person has relevant to the industry, but there are many more factors than this. There is a mixture of skills and personal attributes that makes a person a more desirable employee. In this paper we are referring to those employability skills and attributes that are seen as generically desirable.

According to the DEST report on Employability Skills (2002) the following personal attributes are valued by employers:
- loyalty;
- commitment;
- honesty and integrity;

- enthusiasm;
- reliability;
- personal presentation;
- commonsense;
- positive self-esteem;
- sense of humour;
- balanced attitude to work and home life;
- ability to deal with pressure;
- motivation; and
- adaptability.

These are reflective of an individual's attributes and the development of these can be supported by incorporating greater periods of self reflection in teaching and assisting the student to make stronger links between self and study. These are not "skills" that can be taught in isolation and they require high levels of application, reflection and thinking from both the student (in order to be able to engage with them) and the teacher (in order to be able to create opportunities for teaching them and having the capacity to evaluate them). In addition to this, there must be an element of student and teacher self-efficacy. Without the belief in one's ability to meet the demands of a job, there is little chance that a graduate will be willing to activate these skills.

However, in addition to the above personal attributes are generic skills:

- communication skills that contribute to productive and harmonious relations between employees and customers;
- team work skills that contribute to productive working relationships and outcomes;
- problem-solving skills that contribute to productive outcomes;
- initiative and enterprise skills that contribute to innovative outcomes;
- planning and organising skills that contribute to long-term and short-term strategic planning;
- self-management skills that contribute to employee satisfaction and growth;
- learning skills that contribute to ongoing improvement and expansion in employee and company operations and outcomes; and
- technology skills that contribute to effective execution of tasks.

The generic skills and personal attributes above combine to form the Employability Skills Framework (DEST, 2002).

To become useful to a teacher or students the skills and attributes that are listed above were further broken down by the authors to create more specific examples that can be included under the more generalised heading.

An example of this – Formal communication at a tertiary level (multi-literacy) including:

- Academic writing;
- Effectively using numeracy skills to complete assignments and other tasks;
- Completing oral presentations/ reports for internal or external audiences; and
- Critically reading and engaging with texts.

It is then necessary for course and unit design and for assessment to know what this might look like when considered in terms of teaching and learning activities in classrooms. Ideas were then developed to support staff in knowing how to accurately and efficiently determine whether a student was able to demonstrate these skills.

We would argue that while there should be opportunity for students to engage in authentic assessment and workplace integrated learning (WIL), there are also opportunities in the classroom to support the development of these skills. This is not to suggest that opportunities for WIL should be minimised or marginalised, but that when this is not a viable option, or even when we consider what constitutes good teaching practice, there are opportunities to develop these skills.

Academic Skills and Attributes

There is currently no one set definition of what constitutes the group of skills categorised as "academic skills" in relation to a tertiary environment. There is some slight variation of definition between different universities; however, there are a number of common threads that underpin all academic skills. To generate our list we considered different definitions from a range of universities across Australia and internationally and created a list that we believe captures all the facets required for a student to be successful in an academic setting. These include both the specific attributes a student needed as well as the general skills required. An attribute is any quality a possessed by a person and in this instance refers to the qualities a person needs to be successful at gaining and maintaining employment. A key attribute for example may be "common sense". This is a personal characteristic that is considered desirable and is sought after by employers. Attributes are typically seen as characteristics a person has or does not have, and there is evidence to suggest that these can be developed and promoted through specifically designed teaching and learning experiences. The decision to include both of these aspects (Attributes and Skills?) was driven by the consideration that without both the ability to engage with the university in every sense (communicate with staff and students, successfully complete routine tasks etc.) and to complete academic tasks, ultimately a student would find it difficult to achieve success at university. A student may have a very high level of understanding, but without the motivation to complete assignments, the understanding will never be realised. From a university perspective, if increased student retention is important, then it would be useful to consider both attributes and skills as important in achieving academic success.

Our list evolved into the following:

To be successful at university a student needs to have:

- Formal communication ability at a tertiary level- including ICT skills (multiliteracy);
- Interpersonal skills and teamwork skills, including ability and willingness to engage with diverse cultures;
- Theoretical and practical knowledge and experience of discipline demonstrated by applying discipline specific knowledge;
- Intrapersonal skills, including ability and willingness to align personal vision and goals with the university's vision for its students;
- High level planning and organising skills demonstrated by effective day-to-day and longer term planning; and
- Problem solving, independent and innovative thinking skills.

In developing this list, it became apparent that there was an overlap between these skills and the employability skills and attributes as outlined by DEST (2002) and it also became apparent that these can be embedded into the curriculum.

The process

What emerged as we developed these lists were the links between employability and academic skills and attributes. What became clear was how closely related they are. While the context and specific application may vary, the general skills and attributes required for success in the employment and academic domains are very similar. This supports the idea that development of academic skills and attributes as part of a course can simultaneously develop employability skills and attributes.

For example

•   Analyse a range of communication formats in class and consider suitability for various purposes/audiences. Talk about what needs to change for different purposes, different audiences and different formats.

•   Compare formal reports to a business with multimedia presentations to a live audience or with presentation of information on an interactive website.

We compiled these separate lists into a combined list that could be useful in course and unit desing as well as teaching and learning. It could also be used to review teaching material and to provide support in making claims about good teaching practice

The following table outlines some of our key employability and academic skills and attributes and shows the links between the two.

Employability skills	Academic skills
Formal communication (multiliteracy) including: • Writing to the needs of the audience; • Using numeracy; • Speaking in a public forum; and • Understanding the needs of internal and external customers. • using computer technology appropriately; and • staying familiar with up-to-date equipment, facilities and materials.	Formal communication at a tertiary level (multiliteracy) including: • Academic writing; • Effectively using numeracy skills to complete assignments and other tasks; • Completing oral presentations/ reports for internal or external audiences; and • Critically reading and engaging with texts. • communicate and complete given tasks effectively; and • enhance engagement with university activities.

Employability skills	Academic skills
Interpersonal and teamwork skills, including ability and willingness to engage with diverse cultures by: • communicating respectfully (using voice and body); • listening actively; • empathising; • persuading effectively; and • being assertive; and • establishing and using networks • collaborating with others to achieve team goals; • recognising and adopting roles within teams; • giving and receiving feedback; • coaching and mentoring; and • leading with integrity.	Interpersonal and teamwork skills, including ability and willingness to engage with diverse cultures by: • communicating respectfully (using voice and body); • listening actively; • empathising; • persuading effectively; • establishing and using networks within the university; and • establishing external community and industry networks. • collaborating with others to achieve team goals; • recognising and adopting roles within teams; • giving and receiving feedback; and • committing to a team for the period required to complete the task.
Theoretical and practical knowledge and experience of industry demonstrated by: • recognising and enacting of company specific skills; • gaining experience and participating in work related activities; • having sound knowledge of industry specific content; • understanding business processes-inclusive of aspects such as customer service.	Theoretical and practical knowledge and experience of discipline demonstrated by applying discipline specific knowledge: • in authentic contexts; • for authentic purposes; • in discipline related activities; • for academic assessments; and • while engaging in WIL.

Employability skills	Academic skills
Intrapersonal skills, including ability and willingness to contribute to productive outcomes by: • identifying opportunities; • generating a range of options; • initiating innovative solutions; • translating ideas into action; • adapting to new situations; • maintaining sense of humour and positive self-esteem under pressure; • being open to new ideas and techniques; • evaluating and monitoring own performance; • taking responsibility; • managing own learning; and • aligning work and learning with personal vision and goals.	Intrapersonal skills, including ability and willingness to align university engagement with personal vision and goals by: • identifying opportunities; • generating a range of options; • initiating innovative solutions; • translating ideas into action; • adapting to new situations; • maintaining sense of humour and positive self-esteem under pressure; • being open to new ideas and techniques; • self-assessment; • taking responsibility; and • managing own learning.
High level planning & organising skills demonstrated by: • planning and managing workloads efficiently; • allocating time and resources effectively; and • establishing clear goals and plans of action.	High level planning & organising skills demonstrated by effective day-to-day and longer term: • planning and management of workloads; • allocating of time and resources; and • prioritising tasks according to personal goals.

Employability skills	Academic skills
Problem solving, independent & innovative thinking skills, demonstrated by: • engaging in logical and orderly thinking; • willingly and proactively making decisions; • identifying opportunities not immediately obvious to others; • creating innovative solutions to given problems; and • accurately analysing and synthesising information.	Problem solving, independent & innovative thinking skills, demonstrated by: • conducting and completing research; • engaging in logical and orderly thinking; • willingly and proactively making decisions; • identifying opportunities not immediately obvious to others; • creating innovative solutions to given problems; and • accurately analysing and synthesising information.

Table 1: Employability and Academic Skills

What are the Implications for Students?

The competition for employment for graduating students can be intense. Students need to be able to demonstrate skills in a way that is meaningful to the employer and the industry in order to be successful in gaining employment and furthering their career. This makes students more demanding of universities. The likelihood of a student getting gainful employment is one measure of how successful a university has been and is demonstrated in publications like the Good Universities Guide (ALTC, 2011). If students have a focus on gaining employment upon graduating, they will then be looking for universities that perform strongly in this area. By embedding employability skills, ECU's position as a university that has a focus on the dual goals of academic excellence and graduate employment is enhanced.

This then leads us to consider how students will be able to demonstrate the acquisition and purposeful development of their skills and attributes. One possible platform that could be considered is the use of e-portfolios. The development and maintenance of a high quality e-portfolio would allow a student to showcase the skills that they have developed during their time at ECU. It would also allow students to provide meaningful examples to prospective employers to show how a skill has been demonstrated. This then places the onus for learning and development of the e-portfolio back on to the student. It doesn't allow teaching staff to relinquish responsibility. Teachers would need to consider how they will teach and assess these skills. Purposeful assessment tasks need to be developed that allow students the opportunity to demonstrate generic employability skills. Assessments that are set in an authentic context or have a real world purpose/audience often prove to be the most useful in this regard.

What are the Implications for Teaching Staff?

Those who are involved in the teaching of students or the design of curriculum need to consider how they can best provide opportunities for students to develop of these skills and attributes. There needs to be a recognition and acknowledgement that the both the pursuit of academic excellence and the development of employability skills can align and provide students with the best opportunity to pursue a career. The teaching of these skills and attributes

may require some redesign of current curricula, but this is not to suggest that there are not examples of good practice currently taking place in the university.

One of the first things that any teacher can do in order to best develop these skill and attributes is to examine their current course and determine what skills and attributes they are enabling. Teaching staff can refer to the checklist that has been developed (above). This list will allow staff to undertake a self directed critique of their courses and determine to what degree they are promoting the development of employability skills in students. As this is not always immediately obvious, we have also developed a series of examples that show what the development of this skill or attribute will look like in the classroom/ lecture theatre. These examples will also work for those who are looking at how to better promote these skills and attributes in the curriculum.

In addition to this, there will need to be opportunities for staff to be supported in developing teaching and learning materials that will enable students to develop both sets of academic and employability skills and attributes.

References

ALTC. (2011). Engaging industry: embedding professional learning in the business curriculum.

Cox, S., & King, D. (2006). Skill sets: An approach to embed employability in course design. *Education & Training, 48*(4), 262-262-274. doi:10.1108/00400910610671933

DEST. (2002). Employability skills for the future.

DEST. (2004). Training Packages at Work. Retrieved 30th August, 2011. From http://www.tpatwork.com/ViewArticle.asp?articleid=1310

Knight, P.T. & Yorke, M. (2002) Employability through the curriculum. *Tertiary Education and Management. 8*, 261-276.

Mayer, E. (Chair). (1992). *Report of the Committee to Advise the Australian Education Council and Ministers of Vocational Education, Employment and Training on Employment-Related Key Competencies for Post Compulsory Education and Training,* September 1992, Carlton South, Australian Education Council

Stewart, J., & Knowles, V. (2001). Graduate recruitment: Implications for business and management courses in HE. *Journal of European Industrial Training, 25*(2), 98-98-108. Retrieved from http://0-search.proquest.com.library.ecu.edu.au/docview/215388649?accountid=10675

Wickramasinghe, V. & Perera, L. (2010). Graduates', university lecturers' and employers' perceptions towards employability skills. *Education + Training. 52*(3), 226-244.