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Improving graduate employability by implementing subject benchmarks

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Executive summary

Employability is defined as a set of skills, understandings and personal attributes that graduates should have in order to succeed in their careers. But how can humanities disciplines improve graduate employability even further? The feedback from workshops and interviews undertaken for this report demonstrate that the nature of the university context is critical to whether professional standards can be integrated into undergraduate topics and courses. The most important factors for implementation are:

Enablers

- Pro-active staff members who are willing to drive the program.
- Congruence of the program with the research interests of key staff.
- Broad departmental support for the program.
- Internal university rewards—congruence of the program with university planning strategies or review processes.
- Templates that can be serve as a model.
- Positive student feedback, higher levels of student satisfaction.
- Positive reinforcement from professional bodies.

Barriers

- Existing workloads.
- Lack of broad departmental support for the program.
- Lack of control over the content of key topics.
- Departmental fatigue with managing change.
- Departmental fear of identifying weaknesses in existing offerings, potentially making the department vulnerable to University cutbacks.
- Lack of examples and materials to use as a model.
- A perception that shaping university teaching to meet the market needs of professional organisations may be *infra dig*.
- The implementation of graduate benchmark practices to improve graduate employability can be advanced through maximising the enablers and minimising the barriers listed above.

Recommendations—Institutional Context

- Implementation of the Archaeology curriculum guidelines set out in my (2008) document by Archaeology teaching units around the country lies in the hands of individual departments and higher education institutions.

Recommendations—Academic Team Context

- The identification of a team of staff members who would be keen to drive the implementation of benchmarks. Staff who have won teaching awards or who have research interests in teaching or industry standards are potential leaders in such a program.
- The provision of support to staff working on the program. This support needs to include teaching relief, administrative assistance (which should include support to publish on the program), and promotion criteria that recognise the value of benchmarking to the University as a whole.
- Consensus within a department on the importance of benchmarking is critical for such a program to succeed, as the benchmarks need to be implemented across the full departmental offerings. Such a consensus can only emerge from focussed discussions, and this process needs to take into account potential barriers, such as fatigue with change, high workloads and a fear of identifying weaknesses in existing offerings. The most effective way of achieving consensus would be a dedicated planning day, but this would need support, otherwise staff will see the program as simply increasing their workloads and this will act as a barrier to implementing the program.
- Evaluations of students' satisfaction. In The University of Queensland exemplar the introduction of benchmarking statements into topic and course material increased students' understanding of why the material was shaped in a particular way and this led to greater student satisfaction. That satisfaction is itself a driver in programs such as these.

Recommendations—Disciplinary Connections

- Positive reinforcement from professional bodies is an enabler as this reinforces the value of benchmarking standards.
- The development of close relationships between professional bodies and university departments can lead to a shared vision between educators and practitioners and to students who are better informed of the requirements of their profession. These relationships can be developed both formally, for example through industry participation on review committees or in departmental seminars or informally, through social occasions. See Flinders University Directed Industry-Ready Training (DIRT) program for an exemplar http://www.flinders.edu.au/ehl/Archaeology/professional-development).

List of acronyms used

ALTC Australian Learning and Teaching Council

LTAS Learning and Teaching Academic Standards program of the ALTC

QAA Quality Assurance Agency (UK)

TEQSA Tertiary Education Quality and Standards Agency

Background

Aims: Research questions and answers

Why do Humanities disciplines in Australian higher education need Standards? How can they relate to employability profiles? This program built upon the findings of Beck's previous ALTC Priority Project, 'Benchmarking Archaeology Degrees in Australian Universities' 2007-2008 (Beck, et al. 2008). The purpose of my activities is to address three of the significant future directions in improving graduate employability identified by participants in the Benchmarking Archaeology Project. They are:

A) discuss development of joint-use employability profiles

B) with colleagues, explore the development of collaborative teaching arrangements (following Small Disciplines Carrick Institute Workshop UNE (Tynan, et al. 2007); and

C) encourage other discipline areas in Humanities and Social Sciences to take up the benchmarking process, because it has been shown in my original ALTC project to be a successful method of improving teaching and learning (Beck, et al. 2008).

Standards and employability profiles are used for a range of assessments of teaching and learning. To obtain the benefits of benchmarks educators need to move away from regulatory uses towards reflexive practice uses.

My activities with standards encouraged adopting a bottom up approach to working with Benchmarks for more self-reflexivity and strengthen disciplinary identities and understandings. Employability is defined as a set of skills, understandings and personal attributes that graduates should have in order to succeed in their careers.

The key policy audiences for this activity are: staff in archaeology and other humanities and social science teaching units of universities; relevant university Pro Vice Chancellors concerned with teaching and learning policies; the five professional archaeology associations in Australia. The key practice audiences for this activity are: students and teachers of benchmarked degrees; employers of archaeology graduates; practising archaeologists in Australia.

Overall Research Design: What use are Australian Archaeology Standards?

In order to explain the particular history of archaeology subject benchmarks in Australia I ask the question: what can humanities disciplines do to make the best use of disciplinary standards, moving away from regulation and accountability towards developing reflexive practice in teaching and disciplinary development? Archaeology has a longer history of subject benchmarking than other humanities disciplines in Australia so it serves as a useful model of best practice. By reflecting on past and present initiatives (pre and post 2009), I hope to outline the benefits and issues resulting from the construction of subject

benchmarks for archaeology and the implications more generally for other disciplines in the Australian context. The best outcome would be for disciplines to become more self-reflexive and strengthen their disciplinary identities and understandings. The danger however is that benchmarking becomes just another tick box compliance issue.

Current Dynamics and history of Standards

Archaeology has long been debated how skilled graduates really are and the transferability of education to employment. Higher education has a long history of standards work, but there are clear benefits and negative outcomes from previous history. So the reason the work was undertaken was to try and emphasise the positive outcomes. The current dynamic includes market pressures for distinctiveness between institutions leading to diversification of curricula, the issues around the Australian Qualifications framework, and ongoing national concerns about standards (Tertiary Education Quality and Standards Agency (TEQSA), Learning and Teaching Academic Standards (LTAS) project, Bradley review and so on). Given the current Australian focus on defining disciplinary 'Standards' for learning outcomes of Undergraduate degrees: What can humanities disciplines do to extend these away from regulation and accountability and towards developing reflexive practice in teaching and development of curriculum?

Subject benchmarking in Australia and the United Kingdom (UK): making the best use of disciplinary standards

Academic learning standards describe "what a learner is expected to know, understand and/or be able to do at the end of a learning experience" (CEDEFOP 2008). Learning standards, which are also known as "learning outcomes" and "subject benchmarks", are primarily designed to generate improvements in student learning. There is a long-standing international movement towards the development of academic standards for university education that has its origins in the 1960s (Harris 2009; OECD 2006; Spellings 2006). Standards have been developed in recent years for disciplinary degree programmes within nations (for Australia: ALTC 2010; Beck 2008; for UK: QAA 2007), within and across regional economic communities (the Tuning Process in Europe) and internationally (OECD's Assessment of Higher Education Learning Outcomes (AHELO) project). In this paper we examine the similarities and differences between archaeology standards and contexts in which they were created. We examine the questions of why and how archaeology learning outcome standards were developed in the UK and Australia and what their future is likely to be. How will standards affect learning and teaching in archaeology degrees in the UK and Australia in the future? In future, both Australia and UK archaeology degrees will change, meaning that a revision of benchmarks is likely.

The UK and Australia have followed similar paths to creation of archaeology standards, and both have emphasised the breadth and usefulness of the skills students learn. We argue that the disciplinary standards for archaeology have been remarkably successful at gaining the broad support of the academic community and in communicating a broad vision of the value of an archaeology degree.

There has been a long debate about the standards of higher education, how skilled graduates really are, and the transferability of higher education learning to archaeological employment. The UK and Australian benchmark standards implicitly addressed this in their formulation, but without clarity about how standards are implemented these concerns remain. Changes in higher education in both countries from 2012 will highlight the standards again.

The Need for Standards

Since the 1960s, there has been an explicit understanding that the future, international competitiveness of nations will be dependent on having a highly educated and well-skilled population, and yet commentators have continuously questioned whether the current educational system provides the knowledge and skills to support nations. Higher education has been central to discussions of the knowledge economy (see comments in the Committee of Higher Education 1963; National Committee of Inquiry in Higher Education 1997; the Leitch Review of Skills 2006; Maasen and Stensaker 2011), and likewise it has been subject to regular comments about the quality of (or lack of) skills and knowledge with which students graduate. The major response to these concerns in both the UK (from 2000) and, more recently, Australia (from 2008) has been to develop a system of standards that set out the understanding, and skills acquired by graduates at various levels of higher education in both general and disciplinary terms.

In Australia, performance direction and standards assessment for universities took the form of the establishment in 2000 of the Australian Universities Quality Agency (AUQA) as an independent, not-for-profit national agency that promoted, audited and reported on quality assurance in Australian Higher Education, including learning and teaching (AUQA 2011 www.auqa.edu.au/aboutauqa/mission/). AUQA was the first institution to externally "assess" Australian universities, which had been totally self-regulating prior to this. It will be replaced in January 2012 with a new quality assurance body, TEQSA, which will have a more specific brief to define and assess teaching and learning standards than AUQA. The regulation of learning objectives in Australia has not yet developed to the subject level, but currently remains only at the level of the qualification, although there are current moves towards changing this (ALTC 2010). The Australian Qualifications Framework (AQF) is similar to the UK and the European Qualifications Framework, consisting of 10 levels (6-10 are higher education levels) and describing the expected learning outcomes for graduates from each qualification.

In both countries, it was intended that whilst such an overarching system of standards would provide a structure and framework of learning outcomes for higher education at a national level, it would still allow each higher education institution to construct its own unique degree programmes that might be attractive within a competitive market place. In the following sections we investigate the history and development of national higher

education contexts in which archaeology standards were introduced, and detail the ways in which learning standards are characterised at various levels and contexts. We compare learning "standards" in Australian archaeology with the UK experience in order to understand their future potential for influencing archaeology learning and teaching at universities in both countries.

History of Standards in Universities

Archaeology standards in the UK and Australia were developed within a common OECD university history of (1) increased student numbers; (2) recognition that universities are part of the "knowledge economy"; (3) the transformation of universities from social institutions into an industry of higher education; and, (4) increased modularization of degree programs (Maassen and Stensaker 2011; Voegtle *et al.* 2011). The regulation of performance is subject to increasing state influence, in both the UK and Australia. These similarities, as well as similar historical links to the history and classics disciplines led Australian archaeologists to use the UK benchmarks as a model for developing their own benchmark set (Beck and Clarke 2008).

The Wider Context of Higher Education

Higher education, in both the European and Australian contexts, can be seen to have three main areas of reform and development since the 1960s which have impacted on quality assurance and standards, including the encouragement and development of learning outcomes. Some have claimed both in Australia and the UK that higher education is currently in the process of a major transformation from a social institution into an industry. For instance, a European university "is regarded as (politically) more important, but at the same time less special. It should no longer be treated on the basis of what it *is,* i.e. the basis of it specific institutional characteristics, but what it *does*, ie. how it performs in contributing to making Europe the most dynamic knowledge economy in the world." (Maassen and Stensaker 2011:766). This fundamental change in universities has occurred in three areas which have affected standards development: (1) "massification" of higher education; (2) research and teaching links to the national economy; and, (3) the role of "innovation" in knowledge transfer and use.

Firstly, the increase in student numbers led to increased attention to public funding of higher education and concerns about value for money and efficiency. There has been an extraordinary expansion in student numbers in higher education and the increasing number of universities they attend. In the UK, the number of students taking a first degree has increased from 25,000 in 1902, to 1.9 million in 2010, with the largest increase happening since the early 1960s when there were just 216,000 students at university. The rate of participation in higher education in the UK has increased from just 8% in the early 1960s (of whom about half were in universities) to approximately 45% in 2010 (with the majority now

taught in universities). A similar expansion happened around the same time as Australia. There has been a doubling of Australian higher education students from 1984 to 2001, with 813,896 students enrolled in 2009 (DEEWR 2010), and very similar levels of participation. In 2006 in both the UK and Australia, 29% of 25-34 year olds had achieved Bachelor level qualifications or above (Bradley 2008:18). Similarly, there has been a modularisation of degree programmes from the early 1990s. The introduction of discrete units of study - modules, each bearing credit, enabled students to transfer courses more easily, and to move between higher education institutions on the basis of having completed a set proportion of their degree. However, these changes also led to a concern that "standards" were apparently falling (Beck and Balme 2005) as well as funding issues, such as the introduction of direct student contributions to university costs.

The second area, over the last 20 years, has been the explicit recognition that higher education was a part of the "knowledge-based" economy, and this led to new forms of state influence on higher education and new interest in steering the performance of universities and standards of degree outcomes. For example, the focus on standards and regulation bodies which developed in the 1990s (and is described above) is driven by the idea that universities should act as knowledge generators and innovators (rather than as social institutions), and therefore needed new governance, organisation and management structures. This has led to higher education governance developing "hybrid steering approaches with multi-actor, multi-level governance frameworks emerging" (Maassen & Stensaker 2011:760).

The benchmark statements for archaeology in both the UK and Australia follow essentially the same form. They begin with similar statements about the nature, history and importance of archaeology, and they both define the discipline as the study of the human past through the study of the material remains left behind. Likewise, the threshold statements of knowledge and skills are remarkably similar across both the UK and the Australian benchmarks, but there are slight differences in wording that reflect the specific geographical context and the contemporary concerns of the two discipline communities.

For example, the Australian benchmark points to the role of archaeology as the primary means for understanding the earliest communities in Australasia prior to the arrival of European colonists. There is no such stress on the understanding of Indigenous communities in the UK benchmark. In the UK statement there is a long discussion of the nature and place of archaeology as an academic study in higher education. Archaeology, it is noted, sits within four contexts: a social context - emphasising the nature of archaeology as a contemporary narrative practice; a professional and ethical context - reflecting the fact that there was a professional archaeological sector as well as a public community to whom there were appropriate ethical standards of behaviour; a theoretical context - reflecting the long history of archaeology's engagement with theoretical developments across a range of disciplines;

and finally a scientific context - reflecting the impact and benefit of scientific techniques to the study of archaeology.

This almost certainly reflects a concern in the UK that archaeology, which is not generally available as a subject of study below higher education, should not be misunderstood as the practical activity of excavation (as usually portrayed in the popular media such as 'Time Team') but rather as a broad ranging humanities subject. It also offered the potential for considerable diversity in provision (a "threshold statement" of the nature of UK higher education) with departments choosing to position their degree programmes "at different points within a triangle drawn between the complementary archaeologies of the humanities, sciences and professional practice" (QAA 2000:5). In a similar fashion, much greater emphasis is given in the UK benchmark to the broad range of employment opportunities offered by a degree in archaeology, further reinforced by the statement that "archaeology at HE level firmly aligns itself with the liberal view of education and learning, whilst recognising the practical application of the subject's knowledge base and skills" (QAA 2000:2), whereas the Australian benchmark describes the future employability of archaeology graduates within the cultural heritage sector with just brief mention of the general employability of graduates. Of particular interest here, is the fact that the descriptions of the generic skills acquired by the end of a degree in archaeology in the UK standards are almost the same, in number and word, as the descriptions of the subject specific skills: they just happen to lose the words "archaeology" or "archaeological".

Both standards documents were also created within a broader political context for the discipline of archaeology in their respective university systems. For example, it has been noted by a member of the first benchmarking committee in the UK (Professor Matthew Johnson, personal communication, 2000) that the document was written with the implicit intention that it should support archaeology departments in their negotiations for funding within universities. So, the emphasis on the practical and scientific aspects of archaeology was written to support claims funding for the provision and/or the maintenance of laboratories and of fieldwork training for which archaeology graduates in the UK (except Scotland) receive a higher level of government tuition grant than most of the other arts and humanities disciplines. Some of the subject specific standards statements were also written with the understanding that they could easily be adopted into all contemporary provision. For example, two of these standards state that graduates will have acquired a knowledge of (i) selected archaeological areas, or of (ii) selected chronological periods, allowing for such areas or periods to be defined in a local way. The wording of these standards identifies the central cognitive skills of critical evaluation that are key to the general understanding of a Bachelor degree, and yet the lack of subject specificity ensures that they do not disadvantage institutions with a smaller staff base or range of expertise upon which to draw. The Australian benchmark statement reveals similar supportive undertones; it too stresses the scientific side, and this time explicitly notes that this is to aid the call to secure the

necessary extra funding for such scientific teaching.

The full text of these disciplinary standards can be found online (ALTC 2008; QAA 2007) so there is no need to go through the list of standards in detail. Box 2 sets out a few exemplar standards and gives some example of the similarities and slight differences between the UK and Australian benchmark statements.

Where the UK and the Australian standards do differ significantly, however, is in the fact that standards are defined at two levels in the UK Honours benchmark documents: "threshold" and "typical"[1]. Almost all of the UK benchmark statements set out standards at both threshold and typical levels, with a few statements even including standard descriptors for an excellent level of achievement (see Jackson 2002: Appendix1). "Threshold" level standards define, as their name indicates, the minimum level of achievement in knowledge and skills that every student who has been awarded an Honours degree in archaeology should have achieved at graduation no matter what the final degree class awarded. "Typical" level standards are aimed higher; they describe the knowledge and skills that should be achieved by a student who has graduated with a good degree. In the benchmark for archaeology, the "typical" level was defined explicitly by the expert community as an upper second class or a first class degree (awarded to students who have graduated with an average mark in their modules of 60% or greater).

Establishing Disciplinary Standards

In Australia, the creation of any disciplinary benchmark standards is a reasonably recent and very much ongoing process (ALTC 2010). One attempt at "demonstration" discipline standards was undertaken by the Discipline Scholars of the ALTC in 2009-10 (ALTC 2010). The brief stated that:

- Academic standards should be expressed as **assessable** learning outcomes.
- Input and process (e.g., lab hours) may support, but are not substitutes for, learning **outcomes**.
- Threshold Learning Outcomes (TLOs) will ultimately be defined by each discipline community for **each level** of AQF qualification (e.g., bachelors, masters, doctorate)
- TLOs must be comparable with appropriate **international** standards (e.g. QAA, Tuning).
- Should take account of **pre-existing professional accreditation standards**, where relevant.

[1] Some benchmarks (e.g. "Social Work") define standards at three levels, but "threshold" and "typical" are present in almost all.

The six initial discipline groups were: arts, social sciences and humanities (history & geography were chosen); business, management and economics (accounting was chosen); creative and performing arts; engineering and ICT; health, medicine, and veterinary science; and law. Despite the same brief, (and with a limit of 6-8 outcomes) as with the UK benchmarks there was variation in the length and specificity of learning outcomes defined. For instance the history standard has the following:

> Upon completion of a bachelor degree with a major in History, graduates will be able to:
>
> 1. Demonstrate an understanding of at least one period or culture of the past.
> 2. Demonstrate an understanding of a variety of conceptual approaches tointerpreting the past.
> 3. Show how History and historians shape the present and the future….

These TLOs may be achieved through a combination of individual and collaborative work. (ALTC Standards History 2010)

The threshold learning outcomes for Engineering and ICT state:

> Engineering and ICT practice focuses on problem-solving and design, whereby artefacts are conceived, created, modified, maintained and retired (lifecycle assessment). Graduates must have capabilities to apply theory and norms of practice to efficient, effective and sustainable problem solution. Apply *problem solving, design and decision-making methodologies* to develop components, systems and/ or processes to meet specified requirements, including *innovative approaches* to synthesise alternative solutions, concepts and procedures, while demonstrating *information skills* and *research methods.* (ATLC Standards Engineering and ICT 2011)

For example, the benchmark for accountancy was four pages in length with six statements making reference to the knowledge or understanding that will be achieved by graduates and eight statements about skills. The economics benchmark was five pages in length but with mixed and general statements that lack sufficient specificity to permit their assessment. The engineering document was 28 pages in length with 10 statements about knowledge and understanding and 22 statements about skills. The document for social work was just 10 pages in length but with 30 statements about knowledge and understanding, and 50 statements about skills. The benchmark for archaeology was 10 pages in length with 15 statements about knowledge and understanding and 20 statements about skills (Jackson 2002). There is a similar issue about the length and complexity of Australian disciplinary standards where only 6-8 threshold learning outcomes were required in the Brief to Discipline Scholars (Hay 2011), although the final standards documents varied from 10 pages for engineering and ICT to 24 pages for law.

In terms of curriculum content, many benchmarks set out possible topics or themes embedded in their knowledge statements, whilst the statements for computing and that for social work sets out a "comprehensive exposition of knowledge areas". Most of these subject benchmark statements specify both the "threshold" standards, as well as the "typical" standards attained by graduates in their subjects (Yorke 2002: Figure 1). The statements for engineering, general business and management, and law set out statements at the level of "threshold", "typical" and "excellent", whilst the social work statement describes attainment at "threshold" and "excellent" levels.

A detailed analysis by Mantz Yorke (2002: Figure 2) of the performance criteria published in the benchmark statements shows tremendous variation amongst the first benchmark statements in terms of the skills in relation to the skills (defined in both categories and integrative skills), the professional and technical skills, the interpersonal, the personal, and finally, the personal/technical skills. As might be expected, the extent to which the professional and technical skills are specified in detail varied according to the vocational nature of the degree programmes.

Appraising each of the benchmark statements from the perspective of a non-specialist in terms of their level of challenge in application to the curriculum and to aspects of teaching, learning and assessment, Norman Jackson (2002, Appendix 1) estimated that the discipline community for architecture, and for geography would face a "significant challenge to demonstrate that the curriculum and assessment meet most of the expectations" of the statement. By contrast, the discipline communities of accountancy, classics and ancient history, education and philosophy would find it "likely to be easy to demonstrate that the curriculum and assessment meet the expectations" of the statement.

In the broader context of the other benchmark statements, the expert committee for archaeology has defined a set of standards that, like the discipline itself, sit midway between the "classically non-vocational" humanities disciplines like English and history and the clearly vocational disciplines like social work.

Standards for archaeology have not only been written by the academic community, and so it is possible to compare the standards of the academic discipline community with those suggested by the professional community. In the UK, a provocative standards-based response to the original subject benchmark written from the perspective of a professional archaeologist was published soon after the first benchmark statement (Bishop 2001). This was followed up by a project to define a set of standards in professional archaeological practice (Carter and Robertson 2002) has led to the publication of a set of National Occupational Standards in Archaeological Practice (TORC 2011), now aligned to two National Vocational Qualifications. These standards are quite different to the academic benchmarks in both their structure and detail. Similarly, there is interest in vocational archaeology

standards in Australia within the Technical and Further Education sector, at levels below an undergraduate degree, particularly in light of recent legislative changes to Indigenous heritage conservation (M.Maitri and C. Pavlides, pers. comm.). However, we will not specifically deal with these standards here.

The future of benchmark standards

In order to ensure that there is disciplinary level engagement with the development of benchmarks, it is necessary for learners, teachers and professionals to understand archaeology standards and their goals because governments are becoming increasingly involved in the review of university learning outcomes in all OECD countries, including the UK and Australia, and such standards will be an important part of this review process. With similar histories of reform in universities, we also argue that it is in the interests of archaeology as an international discipline, to ensure that all work to similar agreed standards uses similar evidence to show that standards have been met. It is also useful to share experiences about ways of compiling and implementing learning standards, so that past mistakes can be learnt from.

In the UK, the discipline standards have already been introduced across the undergraduate curriculum through the program specification documentation, and the benchmarks have also been through their first cycle of revision. The long-term future of discipline-based standards is difficult to predict, particularly for disciplines in the humanities, arts and social sciences. This is due to a number of forthcoming major changes in the higher education system that will impact of discipline standards in seemingly quite different ways.

Until now, there is no process of national evaluation to determine whether discipline standards have been attained by all graduates. At an institutional and program level, this duty falls to external examiners who are employed by, and report confidentially to, institutions. From 2011, however, there will be changes to the QAA's institutional audit process that will require a greater emphasis on proof of the achievement of the benchmark standards by graduates. These changes are in response to renewed concerns about the standard of graduate attainment within and between institutions (see HCIUSSC 2009; QAA 2009). They will ideally encourage departments and the wider disciplinary community, from which external examiners are drawn, to address the assessment of standards more clearly than has been the case so far. Specifically the discipline community will need to determine what constitutes appropriate evidence for evaluating the attainment of its standards, and how this evidence should be measured if institutional audits are not to cause significant difficulty. This development should only enhance the use and development of discipline-based standards in archaeology.

On the other hand, new funding arrangements in UK higher education starting in 2012 may significantly change the nature of disciplinary provision in institutions with impact upon the associated discipline standards. From 2012, students in UK higher education will be required to repay significantly larger government-sourced loans for their degree level tuition. For the majority of students it seems likely that they will repay loans for fees calculated at £9000 per annum (nearly three times higher than at present). Furthermore, in this new funding regime universities will receive no financial support from government for the tuition of students taking degrees in the arts, humanities and social sciences. In these circumstances, it can be predicted that students will choose both the institution at which they study, and the discipline(s) of their degree program with their future employability prospects firmly in mind. It is very possible that students will be cautious about choosing to study subjects such as archaeology whose employment prospects are hard to evaluate (Sinclair 2010) and this may lead to a significant drop in income coming into these discipline areas within institutions. From an institutional perspective, concerns over future income especially in the areas not financially supported by government, will encourage managers to reduce the costs of teaching delivery through staff reduction or the gathering together of diverse smaller degrees programs into larger joint degrees such as a Bachelor in Arts or Humanities. In such degree programs in which students take a broad range of arts or humanities courses at the beginning and only later specialize in single disciplines towards the end of the degree program, if at all. In these circumstances, the relevance or applicability of the individual subject benchmark statements to graduate attainment will be much more open to local institutional choice. For the discipline of archaeology in the UK, our one crumb of comfort might prove to be the fact that most degree programs in this discipline are taught in the high-prestige, research-intensive universities that are likely to retain their attraction to students in the longer-term.

In Australia there are specific immediate developments that will affect the development of archaeology learning and teaching standards. The most important one is the introduction of the Tertiary Education Qualification Standards Agency in 2012. A recently released discussion paper (TESQA 2011) has proposed that there will be National Teaching Standards and National Learning Standards defined and assessed. “It is about institutions checking how their courses, their teaching and their students” learning measure up against agreed national standards” (TESQA 2011:18). The process will probably include student survey data, common test instruments for learning outcomes, and some assessment of entry standards. There will also be an Expert Review of Learning Standards, which will focus on assessment and grading and which may include direct review of students’ work and the marking of student work. “For the purpose of national standards it is also appropriate for external review to emphasise threshold-level attainment, to examine the minimum standards for a pass, and to reference these to the AQF, and the national teaching and learning standards statements, including any relevant, agreed discipline-specific learning outcomes statements’ (TESQA 2011:20). The message here is that there will be continuing focus on standards,

although the role of discipline-specific standards is less central than in the UK, it seems clear that a precautionary approach would be to maintain the currency of our existing standards. It will also be necessary to differentiate the levels of achievement for the range of AQF qualifications offered by universities in Australia, including undergraduate Diplomas, 3 year Degrees and Masters coursework degrees, not just the 4 year Honours program which the Australian benchmarks currently define. As assessment practices are also a focus, there needs to be attention paid to methods of assessing benchmarks used in archaeology learning and teaching at the unit and award level. "Capstone" units may need to be introduced for majors for this purpose, similar perhaps to the thesis components of the BA (Honours) degrees. Discipline discussions about these issues would be very useful.

There will be similarities here with the UK future such as the broadening of degree scope (a 3 year degree at an Australian university typically contains only 33% archaeology units), and the looming tensions between education and research concentration forcing a sharpening of the "race for prestige" rather than improving teaching quality between institutions. Unlike the UK the relationships with industry and standards of vocational training will continue to be an issue, especially in regard to employment in the booming Australian mining industry. In Australia there will be further increase in student numbers as government pressure to educate a higher proportion of the population increases, and inducements for enrolment of lower socio-economic groups in higher education are also increased (DEEWR 2010).

Current trends in university education in Australia emphasise the construction of degree 'standards'. This is a trend which can be seen in many other higher education systems around the world, including of course the United Kingdom. The focus here is on 'subject benchmark standards' or a list of learning outcomes for graduates which are specific to one discipline.

This project arose from professionally relevant changes in archaeology here and overseas, also related to History and Geography (eg. National Vocational Guidelines) where the relevance of 'real world' was stressed.

Overall trends

There are a number of current dynamics in higher education in Australia which are relevant to the standards question. Firstly over time there have been market pressures for the higher education sector to diversify curricula between institutions, so that for example some Australian institutions (38 universities in total) might emphasise work-integrated learning, while others research intensity or flexible learning. This leads to some anxiety about the outcomes for graduates overall. The next issue is that of the Australian qualifications framework which is a document defining the differences between levels of higher education for example, an undergraduate bachelors' degree versus a PhD versus a Diploma. This is currently actively under review, and a draft has been prepared. Disciplines will have to take

these into account in designing subject benchmarks.

Together with these initiatives is a major government concern with standards arising out of wide-ranging review of Australian higher education (the Bradley report) and the consequent setting up of a new independent quality assurance body (TEQSA) tertiary education quality and standards authority) to replace the existing body. The body was operative in 2011. Approaches to standard setting and assessment are undergoing similar processes in other parts of the world such as the tuning project in Europe and South America. Similar to these processes is the focus on learning outcomes (as opposed to inputs or other quality indicators) and assessing the level of performance.

Conceptual framework for Australia

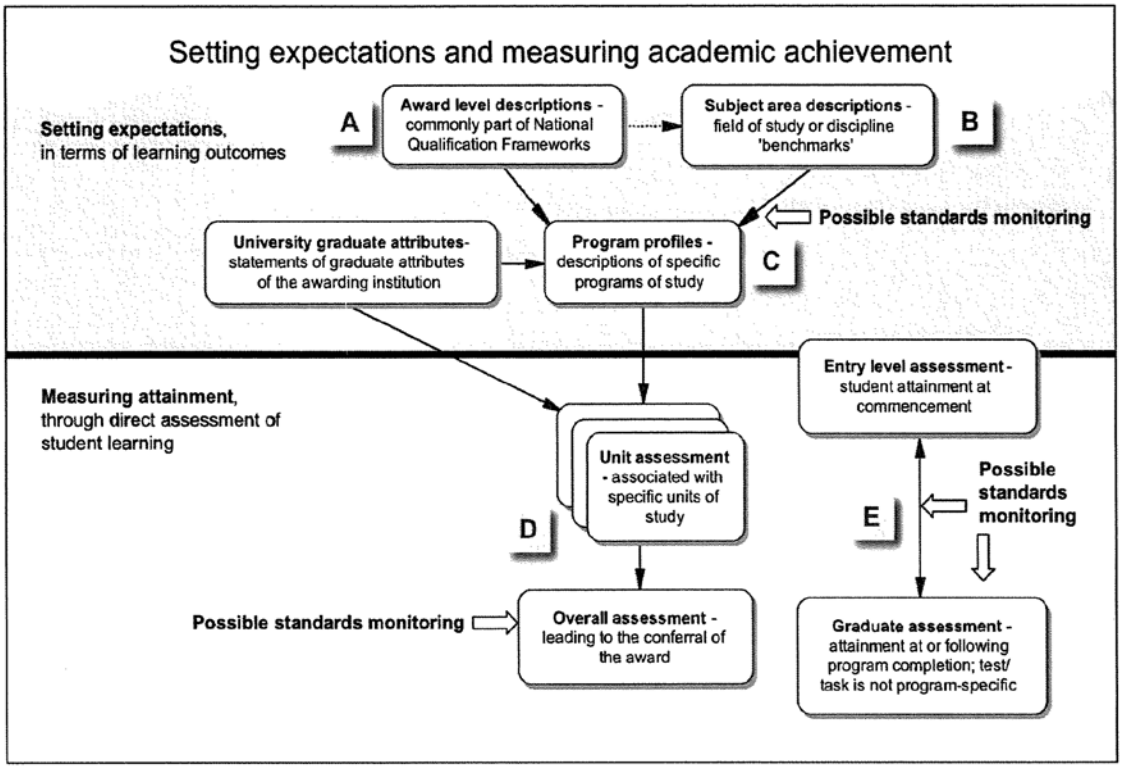

figure 1: Higher education academic expectations and achievements (Harris 2009).

This figure (Figure 1) demonstrates the two domains where learning outcomes can be set and measured, and possible points where they may be assessed or monitored. It is not clear yet how or where the monitoring by universities and TEQSA will occur.

In the 'expectations' frame are the current Australian learning outcomes characteristics. The project is a government funded initiative to develop model disciplinary learning outcomes in 13 subject areas by the end of 2010. The **LTAS project.** History and geography are the demonstration disciplines for humanities and social sciences. In the attainment frame are possibilities for how student learning may be measured.

Standards development in archaeology in Australia has undergone two major phases of development, funded in part by the Australian teaching and learning council: before 2009 and the LTAS project and afterwards. Looking at the first phase since 2003, commentary was made such as: ‘changes over the last few years within universities have led some to suggest that archaeology standards have fallen and that Australian honours graduates are not necessarily competent professionals (Colley 2004)’. This contention is part of a long running debate in Australia, as outlined some time ago in, since the 1980s. (for example, Frankel (1980) and McBryde (1980)). Beginning with a joint forum of academics and professionals in Redfern in 2003, there have been a number of successful educational initiatives in the discipline in Australia seeking to address perceived shortcomings in archaeology programs. These have included the development of a register of work experience partners (Ulm et al. 2005), the formation of a national committee, a sub-committee of Australian archaeological Association (Australian National Committee for Archaeology Teaching & Learning [ancatl]), to focus on archaeology teaching and learning issues and the 2007-2008 benchmarking project. This project, 'benchmarking archaeology degrees in Australian universities', funded by the Australian Learning and Teaching Council, is described in detail in Beck and Clarke (2008).

In brief, however, the project focussed on the articulation of commonly agreed subject benchmarks for Australian archaeology honours degrees, recognising that degree's status as the qualification commonly accepted as an entry level by professional bodies such as the Australian association of consulting archaeologists and by state government heritage authorities (Colley 2004). In the broader institutional context too, there was need to reconcile the tension implicit in criticisms of the quality of archaeology graduates' knowledge and skills with the role accorded to honours degrees in general by the Australian qualifications framework review (Australian Qualifications Advisory Board 2000:12) which noted that the honours degree ‘in its emphasis on a capacity for independent research and project work, is increasingly valued as high-quality vocational preparation as well as preparation for postgraduate research’. It is worth noting here that honours degrees in Australia are structured differently to those in the UK, being a three years plus one model. The final year is a sustained research project with advanced coursework. However, most importantly these initiatives were not driven by any government pressures but internally from the discipline itself.

The expected benefits of this process were twofold- both inside and outside the discipline. The process was a two-year research and development project to focus on negotiating a list of achievement standards and broad learning outcomes for Australian honours graduates, as a partial groundwork for changing some of the negative perceptions that had been reported in recent years. In this way we sought to benefit the archaeological community by making explicit for the first time the outcomes of Australian archaeology degrees. Another funded Fellowship in 2009-11 on implementing the Benchmarks (including other disciplines) has

been taken over to some extent by other developments and Government initiatives, for example, the set up LTAS learning and teaching academic standards project. The LTAS project will support these ends by setting out expectations about threshold standards for degrees in a range of subject areas. These standards will describe what gives a discipline its coherence and identity, and define the skills, knowledge and other attributes that can be expected of a graduate in that discipline' (Hay 2010 draft standards consultation paper). It is unclear how these will actually be used but it is likely to be used to monitor standards in some way. How will this be tied to funding? Used for ranking? (not yet a feature of the Australian scene but note initiatives with school rankings this year, universities to follow).

Higher education in Australia and elsewhere has four main areas of reform and development since the 1960s which have impacted on quality assurance and standards, including the encouragement and development of learning outcomes. These are: increase in student numbers, development of 'knowledge economy', higher education industry and modularisation of degrees.

Regulation of universities is subject to increasing state influence in Australia and elsewhere. So it is inevitable that humanities degrees will change making future reviews of benchmarks inevitable. Understanding and engaging with humanities standards and their goals is necessary for learners, teachers and professionals who make up the disciplinary community.

Evaluation

Evaluation Plan

The evaluation of this Fellowship was conducted throughout the program so as to improve processes and ensure that the outcomes were reached. The role of the lead external evaluator in the program was to assist in developing the evaluation plan, and to act as a "critical friend" that provided advice on the progress of the activities. The evaluation plan was designed so that survey data was acquired cumulatively, through participation in workshops, and augmented by in-depth interviews with selected workshop participants at the conclusion of the program.

Evaluation Criteria

- To what extent have the activity aims been achieved?
- What tools and strategies are the most effective for supporting the standards building process for graduate benchmarks in Humanities and Social Sciences?
- How can good practice strategies be appropriately applied to collaborative teaching of archaeology honours degrees?

Key Questions

Key questions that were assessed as part of the evaluation included the following:

- What processes were planned, and what were actually put in place for the activity?
- Were there any variations from the processes that were initially proposed, and if so, why?
- What were the short-term outcomes of the activity (those produced within the activity timeframe)?
- To what extent have the intended outcomes been achieved?
- What unintended benefits accrued from the activity?
- What has been the impact of the dissemination strategy?
- What factors helped and hindered in the achievement of the outcomes?
- What lessons have been learned from this activity, and how might these be of assistance to other institutions, researchers and practitioners interested in implementing graduate benchmark practices to support/enhance teaching and learning of students?
- How best can other higher education institutions be encouraged to take up the outcomes generated by the activity?

Evaluator Biography

Professor Claire Smith, the lead external evaluator for this program, has written sections of this report, primarily the evaluation sections. Smith is a Professor of archaeology at Flinders University, and President of the World Archaeological Congress. One of her main research areas is teaching archaeology in higher education settings and, together with Heather Burke, she has published archaeology *to Delight and Instruct: Active Learning in the University Classroom* (Burke and Smith 2007). Smith and Burke received a National Team Teaching Award in 2006 from the Carrick Institute.

Methods

To explore the manner in which academics have used the Archaeology Benchmark document in regard to employability, the following general uses were suggested by earlier participants:

1) For setting expectations of learning outcomes:

- Embedding benchmarks in units/subjects, including mapping benchmarks across different levels (e.g. 100 versus 300)
- Embedding benchmarks in overall course structures (eg. archaeology majors)
- Professionalisation/accreditation standards

Carried out interviews with previous participants

2) For measuring attainment of student learning:

- Cross-institutional moderation of Honours or other courses
- Development of joint-use educational resources (e.g. A student work experience portfolio, National Archaeology Field School)

3) Other outcomes improving teaching and learning capacity:

- Collaborative teaching
- Develop Student employability profiles
- Collaborative educational research and/or development projects
- Initiating general discussions about archaeology learning and teaching with colleagues inside and outside the institution

We decided to focus on the first set of outcomes for this fellowship.

Data Collection and Analysis

The process was carried out through the qualitative analysis of observations and reflections in the form of:

Group Workshops

Group sessions at face-to-face activity workshop for Humanities colleagues were held as follows:

- Bateman's Bay, New South Wales. 10th December 2010.
- Sydney, New South Wales. 15th December 2010.
- Armidale, New South Wales. 17th December 2010.
- Brisbane, Queensland. 20th December 2010.
- Group sessions at face-to-face activity workshops.

Associate Professor Beck and Dr Anthony Sinclair, an archaeologist who was Head of the Higher Education Academy Subject Centre for History, Classics and Archaeology at the University of Liverpool, presented the group discussions collaboratively. In some centres (Brisbane) other academics were involved also. The group discussions were conducted in an iterative manner, with input from one feeding into those that followed. The disciplines that were included in the workshops included education, anthropology, sociology and theology.

Workshops sample program

The workshops were entitled "Improving graduate employability in Humanities disciplines by implementing subject Benchmarks"

Session 1 9:00 – 11:00 am

- Intro' to the Subject Benchmarks Standards in the UK (AS)
- Enhancing Graduate Employability through Standards (WB)
- Profiling Australian Archaeology (the 2010 survey) (SU)

- Implementing Archaeology Benchmarks at UQ (AF)

Session 2 11:15 am – 12:45 pm

- Using Benchmarks to develop assessment (eg. First year exam questions)

Lunch 12:45 - 1:30 pm

Session 3 2:00 – 3:30pm

- Using Benchmarks to develop collaborative marking assessment schemes (eg. Grade descriptors)

The table below was used as part of the material for discussion during the workshops (see Beck & Balme 2005

	Employers	*Students*	*Academics*
Problem?	Not vocational enough	Not clear what the qualification make them them fit for	Not consistent enough between universities
What do we want to achieve?	'Work ready' qualification	Qualification suited to their career goals	Qualification standards that are clearly articulated and monitored
Benefits?	Confidence in qualification and its professional standard	Confidence to choose relevant qualification components and experiences	Confidence in nature and level of learning outcomes all students should demonstrate

- Evaluation surveys conducted during the proposed activities.
- Interviews with selected workshop participants, conducted at the conclusion of the program.

Interview Process

Interviews were conducted with participants from the workshops to evaluate the enablers and barriers to implementing subject benchmarks. Interviewees included participants from non-archaeological disciplines. Where possible, interviews were conducted face-to-face. These were augmented by phone interviews.

The following interviews were conducted face-to-face:

- Associate Professor Jane Balme, University of Western Australia, Perth, Western Australia.

- Associate Professor Heather Burke, Flinders University, Adelaide, South Australia.
- Dr Alice Gorman, Flinders University, Adelaide, South Australia.
- Dr Sean Ulm, James Cook University, Cairns, Queensland.
- Dr Michael Wilmore, Adelaide University, Adelaide, South Australia.

The following interviews were conducted by phone:

- Dr Tracy Ireland, University of Canberra, Canberra, ACT.
- Dr Andrew Fairbairn, University of Queensland, Brisbane, Queensland.
- Dr Annie Ross, University of Queensland, Brisbane, Queensland.
- Dr Melanie Fillios, University of Sydney, Sydney, New South Wales.

Data Analysis

Smith and Beck analysed the data from surveys, interviews and associated reports. The survey results and interviews were analysed together to explore links between the program and the wide implementation of standards. Data was drawn together to identify barriers and enablers to the benchmarking and implementation of standards in archaeology. With some reservations, the discussion extrapolates these findings to other subject areas in the humanities and social sciences.

Evaluation Surveys

Evaluation surveys were undertaken as part of the program's process. These surveys were filled out at the conclusion of the workshops. They provided qualitative feedback on the process.

Program Results

The extent to which the activity aims were achieved was assessed in terms of the key questions outlined in Beck's application.

What processes were planned, and what were actually put in place for the activity?

The processes that were planned for Beck's ALTC Fellowship were:

- Group sessions at face-to-face activity workshops.
- Workshop on activity aims, processes and outcomes to be offered at national archaeology conference; and
- Evaluation surveys undertaken during the proposed activities.

The group sessions, evaluation surveys and conference workshop took place as planned.

Were there variations from the processes that were initially proposed, and if so, why?

The only variation to the processes being undertaken as planned concerns the timeframe. The completion of this program report was delayed by the availability of the external evaluator, and the illness of the Teaching Fellow.

What were the short-term outcomes of the activity?

Program outcomes that were achieved within the activity timeframe were:

- Four group discussions workshops, held in Bateman's Bay, Sydney, Brisbane and Melbourne.
- Analysis of evaluations of workshops.
- An exemplar program on standards and benchmarking, undertaken by the University of Queensland.
- A dedicated session at the 2010 annual conference of the Australian Archaeological Association.
- International dissemination of information on the program, through Beck and Sinclair's participation in the Archaeology and Education conference, in Liverpool, United Kingdom.
- Publication of the AAA session in a Special Issue of the UK journal Archaeology and Education journal, currently in press.
- Supporting Resources: Annotated bibliography of Endnote library, hosted on the website of the Australian Archaeological Association.
- An invited member of the Review Panel for the BA at the University of Western Sydney.

To what extent have the intended outcomes been achieved?

The intended outcomes of the program were achieved and surpassed. The individual outcomes are outlined in the previous section and the benefits that accrued beyond the original intention of the program plan are outlined below.

Standards building process

What tools and strategies are the most effective for supporting the standards building process for graduate benchmarks in humanities and social sciences?

What benefits accrued from the activity?

The benefits that accrued from this program occurred in at the following areas:

- Establishment of a sense of community among archaeological educators.
- Wider dissemination of the program aims and outcomes than originally envisaged.
- Inspiration for further innovation in archaeological education, furthered through Beck's successful ARC Discovery application.
- Benchmarks exemplar undertaken at the University of Queensland.

Sense of Community

One of the major points of feedback from workshop participants concerned the sense of community that was engendered by this program. This is evident in the following

statements in response to the question ‘What aspects of the workshop were most useful for you?’

Meeting with colleagues and seeing how they have creatively and collegially approached challenges I face at my uni.

Participant in Brisbane workshop

Chance to discuss issues with colleagues in a small group. Workshop components were superb.

Participant in Brisbane workshop

Just great to have time to learn and discuss a lot the areas of teaching and learning, to brainstorm and get new ideas – very stimulating.

Participant in Sydney workshop

The engagement provided by a sense of community complements evidence that students who are actively engaged in their learning are more likely to progress to graduate studies and to succeed in higher education (Coates 2005; Zhao and Kuh 2003).

Unanticipated Dissemination of Information

The unanticipated dissemination of information concerning Beck’s ALTC occurred in the form of a Special Issue of the *Research in Archaeological Education* journal, which takes the program clearly into a multi-disciplinary realm.

Successful ARC Discovery Application

Associate Professor Beck obtained unintended benefits from the Fellowship through her participation in the Archaeology in Education conference in the UK. Her participation in this conference inspired her to focus more clearly on archaeological education outside of the university, and the particular value of using archaeology for increasing employability. Partly as a result of this inspiration she established a multi-disciplinary team which submitted a successful ARC Discovery Grant in the 2011 round entitled: 'Indigenous Heritage: working ancient wetlands for social benefit and cultural understanding'. This program was awarded $550,000. It is currently underway, with the potential to provide significant benefits to the Indigenous communities involved, especially in terms of employability in the field of archaeology and cultural heritage management.

Benchmarking Exemplar

The impetus for the University of Queensland study came from Beck’s ALTC program, as stated by former University of Queensland staff member, Sean Ulm:

‘Without Wendy taking the initiative none of this would have happened.’
Sean Ulm, James Cook University

Beck's ALTC program acted as a catalyst for staff at the University of Queensland to implement benchmarking statements into the curriculum of a major in archaeology. The expectation was that the focus and identity created through the renewed sequence of study develops a sense of cohort and also a sense of coherency across the program, which better prepares students for the workplace. An example of the redesigned curriculum is given here in the Department of Archaeology's student handbook for 2010 (Fairbairn 2010).

In addition, Andrew Fairbairn commissioned the Evaluation Services Unit (ESU) within the Teaching and Educational Development Institute at the University of Queensland to undertake this evaluation. This evaluation was conducted against the background of a 2005 review of the Bachelor of Arts program. However, the evaluation program was prompted by Beck's ALTC program:

"As a result of the Australian Learning and Teaching Council (ALTC) funded program, By Degrees: benchmarking archaeology degrees in Australian universities, there has been a gradual implementation of the benchmarking statements as part of the learning objectives of the major. These benchmarking statements create a focus for the 4 year (including Honours) program. The revised sequence of study is intended to produce graduates who are work ready and employable by giving graduates a sense of purpose, a professional and intellectual identity and a clear direction through an otherwise diverse learning experience " (Berry and Gannaway 2010:1).

The University of Queensland benchmarking program compared third year students and fourth year Honours students perceptions of their levels of generic skills and archaeology-specific skills. Benchmarks were taken from Beck's (2008) report, which contains benchmark statements drafted by a representative working group of all the university providers of archaeology education in Australia.

The key findings of the University of Queensland benchmarking program were that:

- Both third year students and Honours students had higher ratings for their knowledge, experience and confidence in generic skills compared to their knowledge, experience and confidence in archaeology-specific skills.
- Both third year students and Honours students typically rated their knowledge of benchmarking skills higher than their actual experience of, and confidence in, the benchmarking skills.

	Knowledge	***Experience***	***Confidence***
Archaeology-specific skills	3.79 (.34)	3.51 (.42)	3.50 (.45)
Generic skills	4.27 (.46)	4.04 (.56)	4.06 (.54)

Note: Figures in parentheses represent the standard deviations.

Table 1. Overall means and standard deviations for third year students' knowledge, experience and confidence across the two domains of benchmarking skills (Berry and Gannaway 2010:3).

	Knowledge	***Experience***	***Confidence***
Archaeology-specific skills	3.70 (.42)	3.28 (.64)	3.27 (.64)
Generic skills	4.01 (.42)	3.75 (.59)	3.70 (.57)

Note: Figures in parentheses represent the standard deviations.

Table 2. Overall means for Honour students' knowledge, experience and confidence across the two domains of benchmarking skills (Berry and Gannaway 2010:6).

Quantification of the findings of the University of Queensland study are outlined in Tables 1 and 2. Group discussions with students produced the following qualitative findings:

- The perception that practical skills were not obtained in the curricula.
- Opportunities to engage in volunteer work were limited.
- The need for fieldwork.
- Core courses were unable to be completed due to enrolment complexities.
- Courses that were viewed as crucial were not mandatory.
- There was pressure to specialise in a particular field.
- Participation in the Honours program was due to future employability.

The findings of the University of Queensland study provided useful data on how the implementation of subject benchmarks could improve graduate confidence. In this study, Berry and Gannaway (2010:9) suggested the following areas for further investigation:

1. Based on the findings from the surveys administered to both the third year and Honours students, it is clear that both cohorts reported lesser knowledge of, experience of and confidence in archaeology-specific skills. Further investigation is required around how this may be improved and whether this issue is also linked to the students' desire for further opportunities to engage in archaeology fieldwork.
2. The current course structure and the mandatory requirements of the program needs review, as demonstrated through the group responses. Students felt that there were difficulties with completing courses that were unavailable [during the necessary timeframe]. It was also clear that there is a desire to make some of the courses mandatory, particularly those perceived to add to the students' employability.
3. Attention to the benchmarking skill "*understanding the principles and practice of consultation processes relevant to undertaking archaeological research or consulting programs"* is required. This was identified by both the group and by third year as an area in which they did not feel they were well versed.

The University of Queensland's evaluation of the response of students to a redesigned curriculum is ongoing.

What has been the impact of the dissemination strategy?

The dissemination strategy for this program communicated information widely within the profession of archaeology and associated disciplinary areas in Australia and within the higher education sector in the United Kingdom. The effective dissemination of information is particularly crucial when a program aims to make changes across teaching and learning in a discipline as a whole. The dissemination strategy for this program involved:

- Consultation and collaboration with and support for external groups of staff or other institutions during the fellowship.
- Provision of information through material on a website or conference presentations.
- Provision of information through peer-reviewed publications such as journal articles.
- Provision of information through a final report.

Consultation and collaboration with and support for external groups of staff or other institutions during the fellowship were undertaken through a range of program activities. These included the workshops themselves, conference session at the AAA conference, conference presentations in Australia and then UK and informal discussions. The dissemination plan targeted disciplines in addition to archaeology.

Material on this program was disseminated on the website of the Australian Archaeological Association http://www.australianarchaeologicalassociation.com.au/.

Conference presentations were given in Australia and the United Kingdom. In Australia, Beck organized an archaeology and education session at the annual conference of the Australian Archaeological Association. This was held in Bateman's Bay in December 2010. Co-organisers of this session were Dr Lynley Wallis, then of the University of Queensland, and Dr Sean Ulm, of James Cook University. Beck co-wrote and co-presented a paper at this conference, with international specialist Dr Anthony Sinclair, Head of the HEA Subject Centre for History, Classics and Archaeology & an Archaeologist at the University of Liverpool.

In the United Kingdom, information on this program was disseminated in the United Kingdom. In September 2010, Beck gave a presentation to the Archaeology in Education conference, hosted by the Council for British Archaeology and the HEA Subject Centre in History, Classics and Archaeology at the University of Liverpool, United Kingdom. The title of the paper was 'Subject benchmarking in Australia: making the best use of archaeology disciplinary standards'. Around 100 educators, ranging from Primary School to University level, attended this conference.

Selected papers from the AAA session itself are being published as a Special Issue of the *Research in Archaeological Education* journal. The paper that Beck and Sinclair presented at the Australian Archaeology Association Conference at Bateman's Bay was revised for publication as 'The Future of Benchmarking Degrees in Archaeology: comparing the development and nature of learning standards in the United Kingdom and Australia' and will be published in the *Research in Archaeological Education* journal (Beck and Sinclair in press).

The report presented here meets the goal of providing information through a final report. This report will be provided to a range of stakeholders including academics and administrators as listed earlier.

What factors helped and hindered in the achievement of the outcomes?

Though Beck's ALTC program had impact in a wide range of disciplines it had greatest impact her own discipline of archaeology. Achievement of the outcomes from her program were helped by the fact that the program built on, and articulated with, broad disciplinary concerns about the degree to which training and education in archaeology in Australia was meeting the needs of the profession, and preparing students to take up employment in those parts of the profession that are growing. In particular, there was a clear concern that training needed to be more clearly focussed on the increase in professional activity associated with heritage and development (Gibbs and Gojak 2005; Lydon 2002; Ulm, Nichols and Dalley 2005). Most recently, disciplinary calls for professional standards have been expressed in submissions on the Review of the Western Australian Aboriginal Heritage Act 1972 by the Australian Association of Consulting Archaeologists Inc (Hook and Czerwinski 2012), the Australian Archaeological Association (Faulkner 2012) and the World Archaeological Congress (Smith 2012). All three submissions called for the accreditation of heritage practitioners, something that would be supported by professional benchmarks in university courses. The point here is that Beck's program tapped into a groundswell of concern within the discipline of archaeology and this meant that the program attracted broad support: it was both grounded in, and stimulated, current concerns in the discipline.

In terms of a broader canvas, Beck's program addressed concerns about standards that were being expressed at a national level.

There were no identifiable factors that hindered the achievement of outcomes for this program, which, indeed, exceeded what had been anticipated.

Good practice strategies

How can good practice strategies be appropriately applied to collaborative teaching of archaeology honours degrees?

What lessons have been learned from this activity?

What lessons have been learned from this activity, and how might these be of assistance to other institutions, researchers and practitioners interested in implementing graduate benchmark practices to support/enhance teaching and learning of students?

The major lessons concern the factors that enable or prevent improving graduate employability by implementing subject benchmarks. While most—if not all—participants in the ALTC workshops intended to implement benchmarking standards at their own universities only staff at the University of Queensland followed through with this in a sustained and collaborative manner. While the University of Queensland exemplar provides insight into the factors that enabled the benchmarking of archaeology skills in undergraduate degrees, comparison with experiences at other universities provides data on the barriers to improving graduate employability by implementing subject benchmarks.

Good practice strategies are delineated in enablers, while poor strategies and practice are delineated in barriers.

Enablers

- Pro-active staff members who are willing to drive the program.
- Congruence of the program with the research interests of key staff.
- Broad departmental support for the program.
- Internal university rewards—congruence of the program with university planning strategies or review processes.
- Templates that can be serve as a model.
- Positive student feedback, higher levels of student satisfaction.
- Positive reinforcement from professional bodies.

Barriers

- Existing workloads.
- Lack of broad departmental support for the program.
- Lack of control over the content of key topics.
- Departmental fatigue with managing change.
- Departmental fear of identifying weaknesses in existing offerings, potentially making the department vulnerable to University cutbacks.
- Lack of examples and materials to use as a model.
- A perception that shaping university teaching to meet the market needs of professional organisations may be *infra dig*.

The implementation of graduate benchmark practices to improve graduate employability

can be advanced through maximising the enablers and minimising the barriers listed above.

How best can other higher education institutions be encouraged to take up the outcomes generated by the activity?

Concerted effort from several directions is needed for other higher education institutions to take up the outcomes generated by this program. The following recommendations are made with the aim of facilitating the implementation of professional standards in undergraduate courses in the Humanities and Social Sciences in order to improve graduate employability. It should be noted that implementation of the recommendations outlined below would depend heavily on institutional will as evidenced in the allocation of resources to support such an endeavour. The likelihood of such a will in the current climate can certainly be queried (see Myer 2012).

Recommendations—Institutional Context

- Implementation of the standards set out in Beck's (2008) document by archaeology departments around the country lies in the hands of individual departments and higher education institutions.
- The relationship between the standards set out in Beck's (2008) document and those produced by professional, statutory or regulatory bodies is a matter for individual higher education institutions to consider.

Recommendations—Academic Team Context

The feedback from workshops and interviews undertaken for this report demonstrate that the nature of the university context is critical to whether professional standards can be integrated into undergraduate topics and courses. Within a departmental context, the most important factors are:

- The identification of a team of staff members who would keen to drive the implementation of benchmarks. Staff who have won teaching awards or who have research interests in teaching or industry standards are potential leaders in such a program.
- The provision of support to staff working on the program. This support needs to include teaching relief, administrative assistance (which should include support to publish on the program), and promotion criteria that recognise the value of benchmarking to the University as a whole.
- Consensus within a department on the importance of benchmarking is critical for such a program to succeed, as the benchmarks need to be implemented across the full departmental offerings. Such a consensus can only emerge from focussed discussions, and this process needs to take into account potential barriers, such as fatigue with change, high workloads and a fear of identifying weaknesses in existing offerings. The most effective way of achieving consensus would be a dedicated planning day, but this would need support, otherwise staff will see the program as

simply increasing their workloads, and this will act as a barrier to implementing the program.

- Evaluations of student's satisfaction. In the University of Queensland exemplar the introduction of benchmarking statements into topic and course material increased students' understanding of why the material was shaped in a particular way, and this led to greater student satisfaction. That satisfaction is itself a driver in programs such as these.

Recommendations—Disciplinary Connections

- Positive reinforcement from professional bodies is an enabler as this reinforces the value of benchmarking standards.
- The development of close relationships between professional bodies and university departments can lead to a shared vision between educators and practitioners and to students who are better informed of the requirements of their profession. These relationships can be developed both formally, for example through industry participation on review committees or in departmental seminars or informally, through social occasions.
- A successful model for productive interaction between universities and the cultural heritage sector is the DIRT (Directed Industry-Ready Training) Program run by the Department of Archaeology at Flinders University. This progam is aimed at both students and professionals working in archaeology and heritage management. Classes are delivered by staff within the Department of Archaeology or by specialists and professionals from outside the university (see http://www.flinders.edu.au/ehl/Archaeology/professional-development). This professional development program includes field schools, short courses, workshops and master classes.

Discussion and Conclusion

The Australian Learning and Teaching Council's Fellowship 'Improving Graduate Employability by implementing Subject Benchmarks', awarded to Associate Professor Wendy Beck, of the University of New England achieved, or surpassed, its objectives. The program directly addressed critiques in the Australian archaeological literature that university education and training was not producing high quality graduates with the required disciplinary-specific skills (Gibbs and Gojak 2005); that expectations and standards in bachelor honours degrees in archaeology need to be better defined (Beck and Balme 2005); that commitment was needed to gathering reliable data for benchmarking of a variety of archaeology activities (Colley 2003, 2004); and the need for university education and training to be oriented towards the increase in professional activity associated with heritage and development (Lydon 2002; Ulm, Nichols and Dalley 2005; Ulm, Mate and Dalley in press).

In the UK and USA, there is less direct pressure on universities from the private sector. As Ulm, Mate and Dalley (in press) point out, studies of professional development in these countries (e.g. Aitchinson and Edwards 2008; Zeder 1997) have been focused at an organisational level, rather than on the development of skills and benchmarks within a university environment.

Nevertheless, Beck's ALTC program provides lessons for improving graduate employability in a range of subject areas in the United Kingdom where subject benchmarking statements that set out expectations about standards of degrees in a range of subject areas have been established by the Quality Assurance Agency for Higher Education (see QAA 2012), including subject benchmarking statements for archaeology (QAA 2007). The subject benchmarking material is designed to assist those involved in programme design, delivery and review, so it is not mandatory to include the material be included in university topic and course books. The inclusion of this material lies in the hands of individual academics and departments. The lessons concerning enablers and barriers from Beck's ALTC program could assist those wishing to improve graduate employability by implementing professional benchmarks.

In Australia, the use of subject benchmarks to improving graduate employability, as canvassed in Beck's ALTC Fellowship, is of growing importance, as the proportion of graduates who are being employed by the private sector is growing. This is demonstrated in Ulm, Mate and Dalley's study, presented at the AAA conference as part of the ALTC program:

These data document the ongoing trend over the last two decades towards growth of the private sector and reduction or stasis in the university and museum sectors and downsizing of the cultural heritage functions of government agencies. When these data are taken together with the increasingly young age profile of the profession, the increase in the size of archaeological workplaces and the decrease in the number of people undertaking sustained volunteer work, the pattern suggests increasing pressure on the industry to provide graduates for employment in the private sector (Ulm, Mate and Dalley in press).

Ulm, Mate and Dalley also note a significant professionalization of the discipline in Australia between studies undertaken in 2005 and in 2010, with the percentage of respondents working in archaeology without formal university qualifications falling from 6.2 per cent to 2.5 per cent. The increasing professionalization of the discipline highlights the importance of improving graduate employability by implementing benchmarked standards into university topics and courses.

The continued skills shortage in Australia's mining sector, and the continued growth of this sector, will increase the need for professional standards to be integrated into archaeological

education and training. At the moment, there are numerous instances of unqualified people undertaking cultural heritage surveys, and this will only increase without professional standards. Such standards need to be inculcated into both undergraduate and postgraduate education. In addition, there is a disciplinary push for an accreditation process for heritage practitioners to be implemented as part of best practice and the raising of standards of work (Hook & Czerwinski 2012:9; Smith 2012).

The University of Queensland program provides a model of good practice that could be appropriately applied to collaborative teaching of archaeology honours degrees. The study undertaken by Berry and Gannaway (2010) provides templates for implementing a similar study for archaeology in other universities, and other disciplinary areas, while the student handbook (Fairbairn 2010) is a model for implementing benchmarks into topic and course outlines. At a more general level, Flinders University provides a best practice model for the integration of professional and university teaching and learning agendas, most notably through its DIRT (Directed Industry-Ready Training) Program.

The findings and recommendations outlined in this report can be applied to a range of subject areas in the Humanities and Social Sciences. The benchmarking approach is most likely to succeed in subject areas that have a vocational or applied focus, such as anthropology and cultural tourism, or where the majority of graduates find employment in the private sector. In such cases, the benchmarking of standards within university curricula is a clear route to improving graduate employability. The outcomes of Associate Professor Wendy Beck's ALTC program 'Improving Graduate Employability by implementing Subject Benchmarks' make a qualitative contribution to this process across a range of disciplines in Australia, and internationally.

Dissemination

Conferences

Conference presentations on this ALTC program were given in Australia and the United Kingdom. In Australia, Beck co-organized an archaeology and education session at the annual conference of Australian Archaeological Association. Poster was presented in 2011 at a UTS session, and a seminar given on the Fellowship program at the Fellows Forum in November 2012.

Associated publications

This report also considers how Beck's ALTC program has furthered disciplinary views on needed improvements in professional archaeology in Australia (e.g. Beck and Balme 2005; Colley 2003, 2004; Lydon 2002; Gibbs and Gotjak 2005; Ulm, Nichols and Dalley 2005; Ulm, Mate and Dalley in press) and other work that was stimulated by Beck's Fellowship. In particular, Berry and Gannaway's (2010) study of Third year and Honours student experiences of the archaeology program at the University of Queensland is discussed in detail.

Other reporting and dissemination

This report outlines key findings from the data collection and interviews undertaken for this program. It identifies enablers and barriers to benchmarking and implementing professional standards, incorporating the suggestions of workshop participants. The report concludes with a summary that highlights program features that could be extended to encourage standards in the Humanities and Social Sciences.

The main contextual shift in standards in archaeology has been from the academic driven process to the government driven one. In the **best-case scenario** Standards construction can enable academics to think outside their individual institutions about how the Benchmark activities and processes might contribute to disciplinary identity. In the **Worst-case scenario** Benchmark standards become just another meaningless compliance routine! Enablers and Barriers to change have been identified through interviews with archaeology academics. The worst case scenario is that academics will be used to construct standards and then they have no say in how they will be used in monitoring and assessment. ie. Could be used to get rid of some vulnerable small teaching units. The government driven process drafted 6-8 learning outcomes for each discipline (versus 34 for archaeology standard in Australia). So there will be tensions between the standards that can be specified in this type of learning outcome. How they will match current curricula, how they can be demonstrated, how they will be used to audit standards, funding and regulation and the shift from collaboration to competition. The assumptions behind the process are that benchmarks are needed to ensure quality. But benchmarks are also really important to communicate the nature of archaeology degrees and student achievements and the discipline profile.

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