

## Graduate Outcomes

### Introduction

Higher education is widely regarded as a life-changing experience; the opportunity to learn and question new ideas, develop new social networks, and rethink your personal destiny is for many an invaluable experience. A main goal of many entering university or professional education though is to enhance their employability, to provide a firm basis for their future career. While relevant employment skills are changing rapidly, and what is necessary is to develop the capacity to learn, students require the reassurance they are acquiring a wide range of useful skills for the future. Employers look for talented people who have acquired skills that are readily adaptable. Governments which are investing increasing amounts in higher and professional education now demand greater accountability, and evidence that the university experience provides employability capabilities for all graduates.

This analysis of Graduate Outcomes discusses the following issues:

- Analysis of what Graduate Outcomes are
- The development of ePortfolios
- Reflective Practice
- Graduate Capabilities
- Assurance of Learning
- Lifelong Learning
- Graduate Success
- Myths of Graduate Outcomes

### What are Graduate Outcomes?

Graduate outcomes are now the focus of considerable scrutiny. Every university and professional education institute now examines on a regular basis the range of generic skills students are developing on their courses, the quality of the teaching and learning, the extent and depth of graduate capabilities, and the overall satisfaction of graduates with their educational experience. This analysis stretches beyond the educational institution and into the workplace. Universities survey the level of employment outcomes of their graduates, the distribution of employment sectors, average annual salaries, and further study and career developments. These studies are carefully analysed and collated and compared by the government.

It is important to remember though that the initial student outcome may be part of a process of transition to new horizons. Early employment success may prove to be an inaccurate indicator if there is not a clear career path for the individual. In the context of rapid technological and industrial change, a portfolio career built on a range of skills may be most promising. However, given the greater investment in education and training for the professions, often the mobility which occurs will be within the profession itself, as the professional develops and changes.

## The Development of ePortfolios (Education Portfolios)

In preparation for diverse careers, the practice of developing a portfolio of personal skill developments and achievements is now becoming widespread in higher education. This is a documentation and integration of the knowledge and skills acquired by the student during education. This is a very useful exercise because of “the capacity of ePortfolios to demonstrate the education of the whole person, rather than discipline by discipline, by providing a platform to demonstrate the interconnection of knowledge.”<sup>1</sup>

The development of ePortfolios by students encourage the opportunity for students to evidence their achievement in specific disciplines, engaging students to develop a narrative of their understanding, of the what and why they learnt a particular aspect of their discipline.<sup>2</sup> ePortfolios are useful for teachers to ask students to evaluate their discipline learning, how it relates to other disciplines, and to reflect on how it impacts on who they are becoming professionally, and how they might exercise these skills as a professional, as a result of the learning they have experienced.<sup>3</sup> “Today, ePortfolios are many different yet connected things: ...a range of... models in practice... in creative arts and in medical science... promoting identity formation and supporting employability... a conveyance of a person’s... professional genesis.”<sup>4</sup>

## Reflective Practice

To understand more fully the nature of the educational experience, and to be able to perform the analysis and integration of what is being learned in different subjects and disciplines, it is helpful to develop the sense of reflective practice. Reflective practice involves not simply accepting learning as a process of acquiring discrete ‘facts’ but looking more deeply and experimenting with ideas to discover the most intelligent action, different explanations, and being able to think through multiple perspectives (Figure 1).<sup>5</sup> This is a useful preparation for the diversity, ambiguity and complexity of the real world. “What is important is how and why the students use such a learning space to transfer individual experiences into authentic learning to assist them, amongst other things, in transitioning from student to professional.”<sup>6</sup>

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<sup>1</sup> Jennifer Rowley and Jennifer Munday (2018) ‘The Evolved Landscape of ePortfolios: Current Values and Purposes of Academic Teachers and Curriculum Designer’ (2018) 9(1) *Journal of Teaching and Learning for Graduate Employability* 2, 3; Becky Boesch, Candyce Reynolds, and Judith Patton ‘ePortfolios as a Tool for Integrative Learning: Building Classroom Practices That Work’ in Elena Railean, Gabriela Walker, Atilla Elçi, and Liz Jackson (eds), *Handbook of Research on Applied Learning Theory and Design in Modern Education* (IGI Global, 2016) 439, 443.

<sup>2</sup> Kelly Parkes, Katie Dredger, and David Hicks ‘ePortfolio as a Measure of Reflective Practice’ (2013) 2(3) *International Journal of ePortfolio* 99.

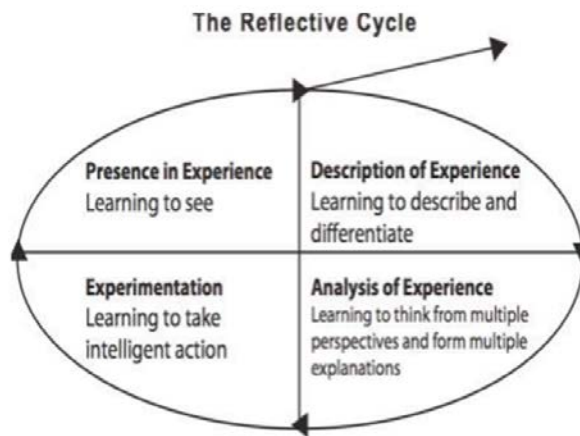
<sup>3</sup> Joanne Nakonechny and Shonna Ellis ‘Bryofolios: Individual and Group ePrortfolio Learning Spaces for Developing Authentic Science Scholars’ in Darren Cambridge (ed), *E-portfolios and Global Diffusion: Solutions for Collaborative Education* (IGI Global, 2012) 29.

<sup>4</sup> Kathleen Yancey ‘Foreword: What We Learn from This Portfolio Collection’ in Jennifer Rowley (ed), *ePortfolios in Australian universities* (Springer, 2016) i, vi; Jennifer Rowley and Jennifer Munday (2018) ‘The Evolved Landscape of ePortfolios: Current Values and Purposes of Academic Teachers and Curriculum Designer’ (2018) 9(1) *Journal of Teaching and Learning for Graduate Employability* 2, 5.

<sup>5</sup> Carol Rodgers ‘Voices Inside Schools Seeing Student Learning: Teacher Change and The Role of Reflection’ (2002) 72(2) *Harvard Educational Review*, 230, 235.

<sup>6</sup> Jennifer Rowley and Jennifer Munday(2018) ‘The Evolved Landscape of ePortfolios: Current Values and Purposes of Academic Teachers and Curriculum Designer’ (2018) 9(1) *Journal of Teaching and Learning for Graduate Employability* 2, 7.

Figure 1: Rodgers Reflective Cycle



Source: Adapted from Rodgers 2002:235

Capability in understanding, interpreting and navigating through complex problems and ambiguous circumstances will be among the key attributes of professionals in all sectors. For example, though guided by science, it will be the exercise of clinical judgement ultimately that will define the skill of the medical practitioner. Similarly, in understanding and translating the law in practice, the lawyer will interpret the law in the context of extensive experience and judging the complexities and ambiguities of the context.

### Graduate Capabilities

Those engaged in the delivery of higher and professional education are becoming alert to the importance of evidence of graduate capabilities. "Clearly defined graduate attributes are essential for producing graduates with the skills necessary to be proficient employees and contributors to society."<sup>7</sup> The boundaries of universities and institutes are becoming more permeable, thereby allowing engagement with industry partners to contribute in informing curriculum development and enhancing student experience. Professional accreditation may contribute to this process of engagement and practical understanding. A range of relevant graduate capabilities, drawn from national surveys of student engagement, which are necessary to consider in curriculum development and integration with professional practice are listed in Table 1.

<sup>7</sup> Ewan, C. *Learning and teaching in Australian universities: A thematic analysis of cycle 1 AUQA audits* (2009). Australia: ALTC and AUQA (Ewan, 2009).

**Table 1: Graduate Capabilities**

1. Knowledge:	Work related knowledge and skills
2. Writing:	Writing clearly and effectively
3. Speaking:	Speaking clearly and effectively
4. Thinking:	Thinking critically and analytically
5. Quantitative:	Analysing quantitative problems
6. Using ICT:	Using computing and information technology
7. Teamwork:	Working effectively with others
8. Independent Learning:	Learning effectively on your own
9. Intercultural Understanding:	Understanding people of other racial and ethnic backgrounds
10. Problem-solving:	Solving complex, real-world problems
11. Values & Ethics:	Developing a personal code of values and ethics
12. Community Engagement:	Contributing to the welfare of your community
13. Industry awareness:	Developing general industry awareness
14. Social contexts:	Understanding different social contexts

Source: Adapted from Tee, Ferns, and Hughes (2018:26)

Similar surveys are widely conducted of employers' assessments of the usefulness of graduate attributes. Among the more useful attributes commented on in a survey of pharmacy employers were the professional skills of self-discipline, independence, time management and organisational skills; together with a positive attitude, willingness to learn, enthusiasm and empathy; and accuracy, attention to detail; leadership and management skills. Communication skills were also highly valued by employers including language and clear communication; ability to counsel and personal relations skills; teamwork including the ability to work and communicate as a team.<sup>8</sup> From this wide range of graduate attributes a selection of attributes will be of importance in any profession, depending on the nature of the profession. For example, in some professions, such as engineering, quantitative, technical and analytical skills will be essential attributes, while in other professions inter-personal skills, engagement and understanding of different social contexts will be crucial such as in professional social work.

### **Assurance of Learning**

Educational institutions are in the course of developing a series of methodologies to assure learning of useful skills and relevant knowledge takes place. This involves making more explicit the expectations of what the student's capabilities are upon completion of a course. Criteria are more clearly specified, and standards of attainment more carefully gauged. The resulting data is analysed to determine whether the performance of the course matches the expectations of curriculum developers and students. This in turn offers guidance on how the quality of teaching, curriculum design and delivery might be improved. This process allows the following questions to be more accurately addressed:

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<sup>8</sup> Lisa Tee, Sonia Ferns, and Jeffery D Hughes, 'The Capabilities That Count For Early Professional Success in Pharmacy: A case study of graduates, employer and course team perspectives' (2018) 9(1) *Journal of Teaching and Learning for Graduate Employability* 23, 33.

- What are our expectations of student learning?
- What will students learn during the course?
- How will students learn this?
- How will we know if they have learned this or not?
- What will be student attributes when they graduate?

Assurance of learning allows institutions to improve subjects and programs, and to assure both students and external stakeholders including future students, accreditors, employers, and the government that there is assurance of graduates acquiring the attributes required by the professions.

This a more conscious and evidence-based approach to measuring the quality of the knowledge and skills of students. It enables greater coherence for students as they work through the stated objectives of the course. Students are given greater control of their own learning by reference to the objectives set and are enabled to make a more positive contribution to developing the required attributes.

### **Lifelong Learning**

A commitment to life-long learning is a necessary pre-requisite for continuous performance in any professional practice. Therefore, higher education needs to equip graduates with the skills and aptitude to engage in a life-time of inquiry into new knowledge and skills:

“Lifelong learning is recognised as a graduate capability that ensues beyond the walls of the educational institution. Learning is a continuum where career development learning is strengthened and nurtured through employment. Graduates are frequently critical of the disconnect between the university curriculum and the workplace. In response to this, higher education institutions are focusing on a quality student experience with a move away from didactic models of teaching and learning, to an integrated approach where theoretical aspects of the discipline are blended with practical experience.”<sup>9</sup> (Tee, Ferns, and Hughes 2018:24).

The capacity for life-long learning is probably the most precious asset of any graduate.

### **Graduate Success**

How then do we define graduate success? For some it will simply be getting a good job or earning a good salary soon after graduation. For other graduates it will be the satisfaction they experienced on the course, or the intellectual passion engendered by studying.

Reviewing the evidence on graduate success, the results remain strong despite the progressive increase in the age participation rate, which means there are a much higher proportion of graduates in the employed

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<sup>9</sup> Tee, Ferns and Hughes, above n 8, 24.

population (for example in 1986 only 7.2 per cent of people aged 15-74 years old held a bachelor degree qualification, compared to 28 per cent of men and 35 per cent of women in 2017)<sup>10</sup>. In addition, many transformations have occurred in the structure and status of professions.

According to the Australian National Course Experience Questionnaire (*Graduate Careers Australia 2014*), a survey of graduate success, the employment rates of bachelor's degree graduates were around 68 per cent meaning that they found employment within four months of completing their degree. There is variation of success rates between different fields of study. The fields with the best employment prospects were:

Medicine (98 per cent)

Pharmacy (94 per cent)

Surveying (84 per cent)

There are many reasons why some fields outperform others at different periods of time. Medicine and Pharmacy have compulsory training periods that graduates must complete to become qualified. Other professions such as surveying, or engineering respond to the periods of expansion or contraction of major industries.

In other fields, the competition for employment upon graduation is more intense. For example, in communications, 40 per cent of graduates still seek work four months after completion of their degree. In creative arts, 47 per cent of graduates are still seeking full time employment four months after course completion.

There is similarly a wide distribution in graduate earnings with dentistry, engineering, and medicine near the top of the scale, and fields such as architecture, pharmacy and creative arts paid lower starting salaries.

Overall graduate satisfaction with their field of studies also shows a wide variation, with graduates from environmental studies, humanities, and social sciences, sciences and social work indicating the most satisfaction, and graduates from accounting, architecture, built environment, dentistry, and pharmacy indicating less satisfaction with their program of studies.<sup>11</sup>

In a society increasingly geared towards accreditation and advanced study, it is interesting to note that according to the National Course Experience Questionnaire Survey (*Graduate Careers Australia 2013*) students who complete postgraduate degrees are more likely to find work than undergraduates as the former enjoy an employment rate of around 83 per cent.

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<sup>10</sup> ABS

<sup>11</sup> Good Education Group, *Good Universities Guide 2014* (2014) Good Universities Guide  
<<https://ebook.gooduniversitiesguide.com.au/?iid=81895&startpage=page0000242#>> (accessed 08 March 2018)

## Myths of Graduate Outcomes

How does the relatively buoyant view of graduate success detailed above sit with the frequently expressed beliefs that educational and professional qualifications are less valuable today than they may have been in the past? That students are not as likely to secure graduate careers in the way they might have done before?<sup>12</sup>

Firstly, it is important to recognise that there is a close correlation between national prosperity and investment in education. In the industrial age, it was a firm conviction that education, science and research and development helped deliver economic progress. The economies of the Asia Pacific have learned this lesson, and are now investing increasing amounts in education, science and research development. Secondly it is necessary to realise that, as with all other industries, education is impacted by economic forces. The rate of graduate employment is impacted by economic growth, and the resulting employment rates in the labour market. Graduate employment rises as national GDP rises, and falls during economic downturns. A university degree or professional qualification is an investment for life and will contribute life-chances and economic well-being through many economic changes. While useful employment is essential, there are many other attributes of higher education that contribute to better lives and a more flourishing society.<sup>13</sup>

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<sup>12</sup> Thomas Clarke and Keun Lee, *Innovation in the Asia-Pacific: From Manufacturing to Knowledge Economy*, (Springer, 2018).

<sup>13</sup> Omer Yezdani, *Five Myths About Australian University Graduate Outcomes* (24 November 2017) The Conversation <<http://theconversation.com/five-myths-about-australian-university-graduate-outcomes-87074>> (accessed 08 March 2018).

## Summary

While there are many benefits of higher and professional education, it is important to have a clear sense of what graduate outcomes are achieved. Graduate attributes equip people to perform well in the multiple challenges of professional work. Professional challenges go beyond the esoteric knowledge and profound skills of the professions, and include the capacity to think through complex problems, communicate effectively, work with others, and maintain a code of ethics and values.

Preparation for the exercise of these and other skills and attributes begins with education, and it is this practical and enabling aspect of education that is the focus of graduate outcomes.

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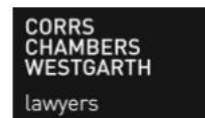


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