

Undergraduate OHS Degrees: Meeting the Demand

Colin Findlay

RMIT University

Co-Authors: Fred de Munk, Dr Neale Jackson

INTRODUCTION

Undergraduate programs in Occupational Health and Safety (OHS) are relatively new in Australia. Until 1990, almost all generalist OHS programs were taught at certificate, associate diploma or post-graduate level. However at least seven universities across Australia now offer Bachelor Degree programs in OHS. Refer to Appendix 1.

The developments that have led to a professional approach to occupational health and safety training and education include significant changes to the structure of legislation, pressure from workers compensation insurers, and a shift in employment culture. An issue in the development of undergraduate degree programs has been the acceptance that the generalist OHS professional has a significant place in our workplace environments.

Previously, occupational health and safety practice was not a clearly defined function in many organisations. Legislative requirements provided that employee representatives should be given basic training and accreditation. Management recognised the value in senior staff allocating some of their efforts to OHS and consequently supported short courses and seminars. Certificate courses in Business provided studies in safety. Larger organisations could engage specialist professionals such as occupational physicians, hygienists, nurses or similar.

Graduate programs have become more established. Thus, engineers, industrial chemists, health professionals, human resource managers and the like have had the opportunity to undertake post-graduate studies at a number of Australian universities for some years.

But what of the demand for persons with a high level of expertise in occupational health and safety to work in a full-time capacity? Can an undergraduate program provide the expected level of expertise? Is it appropriate for school-leavers to be directed into undergraduate OHS programs? Is there in fact, a demand for graduates of this type?

This paper aims to provide answers to these questions, in part, through a survey of the qualifications specified in a sample of OHS job advertisements in 1999.

DEVELOPMENT OF TERTIARY OHS COURSES IN AUSTRALIA

The basis for the curriculum of most current undergraduate OHS programs lies with the learning objectives and guidelines set out by a representative Committee of the National Occupational Health and Safety Commission. A significant aspect of the core objectives is the multi-disciplinary approach to OHS and the acceptance that OHS is a field in its own right. The core learning objectives stated in the Guidance Note are:

- i) Ensure the development, implementation, evaluation and monitoring of effective prevention programmes in the workplace.
- ii) Identify potential and current health and safety hazards in the workplace and recommend a systematic approach to their assessment and control.
- iii) Locate, evaluate, interpret and provide occupational health and safety information appropriate to the workplace.
- iv) Collect, analyse, interpret and use workplace data in a systematic way with appropriate attention to ethical, legal and confidentiality requirements.
- v) Consult and communicate in a manner which recognises and makes appropriate use of the industrial framework and social context of the workplace.
- vi) Apply knowledge of relevant legislation, standards and codes of practice in day-to-day activities.
- vii) Assess the workplace management systems and apply sound management practices to all aspects of the occupational health and safety function.

(Worksafe Australia, 1994).

A review of undergraduate course curricula in generalist OHS degrees at Australian universities through world wide web sites indicates that the Worksafe guidelines are essentially being followed, ie. in each program there is emphasis upon health and safety management and professional practice in addition to studies in the physical, biological, behavioural and social sciences. Refer to Appendix 1.

With respect to the expected level of expertise, university accreditation procedures and professional input to course planning should ensure that appropriate levels of rigour are met. Some concern has been expressed previously about the ability to mount adequate support for the emerging OHS degree programs due to the limited number of qualified OHS lecturers and researchers in universities (Quinlan, 1995). However, the number of qualified staff has grown and the expected educational standards should be achieved.

Debate has ensued in various fora as to whether young graduates can take their place in the work environment without the worldly experience of those people they are to advise. Anecdotally, this appears to have been an issue when other emerging professions have moved to achieve university status. The nursing profession is a recent example. In relation to OHS, industry representatives surveyed by Gardner and Cross (1995) stressed the need for courses to be practical and geared towards developing skills and competencies in graduates, as well as knowledge. The inclusion of significant

workplace experience and placement in most programs aims to provide graduates with a reasonable level of work environment competence.

DEMAND FOR GRADUATES

What demand is there for graduates in occupational health and safety?

A study of 423 job advertisements in 1994-95 reinforced the perception that industry prefers job applicants in OHS to have tertiary qualification (Fowler *et al*, 1998). These authors showed that 61% of advertisements specified tertiary qualifications whilst 6% specified specific technical or nursing qualifications. The remainder were either not specific in the requirement or did not seek formal qualifications.

The current study has investigated academic qualification requirements in a sample of 80 job advertisements related to OHS in the Melbourne *Age* newspaper in the calendar year 1999. *The Age* professional appointments advertisements were surveyed in Saturday editions where the vast majority of employment positions are placed. Whilst *The Age* is a Victorian newspaper, it is used by advertisers Australia-wide and therefore advertisements are reasonably representative of vacancies throughout Australia. It is acknowledged however that not all positions are advertised in newspapers. World wide web sites are a growing source of recruitment.

Qualifications were classified as either tertiary OHS, post-graduate OHS, other tertiary, or not specified. Where the OHS advertisement was not specific about the tertiary qualification it was assumed to be in OHS. Following Fowler *et al* (1998), the study classified as "tertiary" terms such as "higher", "formal" or "recognised". It is accepted that these terms may include diploma qualifications.

Job titles included OHS Co-ordinator, Officer, Adviser, Consultant, Specialist, Professional, Practitioner, Manager, Lecturer or Teacher, and in one case an OHS "Person". Some position titles included in the survey referred to hazard or risk management and safety training. These position titles mostly fit the Australian Standard occupational classification code Type 29 - other professional (if tertiary qualification is required) and Type 39 - other para-professional (if no formal qualification is required) (Australian Bureau of Statistics 1991).

It is noted that a number of position titles included the term "Environment", supporting previous studies showing the emerging presence and importance of environmental management in OHS education and practice (de Munk and Findlay 1999).

The industries in which the positions were advertised involved a wide range of employers including municipal authorities, hospitals, manufacturing and service industries, wholesale/retail, distribution/transport, Government authorities, education institutions and consultants.

RESULTS

Refer to TABLE 1.

OHS tertiary qualifications were specified in 62.5% (50) of the advertisements. Post-graduate qualifications (in OHS or Hazard Management) were specified in 9% (7) of advertisements.

Other tertiary qualifications were specifically stated for 18% (14) positions. There was some duplication of stated qualifications. Some advertisements listed other tertiary qualifications as alternatives to the OHS qualifications. This group included chemistry, engineering, physiotherapy, occupational therapy, health science, ergonomics, rehabilitation, human resources and business management.

No formal qualification was specified in 26% (21) advertisements. These positions normally referred to “demonstrated ability”, “working knowledge” or “experience”.

TABLE 1.
Qualifications required in job advertisements

Qualification	Number (n = 80)*	Percent*
Tertiary OHS	50	62.5
Post-grad OHS	7	9
Other tertiary	14	18
Not specified	21	26

* Totals exceed number of position advertisements as some advertisements included multiple or alternative qualifications.

Since there was a wide variety of industries represented amongst advertisers, with relatively small numbers in each group, no statistical analysis was attempted to relate which industries were seeking the tertiary qualified applicants. However, it was noted broadly that Government Departments and instrumentalities, and well-known, large, established organisations generally listed tertiary qualifications as a requirement. Conversely, small and at times unidentified organisations invariably required only relevant experience.

GRADUATE EXPERIENCE.

RMIT University is the only Victorian university which conducts a full-time undergraduate OHS program and has produced graduates over five years. The majority of graduates commence the program as school-leavers. Others are mature-age entrants who enter with previous tertiary qualifications, partial qualifications, diplomas, or considerable work experience in the field of OHS.

The experience at RMIT is that graduates obtain appropriate full-time employment within a relatively short period. Records indicate that 93% of all the available graduates to date are employed in jobs related to OHS. Graduates from Queensland University of Technology's Bachelor of Health Science (OHS) program have achieved a similar uptake of jobs (T.Farr, 20 Jan. 2000, personal communication).

Current employers include OHS and risk management consultants, the Victorian WorkCover Authority, insurance companies, and various government and private enterprises. Two graduates are known to have gained positions overseas. Of anecdotal interest is that prospective employers often contact the university directly, seeking to interview students in their final semester of study. Appointments invariably follow this contact. Each year some graduates have gained jobs with the organisation with whom they were placed during their compulsory field placement period. This seems to be a mutually beneficial experience.

The results of this 1999 survey reinforce the earlier work of Fowler *et al.*(1998). It is clear that industry prefers applicants with a tertiary qualification. In this study at least 62.5% of advertisements specified tertiary OHS qualifications. Post-graduate OHS qualifications were stated in a further 9% of advertisements. The specialist nature of the other tertiary qualifications stated (18%) could reflect the nature of the operations and the level of some senior appointments.

SUMMARY

In summary, this study indicates that there is a clear demand for tertiary OHS qualifications from employers of OHS practitioners, and that this demand has increased since similar research was conducted by others in 1994-95. At least two of Australia's universities of technology have established high employment rates of graduates from their OHS Bachelor Degree programs suggesting these programs meet the demands of industry. It might reasonably be assumed the other providers of OHS Bachelor Degree programs are meeting with similar success.

REFERENCES:

Australian Bureau of Statistics. 1991. *Australian standard classification of occupations*. Australian Government Publishing Service, Canberra.

De Munk, F and Findlay, C. 1999. The merging of environmental and safety education to reflect current professional practice. Proceedings of 9th Symposium of the International Organization for Science and Technology Education, Vol 1, 166-174, IOSTE, Durban.

Fowler, B, Sauer, K, Shaw, T and Phillis, D. 1998. Tertiary qualifications in occupational health and safety are now required by most employers. *J Occupational Health Safety - Aust NZ*, **14(1)**: 73-80.

Gardner, D and Cross, J. 1995. Training of OHS professionals: survey of industry representatives and safety science students. *J Occupational Health Safety - Aust NZ*, **11(2)**: 165-170.

Quinlan, M. 1995. Tertiary education and professional development in occupational health and safety in Australia – have we reached a watershed? In Quinlan, M. (Ed) *Tertiary education in occupational health and safety in Australia and New Zealand* 6-29, Industrial Relations Research Centre, UNSW.

Worksafe Australia. 1994. *Draft guidance note for the development of tertiary level courses for professional education in occupational health and safety*. National Occupational Health and Safety Commission, Sydney.

APPENDIX 1. UNDERGRADUATE OCCUPATIONAL HEALTH AND SAFETY EDUCATION PROGRAMS IN AUSTRALIAN UNIVERSITIES

University	Program Name
Central Queensland University	Bachelor of Health (OHS)
Curtin University	Bachelor of Health Science (H&S option)
Griffith University	B. Behavioural Science (Work & Health option)
Queensland Uni of Technology	Bachelor of Health Science (OHS)
RMIT University	Bachelor of Applied Science (OHS)
University of Newcastle	Bachelor of Occupational Health and Safety
University of Western Sydney	B.App.Sc.(Occupational Health & Environment)

Sources:

Directory of Higher Education Courses 1999, New Hobsons Press, North Sydney 1998.

OHS course information as published on the world wide web, February, 2000

Central Queensland University:

<http://www.cqu.edu.au/>

Curtin University:

<http://www.curtin.edu.au/curtin/dept/health/ohs/courses/bsc/>

Griffith University:

<http://www.gu.edu.au/ua/aa/hbk/fshlthsub5.html>

Queensland University of Technology:

http://www.prospect.qut.edu.au/format_course/action.lasso?-databas=CourseMarketingSystem.fp3&-layout=WebDetailsDomestic&-response=crse01_dom.lasso&-RecordID=33235&-search

RMIT University:

<http://www.rmit.edu.au/courses/he-tafe/u-grad/120004.html>

University of Newcastle:

http://www.health.newcastle.edu.au/disciplines/eoh/BOHS_toC.html

University of Western Sydney:

<http://www.hawkesbury.uws.edu.au/information/calendar2000/Part2/Degrees/bappsci2.shtml#BAppSciOccHlthEnv>