

How do we know?

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Lifelong learning is one of the seven graduate qualities developed by students of the University of South Australia (UniSA) over the duration of their program. Assessment tasks developed for individual courses enable students to achieve various indicators of lifelong learning. Students provide feedback to course coordinators and program directors on their level of satisfaction with the development of the qualities by completing the Course Evaluation Instrument (CEI) and the Graduate Course Experience Questionnaire (GCEQ), and satisfaction with the quality of teaching using the Student Evaluation of Teaching Questionnaire (SET). These student evaluations of teaching and learning methodologies are context dependent and therefore subjective.

These evaluation mechanisms provide timely feedback to individual academic staff members for improvement of courses in terms of the CEI, and quality assurance in terms of the program at the time of completion as well as compliance with internal and external regulatory structures. However, whilst measuring these evaluations is evidence of the successful completion of assigned academic tasks and in some instances of professional competencies, they do not demonstrate that the values underpinning the graduate quality framework have been accepted and/or internalised by graduate students and reflected in their professional lives.

This paper will explore possible indicators for measuring the internalisation of the lifelong learning graduate's quality, once graduates have entered professional practice.

Introduction

Globally there is an increasing emphasis being placed on the development of quality improvement, and quality assurance mechanisms within the higher education sector to demonstrate accountability of individual institutions for their outputs (Anderson, Johnson, Milligan 2000; Biggs 2003). Outputs for the higher education sector are graduates who will contribute to the ongoing growth and development of their society. This increasing emphasis on quality assurance is politically and economically driven, with Bradley (2005) arguing convincingly that quality assurance mechanisms are developed and implemented by government to control the activities within the higher education sector. Bradley's arguments are supported by earlier commentary in the literature about the impact this level of politicisation has had and continues to have on the higher education sector (Bridges, 2000; Marginson, 2002; Vidovich, 2002; Billing, 2004).

The increasing politicisation of the higher education sector is well documented in the literature, together with the seemingly unending streams of commissioned reports (see Biggs, 2001; Vidovich, 2002; Wood & Meek, 2002), and underpins the 'quality' culture that is emerging within and across universities. Measuring quality in the higher education sector tends to be problematic and multifaceted as it is determined by a number of key stakeholders including students, academic staff, and external observers. The issue of quality as it relates to teaching in higher education is well reported in the literature and perhaps is best conceptualised as student focused learning (Biggs, 2003; Centra, 2003; Elliot & Shin, 2003; Thomas & Galambos, 2004).

Biggs (2001:221) makes the point that three definitions of quality have entered this debate:

- Quality as value for money
- Quality as fit for the purpose of the institution
- Quality as transforming

Quality as value for money has a retrospective element in that it is a measure of institutional accountability that emerges from student evaluations of their teaching and learning experiences, and it is these evaluations that form the basis of government reports and subsequent policy directions. Student evaluations of programs and courses are linked to their experiences with assessment tasks; interactions with individual academics and/or teaching teams; and interactions with the non-academic aspects of the university experience (James, 2001). Measures of this public accountability are the cost effective production of graduates; academic publications in high impact journals; increased numbers of academic staff with PhDs; and a corporate planning strategy that identifies self-funding strategies and initiatives.

Quality as fit for purpose reflects the purpose of the university, the most important being that of teaching and research. This paper will focus on effective student learning and associated outcomes as described in the graduate or generic qualities. Thus, a possible indicator for effective student learning extends into employability following graduation

Quality as transforming refers to the university experience changing students' worldviews through knowledge development that enables the application of theoretical concepts to real-life real-world problems. These last two definitions are prospective and impact on the developments and enhancements of the quality of teaching and learning through evaluative measurement.

Literature review

One of the impacts has been the need for universities to develop graduate qualities or generic skills to describe the qualities or skills a graduate of a particular university will be able to demonstrate to prospective employers. Graduate qualities have been defined by Feast (2001:144) as: 'intellectual, aptitudinal or interpersonal skills rather than attitudinal skills'; and as skills and knowledge that are developed beyond the disciplinary level (Barrie 2003). Like other universities in Australia, the University of South Australia (UniSA) has developed a Teaching and Learning framework within which the graduate qualities espoused by the institution are embedded. This framework is available to all staff through the university's web pages as well as supporting materials detailing how these graduate qualities support the institution's mission and objectives statements through the implementation of these graduate qualities.

<http://www.unisanet.unisa.edu.au/learningconnection/staff/framewor/default.asp>

Another supporting document found in this suite of documents is titled 'What people say about the graduate qualities.' The brief chapter headings in this document are:

- The higher education sector
- Graduates failing work test
- What employers look for

Graduate qualities, therefore, are the skills or competencies employers expect from graduates of universities, and the views of potential employers/industries are becoming increasingly important in higher education environments where commercial considerations are becoming increasingly paramount (Feast & Bretag 2005). The following extracts from potential employers describe what qualities or competencies are being looked for in university graduates.

Australian Gas & Light look for:

- Superior initiative, vision and responsibility
- Outstanding communication and interpersonal skills
- Ability to work alone or as part of a team
- Strong commitment to safety and customer service

KPMG seeks graduates with the following attributes:

- Sound academic record
- Communication skills
- Teamwork skills
- Initiative
- Motivated

Arthur Andersen seeks:

- Superior communication skills
- Strong team orientation
- Creative problem solving skills
- Superior analytical skills
- Strong character
- Balanced lifestyle

These extracts were accessed online 28/09/05 from:

<http://www.unisanet.unisa.edu.au/gradquals/studs/what.asp>

and were from the UniSA's School of Business & Enterprise career newsletter and the Arthur Andersen extract from employer on-campus presentations to students.

Compare these with the graduate qualities developed by UniSA:

- Operates effectively with and upon a body of knowledge of sufficient depth to begin professional practice;
- Is prepared for lifelong learning in pursuit of professional development and excellence in professional practice;
- Is an effective problem solver, capable of applying logical, critical and creative thinking to arrange of problems;
- Can work both autonomously and collaboratively as a professional;
- Is committed to ethical action and social responsibility as a professional and citizen;
- Communicates effectively in professional practice and as a member of the community;
- Demonstrates international perspectives as a professional and as a citizen.

(accessed online 12/9/05: <http://www.unisanet.unisa.edu.au/gradquals/staff/default.asp>)

From this it can be seen that there are similarities between the graduate qualities as developed by UniSA and employer requirements, indicating that another purpose of the university is economic and social development through workforce maintenance - the university as 'employment broker'.

Each graduate quality is supported by a set of descriptors that expand its meaning, but as Aspin and Chapman (2000) and Barrie (2003) point out, this meaning is not a shared meaning among academic staff, making this a highly debated topic in the literature (Jarvis, 1999; Gibbons, 1998; Bridges, 2000). One reason for the lack of shared meaning is that the graduate qualities are generic and as such need to be interpreted within a field or program for them to have any real meaning. Also it can be argued that elaboration and meaning come from the adaptation of the descriptors to meet the needs of the profession and field of study.

This debate is supported by a growing body of research examining the outcomes emerging from the implementation of these graduate qualities from a student perspective (Feast 2001; Crebert, Bates, Bell, Patrick & Cragolini, 2004). Both studies examine graduate qualities from a student perspective; Feast's (2001) study used a qualitative approach to explore the perceptions of students of the value of graduate qualities to students. Among the conclusions drawn from the study was that students tended to underrate themselves in the personal achievement of the graduate qualities, and there was variability in the level of importance students placed on the need to achieve different graduate qualities.

However at UniSA we have developed a tool called Transcript2 which goes a long way to remedying this. Transcript2 is an online tool that encourages students to record their experience on the graduate qualities and to document their success in developing these from both their formal academic program and their extra curricular activities (work included). Therefore, this issue of students underrating themselves is open to challenge. Students also find this tool useful when they start applying for jobs because Transcript2 is an online portfolio where information may be stored and then drawn upon to demonstrate the achievement of the graduate qualities requested by prospective employers.

The Crebert *et al.* (2004) study was Stage 4 of the Griffith Graduate Project. All students involved in this project as part of their undergraduate studies experienced work placement. The overall findings from this stage of the project found that work placements offered students opportunities to develop graduate qualities such as interpersonal and communication skills and ethical decision making. The study also found differences between the learning cultures of universities and the workplace, where the latter emphasises team work and team achievement, while the former focuses on personal achievement, thus creating a potential for tensions between the two learning environments. The authors also comment that academics pay little attention to the processes, roles and outcomes in effective team working, suggesting a further area for research. This study emphasises the theory-practice gap, suggesting that there needs to be more collaboration between employers and universities if the intent of graduate qualities is to be realized, and there needs to be more integration of informal and formal learning.

The lack of research and the absence of a theoretical framework in the area of graduate qualities may also account for the multiple interpretations academics apply to graduate qualities (Barrie 2003; Barnett, 2004). None of these studies considered the graduate quality related to lifelong learning in any detail, yet this paper would argue that this graduate quality underpins the employability factor for graduates in a globalised world that is so well reported in the higher education literature (Atkins, 1999; Jarvis, 1999; Marginson, 2002; Tuijnman & Bostrom, 2002; Gustavason, 2002; Barnett, 2004).

While recognising the need for further research on graduate qualities from a range of perspectives and interests, this paper considers indicators for UniSA's Graduate Quality 2: 'A graduate.... is prepared for lifelong learning in pursuit of personal development and excellence in professional practice'. The research perspective proposed by this paper relates the graduate qualities to systems theory because it is about developing graduate qualities in a developmental and consistent manner that is transparent, justifiable, accountable, context specific, and focused on customer satisfaction and quality assurance. The current measures of quality do not measure the internalisation of graduate qualities which can only be measured once the graduate has entered professional practice. The current tools also do not measure employer satisfaction with the 'university product' -

the graduate. Therefore the proposed analytical framework will take these two requirements into consideration, thus providing key stakeholders with the means to measure the internalisation of specific graduate qualities.

Indicator development for measuring outcomes of lifelong learning

The internalisation by graduates of these graduate qualities enhances their employability (see above) but as Aspin and Chapman (2000) point out, the terms are context dependent and the meanings often unclear. Lifelong education has been defined as a 'philosophical principle' that defines higher education (Tuijnman & Bostrom, 2002:95). In this context therefore, lifelong learning becomes a process for lifelong education that can be formal and informal (Gustavasson, 2000). From a corporate perspective, all universities are now corporations within the broader context of service industries that are regulated by governments responding to market forces and all that entails. It would appear that quality assurance in higher education is more about meeting consumer demands (the concept of student as customer) and controlling organisational outcomes using a range of economically derived strategies than teaching, learning and research, which at one time comprised the core business of the university (Marginson, 2002). Accordingly, a possible framework for analysis for Graduate Quality 2 has been adapted from the management literature, beginning with the definition of this graduate quality and descriptors.

Graduate quality 2

'A graduate.... is prepared for lifelong learning in pursuit of personal development and excellence in professional practice is supported by the following descriptors:

A graduate will:

- Locate, evaluate, manage and use information in a range of contexts - ie be information literate;
- Understand the limitations of and have the capacity to evaluate their current knowledge;
- Understand and accept personal weaknesses, strengths and preferred learning styles, have knowledge of a range of learning strategies, and take responsibility for their learning and development;
- Respond confidently to change in a flexible and adaptable manner;
- Maintain a positive concept of self as capable and autonomous;
- Sustain intellectual interest and critical thinking as a mature professional.

(accessed online 12/9/05: <http://www.unisanet.unisa.edu.au/gradquals/staff/default.asp>)

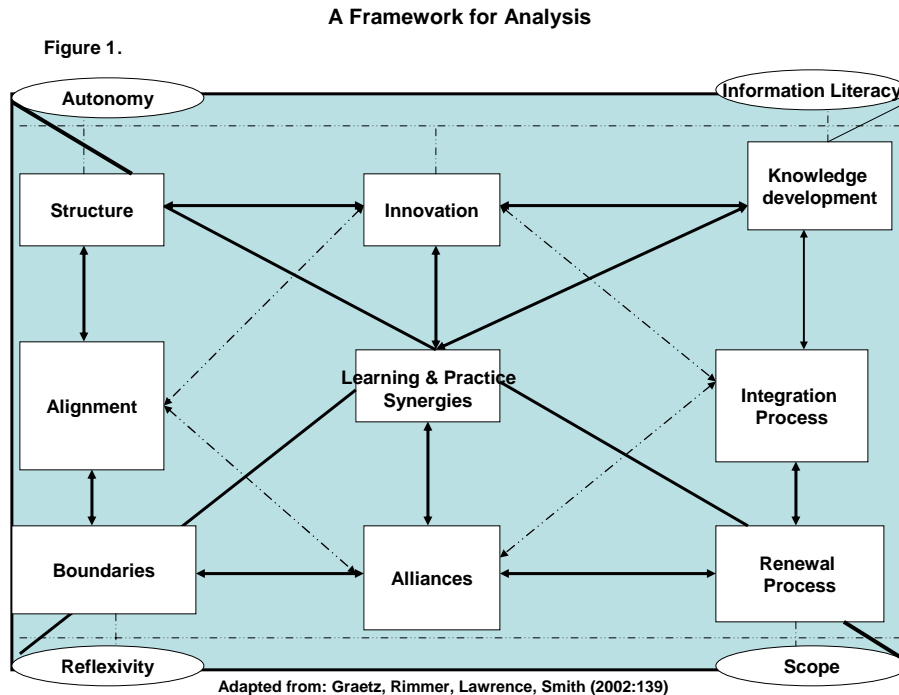
One outcome from this graduate quality when considered from a management perspective is that of value adding to whatever enterprise the graduate is engaged with. Edwards, Ranson, Strain (2002) comment that lifelong learning is now identified as a significant policy vehicle for higher education globally because policy makers believe it will enable graduates to deal with the uncertainties of the 21st century, a view expressed in an earlier paper by Jarvis (1999). Lifelong learning is an integral part of a policy direction to create a 'learning society, a learning age and a learning culture' to increase a nation's economic value through increased competitiveness and social inclusivity, which are considered to be desirable characteristics for graduates, corporations and regions (Edwards *et al.* 2002:529).

Thus, lifelong learning has value adding properties not only for individuals but for organisations and the state. However, lifelong learning has two dimensions - formal (the learning process for completing a recognised academic qualification), and informal (learning that is work and life based).

Therefore, any measurement of lifelong learning must take into account these two forms of learning. The two types of teaching and learning are apparent in management and in the health sciences where the application of theory to practice is integral to achieving successful organisational and customer outcomes and hence quality assurance.

Current teaching and learning in management texts is based on systems theory and this analytical framework is therefore based on systems theory (Robbins, Bergman, Stagg, Coulter 2003). Figure 1: 'A framework for analysis' (see below) has been developed using a systems perspective. Figure 1 is presented for consideration as a conceptual framework for developing indicators for measuring Graduate Quality 2.

Figure 1: A framework for analysis



Discussion

The four main pillars in this framework are: autonomy, collaboration, scope and reflexivity, all of which are reflected in the indicators supporting Graduate Quality 2. For instance, **Autonomy** is reflected in the statement that 'the graduate will....maintain a positive concept of self as capable and autonomous'.

Information literacy refers to the graduates' abilities to locate manage and use information in a range of contexts.

Scope refers to graduates understanding their own limitations and developing the capacity to evaluate their current level of knowledge.

Reflexivity refers to graduates understanding the need for lifelong learners to sustain their intellectual interest, to be reflective practitioners, and to engage in critical thinking as mature professionals.

These four pillars are then networked with other desirable characteristics that make up the elements of Graduate Quality 2. Beginning from the left hand side of the framework and moving clockwise, a brief explanation of the characteristics is given

Structure: refers to the graduate's ability to adapt to the work environment and begin to organise their work day.

Newstreams: refers to an individual's ability to take risks, be creative and innovative

Knowledge development: What learning strategies has the graduate developed? How are these evident?

Integration process: refers to the graduate's ability to integrate information and use it effectively to add value to their workplace.

Renewal process: refers to how the process of lifelong learning supports rationalisation through performance improvement; how it helps to overcome weaknesses becomes a personal SWOT analysis (Strengths, Weaknesses, Opportunities and Threats).

Alliances: refers to how lifelong learning supports the development of professional and social networks.

Boundaries: refers to how lifelong learning enhances strategic approaches to manage the work - life balance.

Alignment : refers to how lifelong learning contributes to the development and sustaining of information literacy and to aligning this knowledge in a meaningful way.

Synergies: This characteristic is the central feature of the framework and recognises the synergistic relationships between the various elements and how these together and separately contribute to the value adding capability of this graduate quality.

This proposed framework provides a system for organising knowledge and information as part of a value adding process that is now becoming a catch cry of governments. It fits current quality assurance initiatives that are focused on demonstrating quality outcomes in higher education.

Summary

This paper is a prelude to beginning research that looks to identify and develop indicators that will assist in measuring higher education outputs through the graduate qualities. Graduate qualities are an integral component of quality assurance programs for higher education institutions because they are a measure of the quality of teaching and learning. However, the literature would suggest that research into the measurement of these qualities is embryonic at this time, evidenced by the multiple interpretations of meaning related to these graduate qualities. It is clear from the research reported thus far in the literature that any further studies need to involve industry and other key stakeholders in the process or processes.

At UniSA, Graduate Quality 2 - 'a graduate of the University of South Australia is prepared for lifelong learning in pursuit of personal development and excellence in professional practice' - recognises the uncertainty and pace of change in the world graduates will enter. This graduate quality, together with the other six, supports the graduates as they begin their professional lives. Lifelong learning is about developing a range of skills and knowledge that will help graduates problem solve and locate and use information effectively. Lifelong learning helps graduates to become information literate i.e., to find information and then apply it to their particular circumstance (s). From the information sourced for this paper it seems timely to develop indicators that measure these higher education outcomes.

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References

- Anderson, D, Johnson, R. Milligan, B. (2000). *Quality assurance and accreditation in Australian Higher Education: An assessment of Australian and international practice*. Department of Education Training and Youth Affairs, Canberra.
- Aspin, D. N. & Chapman, J. D. (2000). Lifelong learning: P concepts and conceptions. *International Journal of Lifelong Education*, 19 (1), pp. 2-19.
- Atkins, M. J. (1999). Oven-ready and self-basting: Taking stock of employability skills. *Teaching in Higher Education*, 4 (2), pp. 267-281.
- Barrie, S. C. (2003). *Understanding what we mean by the generic attributes of graduates*. University of Sydney.
- Barrie, S.C. (2004). A research- based approach to generic graduate attributes policy. *Higher Education Research & Development*, 23 (3), pp. 260-275.
- Barnett, R. (2004). Learning for an unknown future. *Higher Education Research & Development*, 23 (3), pp. 247-260.
- Biggs, J. (2001). The reflective institution: Assuring and enhancing the quality of teaching and learning. *Higher Education*, 41 (1), pp. 221-238.
- Biggs, J. (2003). *Teaching for quality at university*. 2nd edn. The Society for Research Into Higher Education & Open University Press.
- Billing, D. (2004). International comparisons and trends in external quality assurance: commonality or diversity? *Higher Education*, 47, pp. 113-137
- Bradley, D. (2005). To what end? The effectiveness of quality assurance in higher education. *INQAAHE Biennial Conference, quality, assurance and diversity* Wellington New Zealand, 29 March 2005
- Bridges, D. (2000). Back to the future: The higher education curriculum in the 21st century. *Cambridge Journal of Education*, 30 (1) accessed online 27/09/05:
http://www.weblinks3.epnet.com.ezlibproxy.levels.unisa.edu.au/citation.asp?tb=1&_ua-bo
- Centra, J. (2003). Will teachers receive higher student evaluations by giving higher grades and less course work? *Research in Higher Education*, 44 (5), pp. 495-518.
- Crebert, G, Bates, M. Bell, B. Patrick, C-J. & Cragolini, V. (2004). Developing generic skills at university, during work placement and in employment: Graduates' perceptions. *Higher Education Research & Development*, 23 (2), pp. 147-165.
- Edwards, R. Ranson, S. Strain, M. (2002). Reflexivity: Towards a theory of lifelong Learning. *International Journal of Lifelong Education*, 21 (1), pp. 525-536.
- Elliot, K. & Shin D. (2002). Student satisfaction: An alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management*, 24 (2), pp. 197-209.
- Feast, V. (2001). Student perceptions of the importance and value of a Graduate Quality framework in a tertiary environment. *International Education Journal*, 2 (4), pp. 144-158.
- Feast V. & Bretag, T. (2005). Responding to crises in transnational education: New challenges for higher education. *Higher Education Research & Development*, 24 (1), pp. 63-78.

- Gibbons, M (2002). *Higher Education relevance in the 21st century*. Association of Commonwealth Universities.
- Graetz, F., Rimmer, M., Lawrence, A. & Smith, A. (2002). *Managing organisational change*. John Wiley & Sons, Australia, Ltd.
- Gustavason, B. (2002). What do we mean by lifelong learning and knowledge? *International Journal of Lifelong Education*, 21 (1), pp. 13-23.
- James, R. (2001). Students' changing expectations of higher education and the consequences of mismatches with the reality. Paper for OECD-IMHE Conference – *Management responses to changing student expectations*, QUT 24 September 2001
- Jarvis, P. (1999). Global trends in lifelong learning and the response of universities. *Comparative Education*, 35 (2), pp. 249-257.
- Marginson, S. (2002). Nation-building universities in a global environment: The case of Australia. *Higher Education*, 43, pp. 409-422
- Robbins, S., Bergman, R., Stagg, I. & Coulter, M. (2003). *Management*. Pearson, Australia. The University of South Australia. Graduate Qualities. Accessed online 04/08/05
<http://www.unisanet.unisa.edu.au/gradquals/staff/default.asp>
- Thomas, E. H. Galambos, N. (2004). What satisfies students? Mining students' opinion data with regression and decision tree analysis. *Research in Higher Education*, 45 (3), pp. 251-269.
- Tuijnman, A. & Bostron, A-K, (2002). Changing notions of lifelong education and lifelong learning. *International Review of Education*, 48(1/2), 93-110.
- Vidovich, L. (2002) Quality assurance in Australian higher education: Globalisation and 'steering at a distance'. *Higher Education*, 43, pp. 391-408.
- Wood, F. & Meek, V.L. (2002). Over-reviewed and underfunded? The evolving policy context of Australian higher education research and development. *Journal of Higher Education Policy and Management*, 24 (1), pp. 7-20.