# DEVELOPING EXTERNAL STUDENTS' GRADUATE QUALITIES: HOW CAN CURRENT PRACTICE BE IMPROVED?

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### **ABSTRACT**

The identification of Graduate Qualities (GQs) as an approach to developing skills required by prospective employers has led to the embedding of these qualities in the teaching and learning strategies of undergraduate courses (Steven & Fallows, 1998). This paper explores the implementation of GQs into an undergraduate course and the ability of external students to develop these qualities given the facilities available to them.

#### INTRODUCTION

The University of South Australia (USA) has joined the worldwide commitment towards the development and implementation of Graduate Qualities (GQs) throughout their programs (USA, 2000a). The identification of GQs as an approach to developing skills required by prospective employers has led to the embedding of these qualities in the teaching and learning strategies of undergraduate courses (Steven & Fallows, 1998). GQs were first implemented into USA Business degrees in the late 1990s. Not only do the GQs relate to the professional or discipline content but also to the preparation of students to work as professionals in today's multicultural and democratic society (USA, 2000a).

Many of the qualities identified have been informally present in course design for many years but the formalisation of these qualities has led to open debate of how well the outcomes of the students are achieved (USA, 2000a). Nunan (1999, p.1) identified that the introduction of mass education has seen the emergence of a problem for employers as they attempt to distinguish between prospective graduate workers. "...employers in the graduate market have little more to make their decision upon than the reputation of the degree". Nunan (1999) continues by stating " ... while employers may have information about the competence of a graduate in a field-specific area, they do not have information about employment-related skills or about the attainments of individual graduates in areas related to employment". However, with the introduction of Graduate Qualities, employers will now be able to distinguish between graduates from the same institution and degree program as the graduates will be able to include information about their attainment of Graduate Qualities in application and interview situations.

USA has identified seven (7) Graduate Qualities, which state that, a graduate:

- 1. operates effectively with and upon a body of knowledge of sufficient depth to begin professional practice;
- is prepared for lifelong learning in pursuit of personal development and excellence in professional practice;
- 3. is an effective problem solver, capable of applying logical, critical, and creative thinking to a range of problems;
- 4. can work both autonomously and collaboratively as a professional;
- 5. 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;
- 7. demonstrates international perspectives as a professional and as a citizen.

"It is these qualities that explicate the ways in which graduates of the University become educated professionals, effective researchers, experts in applying knowledge, and contribute to serving the many community contexts in which they may operate" (USA, 2000b, p.1).

As these GQs were being introduced, a secondyear core course (Data Management for Administrators (DMA)) in the Bachelor of Business (Administrative Management) was being reviewed and therefore the link between GQs and the course aims, objectives, and assessment tasks was included in the course redesign. DMA is offered in both internal and external modes and students are given similar written materials and undertake the same assessments regardless of the study mode. Delivery of this course in external mode has been undertaken for over 10 years and the mantra of delivery has been 'what you give to the internal students, you must give to the external students'. The application of equity in relation to content and assessment must be ensured no matter which mode the student is enrolled in.

Historically, distance education was known as learning by correspondence - due to the transmission method of study materials and assessment. Correspondence education concentrated on independent study of the student. The advent of many and varied telecommunications channels, including e-mail and other aspects of the Internet, have brought about a new mode of distance education where teaching and learning are experienced simultaneously (Jeffries, nd). "Learning is a lifelong pursuit where training and retraining become strategies for both individual and corporate success" (Yoakam, nd). Many adults are discovering that this truly is the case and are therefore enrolling in distance education programs as a way of pursuing learning whilst maintaining their current employment. Distance education has become a popular mode to pursue this learning, not only to students in remote locations but for those who may be full-time workers (Hooke, 1999) or unable to attend university courses due to disability or other restrictions.

Garrison and Shale (1987a, cited in Jeffries, nd) define distance education using a minimum set of criteria, which allow flexibility. They suggest that:

- 1. distance education implies that the majority of educational communication between teacher and student occurs noncontiguously,
- 2. distance education involves two-way communication between teacher and student for the purpose of facilitating and supporting the educational process,
- 3. distance education uses technology to mediate the necessary two-way communication.

This paper explores the issues related to external students' ability to attain Graduate Qualities – using modern distance education strategies including working collaboratively – when, until recently, the University has not required these students to have access to Internet or e-mail technologies.

#### THE COURSE

A range of undergraduate business degrees (programs) are offered at USA including majors in Administrative Management, Commerce, International Business, Property, and Tourism. Students in these programs are required to undertake an IT literacy course which provides them with a basic introduction to standard PC application software as well as an overview of the use of information systems in organizations.

Recent graduates of some of these programs have sought assistance from tutors in the design and implementation of small-scale databases required in their employment. It was this feedback that led to the redesign of a course that would provide students with an active introduction to the problems of end-user development of databases.

The result of this redesign was the development of DMA, which is not only a core of the Administrative Management degree program but is now also being taken as an elective by other business students in both internal and external modes. This first-semester course concentrates on data management, systems development theory, and small-scale database construction using Microsoft Access. The course is taught using case studies that were written in consultation with business, or based on the industrial experiences of the staff working on the program.

The embedding of GQs into DMA led to the introduction of group work for internal students where they are able to identify and solve the problems presented and therefore experience issues related to group cohesion, allocation of tasks within the group, time management, and conflict resolution. All of these are situations that they are likely to experience in their futures, or current employment. Integration of GOs with these students has been quite successful, with the inclusion of case study analysis and role playing issues leading to increased student abilities in working collaboratively. Their communication skills. lifelong learning strategies, ethical action awareness and problem solving skills have also improved.

Group work has currently not been introduced with the external students in DMA, as it has not been a requirement of the course that the external students have access to Internet and email technology, making collaboration between students more difficult. External students are located locally, nationally, and internationally and therefore methods of communication to

enable collaborative assignment preparation have not yet been explored.

Roberts, Jones, & Romm (2000) identified a "standard model" for the delivery of courses online. The features of this model include access to:

- subject homepage, updated throughout the semester:
- electronic copies of printed materials despatched to students at the commencement of the semester;
- lecture slides in Powerpoint format as used for on-campus classes;
- additional notes arising from on-campus lectures and tutorials;
- workshop tasks with notes and solutions;
- marking guidelines for assignments and sample answers;
- feedback tool;
- links to subject coordinators;
- copies of past examinations;
- links to electronic mailing list;
- list of recent updates and additions.

DMA uses a variation on this standard model of delivery utilising all of the above features with the exception of the last two. Both internal and external students are also encouraged, where access to online technology permits, to participate in online discussion forums to enhance their work on the assignments and ask questions related to their current study. These questions are sometimes answered by other

students in the course; however, they are regularly answered by the teaching staff. The author's experiences to date have suggested that education in the use of this facility is needed, not only for the students but also for the academic staff, to improve its effectiveness as a teaching and learning tool. A possible solution to the lack of understanding and use of this resource is to liaise with the academic staff responsible for the first-year core courses to ensure that students in their second year of study are aware of the facilities available with the current technology.

### ATTAINING GRADUATE QUALITIES

Each course taught at USA is required to show an indicative point weighting to the particular combination of graduate qualities that the course will develop. The total of these point weightings must be equivalent to the points generated by the course. DMA is a 4.5 unit course and the GQ unit weightings are shown in Table 1 below. These weightings give an indication to the students as to how much time they should commit to the development of that quality within the course. Students can also gauge their levels of achievement of particular GQs because the same weightings are used in assessments (USA, 2001b, p.2).

One of the major challenges facing course coordinators is how to embed these GQs into the course materials with appropriate assessment methods to ensure that they are being attained. The following section explores how each of these GQs are embedded into DMA.

Graduate quality	l body of knowledge	2 lifelong learning	3 effective problem solving	4 work autonomously and collaboratively	and social responsibility	6 communicates effectively	7 international perspectives
Point weighting	1.2	0.5	1.0	0.5	0.2	1.0	0.1

Table 1. GQ point weightings for Data Management for Administration

## GQ 1 - Body of knowledge

The practical component of DMA builds on work undertaken in the initial IT literacy course. It can therefore be said that students are not only introduced to new knowledge but apply existing knowledge from a previous course. The practical knowledge is tested through the major assignment, which deals with the development of a small-scale database using Microsoft Access. Theoretical knowledge is tested using standard examination processes.

## GQ 2 - Lifelong learning

Students are generally assigned a question in the assignment or examination that asks them to reflect on what they learned from undertaking the course. Most of these reflections include discussion on their own limitations in time and project management and show an understanding of the limitations of the software they have been using.

## GQ 3 – Effective problem solving

Students are given a case study from which they need to develop an understanding of the business and the problems being experienced by the business, and to then produce solutions to the problems identified.

## GQ 4 – Work autonomously and collaboratively

Students are given weekly individual tasks to complete in both a practical and theoretical sense and, although not directly contributing to their summative assessment, give the students the skills necessary to complete the assessments. The major assignment is set up as collaborative work where studentes are required to not only work with other students, but with the business as well.

## GQ 5 – Ethical action and social responsibility

Discussions are held throughout the classes regarding the impact of the integration of new software into an established business. The ethical and social issues are often assessed in a similar way to GQ2.

### GQ 6 – Communicate effectively

This is considered one of the major parts of this course since the development of a quality database is highly dependent upon the successful communication of the business' requirements for the system. Communication through e-mail and the web-based discussion

board is key to the successful completion of DMA's major assignment.

## **GQ** 7 – International perspective

Again, in the development of databases, students are encouraged to consider the location in which the database will be used and the cultural base of those who will be utilising the system. Interface design is assessed in terms of how well the students have understood this necessary component of their learning.

## EXTERNAL STUDENTS AND GRADUATE QUALITIES

Although external students undertake the same assessment items as the internal students, they currently are not doing so under equivalent conditions. Previous offerings of this course have seen the external students undertaking the major assignment on an individual basis with most questions being answered via verbal communication, either by telephone or face-to-face discussion. Internal students have the added luxury of tutorial and practical sessions where they are able to ask questions verbally or via the Web-based discussion board, and they obtain immediate, or near immediate, responses.

USA has implemented an electronic teaching and learning environment accessible to both internal and external students via the Web. This facility "provides learners with more control over their learning by increasing options about when, where and how to study. It incorporates access to study resources, to administrative information and services, and provides a means for interacting with ... staff and students" (FLC, 2001, p.13). This electronic environment, UniSAnet, gives online access to materials for purposes such as:

- electronic copies of course information booklets as well as other printed materials;
- peer interaction, such as discussion forums with students or international experts;
- fast access to academic staff;
- self-directed learning, students set their own time and place;
- accessing global resources;
- accessing staff from University support services;
- developing skills in the use of online environments that will be useful in future employment (FLC, 2001, p.15).

## On-campus facilities

The University has some computer pools, which are open 24 hours a day, 7 days a week, and all students are allocated a network logon. Internal students appear to make reasonably good use of these facilities, as they are generally busy during assessment time.

With the introduction in 2002 of an online enrolment system, USA announced through email communication to all staff and students that e-mail will be the primary means of communication with all students. Students are given free e-mail accounts on enrolment, with a capacity large enough to handle both administrative and academic e-mail communication throughout the year. On campus, students have free access to the local intranet and a quota-based system that provides access to the Internet for research purposes.

#### Internal students

Internal students participate in lectures, tutorials, and practical sessions on a weekly basis. Theory associated with the course is disseminated during the lectures whilst the tutorial sessions allow the students to discuss the issues raised from the theory. Practical sessions run as interactive sessions where students participate in active discussion of the practical work — listed for study during the preceding week — with a supervisor.

## **External students**

The University's electronic teaching and learning environment allows external students additional flexibility and is "becoming an increasingly important resource to support [the students]" (FLC, 2001). Hooke (1999), in her reflection from an external student's viewpoint, discusses the realisation that "...the ability of students to compete... is largely determined by the facilities he has at his disposal." As the electronic facilities are so important to today's students, Hooke states that up-to-date computing and telecommunications equipment is now an essential component for successful completion of a degree program. She also identifies that the inequalities in tuition charges relate to the fact that universities do not commonly provide computing, Internet, or additional library facilities for external students.

As all students are encouraged to use the USA's online environment wherever possible, they are now required to obtain regular access to computing facilities. The Flexible Learning

Centre (FLC), which coordinates all external students in the University, gives students a list of options for accessing this facility which include using the on-campus computer pools, public libraries, Internet cafes, or the student's place of employment. In many cases, however, these options are not appropriate and therefore the students must purchase their own equipment. FLC (2001, p.16) state that "...you don't need the latest model computer to access the Internet". Of course, the level of equipment sophistication would be determined not only by the generic requirements but also by the specific course requirements the student will encounter during their studies. E-mail can be accessed off campus and students are encouraged to arrange their own Internet Service Provider (ISP) for access to the Internet. USA, however, does provide some assistance in the form of a student access agreement through the University's preferred ISP. USA have recently identified that there are certain locations in Australia, and indeed overseas, where students will not have access to online facilities. Evidence has been obtained (V. Feast, personal communication, April 11, 2002) that USA is implementing a support service for students who do not have access to e-mail facilities due to their remote location. However, this is not being advertised to the student population as a whole. Students who contact USA stating that they are not able to access these facilities are being identified so that they are sent all relevant information by methods other than e-mail. The author has made attempts in the past to identify these disadvantaged students; however, it is regularly the students who do have technology access who respond to the information request.

External students are encouraged to follow a weekly study schedule, exactly the same as the internal students. The very nature of distance education leads external students to work autonomously, which most external students have adapted to quite well - thus attaining part of GQ4. This course provides telephone and email access to a qualified tutor who is able to assist students with the practical component of the course, whilst the course coordinator is available to discuss theory aspects of the course. Although these facilities are made available, very few external students use them. It is perplexing as to why this facility has been under utilised, and further research into this dilemma is currently underway.

There exists a proliferation of research into methods of enhancing distance education delivery. The following discussion outlines a

number of possible solutions to the issues that have been raised in the delivery of DMA in external mode and the subsequent attainment of GQs.

#### POSSIBLE SOLUTIONS

Sherry (1996, para 38) identified that success in distance education could be achieved by "developing appropriate methods of feedback and reinforcement, optimising content and pace, adapting to different student learning styles, using case studies and examples which are relevant to the target audience, being concise. supplementing courseware with print information, and personalizing instruction." In order to achieve successful integration and attainment of graduate qualities in distance education, the coordinators of DMA understand that personalisation and adaptation of course materials may very well be required.

According to Sherry (1996, para 16), Desmond Keegan's theory of distance education implies that "the distance learning system must artificially recreate the teaching-learning interaction and re-integrate it back into the instructional process" Rekkedal (1994, cited in Sherry 1996, para 16) looks at the Norwegian model of delivery that has a "long tradition of combining mediated distance education with local face-to-face teaching". Although currently not an alternative considered by the School or the University, compulsory, on campus sessions for external students may be a one method of working through the collaboration presentation tasks that are currently available to the internal students.

The use of interactive video as a means of instruction (Siantz & Pugh, nd) merits further investigation, particularly with the introduction of digital videoconferencing facilities available on PCs. This would not only give students faceto-face communication with the academic staff but also with each other - thus assisting those students in remote locations with their communication and collaboration tasks. However, this is totally dependent on external students having the technology available to them. A survey of the facilities available to external students is currently being compiled to determine the feasibility of digital videoconferencing.

Slay (1997) identified that the Web and other aspects of the Internet could be extremely useful in facilitating the development of GQs. The Web is a fount of information and therefore

contributes significantly to a student's body of knowledge. It assists students in obtaining lifelong learning and problem solving skills by the very nature of the constant upgrades to software. The Web has a number of tools, including e-mail, chat rooms, and discussion boards, which lend themselves perfectly to collaborative work and increased communication skills. It highlights ethical action and social responsibility in the legalities of its use, and its global reach allows students to research international perspectives of their particular field of study.

However, the biggest failing of the technology for external students is its availability in remote locations. Students located in the Australian outback have very little in the way of communication technology and therefore could not possibly consider access to the Internet. USA's identification of students without e-mail access will identify any of these students. However, it does not provide an answer to the question of how to implement group work for these students. As previously mentioned, cost and the availability of up-to-date technology sufficient to cope with the University's environment are the other obstacles faced by these students. As this is a very technical course, this is the key area that needs to be investigated to allow all students the best access to all the available facilities.

Willis (1992, para 16) identified that "...efforts should be made to adapt the delivery system to best motivate and meet the needs of the students, in terms of both content and preferred learning styles." He considered a number of strategies that could improve the effectiveness of the course delivery. Adaptation of current communication methods appears to be one of the key areas in which improvement can be patterns made. Integrating new communication to be used in the course with appropriate exercises will not only make students aware, the new procedures but more comfortable with them. For example, personal communication with each of the students to determine their personal, academic, and professional backgrounds, and technological facilities and capabilities will not only introduce the course staff to these students but allow the staff to assess what the students' needs will be.

Taking an active role in the course, such as participating in online discussions, will empower the students to independently take more responsibility for their learning.

Implementing a requirement that students contact academic staff and interact among themselves via e-mail within the first week or so of the course will help students to attain the required outcomes not only in communication skills but also will lead to better collaboration.

Consideration should also be made for the use of interaction and feedback strategies that are effective and reach all students regardless of location and technological resources. The integration of a variety of delivery systems for interaction and feedback, including conference calls, fax, e-mail, video, and computer conferencing, is worth investigating to ensure that no students are disadvantaged. Detailed comments should be included on written assignments to allow the students the opportunity to understand the successes and failures of their submissions. Although detailed assignment feedback is currently given on student assessments it is primarily content based. The inclusion of GQ based feedback will allow the students to identify where and how they need to improve to ensure successful attainment of the graduate qualities.

How do we know if a student has attained the GQ? USA (2000b) has highlighted a number of generic key indicators that illustrate how the GQs can be attained (Appendix A). Students are being encouraged to work through these indicators and complete a Record of Achievement (RoA) online which gives them a continuous look at the tasks they have completed, to what level, and to which GQ they relate. This facility has been in trials for the past two years. In the coming year the RoA will be promoted to the entire student body using seminar and workshop sessions.

## CONCLUSIONS

USA supplies the electronic environment to improve the delivery of courses. However, the question still remains, how is this assisting external students in the attainment of Graduate Qualities. Those students who are located in remote areas of Australia, or the world, with limited access to technology, are still disadvantaged by this method of delivery.

This paper has highlighted the fact that to ensure external students are attaining all of the Graduate Qualities, some changes need to be made to the delivery of DMA. An investigation into the students' access to technology will help to identify which of the possible solutions outlined in this paper can be implemented to

increase the opportunities available to these students. Assisting students in becoming familiar and comfortable with the delivery technology is essential to achieving successful completion of course components including the attainment of the appropriate Graduate Qualities.

However, the onus should not be solely placed on the academic staff. Students need to become proactive in their approach to the learning process. In this technological age they need to find ways to access the facilities, even if they do not have personal access at home or work. Students enrol to obtain a degree from the University but the commitment must come from them to ensure the best outcome for them as graduates of USA.

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## Appendix A – Indicators of achievement of Graduate Qualities (USA, 2000b).

Graduate Quality	Indicators of achievement of the quality		
A graduate of the University of South Australia			
operates effectively with and upon a body of knowledge of sufficient depth to begin professional practice	demonstrate an understanding in broad outline of a whole discipline or professional area (concepts, theories, proponents) including a knowledge of the boundaries  apply knowledge (demonstrate application of theory to practice in real situations, appreciate limitations of theory, use materials, devices, safety codes and practices, specific equipment and techniques appropriately)  identify the methodological and substantive limitations of the field and apply the discipline or professional area's mode of inquiry		
	recognise the social and historical context of knowledge		
	demonstrate appropriate understanding of current research areas in the discipline or professional area		
	responds confidently to change in a flexible and adaptable manner		
is prepared for life- long learning in	locate, evaluate, manage, and use information in a range of contexts – i.e., be information literate		
pursuit of personal development and excellence in their	<ul> <li>understand the limitations of, and have the capacity to evaluate, their current knowledge</li> </ul>		
is prepared for tife- long learning in pursuit of personal development and excellence in their professional practice	<ul> <li>understand the limitations of, and have the capacity to evaluate, their current knowledge</li> <li>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</li> <li>maintain a positive concept of self as capable and autonomous</li> </ul>		
	maintain a positive concept of self as capable and autonomous		
	sustain intellectual interest and critical thinking as a mature professional		
	<ul> <li>initiates creative responses to problems and frames such responses as opportunities</li> </ul>		
is an effective problem solvers capable of applying	<ul> <li>gather, evaluate and deploy relevant information to assist problem solving – i.e., analysis and synthesis</li> </ul>		
logical, critical,	define researchable questions in the discipline or professional area		
and creative thinking to a range	apply strategies to conceptualise problems and formulate a range of solutions		
of problems	<ul> <li>provides leadership within a team context by understanding responsibilities for organization, planning, influencing and negotiation</li> </ul>		
is able to work both autonomously and	work in a self directed way		
collaboratively as a	use logical and rational argument to persuade others, to negotiate with others		
professional	<ul> <li>work collaboratively with different groups, identify the needs of others and build positive relationships</li> </ul>		
	<ul> <li>work in a team (cooperate with all team members, share ideas, forgo personal recognition, negotiate solutions when opinions differ, resolve conflict, recognise strengths of other team members, share responsibility, convey a shared vision for the team, display a commitment to make the team function effectively)</li> </ul>		
	recognises the potential social and economic impact of enterprise activities upon particular social groups		

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is committed to ethical action and social responsibility as a professional and citizen	<ul> <li>demonstrate a commitment to personal ethical actions within professional contexts</li> <li>define social aspects of a particular technology (political, economic, legislative, sociological, environmental, etc.)</li> <li>appreciate the impact of social change, the political decision-making process and economic imperatives of business and industry</li> <li>recognise social justice issues relevant to the discipline and professional area</li> <li>appreciate the importance of sustainable development</li> <li>demonstrate responsibility to the community – be aware of safety, efficiency, innovation, cost-effectiveness</li> </ul>
is able to communicate effectively in professional practice and as a member of the community	<ul> <li>demonstrate oral, written, mathematical, and visual literacies as appropriate to the discipline or professional area</li> <li>display sensitivity to their audience in organizing and presenting ideas</li> <li>communicate appropriately with professional colleagues and the public</li> </ul>
demonstrates international perspectives as a professional and citizen	<ul> <li>display an ability to think globally and consider issues from a variety of perspectives</li> <li>demonstrate an awareness of their own culture and its perspectives and other cultures and their perspectives</li> <li>appreciate the relation between their field of study locally and professional traditions elsewhere</li> <li>recognise intercultural issues relevant to their professional practice</li> <li>appreciate the importance of multicultural diversity to professional practice and citizenship</li> <li>appreciate the complex and interacting factors that contribute to notions of culture and cultural relationships</li> <li>value diversity of language and culture</li> <li>appreciate and demonstrate the capacity to apply international standards and practices within the discipline or professional area</li> <li>demonstrate awareness of the implications of local decisions and actions for international communities and of international decisions and actions for local communities</li> </ul>