Useless graduates?: Why do we all think that something has gone wrong with Australian archaeological training?

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Abstract

Over the last half a decade or more professional archaeologists have been voicing a deepening sense of dissatisfaction with both undergraduate training and opportunities for graduate skill development. Much of this appears to arise from continuing transformations in industry directions and needs colliding with a period of significant reduction in university staff numbers and capabilities. This paper presents the results of both a qualitative questionnaire and an informal discussion on the AUSARCH-L listserver, setting out the nature of some of these concerns and identifying some possible areas where consistency and agreement might be reached.

Introduction

There is little doubt that many Australian archaeologists feel that there is a crisis with the standard of new (and in some instances not-so-new) graduates. This situation is frequently, and on occasion angrily, articulated to university-based archaeologists as their failure to train students so that they meet the current needs or expectations of the archaeological industry, whether Indigenous, historic, maritime, or one of the many variants in agency, museum or cultural heritage management settings. Such grumblings are common in many professions and in particular the types of complaints expressed in Australia are virtual mirrors of those voiced among archaeologists in the United Kingdom (e.g. Aitchison 2004). However, the dialogue within Australia to either understand the legitimate basis for complaint or to develop strategies for accommodating change has been curiously stilted, especially given the relatively small size of the professional community.

This paper makes some initial comment about the growing sense of dissatisfaction with both undergraduate training and opportunities for graduate skill development in Australia, based on a survey undertaken as part of the 2002 combined Australian Archaeological Association (AAA), Australasian Society for Historical Archaeology (ASHA) and Australasian Institute for Maritime Archaeology (AIMA) conference, as well as recent commentary on the AUSARCH-L listserver. Based on a consideration of this material, it will be argued that although the way that Australian archaeology is taught and careers are developed has changed, much of the discontent reflects a simple lack of agreement or acknowledgement on core skills and responsibilities. A number of parallels are also drawn with the findings of various comprehensive studies of archaeological industry needs and training in the United Kingdom and Ireland.

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It should be noted that we use the term 'training' deliberately and in some respects in response to the commentary which has surrounded the discussions in Australia. The word 'skill' is used to identify an actual practical ability, rather than 'attribute' which has come to describe generic qualities which are often difficult to clearly identify. We also use the terms 'Australian' and 'Australianist' archaeology or archaeologies to refer to the themes geographically focussed on Australia and its near neighbours, encompassing the areas which common current usage refers to as historical, maritime and Indigenous (or pre-historical) archaeologies. The term 'industry' is used in the broadest sense to include employer groups, such as agencies (mostly State and Commonwealth) and commercial archaeological consultancies (see Colley 2002:22-58 for a discussion of how terms such as 'industry' are problematised, as well as Lydon 2002). The key 'societies' include AAA, ASHA, AIMA, Australian Association of Consulting Archaeologists Inc. (AACAI), and the Australian chapter of the International Council on Monuments and Sites (ICOMOS).

Teaching and training survey: 2002 Combined AAA, ASHA, AIMA Conference, Townsville

Some of the comments made in the above discussion are based on the personal experiences of the authors, together with informal feedback they have received from recent graduates and professional archaeologists in various spheres of academia and industry. In an effort to encourage Australian archaeologists at different levels to articulate their dissatisfaction, two public exercises were initiated. The first was an open plenary session on Teaching and Training, one of several attached to the combined AAA, ASHA, AIMA Conference, held in Townsville in 2002. One of the key purposes of the conference was to overcome some of the long-standing divisions between the different societies/thematic groups and attempt to identify common problems and issues, hence the title of the daily plenary sessions as 'Common Ground'.

The second exercise was a qualitative questionnaire for session attendees. The original intent of the questionnaire was as a spur for the plenary discussions, rather than as a survey in its own right. Being hurriedly put together (as happens before conferences), the questions were far from ideal, especially as their open structure, rather than a simple tick-box, makes synthesising the answers very complex. However, the direct answers and comments provided insight into the issues raised in this paper. Approximately 55 of the c.220 main conference participants responded, with many respondents choosing to answer the questionnaires of other plenary sessions of greater interest to them (although aspects of this material are also relevant here). Some persons did not answer some questions, while others provided lengthy commentary with multiple points, so the results should be seen as indicative of trends, rather than a statistical exercise. However, the following summary

provides some notion of the broad trends – the most striking being the emphatic nature of many comments, often capitalised, and sometimes with stars and exclamation marks. Although a 25% response rate is less than ideal it provides a sufficient sample to permit the relative strength of different responses to be measured.

Satisfaction with current training and graduates

The tone was well set by the first question asking whether, given the nature of current employment for archaeologists, current teaching and training was appropriate (Table 1).

Response	#	%
Yes	4	7
There are gaps	6	11
Uncertain	10	19
No	33	63
Total	53	100

Table 1 Is current teaching and training appropriate?

The response was unambiguous, clarified in part by the following question. Typical responses were 'it has to be driven more towards heritage management because that is where most of the jobs are' and 'do students still have to learn primarily by doing (and making their own mistakes), or do they get sufficient field and lab experience'.

Identified deficiencies in teaching and training

Although the second question actually asked for perceived deficiencies in current teaching and training, many of the responses tended to be articulated as deficiencies in the abilities of new or recent graduates, hence the phrasing of the answers (Table 2). Some of these answers could clearly be merged, but the nuances of how practitioners perceive one area being emphasised over another is significant.

Allowing that some of the contradictory statements may be reflections on particular programs, situations or individuals (for example, too much theory versus not enough), the main complaint was that graduates lacked the field and laboratory experience needed to undertake their employed work. This was closely followed by insufficient knowledge of the cultural heritage management and legislative frameworks in which most consultancies operate, echoing responses in an earlier survey by Lydon (2002). More surprising was the strong expectation for new graduates to have business and management skills, especially as this was an area which has never been addressed within Australian archaeological training. Inability to write a report was mentioned a number of times, but inadequate knowledge of the tendering/contract system was also noted repeatedly. The more ambiguous responses about lack of vocational training may apply to either applied practical or business skills. Several respondents expressed concern at the absence of either structures or opportunities for persons already within industry to obtain further specialised training, or address deficiencies in their existing skills, although others noted the occasional professional development courses offered by AACAI.

Responsibility for curriculum and training

The third and fourth questions explored the perception of what roles universities, societies, agencies and other commercial archaeological industry stakeholders have, or should have, in setting curricula and standards (Tables 3-4). However, as the responses often crossed the boundaries between the two areas (partly because of the ambiguous nature of the questions) we can deal with them together. Many respondents were happy for the primary role and responsibility for curriculum development to remain vested in the universities, as long as they were advised by and responded to industry as part of a cooperative agreement. A number of persons suggested that industry and/or the various societies should monitor standards, although it was noted that there was a lack of consistency and expectations between the groups. However, several respondents also considered that while universities should be charged with teaching basic archaeological skills and understandings, responsibility for vocational training should be vested in agencies and other industry or employer groups.

Response	#	Response	#
Lack of practical/field experience	16	Limited perspective on other parts of the world	1
Lack of consultancy & business skills	15	Graduates are too idealistic	1
Lack of CHM training	10	Outdated work methods	1
Little or no knowledge of legislation(s)	7	Lack of student initiative	1
Lack of anthropological/cross-cultural/ consultation training	6	Limited or no opportunities for postgraduate vocational training & 'up-skilling'	1
Lack of artefact analysis skills	5	Over-focus on 'pure' research	1
Degrees lack vocational training	3	Too much emphasis on field skills over CHM training	1
Lack of industry placements	3	Insufficient training in general research skills	1
Lack of understanding of standards & ethics	2	Lack of cross-disciplinary training & awareness	1
Too much emphasis on theory over practice	2	Not enough theory	1
Insufficient input from industry/ lack of industry engagement	2	Insufficient recognition that students (and grads) will not necessarily practice arch.	1
Emphasis on field skills over analysis/interpretation	2	Lack of training in specialist areas (e.g. contact, rock art)	2
Too focused on academia rather than employability	1		

Table 2 What deficiencies exist in current teaching and training? (Also answered as deficiencies in current graduates).

General Response	#	Specific Response	#
Universities	8	However, universities don't reflect industry needs	1
		Should teach basic skills	1
		Should teach with influence from other bodies	1
Industry	3	Should develop & monitor standards	1
		Should help in training of undergrads	1
Societies	2	Should develop & monitor standards	2
Agencies		Should teach task specific	1
Co-op. agreement	9		
		Total	30

Table 3 What roles do universities, agencies, industry and societies have in setting training and teaching curricula and standards?

Response	#
Universities should have control	2
University should control theoretical training, but, industry control practical	2
Industry & societies should maintain standards	2
Industry should have control	3
Industry provides the 'real world' training	3
Cooperative – universities are advised by industry	15
Total	27

Table 4 What roles do universities, agencies, industry and societies have in setting training and teaching priorities?

Respondents generally placed most emphasis on the universities' role but differed on whether other parts of the archaeology industry should be partners or watchdogs; for example, 'Unis are responsible for giving the theoretical knowledge; perhaps should also focus on practical, but associations + industry need to also invest more in developing practical areas/applications and MONITORING things such as standards' versus 'we need a Peak body to coordinate this, to lobby gov[ernment] for effective controls + support + present standards required'.

Accreditation

While there was a general response favouring some form of accreditation or least a national system or structure, thought was divided over who would establish and control this (Table 5). Opinion was relatively evenly split between creating an independent body with broad representation from all stakeholders, versus forming a council of university representatives with an industry advisory board. Some respondents suggested that the whole process was too difficult, or that existing structures already accommodated this, while others indicated that it was the university teachers and professionals who needed accreditation. Several persons also made the point that you need a national training scheme before you can accredit it, which is where we will take the discussion in a later section.

Avocational or public 'training'

Although the emphasis in this discussion is on university graduates, the original questionnaire included a section on 'non-professional' training opportunities. Many of the respondents linked such programs to developing a greater popular understanding and support for Australian archaeology, indicating the flow-on benefits to both universities and industry (Table 6).

Despite one emphatic response against the idea ('If this is for non-Professionals to work in archaeology – NO.)' response was reasonably supportive. The responses mainly focused on the general public, such as school or generalist courses for the interested, but some specific user groups who are on the edges of the professional industry were also mentioned, including the diving community through AIMA/NAS courses and Aboriginal heritage officers.

The responses from questionnaires used to advise the other plenary sessions on Archaeology and Heritage Practices, Management and Sharing of Data and Resources and Public Perceptions, Promotion and Interpretation provide additional insights to those from the Teaching and Training session feedback. The attendees at these sessions may or may not have also contributed responses in the Teaching and Training session.

The questionnaires for the Management and Sharing of Data and Resources session provided reinforcement for many of the views in the Teaching and Training section, although notably from a different group of people. Several recurrent themes were:

- Industry contributions to teaching (including staff exchanges).
- Greater opportunities to move between industry and the academy, both for training and for research.
- Collaborative projects between the different stakeholders, especially universities and industry/ agencies.
- Concerted (and coordinated) efforts to improve access to the 'grey literature' of unpublished consultancy reports and resources, to enhance our understanding of the archaeological resource, encourage information flow and improve synthesis in both industry and research. National databases or portals, as well as common data standards were mentioned frequently.
- The need for some level of national coordination, again through an unspecified 'peak body' representing Australian archaeology as a whole. Several also mentioned mergers of existing societies to initiate and encourage joint effort.

In the Archaeology and Heritage Practices questionnaires almost all respondents described archaeology as one of a number of data sources informing heritage values, while usually making the point that heritage and archaeology were not synonymous. However, in terms of archaeological industry practice, most saw the

General Response	Specific Response	#
Yes	Unspecified	3
	Requires central/peak/independent board (some suggest government oversight or sponsorship)	7
	Council of university representatives, advised by industry	6
	Yes, but too difficult to implement, or unlikely to get support or agreement	4
	Accreditation required for those who teach archaeology	3
	Not a formal scheme, but universities with help from AAA, AIMA, ASHA, AACAI etc	1
	AAA & professional bodies should control	1
	But only for CHM training	1
	Should have system to accredit all archaeologists & heritage managers	1
Unsure		2
No	Unspecified	4
	We need a national training system before we can accredit	3
	Too complicated	2

Table 5 Is there a need for a national accreditation scheme for teaching in archaeology – who maintains it?

General Response	Specific Response	#
Yes	Certificate courses at TAFE or via universities	5
	Summer schools & site volunteers	3
	Unspecified	3
	Secondary schools & general education system	2
	CHM courses	1
	AIMA/NAS style modules for historic & Indigenous archaeologies	2
	Earthwatch	1
	'Friends' groups and amateur societies	1
	Agency in-house site recognition & recording for staff, environmental scientists, Traditional Owners, consultants	1
No		1

Table 6 Should Australian archaeology include new opportunities for non-professional training? If yes, then in what form?

relationship as far closer, if not inseparable, perhaps underscoring the need to include heritage theory and practice as a key element in current training.

The responses to the Public Perceptions, Promotion and Interpretation survey acknowledged a failure to properly or consistently promote archaeology, exploit media and public interest, or create avenues for ensuring that the fruits of archaeological research enter the public domain. Opportunities to validate the importance of archaeology through public dissemination of knowledge were also seen as vital to increasing public knowledge, appreciation and support.

A final point which emerged in several of the plenary discussions was that proportionally fewer graduates now join societies or professional associations. Several persons raised the difficulties of such a relatively small national professional population having so many special interest societies (historical, maritime, Indigenous, CHM, professional consultancy, as well as international bodies), leading to fragmentation of representation as well as increased cost. It was also suggested that apart from journals and conferences, some societies provided little or no opportunities or direction for new and recent graduates. In part the joint conference itself was an attempt to remedy this problem, and although the potential for future mergers was noted, in the shorter term what was required was recognition of common problems and a need for shared responses.

Useless graduates: An email discussion thread on AUSARCH-L

In April and May of 2004, a discussion thread on the AUSARCH-L listserver commenced following a request for useful tips to be included in a book intended to 'provide some practical advice for people from overseas who wish to undertake archaeological research in Australia' (Smith 2004). Initial responses were relatively humorous, but quite quickly questions arose regarding the role of overseas trained archaeologists in Australian consultancy, as did statements of the need for a comparable book for Australian graduates. Within two days the discussion had refocussed on the failings of Australian graduates, especially within the Sydney consultancy circuit. Rather than attempt separate referencing or a detailed synopsis, all of these responses are available via the AUSARCH-L archive for the April-May 2004 period (http://mailman.anu.edu.au/mailman/listinfo/ausarch-l).

Under the heading of 'Useless Australian Archaeology Graduates', one of the authors encouraged a broader airing of the perceived difficulties with training and the recent products of the university system. Although there were several mildly contradictory or opposing statements, the ensuing flood of responses from academics, consultants, agency personnel, as well as disgruntled recent graduates, stressed many of the same points as the earlier conference survey – the need for graduates to have basic practical skills, an ability to research, and an understanding of

heritage and legislation. As Annie Ross (2004) put it:

> from my perspective the most important (and achievable) skills are those relating to background research, legislative understanding, very basic field techniques, communication (both written and oral) and a passion for the discipline.

While some commentators expressed the desirability for new graduates to be able to write reports or develop management skills, others (surprisingly not the academic staff) suggested that industry had the responsibility of training in this regard, and that no university program was really geared to provide this. As in the preceding survey, the concept of 'apprenticeship' was noted several times – that a new archaeology graduate should understand that they are expected to continue learning, using their own initiative as necessary, just as new graduates do in other professional entry positions. However, perhaps the most salient suggestion from the AUSARCH-L discussion was that what is required in archaeological training is consistency.

Discussion

Both the questionnaire and the open AUSARCH-L discussion confirmed many of the elements evident from personal discussions with colleagues. There is not the scope here to fully examine either the history of archaeological training in Australia, or all of the reasons why we face the current situation of apparent dissatisfaction (although see Colley 2004; Mackay and Karskens 1999). Neither is the purpose of this paper to either identify fault or act as apologist for the university system, industry employers, professional societies or other bodies regarding deficiencies in providing appropriate instruction. However, some of the aspects and causes of change in both academy and industry need to be considered, in order to place the results of the surveys into context.

Changes to the university system

While there has never been a standard Australian archaeology program, many senior archaeologists, namely those archaeologists in their mid-30s or older and who now stand in employer and established researcher roles, relate similar experiences when they were students. Regardless of the university, most feel that they were taught a relatively coherent strand of archaeology courses imparting core practical, theoretical and thematic structures, usually combined with several lengthy field schools and volunteer experiences in which they learned to apply these skills and were socialised into the industry. Overall, academic programs were oriented towards producing 'pure' archaeologists, emphasising an understanding of archaeological research priorities, research designs and outcomes. Other skills, in industry, agency and cultural heritage management practice were then developed over a much longer period, usually while in employment in what many have described as an apprenticeship-style context. Generally skills have been acquired by osmosis, although graduate diplomas and masters degrees have periodically been offered with only moderate take-up. What is clear though is that the academy is now struggling to provide the level of focused archaeological education formerly seen as normal for undergraduate students, while industry has changed its expectations of which skills are required immediately upon graduation, even as its capacity to train employees has diminished.

Over the last decade university departments have had significant reductions in staff and become subject to the same devolved administrative and cost recovery structures, increased workloads, financial constraints and adherence to rigorous occupational health and safety requirements that now beleaguer most government heritage agencies and companies. Some respondents seemed only vaguely aware that what were once distinct programs in Indigenous, historic and maritime archaeologies have generally now been amalgamated, with the specialised sub-disciplinary courses and attendant instruction in dedicated thematic laboratory and field skills restricted to limited components. Smaller courses, where traditionally much of the higher-level professional training occurred (especially field schools) are vulnerable and in many cases have already been cancelled because unsympathetic administrations perceive them as cost ineffective.

As much as current government and university administration's rhetoric encourages industry engagement, as quantified by income generation from financial contribution, linkage grants, research publication and other outputs, neither reward vocational training or industry satisfaction per se. What might be considered small-enrolment vocational courses are sacrificed in favour of mass appeal thematic classes that bring in student numbers and the income required for paying salaries and costs, but with limited vocational relevance. Current trends are also towards a liberal style education that encourages a surface smattering of a lot of disparate subjects rather than a detailed knowledge of a single discipline, making it difficult to enforce student enrolment in more than the minimum specialised subjects required for a major. Finally, both the time that academics are allowed to spend in 'contact' hours with students, the amount of reading or homework exercises that can be set, and the extent and kinds of assessments, have all been seriously curtailed and regulated.

The establishment of, and progressive increases in university fees have considerably changed the dynamic between staff and students, fostering a service-delivery mentality. The rising cost of education is also met with an increasing cost of living, so that many undergraduates are forced into full-time or part-time work, sometimes with multiple jobs, in order to survive during their degree. We have observed that this not only reduces their ability to meet course demands, but for many also restricts opportunities to participate in formal field schools, not to mention eliminating participation as volunteers on research or consultancy fieldwork. Advancing to a postgraduate level and experiencing the opportunity to further explore ideas or develop new skills is similarly balanced against the potentially significant loss of income or strain on lifestyle.

On this note, it is important to remember that the majority of students in archaeology courses have no intention of pursuing archaeology as a career – a situation which is common to Australia, the UK and most other countries (All-Party Parliamentary Archaeology Group 2003). In fact, the number of students on the graduate track who require specialised training in research design, methods or vocational training of other kinds is negligible, and in some respects taking a student through to honours level is almost a luxury. However, as a number of persons have pointed out, the stereotypical economics student who

you ignore in favour of your potential archaeology honours candidate and next protégé may well go on to be the Federal Minister for the Environment and Heritage. Both academy and industry are in the business of developing support for archaeological heritage, which means that our considerations will need to encompass wider concerns including the public taking avocational courses and media exposure in general, as well as the continuing advocacy in government and business that is provided by graduates in other fields who had positive exposure to archaeology while at university.

Changes in archaeological 'industry'

The changes in 'industry' or non-university archaeology over the last decade have been similarly marked. Archaeological consultancy, heritage agency and museum work have evolved apace with legislative and other demands, with an increasingly sophisticated interaction with broader heritage management concerns where non-archaeological knowledge and skills are also expected. In some instances this has reached the point where an archaeological background tends to provide only the disciplinary basis or flavour to generic cultural heritage management practice. However, just as the university capabilities have changed, the mechanisms and budgets to allow a new employee to train or otherwise 'apprentice' within the structure of an organisation have become similarly strained. There is great and unrealistic pressure to have new staff engage far more rapidly with sophisticated projects, often way beyond their experience or without proper training, and make non-archaeological heritage management recommendations or write reports almost immediately, if only to acquit the expense of their appointment. The apparent inability of new graduates to transfer their classroom-based understandings to applied situations is often seen as a failing in their education within the structure of an archaeology major.

One disturbing phenomenon of recent years has been a growing body of a lower echelon graduate labour, usually referred to as 'dig-bums', who seem to have been caught between the decline in the university training systems, the failure of industry to evolve its own structures, and the need for a large pool of labour to cope with the current development boom. Due to the market demands for archaeological consultancy these workers are often well-paid and are able to sustain an archaeological career that consists solely of working as an excavator for other people. This group, mostly in their 20s and early 30s, have come to occupy an ambiguous place in the Australian archaeological profession, with alarmingly limited contribution to journals, conferences, professional organisations or societies, or any of the ongoing dialogues that indicate engagement or even broader understanding of the underlying research questions that drive both research and industry archaeology – if indeed such a distinction should be made. A number appear to see these as separate streams, with little appreciation that regardless of the context, archaeology is inherently an 'academic' (investigative) pursuit requiring demonstrated skill and knowledge, hence the need for the graduate qualification. The readily apparent lack of direction and synthesis from senior archaeologists despite the massive amount of data being generated through heritage-based excavations and survey, as well as the failure of many younger consultants to see this inability to advance knowledge as a problem, underscores this disjuncture. This is not to say that this cohort of newly graduated archaeologists is either lazy or completely unaware. Many have identified the lack of direction and relevant training both during their undergraduate years and afterwards as a significant contributing element towards a fairly disillusioned view of archaeological practice. With the current disjunction between centres of teaching and centres of highest employment there is considerable inter-state movement of recent graduates, resulting in an even lower familiarity with relevant legislation, forms of practice, the relevant field archaeology and so on. As an example, in the past few years the University of Sydney produced very few graduate archaeologists who were interested in working in Australianist archaeology as their first preference, as indicated by thesis topic. These graduates were quickly absorbed into a flourishing heritage market, where they were outnumbered by graduates from La Trobe and Flinders University, coming from states where the paid employment prospects were far less attractive.

A problematic twist is the flow of graduates from non-Australianist archaeology programs both domestic and international, or from allied but non-archaeological disciplines, who seek employment in Australian archaeological consultancy. These graduates often have no background in either the thematic structures or skills required for work in the Australian scene, and consequently have limited interest or engagement in Australian archaeology as other than a source of income. Sydney's recent large-scale archaeological excavations have attracted a substantial number of British and Irish backpacker archaeologists who have been able to gain what is effectively labouring work at wages beyond those of a field director in their own countries. Sometimes this is compounded with frustration at not being able to continue with their chosen area of interest, consequently reducing Australian concerns to a 'second-best' standing. One suspects that at least some of the complaints about inadequate training which were raised in both questionnaires and the discussion forum may well arise from a failure to identify as to exactly what archaeological background new graduate employees have. That is, they have certainly graduated with archaeology honours from University 'X', but from which program? To what degree did they prepare for the realities of their future careers? The two opposing positions – the desire to give preference to dedicated Australianists who develop deeper knowledge of Australian archaeology against the equally reasonable expectation that providing opportunities for international workers, and encouraging Australian graduates to develop their skills overseas also brings in better practice – is also a point of contention in the profession, as a number of successful (now) Australianists have made transitions from other specialisations and have even contended that these 'external' persons are in fact better trained.

It might be fair to ask 'who is to blame', but the answer is probably 'everyone and nobody'. One of the outstanding features of the comments on the questionnaire and AUSARCH-L discussion is that there were significant variations in perceptions of who has responsibility for what aspects of training in this new environment. More to the point, there is no agreed or even broadly acknowledged benchmark or standard as to what skills, and to what levels, it is reasonable to expect from new graduates.

Moving towards a solution

The issues surrounding consistency in training and expectations appear to boil down to three simple questions:

- What skills do both graduates and continuing archaeologists need? How do we create a situation where these expectations are recognised by all stakeholders (including and especially students)?
- What are the thresholds of responsibility for training and learning, on the part of the university system, on the part of different industry employers, societies and professional bodies, and on the part of the students/graduates themselves?
- How do we develop and maintain consistency in training and expectations, as well as ensure that these standards are understood and accessible to all stakeholders?

It is not our intention to answer any of these points here. However, it is clear that we must approach this on a national scale, dealing with fundamental archaeological skills and attributes that encompass all of the sub-disciplines, rather than becoming bound up with specialisations. Whatever systems are established need to be accepted, supported and enforced by the academy and the broader archaeological industry, which means agreement on both principles and practice. This might be created within or beyond existing structures of university or existing societies and industry groups.

Australia is not alone in the difficulties it faces, with larger archaeological communities such as those in the US and UK undertaking extensive studies and consultation in order to address remarkably similar curricula and industry standards issues. For instance, the following passage resonates with some of the discussion above:

> Unlike other professionals that archaeologists work alongside, such as engineers and architects, archaeology does not have an integrated approach to learning, training and cpd [continuous professional development] for professional practice. An archaeology degree does not give you a professional qualification that employers recognise as indicating that you are competent in the workplace – and there is no formal structure for accumulating higher 'in-practice' qualifications to advance your career. Occupational standards could be used to achieve this for archaeology by linking higher education courses with placements for work experience and a period of supervised postgraduate practice. Presentation of a logbook/portfolio and a formal review or examination are usual to 'qualify' as a professional.
>
> Such a system would require the co-operation and considerable voluntary input from employers and the profession and effective support from higher education. The modular system devised for archaeology would fit well with this approach. There would need to be consensus on the awarding body for such a qualification (Archaeological Training Forum n.d.:7).

Consequently, we should also look towards the outcomes of these studies, most of which are available on websites such as Britarch, not necessarily for answers but for methodologies and ideas which can be modified and adopted locally. However, in the meantime we need to explore mechanisms that are easily implemented and maintained, including systems which have been tried at local or state level, but may not have had wider acceptance. In the era of the world wide web, it has become easy to make information and materials available nationally to all interested parties. This might include simple devices such as a nationally agreed list of the skills and attributes expected of a new graduate, as a means of providing students (and employers) with guidance and consistency in expectations. Similarly, a standardised work/field/laboratory experience form could lend further structure to attempts by students to formalise and represent their own efforts to collect skills. There could also be more elaborate processes, such as industry and universities collaborating to develop a modular web-based professional practice training course, possibly at honours level, which specifically deals with many of the apparent gaps such as professional ethics, report writing, contract and management issues. This sort of structure could be accessed by universities and run as a credited course, while at the same time being made available to employers to allow non-Australianist and foreign employees quickly assimilate local structures.

There is certainly a need for the academy to review what (and possibly how) it teaches, in consultation with industry, in order to better respond to the needs of industry. However, one danger is that too specific training at undergraduate level (e.g. in particular computer software applications, or specific legislation) can in itself be problematical – information becomes out-of-date rapidly and universities are probably more at home with systems than with specifics. This training can be useful for students who in their careers will certainly be required to have a flexible and adaptable approach (i.e. the need for 'lifelong learning' and continuous professional development). We also need to avoid parochialism – our students will not only be working in Australia so there is a need to address international as well as national standards – we may well find that these are often similar.

At the same time, industry and the professional societies need to develop and take responsibility for particular types of instruction beyond the university environment, especially for graduate archaeologists requiring specialised industry training. As suggested previously, the experience of universities is that specialised and vocational coursework masters or diploma programs in Australia have a limited lifespan as a result of limited enrolments and income potential. Despite the best will of academic teaching staff, administration will not allow new programs that run at a loss, especially where the loss of staff time may compromise undergraduate courses. The AACAI has sporadically run special courses for industry, but a more consistent and expanded approach to these may be necessary.

There is a tendency to frame this discussion along the lines of changing programs to provide any new training required, when in reality such changes are unlikely to happen, at least in the short-term. While many respondents to the surveys and discussion threads used the word 'initiative' as a desirable quality, there was little attempt to identify structures whereby students could take greater control of the process of meeting industry expectations through obtaining skills from a wider pool of potential sources, including other university departments, volunteer experiences, or from external employment. For instance,

while the chances of a small archaeology department developing a GIS specialisation is limited, most universities have GIS courses available through other departments. What the students need is a clear idea of what skills and attributes they need to develop in order to enhance their particular career path(s), as well as some assurance that this is a recognised and worthwhile process. In most forums and discussions it was broadly acknowledged that universities can teach expertise but not experience. This is not going to change and needs to be accommodated in our thinking.

Many respondents indicated that they would be happy with a national body of representatives taken from the teaching institutions, advised by representatives from the societies or industry bodies, who could create a sustainable structure for training and best practice. There was also wide support for accreditation of teaching programs as training to a suitable standard, or of accreditation for graduates (beyond the normal degree), or even for the teaching staff themselves. However, accreditation in whatever form is a process about which the authors have grave misgivings. In an era of economic rationalism, a formal accreditation process can be used against the survival of university departments. That is, a failure to meet 'industry standards' is more likely to be used as the rationale for closing a teaching program than be met with greater provision of resources by a caring administration. If such a process is still desired by the industry, including employers and users of archaeologists, it might be that rather than accreditation for a whole program, the panel or peak body could recognise particular courses in each program as providing desired skills.

A final confusing factor in identifying needs and directions for Australian archaeology, let alone addressing problems and formulating solutions, is the continuing practice of our relatively small professional community in dividing itself and operating almost independently within the spheres of sub-disciplinary interest. Within these society frameworks it is possible to bemoan the failings of specific training requirements, while doggedly retaining and reinforcing divisions which relate to long-vanished educational structures and rivalries, without acknowledgement of current wider patterns. Although joint conferences (or in reality parallel conferences) had occurred several times with ASHA/AIMA, the fact that the 2002 Townsville combined conference was the first meeting of the major societies after 30 years of operation is indicative of the situation. While generational shift is occurring within industry and academy, one of the purposes of the combined plenary sessions was to encourage, if only within the confines of the conference, some level of recognition of 'common ground' in the problems and possible solutions for Australian archaeology within a whole range of spheres. Although it is not the purpose of this paper to explore this point, it is certain that in the long-term the possibility of integration of societies or creation of an umbrella grouping will need to be explored. A unified group has greater potential for advocacy, public presence, and coordination of teaching requirements.

Conclusion

The results of the 2002 conference questionnaires and the other discussions are at best preliminary and at best indicative only of part of the problem. There is an urgent need to establish a consultative infrastructure that continues to address this issue. One of the main advantages which Australian archaeology has over other areas is that collectively it is a small professional body, with only a handful of training institutions. Therefore, the potential to consult, agree upon, implement, enforce and regulate any decisions should be quite high.

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