

**The acquisition, development and use of generic  
attributes: perceptions of new university graduates**

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**Doctor of Philosophy**

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## **Certificate of Authorship and Originality**

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Production Note:

Signature removed prior to publication.

Ina Te Wiata

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## Contents

|                                                                                  |     |
|----------------------------------------------------------------------------------|-----|
| <b>Certificate of Authorship and Originality</b> .....                           | i   |
| <b>Acknowledgements</b> .....                                                    | ii  |
| <b>Contents</b> .....                                                            | iv  |
| <b>Abstract</b> .....                                                            | vii |
| <br>                                                                             |     |
| <b>1. Introduction</b> .....                                                     | 1   |
| <br>                                                                             |     |
| <b>2. Background</b> .....                                                       | 6   |
| 2.1 Worldwide influences .....                                                   | 6   |
| 2.1.1 The Organisation for Economic Co-operation and<br>Development (OECD) ..... | 8   |
| 2.2 Australian influences .....                                                  | 18  |
| 2.2.1 Early initiatives .....                                                    | 21  |
| 2.2.2 Industry initiated reports .....                                           | 26  |
| 2.2.3 Education sector initiatives .....                                         | 31  |
| 2.3 The University influences .....                                              | 36  |
| <br>                                                                             |     |
| <b>3. Perplexities and ambiguities</b> .....                                     | 41  |
| 3.1 Generic attributes .....                                                     | 41  |
| 3.1.1 Misunderstandings and uncertainties .....                                  | 41  |
| 3.1.2 Consequences of confusion .....                                            | 51  |
| 3.1.3 Working through the confusion .....                                        | 53  |
| 3.2 Transfer .....                                                               | 55  |
| 3.2.1 Misapprehensions and doubts .....                                          | 55  |
| 3.2.2 Establishing the character and incidence .....                             | 61  |
| 3.2.3 Seeking a degree of clarity .....                                          | 62  |
| 3.3 Communities of practice .....                                                | 64  |
| 3.3.1 Original thinking .....                                                    | 64  |
| 3.3.2 Rethinking the meaning .....                                               | 66  |
| 3.3.3 A meaning for this study .....                                             | 68  |
| <br>                                                                             |     |
| <b>4. The Study</b> .....                                                        | 71  |
| 4.1 Terms used .....                                                             | 71  |
| 4.2 Selection of generic attributes .....                                        | 72  |
| 4.3 Outline of participants .....                                                | 74  |

|           |                                                                                                                                       |            |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------|------------|
| 4.4       | Position .....                                                                                                                        | 76         |
| <b>5.</b> | <b>The Design .....</b>                                                                                                               | <b>78</b>  |
| 5.1       | Introduction .....                                                                                                                    | 78         |
| 5.2       | Research approaches - including both the position of<br>this study and the method chosen .....                                        | 81         |
| 5.3       | Considerations of this study, including, circumstances,<br>conduct, ethical issues and termination .....                              | 90         |
| 5.4       | Sampling .....                                                                                                                        | 96         |
| 5.5       | Data collection methods .....                                                                                                         | 101        |
| 5.6       | Validity, reliability, credibility, triangulation, and<br>crystallization .....                                                       | 118        |
| 5.7       | Data analysis and processing, including the emergence of<br>relationships and themes .....                                            | 126        |
| <b>6.</b> | <b>The Stories .....</b>                                                                                                              | <b>130</b> |
| 6.1       | Overview .....                                                                                                                        | 131        |
| 6.1.1     | Overview of participants and findings .....                                                                                           | 131        |
| 6.1.2     | Similarities .....                                                                                                                    | 135        |
| 6.1.3     | Differences .....                                                                                                                     | 136        |
| 6.1.4     | Other generic attributes and qualities .....                                                                                          | 137        |
| 6.2       | Participants' stories .....                                                                                                           | 139        |
| 6.3       | Summary .....                                                                                                                         | 187        |
| <b>7.</b> | <b>Meanings .....</b>                                                                                                                 | <b>189</b> |
| 7.1       | Introduction .....                                                                                                                    | 190        |
| 7.2       | Acquisition and development of generic attributes .....                                                                               | 192        |
| 7.2.1     | Where were generic attributes acquired and<br>developed? .....                                                                        | 192        |
| 7.2.2     | What was learnt in the classroom? .....                                                                                               | 195        |
| 7.2.3     | Why was not the acquisition and development of<br>generic attributes in the "classroom" as successful<br>as it might have been? ..... | 196        |
| 7.3       | Use of generic attributes in the workplace .....                                                                                      | 202        |
| 7.4       | Importance of generic attributes in the workplace .....                                                                               | 208        |
| <b>8.</b> | <b>Reconsiderations .....</b>                                                                                                         | <b>214</b> |
| 8.1       | Introduction .....                                                                                                                    | 215        |
| 8.2       | Moving forward .....                                                                                                                  | 220        |
| 8.2.1     | Reconsidering theoretical or conceptual aspects ...                                                                                   | 220        |
| 8.2.2     | Reconsidering aspects related to ethos or culture..                                                                                   | 222        |
| 8.2.3     | Reconsidering empirical or practical aspects .....                                                                                    | 223        |
| 8.3       | Final comment .....                                                                                                                   | 226        |
| <b>9.</b> | <b>References .....</b>                                                                                                               | <b>227</b> |

|                                     |     |
|-------------------------------------|-----|
| <b>10. Appendices</b>               |     |
| Interview Protocols - Phase 1 ..... | 266 |
| - Phase 2 .....                     | 268 |

### List of figures and tables

|            |                                                                                          |     |
|------------|------------------------------------------------------------------------------------------|-----|
| Table I    | Key initiatives in generic skill development in Australia...                             | 20  |
| Table II   | Taxonomy for far transfer .....                                                          | 63  |
| Table III  | Participants' profiles .....                                                             | 75  |
| Table IV   | Participants' characteristics .....                                                      | 100 |
| Table V    | Participants available for initial interview only .....                                  | 132 |
| Table VI   | Participants available for both initial and<br>follow-up interviews and discussion ..... | 133 |
| Figure 1   | Differences in experiences .....                                                         | 134 |
| Table VII  | Comparison of coached reflection vs<br>reflection-in-action .....                        | 187 |
| Table VIII | Generic attributes in the workplace .....                                                | 203 |

## **Abstract**

This study explores the perceptions new graduates hold of the acquisition, development and use of a specified set of generic attributes (critical thinking, problem solving, interpersonal understandings and communication).

The belief most often espoused in Australian universities, through their policies and practices, is that generic attributes that are useful in the workplace are able to be identified, labelled, taught, and developed over the course of an undergraduate programme. The plethora of literature related to generic attributes has generally supported this view but, for the most part has omitted the student or graduate voice. It has been the views of university staff, employer groups, and government agencies that have created the environment in which students are considered able to leave university with a specified bundle of generic attributes that they can use in the workplace.

The approach to this enquiry is essentially a case study. It studies a collection of individual cases – recent university graduates. This research project relies heavily for its data on the technique of interviewing, which includes, an initial interview, and a reflective interview focusing on a critical incident. Follow up communication (via phone and email) continued for up to two years with some of the participants.

A number of participants' stories are detailed, and the data suggests that generic attributes can be viewed in three different ways including, a naïve view, a sophisticated view, and an antigeneric view. A number of themes are also

developed and used to help consider some of the meanings generic attributes had for participants.

The findings of this study suggest that the university classroom may not be the environment in which students develop the generic attributes that are useful in the workplace. Furthermore, there is a strong indication that new graduates place a high value on the development and deployment of generic attributes in the workplace - the level at which participants are able to utilise their generic attributes plays an important role in job satisfaction and motivation.

The implications for both universities and workplaces as a result of the findings of this study are discussed in the final chapter. Certainly closer relationships between universities and employers would be beneficial in ensuring not only that the voices of students/new graduates are heard but that action is taken so that the most effective and efficient processes are implemented for all parties concerned.

## Chapter 1: Introduction

I have been involved as a educator in staff development for many years and in 1992 was part of a team that developed and introduced a new business studies degree into the tertiary education sector in New Zealand (Auckland Institute of Technology Commerce Faculty, 1992).

Unlike other business studies degrees in New Zealand, at the time the four year programme had a number of innovative features including what was termed a “capabilities” approach to teaching and learning. This meant that the capabilities (or generic skills, generic attributes, transferable skills, competencies – pick a term) were to be viewed as the “vehicle” for the content delivery. Another innovative feature of the programme was the inclusion of a subject (developed by myself), “Cooperative education”. This subject entailed third year students undertaking paid work experience in businesses. The subject carried the same amount of academic credit as the other subjects comprising the degree. The focus for the learning outcomes for this subject was the capabilities students needed to develop. Communication for example, was to be taught explicitly using the various discipline areas that comprised the degree. In one particular exercise, I worked with another academic staff member to develop and assess oral communication skills using the content of a business workplace experience (specific discipline) as the content to be communicated. For me, as a staff developer this was an exciting time, as I had not previously worked so explicitly and in depth with staff on the development of student capabilities.

In 1993 I submitted my Masters thesis, "The experience of learning in cooperative education" (Te Wiata, 1993). This work discussed the perceptions of the three stakeholder groups (employers, educators, and students) engaged in the process, of a number of aspects including the effectiveness of cooperative education as a learning strategy for the development of particular capabilities such as communication, critical thinking and teamwork.

A year or so later when I moved to the Australian higher education sector, generic skills (as they were then termed) were creeping more and more onto the agendas of universities (Higher Education Council HEC, 1992; Mayer, 1992). After working in this environment for a time I became increasingly uneasy at the many taken-for-granted notions surrounding generic attributes (skills) and their development (Bridges, 1993, Clanchy & Ballard, 1995), including the role that universities were playing or asked to play (Bridges, 1994).

By the late 1990s, there was a flurry of activity and interest in the development of generic attributes in university graduates. In the Australian Higher Education report for the triennium 2000 – 2002 (Kemp, 2000), one of the key objectives of the Government's policies relates to the improvement of universities' responsiveness to both student and industry needs. While employers perceived large numbers of graduates to be lacking in many generic attribute areas, universities were placed under increasing pressure to be more responsive to the employers' needs. In 1999, in a partial response to this pressure, the Government commissioned the Australian Council for Educational Research (ACER) <http://www.acer.edu.au>, to develop methods of assessment that might measure the degree to which university graduates had acquired generic attributes (Kemp, 2000). The Graduate Skills Assessment (GSA) was the instrument that would supposedly measure the "value-added" by universities through testing students on entry and upon graduation. The GSA, it was argued, in measuring specific clusters of generic attributes, would show how successful (vis-à-vis "value-addness") the university had been in

increasing generic attribute development in students, ie. any increase in the level of development from the entry test to the graduation assessment could be attributed to the university. (It was not clearly stated in any of the Graduate Skills Assessment documentation as to whether “university” means the curricula or the total experience, but it appeared to mean to the former.)

Despite much interest and a blossoming number of publications at this time expressing views from those involved in government and business, along with other employers and the tertiary educators, nothing was reported as to what students and graduates thought about the development and use of generic attributes. This appeared to me to represent a significant gap in the generic attributes debate. I wondered how solutions could be found to perceived difficulties when only some, rather than all, of the stakeholders’ views had been represented.

It was this environment that provided the setting for this research and thus led me to question what Australian university students/graduates thought about the development and use of their own generic attributes, particularly once they entered the workforce. This study seeks to explore that question from the perspective of new graduates.

Although initially guided by a hypothesis – that the generic attributes most useful and important to graduates in the workplace are not brought from the university “classroom” – I did not want to restrict the study to proving or disproving this hypothesis. Rather, this research as stated above, is aimed at illuminating the generic attributes discourse by providing an as yet unheard voice – that of the student or more specifically the new graduate.

Chapter Two examines the influences in the generic attributes arena. It begins by looking at the worldwide pressures including that of the Organisation for Economic Co-operation and Development (OECD). Following this, Australian

aspects are covered including initiatives by government, business, and the tertiary education sector. The final part of this chapter describes the effects of the micro environment, that is the staff, committees and so on, on policy development in the university from which participants in this study were drawn.

In Chapter Three a more theoretical perspective is taken. It is here that the “taken for granted” terms and concepts, generic attributes, transfer, and communities of practice are discussed. These are problematic not only because people understand them in different ways, but also because of the way people relate to the literature (in the case of transfer and communities of practice), and in the case of generic attributes, how policy is developed and implemented. The chapter concludes by outlining possibilities for clarification for these.

Chapter Four provides an introduction to the study itself. It explains the manner in which terms such as generic attributes will be used, provides an outline of the participants, and describes the place of the study in relation to the existing theory and practice of the development of generic attributes in higher education.

The design of the study is covered in Chapter Five which details the approach used in this inquiry, the methods and measures taken to collect and process information, and the rationale underlying these aspects. Because the study relied heavily on interviewing for its data collection there is a detailed account of this strategy, including types and limitations. This chapter also includes a description of validity, reliability, credibility, triangulation and crystallization along with an explanation and justification of those processes used in this thesis. In the final section of this chapter, a number of emerging themes are outlined.

Chapter Six comprises the details of my results. It covers the participants' stories (case studies) regarding the development and use of their generic attributes. There are three sections to the chapter. The first provides an overview of the participants and findings in the study. The second section portrays the stories of the seven graduates who remained as participants in the study. The information is presented in case study form in an attempt to provide the reader with both interest and a strong sense of reality of the graduates' perceptions. The final section of this chapter provides a summary, including suggestions for how the development and use of generic attributes might be viewed.

The synthesis of my work is found in Chapters Seven and Eight.

Chapter Seven begins with an introduction, explaining how the metaphor "Magic Apple" used in Chapter Five is applied to the themes also identified in that chapter. Section 1 discusses the acquisition and development of generic attributes that ought to be useful in the workplace. The second section considers how participants used generic attributes in the workplace, ie which ones were used, how, and in what situations and the final section is concerned with the importance of generic attributes to work performance as described by participants in this study.

Chapter Eight completes the thesis. It reconsiders different aspects of generic attribute development in order that Australian universities in particular move forward in helping students to effectively develop attributes that are effective in the workplace. It does this by looking at different aspects of generic attribute development such as theoretical, cultural and empirical features, and how these impact on both the university and workplace sector.

## **Chapter 2: Background**

Chapter One introduced the study and posed the question of how new graduates perceived the development and use of their own generic attributes, particularly once they entered the full-time workforce. To begin answering this question, Chapter Two describes the full context in which the research took place. The chapter considers the three broad environments - worldwide, Australia, and the university in which the study was set. These environments influenced the development, and implementation of the generic attributes agenda, and inevitably this study.

### **2.1 Worldwide influences**

Generic attributes and their role in tertiary education can be traced back at least as far as 1862 when Charles Wooley in his opening address at the University of Sydney said,

Our undergraduates... will, we may reasonably hope, possess a well cultivated and vigorous understanding: they will have formed the habit of thinking at once with modesty and independence; they will not be in danger of mistaking one branch of science for the whole circle of knowledge, nor unduly exaggerating the importance of those studies they select as their own. Above all they will have attained the truest and

most useful result of human knowledge, the consciousness and confession of their comparative ignorance.

(Wooley, quoted in Candy et al., 1994: iv)

Cornford (2001) traces the emphasis on generic skills back to the 1950s noting that it was also supported by the humanistic thinking and approaches that characterised learning in the 1970s. Humanistic education refers to an educational philosophy that believes humans are by nature, self-developing creatures. According to humanistic approaches, an educator's primary responsibility is to create an environment in which students can do their own growing. The purpose of humanistic education is to provide a foundation for personal growth and development so that learning will continue throughout life in a self-directed manner (DeCarvalho, 1991).

With this notion of life-long learning came the realisation that there was a necessity to teach more than technical content knowledge. Skills (or attributes as I have termed them) such as problem solving, reflective thinking and understanding interpersonal relationships needed to be developed as part of "learning to learn".

During the late 1980s-early 1990s there was a radical shift in the manner in which world economies, workplaces and societies were viewed as needing to operate. Technical skills were no longer seen as forming the basis of "life", and fundamental changes were taking place. The emergence of an information society, and the claim that newly created knowledge would underpin economies raised a plethora of issues with which communities, enterprises and individuals had to contend if they were to be successful in the new environment.

### **2.1.1 The Organisation for Economic Co-operation and Development (OECD)**

The OECD comprises 30 member countries, which meet to discuss economic and social policies and another 70 countries with which it has extensive communications.

The member countries meet to,

compare experiences, seek answers to common problems and work to co-ordinate domestic and international policies to help members and non-members deal with an increasingly globalised world.

(OECD, 2005a)

The mission of the organisation is to promote policies designed to achieve this, eg., sustainable economic growth and employment coupled with rising standards of living while maintaining financial stability.

The organisation is composed of several committees and a number of directorates. Both the committees, which may work as disciplinary groups or across sectors, and the directorates are engaged in research, analysis, discussion and the development of policy. The two directorates involved in education are the Directorate for Education, Employment Labour and Social Affairs and the Directorate for Education. The latter directorate,

...helps member countries achieve high quality learning for all that contributes to personal development, sustainable economic growth and social cohesion.

(OECD, 2005a)

Education is viewed in a “cradle-to-grave” lifelong learning framework, involving formal, informal and non-formal settings.

The OECD has considerable power in affecting the nature of educational policy in a variety of countries, particularly its member countries, exerting its influence through a variety of publications, projects and its testing and assessment programs

In his review of the OECD activities that have contributed to both the concepts and policies related to generic competencies and life long learning, Gonczi (2006) concludes that:

...through its publications, its projects and its testing/assessment programs the OECD has had a substantial impact on the nature of educational policy in individual countries.

(Gonczi, 2006: 105)

Although the original concept of lifelong learning was outlined in 1972, where it meant second chance learning in formal environments (Gonczi, 2006), the OECD Education Ministers only committed themselves to “lifelong learning for all” in 1996 in a publication, *Lifelong Learning for All*. The meaning here however went beyond second and third chance education to include all learning in all kinds of settings. At this time a number of new forces were impacting on economies. Globalisation and technological change in particular were altering the skill requirements of workers and the strategies of enterprises in meeting them. In addition, the possibility of polarisation between groups with fully developed competencies and those on the fringe was considered important so as not to impact detrimentally on the social unity of a community. Gonczi, (2006: 108) notes that four strategies for developing lifelong learning were proposed:

- strengthening foundations for learning through improving early childhood education and rethinking the formal school system so that it can offer individualised programs

- developing better links between learning and work – the transition process
- rethinking roles and responsibilities of the various participants – governments, learners, families, etc
- developing new ways of resourcing lifelong learning, at post compulsory levels in particular.

Further work in this area saw two projects in particular have major impacts on the conceptualisation and development of generic attributes (competencies):

- Definition and Selection of Key Competencies: theoretical and conceptual foundations (DeSeCo) and,
- Program for International Student Assessment (PISA)

### **Definition and selection of key competencies: theoretical and conceptual foundations project (DeSeCo)**

In 1997 the OECD launched the DeSeCo project (Organisation for Economic Cooperation and Development OECD Directorate for Education, 2002; Organisation for Economic Cooperation and Development OECD, 2003a; Organisation for Economic Cooperation and Development OECD, 2005b), which was based in Switzerland and ran until 2003. The project built on the foundation of the OECD document *Lifelong Learning for All*. That is both shared the same sorts of concerns, for example that the rapidly changing social environment was impacting both positively (eg., increased wealth and productivity for some) and adversely (eg. social inequality for others) on peoples' lives (Gonczi, 2006; Kearns, 2001). Education was viewed as a vital tool for providing some balance to this.

Sustainable development and social cohesion depend critically on the competencies of all our population – with competencies understood to cover knowledge, skills, attitudes and values.

(OECD, 2005b: 3)

To this end the DeSeCo project considered the types of competencies that would be needed for a successful life and a well-functioning society.

The aim of the project was to provide a sound conceptual structure to inform the identification of key competencies and strengthen international surveys measuring the competence level of young people and adults, (Organisation for Economic Cooperation and Development OECD, 2005b). In doing this, the project was also linked to the PISA project.

Gonczi (2006: 111) outlines the questions that guided the DeSeCo project:

- Is it possible to identify competencies which are needed for successful participation in a variety of fields of life?
- How can such competencies be theoretically justified?
- Are such competencies interdependent?
- To what extent are they valid from country to country?
- To what extent are they independent of age, gender, etc?
- Are different competencies needed in different phases of life?
- How can indicators of these competencies be developed?

The work on these questions was according to Gonczi (2006), the most extensive ever undertaken. It involved many different kinds of activities including reviews of scholarly works and input from practitioners and policy makers.

The DeSeCo project can be seen in the wider context of earlier work of the OECD which also involved attempts to develop cross curricular competencies (in addition to those related to knowledge and skills). One of the outcomes

identified in this earlier work was that there was a need to focus more directly on individual attributes developed outside and after formal schooling. The projects resulting from this early work were, assessing life skill (ALL) and PISA. According to Gonczi (2006) these projects have led to an increased acceptance by many OECD countries that there is a necessity to learn/teach more than technical content/knowledge. Competencies such as problem solving, reflective thinking and working co-operatively are also essential as part of a preparation of life. Gonczi (2006) believes that the work both before and during the DeSeCo project will lead not only to much more information on the competencies needed for success as both individuals and society but also to an increased understanding of the whole area of generic competencies.

The multidisciplinary nature of the DeSeCo project was essential because it signalled that the realm of competencies for success in life was not solely the domain of educationalists. According to Gonczi (2006), the variety of perspectives of what competencies were, which ones were important, and so on, was both a strength and weakness of the DeSeCo project. From the cognitive science/philosophy of mind and moral and social philosophy (Canto-Sperber & Dupuy, 2006), sociological approaches, to more empirical approaches (Levy & Murnane, 2001) - all seemingly disparate in their views - it was possible to find some common ground which related to the level and complexity of thinking that had been (and continues to be) given to the area of competencies. Kegan (2006) concludes that implicit in all contributions to the project is that we need to develop in adults an "internal authority" that allows us to engage in ongoing reflective practice in relation to our own values and the prescriptions of society.

In articulating its definition of a key competency, the project concluded that the competency must be about more than just knowledge and skills. It must include the ability to think and act at higher levels (cognitive, affective and

psychomotor) in multifaceted environments in order to meet the ongoing challenges of a changing world:

It involves the ability to meet complex demands by drawing on and mobilising resources (including skills and attitudes) in a particular context.

(OECD, 2005b: 3)

In defining a set of key competencies it was therefore essential that each key competency:

- contribute to valued outcomes for societies and individuals
- help individuals meet important demands in a wide variety of contexts
- be important not just for specialists but for all individuals.

(OECD, 2005b: 3)

The competencies were to be drawn from three broad categories. Individuals would need the ability to:

- use a wide range of tools interactively eg. use technology interactively
- engage with others and be able to act in heterogeneous groups (different cultures, races, ethnicities, etc) eg. manage and resolve conflicts
- take responsibility for managing their own lives (act autonomously) eg. defend and asserts rights, interests, limits and needs.

(OECD, 2005b: 4)

Central to the framework of competencies was the notion of critical reflective thought and action. That is,

...not just the ability to apply routinely a formula... but also the ability

to deal with change, learn from experience and think and act with a critical stance.

(OECD, 2005b: 4)

This approach to key competencies necessitates development over a lifetime (lifelong learning). Therefore learning opportunities need to be made available at different times and in varied contexts, not just within the structure and timeline of formal schooling.

Another important feature highlighted in the DeSeCo report was that individuals in a given context would be likely to draw on a number of different competencies and that these would be utilised in an interwoven fashion rather than an atomistic one. These competencies may also “look” different when utilised in different contexts.

... any given situation or goal may demand a constellation of competencies configured differently for each particular case.

(OECD, 2005b: 8)

The value of the DeSeCo project is that it provides a reference point and sound base for further development of the key competencies (such as using tools interactively, interacting in heterogeneous groups, and acting autonomously). Because it showed us that not all life-relevant competencies can be provided by formal education or in one period of a person's life, it strengthened the argument and need for the development of key competencies outside these boundaries (eg. workplaces, communities) and over a lifetime. The project provided a rationale on which individual countries could draw in the quest to further develop key competencies that were relevant to their own societies.

## **Program for international student assessment (and adult literacy assessment) (PISA)**

PISA (Organisation for Economic Cooperation and Development OECD, 2003b) is an internationally standardised test that focuses on the application of knowledge and skills learnt rather than on the curriculum itself. That is, it assesses both curriculum knowledge and the capacity to reflect and apply that knowledge. It is a pen and paper test for 15 year olds who are approaching the end of their compulsory schooling.

The assessment survey began in 2000 and takes places every 3 years. In 2000 it assessed knowledge and skills in reading; in 2003, mathematics; and in 2006, science. The assessment survey is widely distributed, with 56 countries participating in 2006. Along with the partner countries, which have participated in the surveys, roughly 90% of the world's economy has been covered by PISA (Organisation for Economic Cooperation and Development OECD, 2006) .

The survey reflects a belief by the OECD that certain broader skills are needed along with knowledge of the curriculum, eg., working with others, working independently, and that these cannot all be learnt at school. One of PISA's stated key features is,

...its relevance to lifelong learning, which does not limit it (PISA) to assessing students' curricular and cross-curricular competencies but also asks them to report on their own motivation to learn, their beliefs about themselves and their learning strategies.  
(OECD, 2006: 7)

The program, according to Gonczi (2006) is the beginning of understanding of generic competencies as a basis for lifelong learning. From its outset it has

assessed performance related to the above broad characteristics. For example, the survey has asked students about their qualities as learners, and their attitudes to learning both in general and in specific subjects (reading, mathematics and science). In 2003 the direct assessment of student performance in solving problems outside the context of a single curriculum area was the first step in attempting to describe competencies through external testing rather than self reporting (Organisation for Economic Cooperation and Development OECD, 2006). And in 2006 the science assessment along with testing cognitive abilities sought to assess the relevance and importance that students attach to scientific issues (Organisation for Economic Cooperation and Development OECD, 2006).

In the future (2009-15) PISA will be strengthened by the addition of optional modules that will include:

- assessment of student progress – where the possibility of measuring learning progress within education systems will be investigated. This will be achieved by assessing student knowledge and skills at different stages of schooling (a link again to the DeSeCo project and its positing of competencies being developed over different stages of life).
- instruction and outcomes – approaches and ways to improve the capacity to describe those aspects of instruction that influence student outcomes. This will require a broadening of the distribution and collection of information about students, schools and school systems, for example by providing extra questions and/or supplementary assessments (data here will serve to clarify the link between students' instructional experiences – including the key competencies – and their performance.)

- the role and value of computers – how information and communication technologies might strengthen the assessment of students’ knowledge and skills. As well as determining the extent to which information and communication technologies might facilitate PISA surveys, the assessment of actual information and communication technologies competencies is also becoming highly relevant in our changing world, (once again there is a link with the DeSeCo project and its key competency categories).

(Organisation for Economic Cooperation and Development OECD, 2006: 11-15)

It appears then that the DeSeCo project may very well have influenced, and continue to influence, the PISA survey by increasing the range of what is currently incorporated in the assessment survey. In doing so it will provide a greater and more wide-reaching view of student outcomes than what currently exists.

To summarise then, these two projects in particular have been instrumental in influencing many countries to consider that the desired outcomes of education go beyond curriculum knowledge and technical skills and can be (and often are) acquired outside the formal schooling system. These outcomes (eg. working co-operatively) do in fact prepare individuals for life. Through this development work on key competencies, the OECD has provided a sound base on which individual countries can build to develop further their own sets of capabilities.

## **2.2 Australian influences**

The perceived requirement for a broader range of skills to serve the Australian economy has mirrored the developments in the wider world. The work in Australia on generic attributes reflected similar work being undertaken in the United Kingdom, United States of America and New Zealand, and as Falk, Millar and Owen, (2002) note,

In all cases the impetus driving the generic skills movement was the perceived failure of the education system to be meeting the emergent needs of a new economy and the needs of employers.  
(Falk, Millar, & Owen, 2002: 8)

Changes over the past 10-15 years in work and employment practices in Australia saw a transformed labour market and economy. These changes included altered demographics of the workforce including more part-time and contract workers, and advances in technology that meant an increased requirement for computer literate employees. These changes supported a drive in the economy for increased skill formation and innovation. Unlike the 1980s, where the majority of teenagers outside the formal education system were in full time employment, the beginning of the 21<sup>st</sup> century saw less than a third of teenagers employed in full time positions. And like most nations, the successful transition from school to work became (and still is) an increasing challenge in Australia. It was felt that young people entering the workforce needed to have a variety of skills and knowledge as well as a specialist technical/discipline area (National Centre for Vocational Education Research NCVER, 2003)

The changes provided the stimulus to reconceptualise education and training so that Australia might remain competitive in the global workplace. Generic

attributes were at the forefront of this rethink and the key developments in this area in Australia included:

- Early initiatives – including the Karmel, Finn and Mayer reports
- Industry initiated reports – including the Australian Industry Group (followed by the report by Department of Education, Training and Youth Affairs, which led to the Australian Chamber of Commerce and Industry (ACCI), and Business Council of Australia (BCA) initiative
- Joint initiatives – including vocational education and training national policy development and higher education policy development (National Centre for Vocational Education Research NCVER, 2003)

Table I provides an overview of the main developments, and they are discussed in more detail over the next few pages.

**Table I: Key initiatives in generic skill development in Australia**

|                                  |                                                                                   |                                                                                                                                                                                                                                                        |
|----------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1985<br>Karmel                   | Quality of Education Review Committee<br>(Chair: Peter Karmel)                    | Investigates the quality of education in Australia and recommends that students in primary and secondary schools be prepared for both education and employment through skill development in areas such as communication and working in groups.         |
| 1991<br>Finn                     | Australian Education Council Review Committee<br>(Chair: Brian Finn)              | Reviews education and training in post-compulsory sector and emphasises a strong grounding in generic and transferable skills along with technical knowledge and skills is necessary.                                                                  |
| 1992<br>Mayer                    | Australian Education Council Mayer Committee (Chair: Eric Mayer)                  | Develops a set of key competencies considered essential for preparing young people for employment.                                                                                                                                                     |
| 1992<br>HEC                      | Higher Education Council                                                          | <i>Achieving Quality</i>                                                                                                                                                                                                                               |
| 1998/9<br>Allen Consulting Group | Australia Industry Group                                                          | <i>Training to Compete</i> - a commissioned report seeking information from companies on the basic skills and attitudes school leavers require prior to entering the workplace.                                                                        |
| 2000<br>DETYA                    | Department of Education, Training and Youth Affairs                               | <i>Employer Satisfaction with Graduate Skills</i> - a report on newly employed graduates and unsuccessful job applicants. Identifies a list of desirable skills which too many graduates were lacking.                                                 |
| 2002<br>ACCI/BCA                 | Australian Chamber of Commerce and Industry and the Business Council of Australia | <i>Employability Skills for the Future</i> - a report describing employers views on generic skills (now labelled employability skills., Its purpose, to strengthen the employers influence over the curriculum, particularly in the vocational sector, |
| 2000-2<br>Kemp                   | Australian Higher Education: report for triennium                                 | One of the Governments key objectives relates to the improvement of universities responsiveness to both students and industry needs. Universities are placed under pressure to be more responsive.                                                     |
| 2002<br>ANTA                     | Australian National Training Authority                                            | National policy development taken up through the vocational education and training sector. Particular emphasis given to improving the identification of employability skills in training packages.                                                     |

### 2.2.1 Early initiatives

The initial Australian focus on generic attributes came in 1985, when the Karmel Committee (Quality of Education Review Committee, 1985) investigated the quality of education. The report of the Committee (chaired by Peter Karmel) highlighted the importance of an internationally competitive labour force and stressed that the outcomes of education should contribute to Australia's competitiveness. The Committee recommended that students (primary and secondary) be "taught" skills such as accessing information, communication and working in groups, in preparation for them entering either the tertiary education or employment sectors (Quality of Education Review Committee, 1985)

In 1991 a review undertaken by the Australian Education Council (AEC) reported on the future development in post compulsory education and training in Australia. The Committee (chaired by Brian Finn) (Australian Education Council, 1991) considered in particular young people who had left school and were not participating in any formal education or training. The Review recognised the importance of young people developing key competencies and identified six areas of competence it believed were essential in preparing young people for employment. These were: language and communication; mathematics; scientific and technological understanding; cultural understanding; problem solving; and personal and interpersonal characteristics. These competencies, along with technical knowledge and skills were believed to be necessary to cope with the ongoing changes in both technology and the economy (Australian Education Council, 1991).

The Committee also proposed that the framework of competencies articulate a number of different levels of achievement. This would enable educators to focus on particular outcomes and choose curriculum and teaching strategies to

suit. The argument advanced was that this development would offer new opportunities for increasing the transparency between education and training and the workplace, and would go some way towards helping industry clarify its expectations of young people and of the vocational education and training system.

In 1992 the Mayer Committee (Australian Education Council, 1992) was formed and took responsibility for the further development of a set of key competencies. The Committee defined key competencies as:

competencies essential for effective participation in emerging patterns of work and work organisation. They focus on the capacity to apply knowledge and skills in an integrated way in work situations. Key competencies are generic in that they apply to work generally rather than being specific to work in particular occupations or industries. This characteristic means that the key competencies are not only essential for participation in work but are also essential for effective participation in further education and in adult life more generally (Australian Education Council, 1992: 7).

As with the DeSeCo project (Organisation for Economic Cooperation and Development OECD Directorate for Education, 2002), not all competencies were labelled as “key”. Unlike that project however, the focus for the Mayer Committee’s competencies was heavily workplace/employment oriented. Only those skills with the following characteristics were included:

- essential to preparation for employment
- generic to the kinds of work and work organisation emerging in the range of occupations at entry levels within industry rather than occupation or industry specific
- must equip individuals to participate effectively in a wide range of social settings, including workplaces and adult life more generally

- must involve the application of knowledge and skill
- able to be learned
- amenable to credible assessment.

(Australian Education Council, 1992: 12)

After extensive consultation with a variety of groups (eg., schools, industry, employers, tertiary educational institutions) the Mayer Committee arrived at a list of seven key competencies. These were:

- *Collecting, analysing and organising information*  
The capacity to locate information, sift and sort information in order to select what is required and present it in a useful way, and evaluate both the information itself and the sources and methods used to obtain it.
- *Communicating ideas and information*  
The capacity to communicate effectively with others using the range of spoken, written, graphic and other non-verbal means of expression.
- *Planning and organising activities*  
The capacity to plan and organise one's own work activities, including making good use of time and resources, sorting out priorities and monitoring one's own performance.
- *Working with others and in teams*  
The capacity to interact effectively with other people both on a one-to-one basis and in groups, including understanding and responding to the needs of a client and working effectively as a member of a team to achieve a shared goal.
- *Using mathematical ideas and techniques*  
The capacity to use mathematical ideas, such as number and space, and

techniques, such as estimation and approximation, for practical purposes.

- *Solving problems*

The capacity to apply problem solving strategies in purposeful ways, both in situations where the problem and the desired solution are clearly evident and in situations requiring critical thinking and a creative approach to achieve an outcome.

- *Using technology*

The capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems.

(Australian Education Council, 1992: vii)

Three performance levels were articulated for each key competency, based on increasing cognitive demand, and assessment was to occur on at least two occasions to ensure that the demonstrated skills were being applied broadly. (The ability for the skills to be developed and applied across a range of areas was fundamental to their conceptualisation.)

The Committee emphasised that the key competencies could also be taught and learned in a variety of settings using varied approaches and strategies.

Although *Cultural Understanding*, as described in the Finn Report (Australian Education Council, 1991) was the subject of major discussion during the development of the key competencies, the Committee did not include this separately in their final list, believing that the notion of cross-cultural understandings was incorporated in each of the competencies.

During the mid-1990s much effort was expended in implementing the Mayer key competencies in schools and vocational education and training organisations (VET). A comprehensive review by Kearns (2001: 16) is critical of what he saw as the neglect by the Mayer Committee of the

...human factor and the cognitive processes and motivation that influence the acquisition of these competencies,

and went further, arguing this led to many difficulties in the implementation of key competencies and their implementation into schools and vocational education and training programs. Similar difficulties existed in higher education institutions. For example, personal attributes such as honesty, integrity, self confidence, were considered important by educational institutions, especially the higher education sector yet the implementation strategies of these institutions paid little or no attention as to how these attributes might be integrated with existing generic skills.

In Britain there was confusion about how best to develop generic skills (National Skills Task Force NSTF, 2000), and despite some significant government funding, the overall picture in regard to implementation to implementation in higher education institutions (Drummond et al., 1998) remains patchy. Here in Australia (Down, 1997, 2000) noted the need for increased understanding and staff development in the vocational education and training sector. Other variable outcomes in implementation noted in the literature included the failure to link the key competencies to a theory of human development (Weinert, 1999), the exclusion of foundation skills such as reading, writing, reasoning, problem solving, and personal qualities (Kearns, 2001) and the omission of learning competence, ie. learning to learn as a key generic skill (Kearns, 2001).

The difficulties in implementation according to Kearns might have been avoided or at least mitigated if the approach taken by the Mayer Committee to developing generic skills had been similar to that of the United States. Here the process took into account values, attitudes and learning competence and incorporated these into what was termed “workplace know how” (Secretary's Commission on Achieving Necessary Skills SCANS, 1991). Unlike Australia with its narrowly focused and instrumental set of values, the broader, more holistic approach of the United States meant there was more chance of negotiated settlements whenever problems arose.

### **2.2.2 Industry initiated reports**

Complaints by employers and industry associations that many graduates cannot perform in the workplace because they lack generic attributes have persisted throughout the years. In Australia two industry initiated studies have attempted to clarify what actually comprises the perceived deficit. The first of these occurred in 1998 when the Australian Industry Group commissioned the Allen Consulting Group to undertake a study into the training needs of Australian Industry (Allen, 2000) . The second report was carried out by the Australian Chamber of Commerce and Industry/Business Council of Australia (2002). The antecedent to the latter report was one by the Department of Employment, Training and Youth Affairs titled, *Employer Satisfaction with Graduate Skills* (Department of Education, 2000) and it is also outlined briefly below.

#### **1.     *Training to Compete* (Allen, 2000)**

This study sought the views of over 350 Australian Industry Group companies from a diverse range of industries, including the manufacturing, engineering, technology, processing and construction sectors. Companies wanted more from the school system. Although they were seen as being on the right track,

particularly with vocational programmes, concern was expressed that a significant number of school students lacked the basic skills and attitudes necessary for success in the workplace. This included:

- inadequate formal skills in key areas such as literacy and numeracy;
- insufficient grounding in the generic inter-personal skills needed in the modern workplace; and
- poor development of the positive attitudes required for work in the industry, with a particular unwillingness to work in the manufacturing industry.

(Allen, 2000: 66)

The vocational education and training sector was viewed on the one hand as being more open and responsive than previously but there was overwhelming criticism that the sector was too difficult and complex for companies to access, particularly in relation to the complexity and applicability of competency standards arrangements (Allen, 200: 63).

Companies were also critical of the higher education sector believing that the university system's capabilities could not or were not able to come to terms with the requirements of the workplace.

The objective is to broaden the scope of the university programs by bringing in to them the realities of business and the workplace.

(Allen, 2000: 68)

This study emphasised among other things, the need for Australia's training culture to be strengthened and for skill formation policies to support individuals in taking more responsibility for both upskilling themselves (in

basic skills, interpersonal skills and personal attributes such as the ability to embrace change) and maintaining the currency of those skills.

There appear to be a number of contradictions and difficulties in the findings of this report. First, in order to improve the skills and attitudes of school leavers (as identified above) it would be helpful, if not essential to include some type of school-work based program arrangement for students. Given that only 21% of all the 273 companies surveyed in this report expressed an interest in taking on part time school based trainees-apprentices, and only 26% provide structured workplace learning for school students, it is unlikely that these initiatives would go far in providing a solution. Second, the claim that schools do not provide sufficient grounding in generic skills does among other things assume that the generic skills are able to be taught and learned at school, presumably as part of the curriculum. This is not necessarily the case as is shown later in this thesis in my own research. Third, the criticism of the perceived lack of responsiveness (to businesses) levelled at the vocational education and training sector assumes that institutions in this sector ought to be focussed primarily on customer satisfaction, where the company is the customer, rather than the education and training of students. Whether or not this is, or ought to be the case is beyond the scope of this thesis. Fourth, with respect to the statement,

The objective is to broaden the scope of university programs by bringing in to them the realities of business and the workplace,  
(Allen, 2000: 68)

It is not clear in the report exactly what these realities are. They may relate to work readiness in which case universities could argue that although they understand that reality they actively choose to concentrate on the education of students as part of lifelong learning, rather than simply preparing them for the employment. Once again the role of the university in meeting the needs of business is a contentious one and beyond the scope of this thesis.

It appears from the report that, overwhelmingly companies want the education system to provide students and graduates with a range of generic skills and attributes **before** recruitment, regarding having so called “good quality” people as a key way to gain knowledge and skills for the company. Given the ongoing debate in the generic attributes discourse it is unlikely and unrealistic that this will happen, at least in the near future.

2. *Report from the Department of Education, Training and Youth Affairs.*

*Employer Satisfaction with Graduate Skills* (Department of Education, 2000)

As stated above, this report was the precursor to the second industry report (see below). It identified a list of desirable skills that too many graduates were lacking. According to this report, while the overall performance of newly employed graduates was satisfactory, large numbers of unsuccessful job applicants were considered unsuitable for both the position they may have applied for and for employment within the organisation at large. The perception was that the biggest problem lay in these applicants lacking skills in the areas of “creativity and flair”, “oral business communication”, and “problem solving”. The main skill highlighted as absent in the unsuitable/unsuccessful graduates was that of “independent and critical thinking” (Department of Education, 2000). Just how employers were able to make such strong claims about the capacities of these unsuccessful applicants is questionable. Given that most job application and interview processes are incapable of determining the presence or absence of skills such as those mentioned above, one wonders whether in fact interviewees were ever likely to be able to demonstrate just how capable they might have been. Using pen and paper measures and an interview are not likely to be fair assessments of a person’s generic attributes.

3. *Employability Skills for the Future* (Australian Chamber of Commerce and Industry/Business Council of Australia, 2002)

According to Holland (2006: 271), the public debate that followed the previously mentioned Department of Education, Training and Youth Affairs report led to a second industry study being undertaken. The ensuing report, *Employability Skills for the Future* described employers' views on generic attributes, now called employability skills. This change in terminology (from generic to employability) was deliberate - its purpose was to strengthen the employers' influence over the curriculum, particularly in the vocational sector, believing that doing so would guarantee that more graduates would become "job ready" before they entered the workforce (Holland, 2006: 272). The study arose primarily from dissatisfaction with graduate outcomes from the vocational sector, and gathered data from small, medium, and large organisations. It identified the usual mix of skills as being important (eg. job specific, communication, teamwork, problem solving) along with attributes such as initiative and loyalty. Interestingly, in contrast with the report undertaken by the Department of Education, Training and Youth Affairs, this report did not expect new graduates to possess creativity and flair. It also identified apparent contradictions between the skills and attributes that employers stated they required, and the assessment criteria actually applied in the selection process. These contradictions were illustrated through data presented in a report by the National Board of Employment, Education and Training (National Board of Education and Training NBEET, 1992). Here academic skills, oral communication, ability to work in a team, interpersonal skills and initiative were all regarded as critical to a graduate obtaining employment. *Employability Skills for the Future*, along with its expanded list of skills, acknowledged that combinations of these skills led to high job-related performance and argued that their integration in real life needed to be considered with regard to their development and assessment.

So while employer perceptions may be flawed or contradictory, it should be acknowledged that the nature of work has changed and continues to change, and that new forms of knowledge and attributes are now required. These changes, along with a shift to a service economy (requiring more sophisticated interpersonal skills), provided powerful reasons for the adoption of generic skills if Australia was to remain competitive in the global marketplace (Hager, Holland, & Beckett, 2002)

### **2.2.3 Education sector initiatives**

Fostering a successful transition from school to work has become one of Australia's greatest challenges. Employees now need a range of generic attributes such as teamwork skills, and problem solving and critical thinking skills to enable them to prosper in an ever increasingly complex work environment. The education sectors have a responsibility to help ensure appropriate generic attributes are developed. The manner in which the sectors responded is outlined below.

#### ***School policy development***

During the 1990s all Australian states and territories made an effort to implement the Mayer key competencies in schools (National Centre for Vocational Education Research NCVER, 2003). Although implementation on a national basis failed, each state and territory addressed to varying degrees the development of key competencies (Australasian Curriculum Assessment Certification Authorities, 2008, <http://www.acaca.org.au/>). According to Comyn (2002),

Tasmania appeared to be the most advanced in its policy development with a framework for explicitly assessing and reporting the Mayer key competencies for implementation through the Tasmanian Certificate of

Education. Under the new Tasmanian Curriculum Framework, Vocational and Applied Learning has become one of the seven areas of study. This is organised in four strands: literacy and numeracy; work related skills; personal development skills; and applied learning in technology

<http://acaca.bos.nsw.edu.au/index.cfm?objectid=2AAE0971-F3A8-EDC7-545B886E5AB52735>.

And the *Adelaide Declaration on National Goals for Schooling in the Twenty-First Century* (cited in National Centre for Vocational Education Research NCVER, 2003) incorporated all the Mayer key competencies directly along with other aspects such as personal, interpersonal and ethical attributes. Vocational learning (meaning in part the acquisition of a range of generic skills, competencies, understandings and attributes relevant to a work environment), is being promoted as relevant to all students in all years of schooling on the understanding that the weighting and methods will vary depending on year level (Australasian Curriculum Assessment Certification Authorities, 2008).

### ***Vocational education and training national policy development***

To compete effectively in the tertiary education market the vocational education and training sector needed to address issues such as what the essential generic skills might be, what the learning and teaching implications might be, and what the impact of generic skills on business performance might be. In this sector, although the focus was very much on the implementation of industry-identified employability skills, it has been the Mayer key competencies (and their incorporation into national training packages) that have had the most energy devoted to them (National Centre for Vocational Education Research NCVER, 2003). Given that the training packages require the incorporation of the seven Mayer key competencies (along with their performance levels), this is not surprising. Although there were some good attempts at specifying the skill areas needed there were some gaps, which Dawe (2002) discusses in her

assessment of whether training packages provide enough emphasis to the generic skill achievement. Dawe notes among other things that the emphasis on self-development and lifelong learning may depend on the learning strategies used and the culture of the work (learning) environment. She concludes that the focus on and enhancement of generic skills should continue (ie. a review process is necessary) if there is to be continuous improvement of the packages.

### *Higher education policy development*

In the Australian university sector the Higher Education Council (HEC) in its report *Achieving Quality* offered the following statement as an indicator of a higher education's contribution to society.

These are the (generic) skills, personal attributes and values which should be acquired by all graduates regardless of their discipline or field of study. In other words they should represent the central achievements of higher education as a process.

(Higher Education Council, 1992: 20)

While a number of Australian universities had already begun to develop statements/lists of generic skills others began in part as a response to the *Achieving Quality* report. The term generic skill at this time was used widely to refer to a range of qualities and capabilities including cognitive skills eg. problem solving, communication skills, interpersonal skills, eg. teamwork, personal attributes eg. imagination, and so on.

During this time there were also rudimentary attempts to both develop and assess various generic skills in a variety of discipline areas. Abbott and Peach (1999) looked at embedding information literacy skills over the life cycle of a degree programme within the School of Applied Psychology, while others considered for example, communication and collaboration in horticulture

(McAlpine et al., 2001), counselling and group work in social welfare (Green, 2000), and professional skills in business studies (De La Harpe et al., 2000). Some of the issues raised in these studies, for example, lack of commitment by some staff to participate in teaching generic skills, difficulty for staff in seeing how to teach and assess these skills and the amount of work perceived by staff in teaching and assessing generic skills, are still some of the concerns staff identify today. These issues combined with the lack of conceptual clarity of generic skills (Barrie, 2005, 2006; Chanock, 2004) and complications arising for universities from both the internal and external environments (Green et al., 2009) have reinforced the need for more resources, support, debate and organisational change if progress is to be made in this area.

In the Australian Higher Education report for the triennium 2000 -2002, one of the key objectives of the Government's policies related to the improvement of universities' responsiveness to both student and industry needs. It was not therefore surprising that employer satisfaction with graduate skills remained one of the issues on the reform agenda. While employers still perceived large numbers of graduates to be lacking in many generic skill areas, universities were placed under increasing pressure to be more responsive to these needs. Market place competitiveness for universities ensured they paid attention to articulating their own sets of generic skills as desirable characteristics of their graduates.

In 1999, the Government, responding in part to this pressure, commissioned the Australian Council for Educational Research (<http://www.acer.edu.au>), to develop instruments to test the generic skills of university graduates (Kemp, 2000). The Graduate Skills Assessment, it was asserted, would do this along with measuring the "value-added" by universities (through testing students on entry and on graduation). It was argued the assessment would benefit students, employers, and universities in a variety of ways, including the notion of value-added "ness" and its measurement. Of course, all this assumes that the

development of specified clusters of generic skills can be measured and the acquisition and/or further development of these skills can be attributed to the university. (It was not clearly stated in any of the Graduate Skills Assessment documentation as to whether “university” meant just the curriculum or the total university experience, but it appeared to relate to the former.) This government initiative provided added impetus for universities to articulate exactly what generic skills their graduates would attain by the time they graduated.

Although many universities across Australia participated (to some extent) in the early Graduate Skills Assessment tests, the degree of uptake that Government had hoped for has not occurred. Apart from motivating students to take the test, many universities have been reluctant to put resources into administering a test that students do not wish to undertake. Many university academic staff members also do not see the test as being valuable enough to encourage their students to take part in such an exercise, and, according to the Department of Education, Employment and Workplace Relations, many employers did not know anything about the test instrument, (Our Universities: Backing Australia’s Future – Policy Paper, 2008)

[http://www.backingaustraliasfuture.gov.au/policy/10.htm#\\_3](http://www.backingaustraliasfuture.gov.au/policy/10.htm#_3).

In addition there are number of other factors that are likely to have contributed to the low uptake of the Graduate Skills Assessment. Many of these relate to the test reliability and validity (Hambur, et al., 2002),

[http://www.dest.gov.au/sectors/higher\\_education/publications\\_resources/other\\_publications/graduate\\_skills\\_assessment.htm](http://www.dest.gov.au/sectors/higher_education/publications_resources/other_publications/graduate_skills_assessment.htm). They include:

- uncertainty as to how variables such as age, gender and English speaking background relate to test performance
- lack of clarity as to whether “value added” estimates can be given
- ambiguity as to the relationship between student test scores and work performance

- lack of sufficient data to determine whether or not there is a relationship between student test scores and work performance.

And further concerns related to the test include:

- the possibility of university “league tables” appearing
- whether or not there are generic skills outside of discipline or work situations. (If this is taken to mean that there are generic skills that might be used at university or in the workplace, but are acquired and developed outside of these latter two contexts, then my thesis supports this view.)
- disagreement as to whether or not universities do or should actually teach these skills. This matter is discussed later in Chapter 7.

Whether or not more investigation and evaluation of the Graduate Skills Assessment test reveal any clear answers to the challenges noted above remains to be seen. For now it appears that for many in higher education at least, the test remains a rather pointless and ignored entity.

## **2.3 The University influences**

The present study took place in a medium-sized Australian university located approximately one hour’s drive from one of the largest cities in the country. The university began life in 1951 as a Division of a larger university located in the previously mentioned major city, and in 1975 was incorporated as an independent institution of higher learning. Over the fifty plus years it has existed, the University has grown from a provincial feeder college to an international university. It has over 21,000 students (as at October 2004) spread across three campuses and a number of access centres. There are nine faculties – Arts, Education, Health and Behavioural Sciences, Engineering, Law, Science, Informatics, Commerce and Creative Arts. The student population, originally

drawn predominantly from the local region, is now comprised of students from over 70 countries.

During the period 1997-1999 when the participants in this study were students, generic skills development at the university was still in its infancy. The university, like many others in Australia, regarded these skills as a reference point by which to measure its effectiveness and spent a great deal of time and effort in developing and articulating its own list of generic skills.

Milne (1998) reported that the university had in fact been exploring the notion of generic skills in courses since the early 1990s. In 1992 at a University Planning Conference staff were involved in the development of a set of generic skills (also called graduate attributes). These skills were embedded into a Strategic Plan in an attempt to help define “graduateness” within the university (Wright, 1995). According to the latter writer a number of attributes constitute graduateness. These include, but are not limited to attributes such as problem solving, reflection on practice, communication and presentation and interactive and group skills. The initiative to develop a comprehensive articulation of generic skills was a very innovative step for a higher education institution to take at the time and the university involved in this present research study was keen to be at the forefront of the generic skill agenda.

From 1995 to 1997 the University’s Education Committee (UEC) worked on developing a policy and set of procedures for what was termed, “Information Literacies”. This term was, according to the Information Literacies Policy and Procedures document, the collective noun used for the three interrelated literacies of “computer literacy”, eg. the ability to use a personal computer effectively, “information literacy”, eg. the ability to use information effectively, and “statistical literacy”, eg. the ability to think statistically.

This document contained an inventory of “information literacy skills” that were deemed to be appropriate for the technology of the day and from which faculties could develop their own individual lists. It included such things as, “correctly use and understand basic terminology in the information literacies”, “efficiently and effectively access information...” and “demonstrate the ability to critically evaluate information.” All students, before graduation, the document stated,

...should be able to put into practice the skills... The skills should be transferable from one discipline to another and from one environment to another. Ideally, they should be substantially developed in the first year of undergraduate study.

(University of Wollongong Comprehensive Information Literacies Working Party, 1997: 3)

It was clearly stated in the Information Literacies Policy and Procedures document that the university acknowledged that integration into the curriculum was the most effective means of attaining these skills and learning the concepts. Each Faculty Education Committee was charged with the task of adapting the inventory so that it accurately reflected the specific skills required of a graduate from their Faculty. And furthermore each Faculty needed to be confident that each graduand had achieved a basic level of competency in the generic skills within their programs.

To assist with the implementation of the policy, the University Education Committee working party made a recommendation (which was subsequently actioned) to appoint an Information Literacies Coordinator, and Coordinating Group. The coordinator would advise the University Education Committee as to the degree to which each course achieved the university’s information literacy targets and recommend ways to improve the course. In 1998 a compulsory “Introduction to the University’s Information Environment”

subject was set up and the coordinator was responsible for advising the Academic Registrar's Division when a student had completed this compulsory prerequisite. Failure to meet this mandatory requirement by the end of the first year of enrolment would mean that the student's results would be withheld until such time as the student had completed the subject. Students were also informed that "advanced information literacies" skills would be integrated into each of their academic programs and that development of these skills was the joint responsibility of students, lecturers, and support staff.

All participants in this present research study had been required to comply with these requirements during the course of their degree studies.

Since the late 1990s this university has continued to refine its list of "Graduate Attributes" having incorporated along with the above mentioned "information literacies", the following:

- academic literacy - learning development (refers to the development of skills in reading, critical analysis, listening, writing, and oral presentation)
- professional practices (refers to the transfer and application of knowledge, values, attitudes and skills gained from university study to work and life settings and include the management of a professional career.)

Further attributes specifically related to Research Graduates have also been developed, for example,

- the ability to conduct independent research and report its outcomes to a range of national and international audiences in a scholarly manner.

It can be seen, then, that the articulation, development and implementation of generic skills has been, and continues to be, heavily influenced by external pressures. This particular university like others continues to strive to graduate

students who will possess attributes that will see them cope and succeed with the changing world of work. These attributes will continue to be reshaped and refined as new workplaces evolve and new knowledge is created.

To summarise, there have been and still are a number of significant contextual pressures that serve to highlight the role of generic skills. Kearns (2001: 19) identifies these as follows:

- the requirements of the knowledge-based new economy and the continuing impact of globalisation and the new information technologies
- the exponential pace of change
- the consequent pressures for lifelong learning
- the need for individuals to maintain employability in this environment
- changes in the workplace including major restructuring and the emergence of the concept of the high performance workplace
- recognition of a requirement to foster enterprise skills and an innovation culture in Australia, building Australian industry that is competitive in globalised world markets
- the revision of the National Goals for Schooling.

While many of these have been the subject of much attention over the past few years, probably those most important to this thesis relate to lifelong learning, the rapid pace of change and the concept of the high performance workplace. All of the pressures noted above however, continue to require ongoing work if Australia is to maintain a competitive learning society and market edge in the knowledge-based new economy of the 21<sup>st</sup> century.

## **Chapter 3: Perplexities and ambiguities**

Chapter 2 described the full context in which the research took place as part of illuminating the question of whether or not generic skills that are useful in the workplace are products of the university “classroom”. To continue this clarification it is necessary to discuss the two main concepts in the generic skills debate, those of conceptualising generic skills, and transfer. This chapter considers the debate on these concepts in an attempt to find a way forward through the confusion surrounding both of these concepts. This chapter also discusses the notion of communities of practice and how the idea relates to this study.

### **3.1 Generic attributes**

#### **3.1.1 Misunderstandings and uncertainties**

Confusion and ambiguity surround the term “generic skill”. Several synonyms exist for the term “generic”, including, “key”, “core”, “work related”, “transferable”, “personal transferable”, “employability”, “cross curricular”, “enabling”, “enterprise”, “general”, “higher order”, “soft”, “meta” and “life-long learning”. The second part of “generic skills”, viz. “skills”, also has several synonyms or near equivalents including “competencies”, “competences”, “attributes”, “abilities” and “capabilities” (Bennett, Dunne, & Carre, 1999; Billing, 2000, 2003; Bowden, et al., 2000; Brown,

2002; Clanchy & Ballard, 1995; Drummond, et al., 1998; Guile, 2002; Green, et al., 2009; Hager et al., 2002; Holmes, 2000; Jones, 2009a, 2009b; Seeleman et al., 2009; Te Wiata, 1993).

Billing (2003) notes that sometimes a distinction is made between education (and the consequent labels of "abilities", "capabilities" and the like), and training – with its consequential labels of skills, competencies. This separation of the two implies that skills are of a lower cognitive order than abilities, something, that in his opinion is not a helpful distinction.

In undertaking a review of the literature on generic skills for the new economy (with emphasis on the Vocational Education and Training sector), Kearns concludes

There is no consensus in the international literature on the identification of the essential generic skills.  
(Kearns, 2001: 2)

He does, however, recognise a concept of generic skills similar to that adopted by the British National Skills Task Force, that is, one encompassing the idea of transferable skills essential for employability. Kearns (2001) has also followed the Task Force's idea of extending this definition of generic skills to include a wider set of transferable skills (that is broader than key competencies) which are generic to most work. The term "key competencies" is defined as those

... essential for effective participation in the emerging patterns of work and work organisations,  
(Kearns, 2001: 12)

Other writers though define “generic skills” as those that

transcend traditional subject boundaries and are thus ‘cross curricular’  
(Bryce, 1998: 2)

and Bennett et al., (1999) label “generic skills” as those skills that can support study in any discipline and which can potentially be transferred to a range of contexts including the workplace.

Hager and Holland (2006) highlight conceptual misunderstandings within the area of generic attributes. Hager (2006: 19-31) describes five general errors regarding the nature of generic attributes.

These are:

- 1. Thinking of generic attributes as discrete entities. That is, the atomisation of generic acquisition and subsequent individual acquisition and transfer.**

This misconception has two parts. First that generic attributes are independent of each other, self-contained, ie. there is no overlap, and second, that they can be acquired by person(s) and transferred from one context to other contexts. Hager (2006) likens this second belief to that illustrated by Layoff and Johnson (1980) and Bereiter (2002) where the concept is one of learning as products, with these being added to the mind (much like substances might be added to a container). Hager goes further and suggests that the widespread employment of metaphors such as those previously used overlooks some of the inherent problems in conceptualising generic attributes, for example, the assumption that learning transfer is straightforward and able to be defined. (Transfer is covered in more detail in the next section of this chapter.) Alternative metaphors are required if we are to broaden our thinking about generic

attributes. In some of his earlier work, Hager (2004a) showed how strong the link is between learning and metaphor and how influential this has become in our educational discourse. He suggests that “participation” and “construction” are more useful metaphors than “acquisition” as they relate better to processes and practice contexts and offer more scope for illuminating the development and deployment of generic attributes.

Another difficulty in this general area is that generic attributes vary significantly in their complexity eg. researching information, while it may be at a high level such as doctoral studies, does not involve the same level of complexity as some other generic attributes such as taking an ethical stance or working effectively as part of a team. The latter examples can be modified by situational knowledge and reflection and the notion that they are discrete entities acquired by learners becomes even more fallacious.

**2. Believing that the learning of generic attributes happens quickly and that they can be acquired complete and finished.**

Here the view, widely held, is that generic attributes can be acquired as products, and once a person has them they are able to draw on whichever attribute they wish to utilize whenever necessary, in whatever context they need to use them. Hager (2006) points out that once again the focus on the notion of acquisition, has directed attention away from processes of generic skill development. The alternative view in the literature, and a view supported by my own research, is that generic attribute development is ongoing and highly contextual. Generic attributes need to change and evolve with circumstances, and because of this, significant amounts of workplace learning are required over time.

**3. Thinking that the acquisition of generic attributes occurs on an individual learning basis. That is learning is viewed as being located within the individual.**

The difficulty with this belief is that it takes no account of communal learning, ie. that learning by teams and organisations may not be (in fact probably is not) reducible to individuals. Hager (2006) illustrates this point with an example of a firm that has a reputation for “good customer relations”, (customer satisfaction skills are a commonly proposed generic attribute), which have been gained presumably through the interactions of a number of staff with customers. Each staff member will have brought a different perspective to this generic attribute and thus contributed in different ways and arguably to a greater extent than the expertise residing in each individual staff member (ie. the whole is more than the sum of the parts). The firm’s own development evolves continuously as each staff member helps to shape the organisation’s construction of what it means by good customer relations. This process of adaptation remains ongoing for the organisation. Individual staff members internalise different perspectives, actions, values, and so on, according to the contexts and particularities of their different work.

Stasz and Brewer (1999) consider the understanding of skills from both a “positivist” and “situated” perspective. The former conception is about skills as atomistic, measurable characteristics. Evidence of this positivist conceptualisation can be seen in both the policy development and in-use practices of many Australian universities today. In contrast, the situated view assumes skills are developed as a result of a number of interrelated factors (including behavioural and cognitive processes), and are attached to a particular job rather than an individual. The writers suggest that neither view in itself provides an adequate representation of generic skill development for the workplace.

Another dimension to the “situated-ness” of generic attributes is that which emphasizes the influences of power and gender on skills formation and conceptualisation (Bradley, 1989), such that in certain occupations, employees will have their work viewed as skilled irrespective of the make up or complexity of the tasks (Shields, 1995). Skill formation is viewed as social by an increasing number of writers, (Guile & Young, 1998; Hager 2006; Lave & Wenger, 1991), and Hager points out the implications in this belief,

If the social characteristics of a workplace shape the range and deployment of skills in that workplace, then there will be an inescapable mismatch with standardised or generic competence descriptors.

(Hager 2006: 29)

**4. Regarding generic attributes as readily recognizable in individuals, that it is straightforward determining whether or not an individual has a generic attribute(s).**

This misconception is very understandable given the widely held view that effective learning is that which is able to be “brought before the mind”. If this cannot be done then learning is deemed to have been ineffectual or inferior. This idea of “transparency” of learning is also problematic because non-transparent learning such as dispositional knowledge can underpin other forms of learning (Passmore, 1980), and this means that generic attributes invariably clash with the transparency assumption. Hager (2005, 2006) argues that this lack of transparency need not be viewed as a limitation however, and showed in his earlier work (2004b) that although the specification of the underpinning constituents of competence could not be accurately delineated, the performance itself could still be correctly and meaningfully reported in a written form.

Hager and Beckett (1995) remind us that inference of competence on the basis of performance evidence is always necessary, and judging generic attribute development is no exception. To codify precisely remains an intangible activity. Yet in Australia, as around the world many people make hard-and-fast lists as to what generic attributes are developed in what course or degree and/or what are needed for particular workplaces, societies and so on.

The lack of understanding about what constitutes learning (outlined above) contributes to why the conceptualisation of generic skills remains confused and muddled.

**5. Believing that generic attributes or at least our understanding of them, are easily and readily describable and can therefore be conveyed to others in written form.**

Although this point is related to and follows on from the previous one Hager contends that it is important to make it on its own because there are many who believe that if generic attributes could be accurately described and refined then everything else would fall into place. That is, the teaching, learning and assessment of generic attributes would no longer be problematic; universities could be funded on how well they “added value” to their graduates through the development of specific attributes, and so on.

Bryce (1998) argued that it was possible not only to determine whether or not a generic skill (as she terms them) was present, but also the level at which it was present. She contended that it was the lack of confidence in the post-compulsory school sector in assessing the attitudinal kinds of generic skill that hindered educators in moving forward in this area. In an earlier study (McCurry & Bryce, 1997), which involved consensus of teachers’ judgements (over time) of the Mayer Key Competencies with

Year 11 students there was an 86-90% agreement on both the presence and level at which a particular generic skill was being utilized by students. Bryce suggested that a similar process could also be used in post-secondary school education.

Williams (2005) in critiquing a number of reports (ACCI/BCA, 2002; Curtis & McKenzie, 2001; Kearns, 2001) reminds us that there was no agreement as to whether or not personal attributes, as she termed them, were learnable or not. This once again compounds the confusion about both what is understood by the term generic attribute and how it might be described and assessed.

Confusion regarding the description and assessment of generic attributes is not confined to the education sector. For example Langdon and Marelli (2002) believe it is possible to identify competencies in the workplace environment. They developed a model of performance which they believe provides the basis for defining jobs from which a system for identifying competencies can be built. The term “competencies” is not defined in this study; the closest the writers get to describing what is meant by the term is stating that they need to be based on what it takes to produce the outcomes of a job. An attribute or ability that is viewed differently to competencies is defined as,

...a demonstrated cognitive or physical capacity to successfully perform a task with a wide range of possible outcomes.

(Marrelli, 1998: 10)

and the writers argue that it is possible to identify competencies for attributes fairly accurately. They advocate the use of commercial instruments for this task, and contend that the basic attributes (whatever they are) are unable to be learned. It is not stated in the paper what if

anything ought to be done about this in order to make full use their competency identification in the workplace.

An investigation into the first-year students' perceptions of their capability of a number of generic skills and attributes, (Lizzio & Wilson, 2004), noted another problematic aspect of the generic attributes discourse - what is meant by being "capable" in relation to any particular generic attribute. Just as it is impossible to have full written descriptions of the generic attributes so too is it impossible to use a reductionist methodology in claiming one can measure these attributes. The writers stress that generic attributes are inherently more personally and situationally complex than such a methodology allows.

Barrie (2006: 223) has shown us quite clearly that in the university sector generic attributes are understood in very different ways. His work provided us with four different understandings, which he labelled as follows:

- Precursor conception: that generic attributes are undifferentiated from basic skills such as English language proficiency and numeracy, and most students are expected to have these attributes on entry to university. This understanding focuses on disciplinary knowledge and relegates generic attributes to irrelevancy in the context in university learning. Where students do not have the attributes it is seen as the role of the non-discipline staff member to remedy the situation by provision of an additional remedial curriculum
- Complement conception: where the attributes are believed to be part of what should be taught in a university but ought to be addressed separately and secondary to learning discipline knowledge. Separate courses of study or separate teaching units (eg. learning support units) are viewed as important adjuncts in this understanding

- Translation conception: the view that generic attributes have the potential to change and transform disciplinary knowledge. While the attributes are still thought of as separate from the disciplinary knowledge there is a mutual relationship. Because of this relationship generic attributes are usually developed within the context of usual classes, for example through the teaching processes of that content
- Enabling conception: the belief that generic attributes are an inherent part of scholarly learning and knowledge. In this conception there is a greater awareness of generic attributes as transcending disciplinary boundaries even though their initial development may have been within a disciplinary context. Generic attributes are developed as parallel learning outcomes to knowledge and are interwoven into the curriculum. They provide the framework for the ongoing learning of new knowledge and enable students to acquire a particular way of relating to the world, or to knowledge, or to themselves. Hence this conception is supported by and subsumes all those above it.

The implications of Barrie's work are far reaching, not least of which is the question, will universities ever be able successfully to address the issue of graduate generic attributes as one of the core educational outcomes, given the qualitatively different ways in which academic staff understand the meaning of the term "graduate generic attribute"? His later work suggests a way toward a solution to this question by considering the ways in which academics understand the teaching and learning of generic attributes (Barrie, 2007). This is discussed in more detail below in Section 3.1.3.

It is in clarifying this misconception that Hager (2006) reminds us that because much knowledge of generic attributes is tacit, it is invariably impossible to have full oral or written descriptions of what such attributes really are or might be. He contends that lists and descriptions are only guides in aiding our understanding of generic attributes and we ought not to let ourselves be

seduced into believing otherwise. Studies supporting this notion of knowledge of generic attributes being tacit, are those that reject the view of generic skills as discrete, measurable, technical skills that transcend disciplines. Instead they understand generic attributes as social practice, where participants in a given setting collectively produce social meanings and understandings (Atkinson, 1997). In illustrating this concept in teaching and learning, Jones (2009) contends that it is possible for teachers to promote particular behaviours, attitudes and practices in students, often in tacit ways. She proposes that rather than a super-disciplinary list of skills, generic attributes require a more sophisticated consideration of disciplinary and professional practice.

### **3.1.2 Consequences of confusion**

With such diverse understandings of generic skills, then, it is little wonder that those skills deemed important are often significantly different depending on who is making the choice. Most attempts to define generic skills more closely have, according to Drummond et al., (1998)

... resulted in a plethora of superficially similar but often significantly different lists.

(Drummond et al., 1998:20)

Vast numbers of lists of these skills have been developed by various stakeholders, including educational institutions, employer bodies, and government organisations, in an attempt to “produce” citizens who are able to function effectively in the global environment of the 21<sup>st</sup> century.

Billing (2003) describes two broad approaches to deriving lists of what he terms, “cognitive abilities”. The first and most common approach is to conduct surveys of opinions of various stakeholders eg. employers. This is the approach

used in the UK and Australia. The second method is to look at relationships between superior performance in occupations and particular skills or attributes (ie. factor analysis). This is the way the US has chosen to generate its list of competencies. There are as might be expected many commonalities among all these generated lists, for example, they all include (in some form), communication, teamwork, problem solving and decision making skills. As stated earlier, however, the meanings various stakeholders have for these nominal skills may vary greatly.

In the Australian context most definitions of generic skills derive from the definition in the Higher Education Council report, *Achieving Quality*, where there appears to be an emphasis on the relevance of these generic skills to employability along with other aspects of life (Bowden et al., 2000; Hager et al., 2002). Bowden et al., (2000) emphasize this in their definition referring to the contribution these skills ought to be able to make to a profession and society, along with preparing graduates as agents of social good for an unknown future. Barrie (2004) provides us with the most commonly understood description and intention of generic skills in Australian universities today:

Broadly speaking, generic graduate attributes in Australia have come to be accepted as being the skills, knowledge and abilities of university graduates, beyond disciplinary content knowledge, which are applicable to a wide range of contexts. It is intended the university students acquire these qualities as one of the outcomes of successfully completing any undergraduate degree at university.

(Barrie, 2004: 263)

Barrie continues with an outline of the key features of generic graduate attributes, emphasizing that generic attributes encompass more than skills and attitudes (cf. generic skills), and that the global term attributes is advantageous in that it

... can encompass new or alternative conceptions of wisdom and knowledge.

(Barrie, 2004: 263)

At the time of this study (1999-2001) with the skills debate in Australia still in its infancy, there was no broad agreement as to what generic skills were and what they would be called. Since then, although there has much further ongoing debate there still appears to be no clear consensus in the generic skills discourse in the tertiary education sector (Hager et al., 2006, Jones 2009a, Jones 2009b, Kember 2009).

### **3.1.3 Working through the confusion**

Rather than leaving us with the conceptual perplexity about generic attributes, Hager (2006: 32) provides us with a possible way through the confusion by outlining a number of principles that provide a more accurate understanding of generic attributes.

These include:

- Viewing learning as a process
- Paying due regard to the holism of generic attributes
- Taking proper account of the influence of social/ group factors
- Recognizing the contextuality of generic attributes
- Recognizing the relevance of generic attributes for lifelong learning.

These ideas themselves are interrelated, and support one another. In “learning as a process” where learners are part of their environment, as learning affects the learners and reshapes them (including their generic attributes), it also reshapes their environment. The environment includes both social/ group factors and contexts, and the reshaping process is not one-directional and static;

rather it is ongoing and multidimensional. This illustrates the central feature of generic attributes to life long learning.

Barrie's (2007) work provides us with a view of how academics perceive that students acquire generic attributes, and the various strategies that assist the development of these attributes. He describes six categories:

- remedial – the only role of the university in teaching generic attributes is one of remedial teaching
- associated – generic attributes are developed in association with the usual university curriculum
- teaching content – generic attributes are viewed as being an integral part of the teaching content of the discipline
- teaching process – development of generic attributes is through the teaching process of the usual university course
- engagement – the focus of understanding is on the way the student engages in learning
- participatory – the focus of understanding is on the way the student participates in the broader learning experiences of university life.

(Barrie, 2007: 444)

In developing a conceptual framework for the teaching and learning of generic attributes, Barrie also provides us with an avenue for further conversation and investigation in the generic skills arena.

Training modules and other forms of curriculum design that see learning as atomised, able to be acquired in pieces and transferred to other contexts (including the workplace) are not in keeping with the notion of learning as being an holistic process (Hager, 2006). This thesis, through its participants' stories illustrates how the effective use of generic attributes in the workplace is a much richer and more holistic process than several atomised pieces of learning strung together and transferred from one context to another.

In Hager's (2006) view, generic attributes should be thought of more broadly than as just university and work – rather their development and use is central to managing the increasingly complex and diverse situations that are invariably confronted in a lifetime. This capacity increases confidence and adaptability, ultimately leading to global citizens who are able to make a meaningful contribution not only to their own personal lives, communities and workplaces, but also to the sustainable economic growth of their countries. Whether or not it is the generic attributes themselves that are transferred or that there is growing understanding of how to deal with different contexts is unclear. What is clear however is that we need a sounder understanding of both generic attributes and transfer than we currently have. Transfer is the focus of the next section.

## **3.2 Transfer**

### **3.2.1 Misapprehensions and doubts**

Another significant issue in the discourse about generic skills is that of transferability. It is a major attraction of supposed generic skills that they can be readily transferred to diverse situations. However, when we examine the state of knowledge on transfer, the picture is one of ambiguity. Throughout the history of transfer research (approximately 100 years) a vigorous debate has raged concerning transfer, including whether or not it actually exists, what it might actually be (assuming it exists), and what factors affect its occurrence. The initial debate between Thorndike (1906) and Judd (1908) concerned the implications of their various experimental studies. Judd (1908) on the one hand, believed that the experiments he conducted with a group of boys on their ability to “transfer” theoretical explanations into success in practical tasks provided evidence of transfer. But Thorndike failed to find much evidence of transfer in any of his studies. Detterman (1993: 8), and Reed, Ernst, and Banerji,

(1974) also take opposing views; while Brown, Kane, and Long (1989) add to the confusion by finding mixed results in their study.

Annett and Sparrow's (1985), and Gick and Holyoak's, (1987) attempts at defining the term transferability are not particularly helpful either. The former defined "transfer of training" as the benefit one receives from having had previous training or experience in the acquisition of a new skill or in the adaptation of an old one. The benefit is by and large measured as a percentage saving in time and effort for the new learning, which can be attributed to prior learning. Similarly, according to Gick and Holyoak (1987),

...transfer is a phenomenon involving change in the performance of a task as a result of the prior performance of a different task.

(Gick & Holyoak 1987: 10)

Even they point out that this definition scarcely distinguishes "transfer" from "learning". Although they attempt to elaborate on their definition it remains unclear how learning and transfer are actually different. As Billing (2003) notes in his attempts to understand the purported differences, problem solving, learning and transfer are similar cognitive activities rather than dissimilar actions. Any differences that may exist in these definitions are negligible.

To complicate the picture even further there are apparently, notable instances of negative transfer (Woodworth & Schlosberg, 1954; Singley & Anderson, 1989) where participants perform worse on the task than they would have if they had not been given any initial training.

The extent to which individuals can use the knowledge and skills learnt in a context different from the one in which they are now required to work is the subject of debate (Brown, et al., 1989; Salomon & Perkins, 1989). These writers separate "how" transfer might occur from "what" might be transferred, and

argue that transfer occurs in two ways, “low road transfer” and “high road transfer”. They basically regard the former as an automated behaviour, albeit in a new context, while the latter is an intentional abstraction of something from one context and application in a new context. The “what” of transfer, Brown et al., (1989) and Salomon and Perkins (1989) contend, can either be “forward reaching” where basic elements are purposefully abstracted in anticipation of later application, or “backward reaching” where in a new situation one searches for relevant elements already acquired. They conclude that predicting specifically what will transfer to what may be far too much to ask of a theory of transfer. One way in which they illustrate this is to highlight that what transfers to what necessarily calls for an analysis of the constituents of the “whats”. This can be very complex calling on theories such as those related to cognitive processing both generally and in specific cases, rather than just a theory of transfer per se (Salomon & Perkins, 1989). The significant questions for exploration according to these writers revolve around the “how” of transfer, that is, examining a context of potential transfer with the low and high roads in mind.

Beach (1999), attempting to make sense of the term “transfer” as it relates to education, notes that it is problematic. He describes the two classical, philosophical stances on transfer, one where individuals carry continuity in knowledge with them as Plato believed (Bluck, 1961), and the alternative view that continuity is located within the world, (Dudjom, 1991), before proposing an alternative stance himself. Beach (1999) suggests that transfer be broadened to incorporate,

continuity and transformation in learning as an ongoing relation  
between changing individuals and changing social contexts.  
(Beach, 1999: 130)

He proposes that transfer as a metaphor be discarded and that the phenomenon of transfer be broadened to include a transformation in knowledge skill and identity across changing forms of social organisations. He labels this, “generalization”. To understand the phenomenon of generalization he coins the term, “consequential transition”.

Consequential transition is the conscious reflective struggle to reconstruct knowledge, skills, and identity in ways that are consequential to the individual becoming someone or something new, and in ways that contribute to the creation and metamorphosis of social activity and, ultimately, society.

Beach (1999: 130)

Beach’s alternative stance then aims to address the question of how to prepare individuals to participate in the transformation of society (Beach, 1999). He also contends that we need to understand how to “transfer” opportunities for learning beyond the classroom and quotes Lemke (1997),

We need to extend the networks of the classroom and the school... into professional communities of practice... into the sphere of private life... into the sphere of direct political activity... into libraries and information worlds where there are no preferential barriers to crossing from one domain to another at will. To extend them into productive activities of our ecosocial system ... Most of all we need to extend them outside the networks that define only masculine, heterosexual, middle-class, north-west European cultural values and historical traditions as normative and that seek to deny the already pervasive interpenetration of other networks and practices in our ecosocial systems.

(Lemke, 1997: 54)

Though this will not be an easy task, Beach (1999) postulates that by doing so and considering how best to support students in learning to produce culture as well as reproduce it, that consequential transitions may very well occur.

The distinction between transferable and transferring skills also remains confused, though Bridges (1994) does provide an explanation of what each may refer to, claiming that transferring skills consists of whatever process is involved when a skill can be deployed with little or no adaptation in a variety of settings, as for example, in word processing. The term “transferable”, on the other hand tends to be preferred when people talk about the application of skills across different social contexts. Bridges (1993) also reminds us that the notion of applicability or transferability of skills from one context to another is not new, citing for example, that the skills that underpinned the British Army’s success at Waterloo were said to have been developed on the playing fields of Eton and subsequently transferred to the battle field.

Billing (2003) in his analysis of skills sought by stakeholders, notes that there are relatively few philosophical articles on cognitive transfer. He summarizes the writing of those who argue that there are no “general thinking skills” but rather only “domain specific thinking skills” (Barrow, 1989; Hirst, 1965; McPeck, 1987;) and contrasts it with the more positive approach taken by Andrews (1990) and Bridges (1993), where it is argued we need a theory of domains to make the notion of transferable skills intelligible. Billing believes that Barnett’s (1994) conclusion of a near consensus on the issue of whether or not any generic skills exist is pessimistic, unhelpful and closes off development. He contends that the Bridges’ (1993) conclusion is more constructive, that there may be attributes that are not specific to a single domain but that need to be exercised in the context of the knowledge and understanding appropriate to that domain (Billing, 2000). There is support for this view in the writing of Perkins and Salomon (1989), where, from their review of empirical evidence they find while there are general cognitive skills, they always operate in contextualised ways. Giddens and Stasz (1999) agree, stating that it is the work

setting that determines the way in which employees use workplace skills eg. like problem solving to facilitate a task. According to Giddens and Stasz (1999) skill transfer is the application of skills learned in one setting (eg. classroom) to a different environment eg. workplace. They note that although many people believe this occurs automatically, this is not necessarily the case, and many young people struggle to understand what academic skills need to be used to solve real time work problems. And adding to the debate on transferability is Barnett's (1994) contention that generic skills (he uses the term "meta cognitive skills") learned and valued in one context ought not to be the same as those learned and valued in a different context.

In the Australian context Down (2001) demonstrated that spontaneous transfer (ie. the transference of what is learned in one context to another without prompting towards a recognition of essential similarity of the two concepts) does occur. She theorizes that this transfer arises from an internal sense of "puzzlement" combined with the need, imagination and initiative to make meaning out of diversity, paradox and multiplicity. Her model of learning transfer aims to explain the complexities involved in the process and incorporates concepts of activity theory (Engestrom, 1999), expansive learning (Bateson, 1972), communities of practice (Billett, 1998) and multiple intelligences (Gardner, 1999). And on a practical level Goody, et al., (2001) illustrated how using an experiential learning process could be successful in the transfer of knowledge into workplace practice, providing a number of factors were taken into account. These factors included, ensuring the experience was designed to generate data related to the subject matter and objectives, that if multiple experiences were used each was processed and tied to subject matter and objectives, that the experience component is less than 20% of the overall training, and that training time should be equally split between generalization and application and sharing and processing components. Whether or not this is actually transfer or, new learning is debateable; it could be argued that the

transfer concept has changed its form to the extent that it could now be called new learning.

### **3.2.2 Establishing the character and incidence**

The importance of the nature and occurrence of transfer has been evident then for over 100 years, giving rise to much research and publication. There are both theoretical and practical reasons for this. First, transfer theoretically provides, an important test-bed for models of learning and performance (Barnett & Ceci, 2002: 613)

For example, there are a number of writers researching domain specificity of expertise, eg. (Ericsson & Smith, 1991) and, transferable expertise, eg. (Hatano & Inagaki, 1984).

The second reason is that there is much at stake in the outcome of transfer in terms of both money and time invested in education. In fact, a main reason for formal education is to facilitate learning in situations outside school. (Klausmeier, 1961: 352)

then a huge amount of investment in education has been justified on the grounds that formal education does indeed help instil attributes, skills, attitudes, abilities and so on that transfer to wider contexts and ultimately help students become more productive members of society.

Determining whether or not transfer occurs is crucial. If the critics are right in asserting that it happens rarely if at all, then the justification for educational and training expenditure would require re-evaluation.

### 3.2.3 Seeking a degree of clarity

Barnett and Ceci (2002) reported the continued lack of agreement in the scholarly community about the nature of transfer, the extent to which it occurred and the nature of its underlying mechanisms. They argued that the disagreement between the proponents and opponents was the result of an unstructured or poorly structured debate and a failure to specify the different dimensions that were pertinent to establishing whether and when transferred occurred. They contend that transfer is a concept worthy of more thought, research and debate and worked on developing a framework to assist in the understanding of the concept.

Their study emphasised transfer of thinking from one context to another and uses the term, “far transfer” to describe transfer that is applied well beyond the environment of training. In their view, instances of far transfer although not frequent are able to be documented, and may even be predictable once the relevant dimensions are specified. They identified a number of dimensions along which both content and the differences between training and transfer occur. Table II is a tool that can be used to facilitate further understanding of transfer and the process of comparison among studies. Using the tool is a step toward generating further and/or shared understandings of transfer and illuminating what appears to still be a very complex, confused landscape.

**Table II Taxonomy for far transfer**

(Barnett & Ceci, 2002: 621)

| A Content: What transferred                                                                                                                                                      |                           |                                        |                                  |                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------|----------------------------------|------------------------------------|
| Learned skill                                                                                                                                                                    | Procedure                 | Representation                         | Principle or heuristic           |                                    |
| Performance change                                                                                                                                                               | Speed                     | Accuracy                               | Approach                         |                                    |
| Memory demands                                                                                                                                                                   | Execute only              | Recognize and execute                  | Recall, recognize, and execute   |                                    |
| Learned skill: refers to the specificity – generality of the learned skill (Novick, 1990)                                                                                        |                           |                                        |                                  |                                    |
| Performance change: refers to the measure against which improvement is expected                                                                                                  |                           |                                        |                                  |                                    |
| Memory demands: encompasses spontaneity, ie. whether or not the execution of the task requires any prompting in any way.                                                         |                           |                                        |                                  |                                    |
| B Context: When and where transferred from and to                                                                                                                                |                           |                                        |                                  |                                    |
|                                                                                                                                                                                  | Near                      | Far                                    |                                  |                                    |
| Knowledge domain                                                                                                                                                                 | Mouse vs rat              | Biology vs botany                      | Biology vs economics             | Science vs history                 |
| Physical context                                                                                                                                                                 | Same room at school       | Different room at school               | School vs research lab           | School vs home                     |
| Temporal context                                                                                                                                                                 | Same session              | Next day                               | Weeks later                      | Months later                       |
| Functional context                                                                                                                                                               | Both clearly academic     | Both academic but one non-evaluative   | Academic vs filling in tax forms | Academic vs informal questionnaire |
| Social context                                                                                                                                                                   | Both individual           | Individual vs pair                     | Individual vs small group        | Individual vs large group          |
| Modality                                                                                                                                                                         | Both written, same format | Both written, multiple choice vs essay | Book learning vs oral exam       | Lecture vs wine tasting            |
| Knowledge domain refers to the knowledge base to which the skill is to be applied                                                                                                |                           |                                        |                                  |                                    |
| Physical context is the environment in which both the training and teaching phases occur                                                                                         |                           |                                        |                                  |                                    |
| Temporal context reflects the elapsed time between training and testing phases                                                                                                   |                           |                                        |                                  |                                    |
| Functional context relates to the function for which the skill is positioned, i.e. the mind-set it evokes in the individual                                                      |                           |                                        |                                  |                                    |
| Social context refers to whether the task is learned and performed alone or in collaboration with others                                                                         |                           |                                        |                                  |                                    |
| Modality has both micro and macro aspects. At the macro-level the task can be visual, oral, written etc.; at the micro level the task can be a report, multi-choice, speech etc. |                           |                                        |                                  |                                    |

As the debate over transfer continues, what we do know is that transfer is highly contextualised rather than being ubiquitous as some might have us believe or extremely rare as others assert. At this point the extent to which universities deliver transferable benefit (eg. from the classroom to the workplace) remains unknown. Barnett's tool may very well help us in deciding whether or not educational programs that purport to develop graduate attributes eg. those at universities do in fact inculcate generalisable skills or more limited types of transfer.

### **3.3 Communities of practice**

#### **3.3.1 Original thinking**

Lave (1990) and Lave and Wenger (1991) first coined this phrase in relation to what at the time was regarded as an important and far reaching reconceptualisation of learning. Rather than viewing learning as being the acceptance by the person of factual knowledge or information, these writers argued that learning was a much more holistic activity, with the individual actively involved within a social dimension, that is through participation in communities of practice.

Participation was viewed initially as occurring on the periphery of any given practice. Newcomers would be brought into the culture of the practice through a process of osmosis, that is, by continual exposure to and absorption of knowledge and ideas rather than other forms of deliberate learning. After a period of time and exposure to these learning opportunities, learners would be able to make the culture of practice theirs.

The term community was not clearly defined by these writers. As Lave and Wenger (1991) explain,

... we do not imply some primordial culture-sharing entity.... Nor does the term community imply necessarily co-presence, a well-defined, identifiable group, or socially visible boundaries.

(Lave & Wenger, 1991: 98)

What it did mean though was that members of the community were part of a system group of practitioners that shared understandings and meanings about what they were doing and what this meant for them both on a personal and community level.

Membership in a community of practice entailed participation at multiple levels as members had different ideas, interests, talents and so on, to bring to any given activity. This process centred on the master-apprentice relationship and in my thesis is evidenced, for example by Raewyn (case study 2, Chapter 6) moving through from a peripheral position as marketing assistant to reporting analyst to marketing manager. In each of these positions she was exposed to the company's methods of operating, its knowledge and information base, and the beliefs of what was required to engage in each of the roles. As a reporting analyst (apprentice), for example, where her role was across the whole company she was both observed and was warned by senior staff, including her direct manager (master) of the major expectation and pressure of this role. Armed with this information she was able to discuss the support she might expect in order to accomplish a successful outcome.

And Edward, the (apprentice) engineer who worked for a civil engineering contract company told of how his boss (master) at the end of a day on a remote site would tell stories of the company, showing for example the value of knowing how to draw engineering specifications by hand as well as by

computer. This type of story illustrates what Jordan (1989:935) terms a “package of situated knowledge”. (Edward was one of the four participants who completed only Phase 1 of this study. As such his “story” is not written up as a case study; the information he provided served to reinforce and further illuminate how both knowledge and skills are developed in the workplace.)

### **3.3.2 Rethinking the meaning**

Though Lave and Wenger’s work is very widely cited, it often tends to create a dichotomy of opinion, with those who adopt aspects of it (sometimes uncritically) and those who reject it, finding it inadequate. One of the main reasons for the non-adoption of the work is the confusion and apparent contradiction surrounding the meaning of “community of practice”.

Hodkinson and Hodkinson (2004a) identify the ambiguity of Lave and Wenger’s (1991) description of what represents a community of practice. On the one hand there is a broad view illustrated in the following quote:

A community of practice is an intrinsic condition for the existence of knowledge.... Thus, participation in the cultural practice in which any knowledge exists is an epistemological principle of learning. The social structure of this practice, its power relations, and its conditions for legitimacy define possibilities for learning  
(Lave & Wenger, 1991: 98)

Here, all learning situations involve a community of practice. However, the examples used to illustrate this concept are fairly narrow, describing communities of practice as close-knit groups of workers sharing knowledge, tasks, activities and a common physical location. And Wenger’s later work (Wenger, 1998), instead of clarifying the notion compounded some of the

original problems. In some cases, there is even further confusion when for example he produces a much tighter definition of communities of practice, ie. involving mutual engagement, joint enterprise and a shared repertoire of actions. Communities of practice are now viewed as being uncommon – they needed to meet tight criteria. This narrower description is not reconciled in any way with Lave and Wenger's earlier writing.

The Hodkinsons, in their critique of the work of Lave and Wenger believe that there is great value in retaining both of the ideas (ie. broad and specific) represented in this work, although disagreeing with a number of aspects, for example:

- a lack of description or analysis of communities of practice that are either spatially or socially fragmented;
- the apparent contradiction as to whether membership of a community of practice is a major condition for all learning or whether communities of practice represent particular environments where some learning can flourish; and,
- an apparent omission of the fact that for some workers membership in the workplace has relatively little personal significance, eg some contract workers.

(Hodkinson & Hodkinson, 2004a: 4)

In an effort to clarify the different ideas encompassed in Lave and Wenger's conception of communities of practice, they use the work of Bourdieu to develop a slightly different terminology. The modified terminology is as follows:

- situated learning or learning as social participation – captures the essence of the 1991 work;

- broad field of practice or learning field – captures Bourdieu's ideas and represents the view that learning is ubiquitously social; and,
- community of practice - captures the essence characterised in Lave and Wenger's examples where social relations are narrow and cohesive.

(Hodkinson & Hodkinson, 2004a: 7)

Hodkinson and Hodkinson (2004b) found that their research with teachers and their interrelationships was most effectively explained through using this terminology.

### **3.3.3 A meaning for this study**

The participants in my study were young newcomers, so the original Lave and Wenger concept of peripheral participation retains much that is of value for me. As newcomers (that is engaged in their first full time job) their learning was initially on the periphery of their given practice. Every one of them learned from their masters and what constituted practice in their particular communities. Sometimes (eg. Edward, Richard and Raewyn in their initial roles) this learning reinforced their own values and commitment to the organisation and its communities of practice. At other times, however, it meant the apprentices (eg. Olivia, Brian and Leanne) chose to leave particular communities and join organisations where the communities were more in tune with their own principles and ideals. And there were yet other apprentices like Erica who, at the end of Phase 3 of the study had still not yet determined what the communities of practice in her workplace were and what her place within them was.

While I acknowledge the value in using modified terminology in some studies I have not used it here. The fact that, in Lave and Wenger's (1991) original work, communities of practice can be extremely varied, and that there is no precise or

clear definition, or identifiable boundaries, has not caused any difficulty for me in my particular study. I have viewed participants in my study as being members of different, overlapping communities of practice, for example, both Richard and Edward are members of the engineering profession, the companies where they work, the particular specialist area of engineering in which they qualified, first full-time job workers etc.

Having said this, the Hodkinsons analysis and development of Bourdieu's work helped me understand and articulate the different ideas encompassed in Lave and Wenger's conceptions of communities of practice. They have, for example, given me a clearer picture of the workers who place little or no significance on membership in a workplace community of practice. In my study, Leanne (in her first full time role in the workplace) is such an example. In her job as a consultant for an Australian based e-Commerce firm she worked independently with clients and did not place much, if any importance on any membership in a community of practice in her workplace.

So while I have not used the term learning field as it is used in Hodkinson and Hodkinson, (2004a; 2004b; 2005), I have sought retain the valuable insights in Lave and Wenger's (1991) work along with those of Bourdieu and Wacquant, (1992).

## **Summary**

To research the area of generic attributes is to enter and try to make sense of a world where ambiguity, complexity and confusion is the norm. Terms, phrases and meanings vary from writer to writer. This chapter has illustrated that, and in doing so has described some of the theoretical difficulties faced by those researchers who seek to illuminate various aspects of the generic attribute discourse. The next chapter focuses on how the terms and expressions discussed here will be used in this thesis and positions the study in the light of existing theory and practice.

Chapter 3 has discussed the theory and conceptualisation of generic attributes and transfer. The manner in which these terms and expressions will be used in this thesis is the subject of Chapter 4. Chapter also describes the position of this study in relation to the existing theory and practice of the development of generic attributes in higher education.

## **Chapter 4: The study**

Chapter 3 discussed the theory and conceptualisation of generic attributes, transfer and communities of practice. The manner in which primary terms, that is, generic skill and transfer will be used in this thesis is the subject of part of Chapter 4. The chapter also describes the position of this study in relation to the existing theory and practice of the development of generic attributes in higher education.

### **4.1 Terms used**

At the time of data gathering for this study (Dec 1999-2002), there was no broad agreement as to what generic attributes were and would be called, as the skills debate in Australia was still in its infancy. In choosing and defining the term I will use in my own writing in this study I have drawn on the work of the Organisation for Economic Cooperation and Development, specifically the "Definition and selection of competencies: Theoretical and conceptual foundations" Project, (Organisation for Economic Cooperation and Development OECD, 2003a), and also Billing (2003).

I have chosen to use the term "generic attribute". "Attribute" rather than "skill" to indicate that the activity, mental or otherwise, has a high level of cognitive content, and to remove any connotation that is purely technical (eg. keyboarding, which would be regarded as a technical skill.) The term

“attribute” is also intended to encompass a broader notion of activity than “skill” might. For example, the generic attribute, “communication” encompasses a number of different skills, dispositions and attitudes. It is the choice and use of these skills, dispositions and attitudes in any given situation that determines the extent to which the communication attribute is effective.

The terms “generic” and “transferable” in this study are regarded as largely interchangeable in the same way as Billing (2003) treated them. They are taken to mean attributes that can support study in any discipline, and which can potentially be transferred across different social contexts, including the workplace (Bennett, et al., 1999; Bridges, 1993). So a generic attribute in this study is a high order activity (eg. cognitive or affective) that can be transferred from one context (eg. university classroom) to another, in this case, the workplace, and that can meet the complex demands of that context.

As well as “generic attribute”, other terms, for example, generic skills, competencies, core skills and so on, will be used where necessary when reporting the writing of other authors.

## **4.2 Selection of generic attributes**

Having regard once more to the different understandings of what generic attributes might mean and comprise, I chose to identify a cluster of the former and describe the activities that they contained. In doing so I was cognisant of the overlapping and interweaving nature of both the clusters and the attributes they comprised, which is indicative of how the generic attributes are developed and used, particularly in the workplace. Delineating the clusters served to indicate to participants the meaning of the terms for this study, and also ensured there was a shared understanding in our discourse.

The specified clusters of generic attributes identified in this study comprise critical thinking, problem solving, communication skills, and interpersonal understandings. These clusters were chosen partly because all Australian universities advocate, and indeed expect, that their graduates develop these during their university experience, and partly because they were the basis of the initial Graduate Skills Assessment instrument(s) (GSA), that was being trialled at the university from which the research participants were drawn. (Note: The Graduate Skills Assessment was a pen and paper instrument. It assessed written communication as opposed to other forms of communication.)

Definitions/descriptions of what is meant by each of the specified clusters of generic attributes are based on the information provided by the Australian Council for Educational Research (ACER) documentation (see above), and, Nightingale et al., (1996). They are as follows:

*Critical thinking* - reasonable, reflective thinking that is focused on deciding what to do or believe.

*Problem solving* - a mental activity leading from an unsatisfactory state to a more desired goal state.

*Communication skills* - includes writing, oral, and visual communicating. This involves activities where a people need to get their ideas across to others.

*Interpersonal understandings* - understanding the features of interpersonal relationships that enable people to work and live together.

### **4.3 Outline of participants**

An overview of the participants is provided in Table III. There were three phases comprising the interviewing process of this study, along with changes both in the roles that some participants undertook in their companies, and in the number of different companies in which others were employed.

#### **Key to symbols in Table III**

- 1 – participants completed initial interview
- 2 – participants also completed critical thinking interview
- 3 – participants engaged in ongoing communication
- \* - change of role within same institution/company
- # - change of institution/company

**Table III Participants' profiles**

| Name           | Qualification                        | Position -initial workplace | Initial institution or company                                                                 | Commence-ment date | Position in workplace at last interview                                                                                        | Number of phases completed for study                   |
|----------------|--------------------------------------|-----------------------------|------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| <b>Richard</b> | Bachelor of Engineering (Electrical) | Electrical Engineer         | Foreign owned public company - several business sections including an engineering systems unit | November 1999      | Electrical engineer with same company*                                                                                         | 1,2,3                                                  |
| <b>Leanne</b>  | Bachelor of Information Technology   | Consultant                  | Australian based e-commerce firm                                                               | December 1999      | Teacher in a university#                                                                                                       | 1,2,3                                                  |
| <b>Olivia</b>  | Bachelor of Commerce                 | Accountant                  | Global accounting firm                                                                         | January 2000       | Teacher in a university#                                                                                                       | 1,2,3                                                  |
| <b>Raewyn</b>  | Bachelor of Commerce                 | Sales and marketing analyst | Global real estate investment group                                                            | January 2000       | (3 months after beginning work -assistant marketing manager*)<br>Marketing manager with same firm, another location*           | 1,2,3                                                  |
| <b>Erica</b>   | Bachelor of Arts                     | Accountant                  | Accounting services firm                                                                       | January 2000       | Accountant with different firm (merger) #                                                                                      | 1,2,3                                                  |
| <b>Brian</b>   | Bachelor of Commerce                 | Stockbroker                 | Stockbroking and financial services firm                                                       | January 2000       | Financial planner with global financial services company#                                                                      | 1,2                                                    |
| <b>Nina</b>    | Bachelor of Laws                     | Law Clerk                   | Australian Government Department                                                               | December 1999      | Solicitor with small law firm#                                                                                                 | 1,2                                                    |
| <b>Edward</b>  | Bachelor of Engineering (Mechanical) | Engineer                    | Australian owned civil engineering and construction company                                    | December 2000      | Engineer with same company*                                                                                                    | Withdrew from study 2001 1                             |
| <b>Trudy</b>   | Bachelor of Commerce                 | Marketing Assistant         | Australian distributor of scholastic and office supplies, furniture, and accessories           | March 2000         |                                                                                                                                | Withdrew from study 2001 (prior to second interview) 1 |
| <b>Michael</b> | Bachelor of Commerce                 | Service Office              | Global financial services firm                                                                 | Jan 2000           |                                                                                                                                | Withdrew from study 2001 (prior to second interview) 1 |
| <b>Aaron</b>   | Bachelor of Computer Science         | Computer programmer         | Online electronics company                                                                     | January 2000       | Consultant - Australian-owned web development (in his 2 <sup>nd</sup> place of full time employment at the first interview). # | Withdrew from study 2001 (prior to second interview) 1 |

## 4.4 Position

At the inception of this study there was a dearth of research evidence available as to graduates' perceptions of their own generic skill development and importance. Haigh and Kilmartin (1999) had studied the perceptions of first - and third-year undergraduate students and their teaching staff, suggesting that oral communication skills, and problem solving skills were best learnt through apprenticeship and practise. A comparative study by Smith and Wilson (1992) with employers and undergraduate students in work-based placements showed that while there was some agreement that some development of generic skills occurred, there were major inconsistencies between employers and students as to the level of proficiency reached.

The first interaction with potential participants for this study occurred in December 1999, with the bulk of the data gathered between 2000 and 2002. Literature that supported the study, including analysis of data and the writing of this thesis was primarily drawn from work carried out up to about the end of 2002. Since that time there have obviously been many publications in the area of generic attributes. While this thesis does not include detailed discussion of this literature it is referred to at various times throughout. One of the ongoing concerns is that while there appears to be an increasingly shared vocabulary discernible in the discourse, the extent to which there is a shared meaning is still questionable (Barrie and Prosser, 2004). Barrie and Prosser highlight once more, the differences in definitions of the terms, and the still-apparent lack of critical attention given to the concept. They further note that there is a need for critical consideration to be given to the broader notion of the purpose and nature of Higher Education and what knowledge is, along with what it means to be educated in a contemporary society.

In terms of the research related to student/graduate perceptions, there is still little in the literature. In the Australasian environment work by Crebert (2002),

Phillips and Bond (2004), and Leggett, et al., (2004) identifies some of the issues associated with students' perspectives of various aspects of generic attribute acquisition. Crebert's later work (Crebert et al., 2004) identified the importance graduates placed on the acquisition of skills outside the university classroom (that is, in work placement and employment). Unlike this work however, no students in the study I conducted experienced work placement as part of their undergraduate studies.

This thesis seeks to add to the existing literature (including that cited in this chapter) in a number of ways. First, it reaffirms the importance of environments other than the university classroom for generic attribute acquisition and development. Second, it supports the views and research of those writers who argue that the development, use and transfer of generic attributes is highly contextualised. Third, it illustrates that generic attributes are learned in an holistic fashion and their development is ongoing. And last, this study introduces a little known perspective on generic attributes - the view of new university graduates and how they use and understand generic attributes in relation to their own work practice.

## **Chapter 5: The Design**

This chapter details the approach of this inquiry, the methods used and the measures taken to collect and process the information. The rationale underlying these aspects is also discussed. Section 5.1 introduces the study and includes a brief overview of the research and other factors impacting on the development of generic attributes in Higher Education. Section 5.2 discusses the research approaches including both the position of this study and the “method” chosen. Section 5.3 covers considerations specific to this study, including, circumstances, conduct, ethical issues, and termination. Section 5.4 concerns sampling, and Section 5.5 details the data collection methods. It also includes a detailed description of interviewing. Section 5.6 covers validity, reliability, credibility, triangulation and crystallization, and Section 5.7 describes data analysis and processing. The chapter ends with an outline of the emerging themes, and a short summary.

### **5.1 Introduction**

The approach taken to this enquiry was essentially a case study; specifically a collective case study, that studies a collection of individual cases (recent university graduates) regarding their perceptions of the use and development of generic attributes.

A collective case study, according to Stake (in Denzin and Lincoln, 2000) is an

...instrumental study extended to several cases. Individual cases in the collection... may be similar or dissimilar.... They are chosen because it is believed that understanding them will lead to better understanding, perhaps better theorising about a still larger collection of cases.  
(Denzin & Lincoln, 2000: 437)

## **Aim**

This study began as an exploration of the contexts in which a group of new university graduates believed they had acquired/developed a specified cluster of (assumed to be workplace-useful) generic attributes. As the research progressed it became apparent that it should also investigate whether or not the generic attributes promoted in the university were indeed the same as those required in the workplace, and what is the importance (if any) of these generic attributes determining job satisfaction? Apart from an initial compulsory unit on "Information Literacies" (taught separately at the beginning of year), the university in this study appeared to have adopted an embedded approach to developing generic attributes – albeit on a rather ad hoc basis. In contrast to Clegg et al., (2008), participants in this study were, most often, unaware of any generic attribute development that teachers in their subjects may have been attempting to foster, ie it was not made explicit.

not taught explicitly regarding the generic attributes

Questions I was interested in included:

- What happens to and with generic attributes once graduates enter the workforce?
- Are those generic attributes that are most useful in and to the workplace brought from university?
- If so, do they come from the "classroom" or the wider university experience, or both?

- What strategies (if any) can universities employ to optimise the development of generic attributes that are useful in the workplace?
- What role (if any) do generic attributes have in determining job satisfaction?

The participants in this research study were asked for information about the following:

- the development of their generic attributes;
- the contexts in which generic attributes were learnt and, perhaps were still being learnt;
- how they developed and refined these attributes;
- when the generic attributes were learnt and, perhaps, were still being learnt;
- if generic attributes continue to be developed in the workplace; and
- any strategies that were employed to assist in the development of these generic attributes.

The research took place during the first 2 to 2 ½ years of the participants' full time working life.

## **Overview of research and context**

A search of the literature had shown that in the early to mid 1990s, while research had been undertaken on identification and development of generic skills (attributes) in Great Britain, and the United States of America, they were only just beginning to creep onto the agenda of universities in Australia (Higher Education Council, 1992; Mayer, 1992). The studies had focussed primarily on determining what the generic skills were, what the teaching and learning implications were – particularly for vocational educational training providers, and what impact the generic skills had on business performance Kearns (2001). Although there appeared to be no record of research relating to the perceptions that university graduates had regarding the acquisition and/or development of

generic attributes, as noted in Section 1, by the late 1990s there was a surge of activity and interest in this area.

This previously noted snapshot of the higher education environment provides a sketch of the setting for the research reported in this document. In light of the research studies previously mentioned, and their foci, I gave detailed consideration to the research methods that would be appropriate for the project I wished to undertake.

## **5.2 Research approaches**

It is important to place a particular approach to research into a broader conception of social science itself and then to provide the justification for the particular approach used.

Social science research is the means by which attempts are made to establish the “truth” about social phenomena. It is an issue that is problematic. What is truth? What can be seen as qualifying as social knowledge? Further, although the method of research ought to suit the task, it is influenced by the researcher’s own conception of knowledge.

Educational research, as with social science research generally, has historically been dominated by positivist perspectives. These perspectives hold that the social sciences are essentially the same as the natural sciences and therefore are concerned with attempts to discover the natural and universal laws that regulate individual and social behaviour. From the positivist perspective, knowledge is “hard, objective and tangible” (Cohen & Manion, 1989: 7). A particular role is therefore prescribed for the researcher; s/he is an observer, and her/his scientific investigation will attempt to seek out and analyse relationships and regularities between selected factors in a search for causal

explanations of behaviour. The concern is with the quantitative – the measurable and the observable. The tools and techniques are those of the physical scientist. The methodological issues of importance are thus the concepts themselves, their measurement and the identification of underlying themes, (Durkheim, 1964: xiv). This approach is nomothetic, that is, characterised by procedures and methods designed to discover general laws (Cohen & Manion, 1989).

The positivist tradition dominated social science research for some time until the humanist challenge was mounted. (Hamilton, in Denzin & Lincoln, 1994). The humanist perspective sees social science knowledge as more personal, subjective and unique, and this implies a methodology that sees the researcher as being more involved with her/his informants, and more concerned with searching out meanings.

The principal concern is with an understanding of the way in which the individual creates, modifies, and interprets the world in which he or she finds himself or herself.

(Cohen & Manion, 1989: 9)

This approach is idiographic, that is, it emphasises the particular and the individual. Thus it takes on a qualitative as well as a quantitative dimension, and emphasises the relativistic nature of the social world. The researcher is more concerned with an analysis of language and meaning compared with the abstraction of reality that is the hallmark of positivism. The approach is claimed as non-the-less scientific – being concerned with objectivity and empirical evidence, but extending the legitimate targets of research into the realm of human meanings, values and motives which, because unobservable,

and therefore unverifiable, were avoided by positivists, for whom

... unverifiable statements are held to be meaningless.

(Cohen & Manion, 1989: 12)

### **The Position of this Research Study**

The position from which this investigation commenced was an interest in exploring the perceptions that university graduates had regarding the development and use of a number of their generic attributes (I studied a specified cluster of generic attributes as described earlier.)

I made the decision to conduct the study within the interpretive paradigm. It was to be a naturalistic inquiry (Lincoln & Guba, 1985). I believed that because I was concerned with what all of the graduates in this study (participants) thought, perceived and felt about their experiences with generic attributes, the interpretive paradigm best suited my investigation. In making this decision I was cognisant of Trow's (1957) words that the research problem under investigation should dictate the method of investigation.

Justification for operating in an interpretive paradigm is widespread in the literature (Cohen & Manion, 1989; Denzin & Lincoln, 1994, 2000, 2005; Hughes, 1980; May, 1993; Minichiello et al., 1999a,b,c; Stake, 1985). Unlike the positivist research paradigm in which the researcher, as neutral observer, attempts to seek out and analyse relationships and regularities between selected factors in a search for casual explanations of behaviour, the interpretive paradigm allows the search for meaning from particular actions and situations that the participants are experiencing. Hughes (1980) perhaps best sums up the malaise of the positivist research approach, which an interpretive approach seeks to overcome.

Positivist methods, it is claimed, decontextualise “first order” constructs so distorting the reality they are designed to investigate. They impose by fiat a version of reality insensitive to the ways in which the social world is a meaningful one and one constructed by those who live in it.  
(Hughes, 1980: 100)

The interpretive approach on the other hand rejects the notion of a social reality “discovered” by the researcher, in favour of a much greater role for the social actors themselves. In seeking to understand particular social actions and contexts a critical issue is:

What criteria are available for deciding whether it is the right account?”  
(Hughes, 1980: 114).

Hughes answers his own question,

... it would seem, almost certainly, that the actors themselves must play some part in that judgement...  
(Hughes, 1980: 114)

## **The Research Method Chosen for this Study**

Having resolved to adopt an interpretive approach to this study, I then chose to draw on the strengths of the case study form of qualitative enquiry in my main investigative framework. Case study research seeks to observe and understand an individual unit as a whole. It needs to be remembered that case studies do not constitute a discrete **methodology**, but are a response to the attempt to get at **meanings** often within an institutional context.

Case study is an umbrella term for a family of research methods having in common the decision to focus an enquiry around an instance.  
(Adelman, et al., 1976: 140)

There is therefore considerable overlap with a number of specific research techniques such as ethnography, participant observation and interviewing (Harker, 1991).

Although case studies have become one of the most common ways to undertake a qualitative enquiry, Stake (in Denzin & Lincoln, 2000), reminds us that they are neither new nor essentially qualitative. He goes on to argue that a case can be studied quantitatively and/or qualitatively; that it is actually the case that is being studied not the “case” as a method of inquiry for something else. He reiterates that the techniques and procedures used to study a case may commonly include observation (participant and non-participant), interview (conducted with varying degrees of structure), field note taking, document collection and the negotiation of products (eg. discussing the accuracy of an account with those observed.)

The case study approach has a number of characteristics that appeared to make it a suitable method of investigation. These features are as follows:

- its realism and naturalness;
- the **possibility** of generalisability;
- its concern with context;
- it can provide a cumulative resource;
- the outcomes often relate more directly to **practice** than other research approaches;
- results are often more accessible to non-researchers.

Case study is “strong in reality”. It is naturalistic, in that the researcher does not set out to manipulate the environment.

In general the case study worker cannot “create” the situation he is to observe, nor can he artificially simplify it by manipulation of its context. (Kemmis, 1980: 107)

Further, it is naturalistic in the sense that it is a search for social phenomena, and a quest to articulate the social world by full description, ie. it is an illuminative exercise rather than an abstractive or reductionist one. The naturalistic approach allows/creates flexibility and an exploratory approach for identifying important issues. It also enables the participants to give unrestricted constructions/reconstructions about people, contexts, environments as well as feelings, motivations and concerns.

A case study always involves studying an instance in action, (Adelman, Jenkins, & Kemmis, 1976). These writers identify two ways in which case study research may initially be set up:

1. an issue or hypothesis is given, and a bounded system (the case) is selected as an instance drawn from a class. For example, a group of researchers wanting to explore what happens with the development of generic attributes and their use in the workplace (the class), will select *any instance* of such a group within the class, eg. a group of recent graduates from a medium sized Australian university.
2. a “bounded system” (the case) is given within which issues are indicated, discovered or studied so that a fuller understanding of the case is possible.

The first type of study will be predisposed to making generalisations *about the class*. However as Adelman et al., (1976) point out, during the study some apparently case-bound features of the instance vis-à-vis the class are likely to be revealed. So the study becomes one of a unique case. This may mean that the researcher abandons the hope of generalisation, though this does not necessarily have to happen - rather, it is the basis of generalisation itself that has

changed. They also argue that the term “generalisation”, as used in case study research and evaluation, may be equivocal.

The second type of study will be predisposed towards making generalisations about the case. However, as the study progresses, the boundaries of the system appear increasingly permeable. For example in undertaking a study of the development of generic attributes, and their use in the workplace it was not possible to treat the study as a bounded system isolated from the university from which the graduates were selected, or the workplaces in which they were involved, and without reference to the wider context in which the study was initiated. In short the boundaries are no longer given - they have become problematic.

In both types of study the researcher must treat the boundaries of the system and the issues as problematic, and attempt to define its uniqueness:

...we cannot take an indulgent view of the idiosyncrasy of the case: all cases are unique, and uniquely embedded in their real work situations.  
(Adelman et al., 1976: 141)

Case study also has the advantage of being action-oriented. Theory emerges from the description of the case and the meaning and motives ascribed by the participants.

Theory becomes sets of meanings which give insight and understanding of people's behaviour.  
(Cohen & Manion, 1989: 40)

These insights may be directly interpreted and put to use by both the subjects of the research and those who see meaning in and relate to the case in terms of their own experience and context. That is, case study research offers readers a

substitute experience and by appealing to their tacit knowledge of human situations invites them to underwrite the account. It is this attention to complexity that offers scope for a “good” case study to support alternative interpretations of social events; which underscores the criticism made of positivist approaches geared to find the “the truth”.

The truths contained in a successful case study report, like those in literature, are ‘guaranteed’ by the ‘shock of recognition’.  
(Adelman et al., 1976: 142)

A final strength of the case study approach is its accessibility. Case study reports tend to be down-to-earth and less dependent on specialised interpretation. Adelman et al., (1976) argue that

Case studies therefore may contribute towards the ‘democratisation’ of decision-making (and knowledge itself).

At best, case study allows the reader to judge the implications of a study for himself.  
(Adelman et al., 1976: 149)

In summary then the case study approach has a number of strengths and was chosen for this study for the following reasons:

- it is strong in reality. That is, it is down to earth and attention holding. The approach is in harmony with the reader’s own experience, and thus provides a “natural” basis for generalisation;
- it allows generalisations, although care is required as they are generalisations of a particular kind, ie. either about an instance or from an instance to a class;

- it recognises the complexity and the “embeddedness” of social truths;
- the products (ie. case studies) may form a collection of records rich enough to admit subsequent reinterpretation;
- it is a method that is a “step to action”;
- it enables data to be presented in a more publicly accessible form than many other kinds of research reporting.

Case study is not without its critics however. Some critics argue that the case study results cannot be taken seriously because they are subjective – such criticisms often stemming from the perceived close relationship and involvement of the researcher with the subjects of the case, and from the personalised nature of the data generated. By implication the results are suspect because the researcher was not sufficiently detached nor is the data, in Hughes words (1980: 112) “brute data” – directly observable and verifiable. But such criticisms return us to the fundamental debate about “what is knowledge”, and what represents the judging of an approach from the norms of a different paradigm – the positivist paradigm.

What we can say is that personal or subjective data are not by definition biased, nor any the less scientific or objective than externally observable data. That is not to say that a case study researcher cannot be guilty of bias. Rather, that the bias is not inherent in the method. It is still incumbent on the case study researcher to justify any descriptions made or interpretations provided.

Indeed, the allegation that interpretive approaches to research lack empirical rigour has been taken seriously by a number of writers. Atkinson and Delamont (1985), in their critique of case study method, identified as an issue,

the apparent lack of concern for data credibility of some case study researchers. Lather (1986) identifies this problem as a real danger threatening to:

... decrease the legitimacy of the knowledge generated therein.  
(Lather, 1986: 272)

Lather suggests a three-fold approach to ensure data trustworthiness: triangulation (involving multiple data sources, methods and theoretical schemes; reflexivity; and member checks, ie. recycling description, emerging analysis and conclusions back through the participants, and refining them in the light of their reactions.

In planning this research I took this particular issue on board and built in a triangulation strategy (outlined later in this chapter) as well as providing for “member checks”, both of the data (did people say what they wanted to say, and did they mean what they said) and of my own conclusions.

### **5.3 Considerations specific to this Study**

#### ***Circumstances of the Case***

The investigation of this study arose from my interests as a teacher in staff development. I had worked for many years with academic staff in developing curricula that took account of the development of a number of generic attributes eg. problem solving. As mentioned previously in the Introduction to this thesis, I became increasingly uneasy with various aspects of generic attribute development in Higher Education, including the apparent lack of research regarding the students’ perceptions of attribute development in universities and how the former used particular attributes once they had graduated and were in full time employment in the workplace.

## *Conduct of the Study*

Considerable thought was given to which university I would select graduates from and how they might be accessed. At the time of the study I was working at a different university from that where I was enrolled as a student.

Accessibility to the new graduates initially proved to be a problem. Formal permission to undertake the study at the chosen university was finally negotiated with the Office of the Registrar, as principal gatekeeper of the system.

New graduates from the areas of Commerce/Business, Science/Technology, Engineering and Humanities were approached on their Graduation Day (before the ceremony) with information about the research. These areas were chosen for two reasons. First, I wanted to cover a range of disciplines as one of the initial questions I had was whether or not discipline differences might emerge in this research. Second, I was only able to be physically present to gather names on the days that students from the above areas were graduating. (I had been unable to gain access to the names of graduating students before their actual Graduation Day, but was given permission to talk to them after they had been fitted with their caps and gowns, immediately before the actual ceremony took place.)

In order to adopt a “detached” approach to this study, and to represent the perspectives of participants (in this study) in a bona fide way, and without error I took on board the notion of “The Outsider as Neutral Broker – the Insider as Contributor of personal perceptions and judgements” (Centre for Applied Research in Education, CARE, 1987). In this study, I, as the researcher was the “outsider”, the graduates (participants) the “insiders”.

The outsider is viewed as a detached individual who aspires to collect and process data in a manner, which is free from subjective bias... S/he

achieves detachment, not as a condition of grasping objective truths about social activity, but in order to grasp others' subjective perceptions of such reality. The neutral broker is "neutral" because s/he does not interpret or judge educational practices, but instead processes the interpretations and judgements of others.

(Centre for Applied Research in Education, 1987: 123)

Having taken this notion of "outsider as neutral broker" on board, however, I was still conscious of my role within the university, that is as a person who worked with academic staff (educational developer), and how this might be perceived by the participants. Although familiarity can ease the way for a researcher it can also hamper observation of the subtle (Rosenthal, 1989).

I therefore took a number of steps to provide assurances that I would operate to the best of my ability as a disinterested party.

These steps included:

- communicating "publicly" to participants my position (as both an employee of the university from which they were graduating, and a doctoral student of another university) and values and biases. This was done orally or in writing by stating my position to each/all participants on each occasion we communicated. This included, before the students graduated, before they consented to be part of this study, before each interview, and at any other times we communicated with each other (eg. unsolicited emails).
- undertaking not to discuss any of my results with staff members who might have been involved in the teaching of those participants in the study.

- not participating in discussions (at the university where the students had graduated) regarding generic attributes in specific discipline areas.

Gathering multiple perspectives is an important part of both the neutral broking process and the case study approach used in this study. The technique of triangulation (described more fully later in this chapter), was used to collect participants' accounts of an event.

Triangulation may be defined simply as the use of two or more methods of data collection in the study of some aspect of human behaviour (Cohen and Manion, 1989).

The technique of triangulation in the social sciences attempts to, Map out, or explain more fully the richness and complexity of human behaviour by studying it from more than one standpoint and, in so doing, by making use of quantitative and qualitative data.

(Cohen & Manion, 1989: 254)

In this study the perceptions of the participants' realities were gathered and processed, and a number of themes were identified. These are outlined at the end of this chapter.

### ***Ethical issues***

These include protocol, confidentiality and negotiation. (Adelman, 1976: 59) suggests that research of the nature undertaken here, because it is based in the practicalities and politics of real-life situations, is more likely to expose those studied to critical analysis, judgement or blame. The important factor to remember – the limiting consideration is that the researcher acknowledges that **others** must live with the consequences of her/his findings.

In order to address these ethical issues the ethical guidelines provided by the University of Technology, Sydney Human Research Ethics Committee were followed. These included: obtaining informed written consent from all participants to write about their experiences; providing participants with information sheets about the research, and their part in it; ensuring confidentiality of all material would be respected; and enabling participants to withdraw from the research at any time without having to give reasons and without penalty of any sort. I also made every effort to ensure that specific information, eg. quotes would not be identified with any particular participant. This guarantee of confidentiality facilitated the accessing of material that may not otherwise have been forthcoming. In a few instances it was not possible to include the information in this research, as it would have been traceable to a specific participant. Although this was somewhat frustrating, my awareness of this information provided me with a deeper understanding of what the experience of participants was like both at university and in their workplaces. It may have also enabled a small number of participants to reflect and discuss (ie. "get off their chests") what had been at the time upsetting/unsettling experiences.

I was also cognisant of the fact that in sharing their experience with me (and thus taking a risk), I did not have to gamble at all. That is,

There is no mutuality of risk between the researcher and the researched.  
(Centre for Applied Research in Education, 1987: 123)

So I made a pledge to participants that if there were any sensitive information I wished to use I would get their specific approval and if not forthcoming would not include these data in this study.

The information I gathered was also fed back to participants as often as possible. I did this by providing updates as to “where I was at” with the research, and what the evidence suggested at various points.

Negotiating the outcomes of my research in such a manner is in keeping with Heron's, (1981) and Lincoln and Guba's, (1985) views on naturalistic inquiry. They argue that participants have the *right* to have protection from becoming unwilling participants or having improper claims made about their interview data eg. a researcher may subsequently claim that a particular participant's quote or piece of data was evidence of something completely different from what the participant had intended.

... everyone does have the *right* to provide input on the subject of what are proper outcomes, and the inquirer has an *obligation* to attend to those inputs and to honor them so far as possible.

(Lincoln & Guba, 1985: 211)

The truths we assert are a function of our procedural norms which in turn are a function of our shared value system. The “truths” researchers generate are a function of the researchers’ procedural norms and underlying values. And if these “truths” purport to be about persons other than the researchers then they have indeterminate validity, and no secure status as truths, until we know whether those other persons assent to and regard as their own the norms and values of the researchers.

(Heron, 1981: 33)

### ***Termination***

Satisfactory withdrawal from the research exercise is important more so if the researcher is to remain in a working relationship with the participants (Baker, 1992). A number of strategies can be employed to ensure this “departure”

occurs, including thanking participants and ascertaining that they have an opportunity to discuss the final report. When the researcher who has undertaken the study is still involved with participants (some/all) on a frequent basis the withdrawal can present extra difficulties. For the first two years of this study when I was employed at the same university from where the participants had graduated, they all had employment in other organisations. Although one participant returned to the university as a member of academic staff this was after I had ceased my employment there. Although I maintained contact (email communication) with some of the participants beyond the end of the study “proper” it appears they are now comfortable with a reformed relationship of peers (fellow workers) as opposed to researcher and participants.

## **5.4 Sampling**

Whatever method is used to sample people, settings and occasions, it must ensure that the ambit of information gathered is maximised (Lincoln & Guba, 1985)

Sampling in this study was purposive (Bodgan & Bilken, 1982: Glaser & Strauss, 1967; Morse, 1989). This was seen as the most useful method in a study such as the one being undertaken, where it was not possible (due to a number of restraints including resource constraints) to include all graduating students who were entering employment. The selection of the sample has a major effect on the final quality of the research.

Purposive sampling is qualitative in that it incorporates the principles of sampling participants who are best suited to the needs of the study under investigation. A “good” participant in this study was one who was going to a full time job after graduation, and who was willing and able to share their

reflective perceptions with me (as the researcher). As I regarded the willingness to share as paramount for this study, participants had the right to “edit” my accounts of their perceptions.

It is interesting to note that Morse (1989) argues that the random selection techniques that are often an inherent part of quantitative research are inappropriate for qualitative studies, and result in fallacious conclusions.

As stated earlier, a purposeful sample is one which meets the needs of the study in question (Morse, 1989). The needs of this study were to take account of perspectives from one participant group, ie. graduating students. Hammersley and Atkinson (1983) point out that participants must be selected or carefully chosen according to specific qualities (for example in this study, being employed full time in the workplace was an essential factor in selection.) Good participants must be knowledgeable about that area of research and experts by virtue of the fact they have “lived” their particular experiences. These participants must also be willing to share – not just in putting aside time to spend with me, but to look critically at their own actions, beliefs and experiences and share this with me. Most importantly the participant must **want** to be part of the study.

According to Morse (1989) the method of sampling in qualitative research must be both appropriate and adequate. Appropriateness refers to how well the choice of participants and method of selection match with the purpose of the study. Adequacy refers to the sufficiency and quality of the data.

In determining appropriateness it is necessary to ask whether or not the understanding of the research “problem” is assisted through employment of a particular sampling method.

In determining adequacy it is necessary to consider whether the information is acceptable, relevant, complete, and sufficient, and whether the theory makes sense.

### ***Study Sampling***

Initiating the study involved approaching new graduates from the areas of Commerce/Business, Science/Technology, Engineering and Humanities on their Graduation Day (before the ceremony) with information about the research. As mentioned earlier in this chapter I attempted to include a variety of discipline areas with the idea that there might be differences (related to the acquisition and development of generic attributes) among them. I was also required (by the graduating university) to meet potential participants (graduates) face to face, which I could only manage on particular days.

The initial information that I provided to graduates explained the broad purpose of the research along with what some of the intended outcomes for participants might be, for example, an increased ability for them to articulate to employers, the usefulness of the generic attributes they had developed.

I made it very clear that having their name on a list merely gave me permission to call them in two or three months time to enquire whether or not they were interested in participating in the research. Because I was focusing on what I have previously termed “workplace useful” generic attributes, only the names of graduates who were moving into the full time workforce were recorded.

Two months after graduation, I began phoning the eighty graduates whose names I had recorded. Fifty-three of these were “lost” from the list for a variety of reasons. Twenty-two of the latter group were not able to be contacted, either because they were no longer at the phone number they had initially provided or because they simply did not reply to the messages I left. Other reasons given for non participation in the study included, inability to find full time work, deciding to continue as a full time student (usually remaining to study a higher

degree), deciding to travel overseas (or in three cases they had already left Australia), or no longer being interested in the research (some gave reasons such as being overwhelmed with a new job; others did not provide reasons).

Out of my initial eighty names I was left with twenty seven people who agreed to consider being in the research. These people were given a more definite indication of the time they would need to set aside for interviews, and a detailed idea of the nature of the research including its duration.

Of these twenty-seven people, twelve self selected as research participants. This number dropped to eleven just before the commencement of interviewing, when one of participant withdrew citing family illness as the reason for non-participation.

The selection procedure as described above also takes into account the notion of pre-interviewing, as described by Paterson and Bramadet (1992), who advise that when a research study includes people who are older, frail or from different cultural backgrounds a procedure of pre-interview should take place about a week before the actual interview is conducted. While my initial approach to potential participants was a few months before their first interview, the advantages of the pre-interview were still apparent. These advantages included, enabling the potential participants to begin thinking about their generic attributes and whether or not they might wish to talk about these further; providing an opportunity for both parties to see each other for the first time; establishing an initial rapport; and, offering potential participants a "taste" of what they would be "buying into" should they choose to take part in the research.

As shown in Table IV, five subject discipline areas were represented: engineering, information technology, commerce, law, and computer science, and both genders participated.

**Table IV Participants' characteristics**

| Discipline             | Number of participants             | Gender                 |
|------------------------|------------------------------------|------------------------|
| Engineering            | 2 (1 Mechanical)<br>(1 Electrical) | Male                   |
| Information Technology | 1                                  | Female                 |
| Commerce               | 6                                  | Female (4)<br>Male (2) |
| Law                    | 1                                  | Female                 |
| Computer Science       | 1                                  | Male                   |

As mentioned earlier in this chapter the sampling was carried out under the constraint of not being allowed to have details of graduating students, but instead having to be physically present on the specific day of graduation. However, I was still able to sample in a manner I hoped would enable some generalisation beyond each specific discipline and also allow unique areas of specificity to be identified. The criticisms associated with this type of sampling (ie. bias by virtue of the selection process) are valid but the purpose of using special sampling strategies is to ensure as many sides of an issue(s) are represented as possible. Hence, for example, in this study the seeking out of students in a variety of subject discipline areas.

## 5.5 Data collection methods

There are a variety of methods available for a study such as this one, including survey questionnaires, participant observation, diaries, interviewing, and content analysis.

I chose content analysis and interviewing as the means by which to gather data for this research.

### *Content analysis*

Content analysis is used to draw assumptions about how messages and meanings are represented in and communicated through texts (Lupton, 1999).

In this research this included all forms of written or visual material.

Specifically, I considered:

- statements of policy and practice (related to generic attributes) from the university from which the participants graduated- both electronic and paper versions;
- policy statements (related to generic attributes) from other Australian universities - both electronic and paper versions;
- Various reports from other bodies, including the Australian Council for Education Research (ACER) report on Graduate Skills Assessment (ACER, 2001), and Higher Education Council (HEC, 1992)
- Newspaper articles, for example those in the Higher Education supplement of *The Australian*.

These documents provided the context and formally expressed rationale for the development of generic attributes in higher education in Australia, in the 1990s to early 2000s.

## *Interviewing*

This research relied heavily on the technique of interviewing for its data.

The goal of in-depth interviewing research is to have the informant reconstruct his or her experience of the topic under study so that the concrete living of people in that content area and the meaning that their experience has for them becomes known.... It is important that the interviewer has a genuine interest in others and respect for the stories told. These are part of the meaning-making process. The interviewer questions, responds and clarifies experiences, working with the material, and selecting from it, interpreting, describing and analysing it.  
(Minichello et al., 1995: 129)

Because this research was about capturing the participants' meanings, definitions and descriptions of events (Minichello et al., 1999a, 1999b, 1999c ) I wanted to use the interview as my primary source of data collection. I therefore felt it necessary to familiarise myself with the strengths and limitations of interviewing, in order that I address any shortfalls as effectively as possible.

Interviewing has a long history. From the population censuses of ancient Egypt (Babbie, 1992) to the present time, the interview in one form or another has been omnipresent. Because the use of interviewing today is so extensive, some writers have termed the world we live in as an "interview society" (Atkinson & Silverman, 1997; Silverman, 1993).

Interviews can be structured, semi-structured or unstructured. They can have a multiplicity of uses, including marketing research, opinion polling, and academic analysis. Interviews can be conducted as one-off events through to life histories, with a huge range of possibilities in between. Interviews may be used for quantitative and/or qualitative research studies, and may include interactions with individuals or groups.

May (1996: 110-114) identifies four types (formats) of interviews, each of which has different ideas underlying its practice. The formats are structured, unstructured or focussed, semi-structured and group interviews.

*Structured:* usually but not exclusively associated with closed-ended questions (those with predetermined answers) and quantitative analysis. That is participants are asked a set of pre-established questions with a limited set of response categories.

While the structured interview may have the advantage of leaving nothing to chance, and eliciting rational responses, it has the disadvantage of overlooking or inadequately estimating the extent to which emotion may play part in the interview process. Whereas once interviews (particularly the structured format) were seen as a neutral tool for gathering data, researchers are increasingly realizing they are in fact an active interaction that leads to negotiated, contextually based results (Denzin & Lincoln, 2000).

I was interested in the differences as well as the similarities in respondent perceptions, so needed to include more flexibility into my interviewing procedure than the structured technique allowed. I also wanted to openly acknowledge and embrace the extent to which I believed emotion might impact on the interview process. I did not therefore choose to use this pure structured approach in my research.

*Unstructured:* are those interviews in which while the questions are not predetermined the information arises from the interaction between the researcher and the informant (participant). These interviews are described by May (1996: 93) as focused and concentrate on understanding the participants' stories by enabling them to express their opinions in a manner that they choose rather than responding in ways predetermined by the researcher. Not all writers however call unstructured interviews focused. Minichello et al., (1995:

65) for example, call semi-structured interviews focussed. For these writers the content of the interview is focused on issues that are central to the research question. There are no fixed wordings of questions or orderings of questions, but an interview schedule may be used to help maintain the focus of the interview. Because the term "focused" can lead to confusion I have avoided using it in any further descriptions of interviewing strategies.

Denzin and Lincoln (2000) note the differences between structured and unstructured interviewing as:

the former aims at capturing precise data of a codeable nature in order to explain behaviour within pre-established categories, whereas the latter attempts to understand the complex behaviour of members of society without imposing any a priori categorization that may limit the field of inquiry.

(Denzin & Lincoln, 2000: 653)

In its pure form unstructured interviewing was not a viable technique for this research either as I had already established a framework within which I wanted participants to respond. Although this form of interviewing can provide a greater breadth of data than the other types, this research did at times require a more formal approach than unstructured interviewing would likely sanction.

*Semi-structured:* This type often uses structured demographic questions, and according to different writers may or may not use open ended questions (centred on a fixed schedule of questions or topics) to follow. For example, Minichiello et al., (1995:65) would use open-ended questions allowing participants to answer in their own words. May (1996:111) disagrees, believing that the questions are normally specified in a semi-structured interview but the interviewer is free to probe beyond the answers by clarifying and elaborating.

Although May (1996) used the term “focused”, perhaps this is just a different way of describing essentially the same thing ie. a semi-structured interview.

*Group*: these interviews enable the researcher to focus on group norms and dynamics. Because our actions and opinions are modified according to the social situation in which we find ourselves, the perspectives gained on particular issues through individual interviews may be different from those gained (on the same issues) in group interviews. While group interviewing, that is accessing interactive verbal and non verbal data from participants (Madriz, 1998; Minichello et al., 1999a, 1999b, 1999c), may have seemed like an option in this research, I chose not to employ this technique. The possible benefits of clearer more focused feedback and use for triangulation purposes that this technique may have provided, were not as great as the requirement to maintain the confidentiality of individual participants. In any case arranging for all participants to be in the one place at the one time would have been logistically unlikely.

Although I interviewed participants individually I did change the techniques used (eg. face to face, telephone, e-mail) and the type of interview eg. from semi-structured to critical incident analysis - in an effort to address the issue of validity in this research.

The position I took in this research was to employ where appropriate aspects of both the structured and unstructured technique. For example, before the initial interview I gave respondents a number of questions to consider, which were to be the focus of the first interview (as might happen in a structured interview). Unlike the structured approach to interviewing however, probes and supplementary questions were used to elicit as full a response as possible (as in an unstructured interview). When asking participants about their critical incident, the interviewing strategy became an almost unstructured situation at

times (see below for detailed information on critical incident interview/analysis.)

### *Limitations of interviewing as a data collection technique*

Although asking questions and getting answers may seem a simple task, I was cognizant of the words of Gorden's (1992) comment,

Interviewing skills are not simple motor skills like riding a bicycle: rather, they involve a high-order combination of observation, empathic sensitivity, and intellectual judgment.

(Gorden, 1992: 7)

Fontana and Frey (2000) provided a note of caution when they highlighted the importance of ambiguity in the written and spoken word despite how we might word the question or code the answer. Kahn and Cannell (1957) also remind us that it is not enough to simply understand the mechanics of interviewing, we must also realize that other factors in the respondent's world may alter the manner or nature of response. The research on interviewer effects also identifies several factors that can impact on the data collected, including age, gender, and experience of the interviewer (Singer & Presser, 1989), status and race (Bradburn, 1983; Hyman, 1954; Singer, Frankel, & Glassman, 1983).

So, with this information in mind I embarked on my research with vigilance. For example, although I had no questions, or intentions of asking questions specifically related to race, I noted that those participants who chose to be part of the research were all of Australian descent. This may have been due to the procedures or part of the procedure I used in inviting graduates to participate in the research, or to other factors quite unrelated to my research. I am unsure as to the effect, if any, this aspect of race may have had on my research.

As mentioned previously, the research relied heavily on interviews for its data. The forms that the interviews took included face to face, telephone, and electronic mail. In this research, semi-structured interviews as mentioned above, including a critical incident analysis, were used to gather information.

With the heavy reliance on interviewing, I felt it was necessary to address some of the points noted by Fontana and Frey (2000).

- Understanding the language and culture of the respondents

The participants in this research were first approached on their graduation. As described earlier in "accessing the participants", they were generally nervous, excited and apprehensive, both about the graduation ceremony and their plans for the future. I was therefore mindful of the mixed reception I was likely to encounter. Some graduates were interested in the idea of this research as they had either been part of a similar exercise previously (either as the interviewer or interviewee) or planned on continuing part-time postgraduate study themselves. One participant spoke of wanting to do something that might help inform universities of student experiences in developing generic attributes. As a university researcher then it was relatively easy for me to approach graduates regarding their participation in a research exercise. I had no barriers to face regarding the language I chose to use in first describing my planned research. Graduates were familiar with the terms I used and even on this initial approach had a good understanding of what the research was all about.

- Deciding on how to present oneself

From the outset I presented myself as an employee of the institution at which the graduates had studied, but also and perhaps more importantly, as a post-graduate research student of another university in a different city. I was clear about my role in the university in which I worked (academic staff development), and the position that I held. I believe that a number of

factors made it relatively easy for graduates to give an initial indication of whether or not they were interested in participating in the research:

- the fact that the graduates were indeed just that - they had just successfully completed their undergraduate degrees;
  - my “non-mainstream” academic position in the university where they had studied; and,
  - my enrolment (for this research) in another university in another city.
- 
- Gaining trust

Since I did not have an obviously contentious topic for my research, the issue of trust here revolved around assuring graduates that their confidentiality would be protected. One concern for participants centred on ensuring that previous academic teaching staff would not be able to identify particular graduates from any quotes I used in the written thesis. Another participant desire was to remain anonymous to other participants. That is, I could not use group emails, group interviews and so on in my dealings with participants (as mentioned previously). The final aspect of trust for the participants of this research revolved around workplace assurances. That is, before participants talked about their experiences in the workplace I confirmed with them that I was not going to be interviewing their supervisors or indeed making my findings available to their individual workplaces.

- Establishing rapport

It was imperative that I establish a good rapport with my participants as my research relied heavily on the interviews I would have with them. I needed to be in a position where I could make meaning of their perceptions of the development of their generic attributes and the use and importance of them in the workplace.

Some of the ways in which I built a good relationship with the participants were to negotiate the following: interview environment eg. electronic, phone, face to face; venue for interviewing eg. a participant's home or workplace, a café, my office and so on; time of interview eg. during work, lunch breaks, after work, weekends. In other words I found a way to work with my participants that suited them. Sometimes this involved travelling to different cities at nights or on weekends but I am sure the rapport I gained was invaluable to my research.

- Collecting empirical materials

As Fontana and Frey (2000) note, being out in the field does not lend itself to many of the advantages of a structured controlled environment. I had a hand held Dictaphone, notebook, and my memory, with which I made do in whatever environment presented itself. In noisy cafes in large cities they felt rather inadequate at times. Hence the importance of capturing the totality of the interview experience. For me this involved noting both mentally and physically, the nuances, body language and other unspoken aspects of the interview. As soon as each interview finished I found a place, eg. park bench, train, or another café, where I listened to the taped interview again and wrote more notes about what I understood to be "going on" during it. I summarised, highlighted, asterisked and reflected on each interview tape. This exercise included my making notes regarding any modes of non-verbal communication that I had also experienced with participants. These included, the use of silence in conversation, pacing of speech, body movements or posture, and all variations in volume, pitch and quality of voice (Gorden, 1980: 335). Doing this meant that I could later recall the whole experience by looking at my notes (Boud & Walker, 1992; Boud, Keogh, & Walker, 1985; Kolb, 1984; Schon, 1983, 1987). Sometimes treating the tapes in the manner described above meant I worked at the task for hours. Although this may sound onerous, the work was often made easier

because I usually had to return home via public transport so had the “free” time available.

In interpreting the interview data, I was mindful of Fontana and Frey’s (2000) comment that

The spoken or written word has always a residue of ambiguity, no matter how carefully we word the questions and how carefully we report or code the answers.

(Fontana & Frey, 2000: 645)

I attempted to address the contradictory nature of some of the comments I received from participants and to present various meanings these might have. In the end however, I am still left with some apprehension that my interpretation may have somehow “cleansed” the information and made it appear less problematic than it really was.

### *Critical incident analysis/reflective interviews*

The initial interview (with eleven participants) sought information primarily about the contexts in which graduates believed they had developed any/all of the specified cluster of generic attributes. Other questions related to how the attributes were learnt, and whether or not they were using any of them in the workplace. The issues of the importance and usefulness of the skills was not central to the study at this time so no detailed data on these aspects was collected at this interview.

Further face-to-face interviews, phone interviews and e-mail discussion (seven participants) were employed to gather more in-depth information, including perceptions about the usefulness and importance these attributes have for participants in determining job satisfaction. The critical incident technique

(Benner, 1984; Christie & Young, 1994; Flanagan, 1954; Ghaye & Lillyman, 1997; Tripp, 1993) was employed at this stage.

This technique is ideal for gathering qualitative data as it is grounded in common-sense procedures. It essentially involves the identification of and reflection on an incident that has had “real” significance for the individual concerned; that is, it is personal, and memorable. The reflection then ought to lead to some sort of action, for example, a change in attitude, thinking or behaviour.

In this study, participants were asked to identify and reflect on an incident that was significant to them in terms of the way they thought, acted, or felt in relation to their work or workplace. (It was stressed that the actual incident did not have to occur at work. See Appendix 2.)

The incident could include any of the following:

- an experience that did not go to plan (either positive or negative);
- an event that went well
- an ordinary experience
- a happening that reflected their own values and beliefs
- an occasion that identified the contribution of qualified practitioners (eg. experienced colleagues, supervisors, mentors)
- a circumstance that allowed them to identify that they had learned something.

Parker et al., (1995) argue that the use of critical incidents means that the growth of knowledge, skills, and attitudes for those experiencing the incidents are grounded in practice through reflection on action (Schon, 1983, 1987). Since the focus of this research is on how participants are “managing” their generic attributes in the workplace, it is important that the study offer opportunities

and employ techniques that enable participants to reflect on their actions and how they impact on their workplace practices.

By asking the participants in this study to reflect on incidents I began to draw out the types of generic attributes the participants employ directly (those actually learnt and/or used at work) or indirectly (that is, they impact on practice irrespective of where they are learnt) in the workplace, and the significance that they place on the acquisition and use of these attributes. From the data gathered from the critical incidents, a picture began to emerge that described the meaning that these attributes have for participants in determining both job effectiveness and satisfaction.

### *Interviewing the participants*

#### **Phase 1**

The first phase involved semi-structured interviews with all eleven participants. The interviews sought information about those generic attributes that had been learned that were part of this research. The interviews took place within the first three to four months of employment and were formal in that they were pre-arranged and for the purpose of detailed conversation.

Although semi-structured, each interview was to some extent allowed to take its own course, with reference to the question guide being made only if and when the participant had seemingly exhausted talking about a particular aspect of her/his experience.

Ten participants had face-to-face interviews of about one hour, and one had a telephone interview (due to distance) of about the same duration. These interviews were recorded and the transcripts returned to the participants for correction and or verification.

I wanted to obtain information on various aspects of the generic attributes under study, including, what was learnt, where, and how. Participants were also asked whether or not they had been made aware of any strategies or environments that were helping them develop these attributes (ie. explicit teaching of the attributes.)

The participants in the first phase interviews are coded as Richard, Leanne, Edward, Olivia, Brian, Raewyn, Erica, Nina, Trudy, Michael, and Aaron. The outline of the interview schedule is included in Appendix 1.

## **Phase 2**

Seven participants continued through to Phase 2 of this research.

Data analysis from the initial interviews led me to conduct a critical incident interview, (Flanagan, 1954;; Christie, 1994; Ghaye & Lillyman, 1997; Parker et al., 1995; Tripp, 1993) via email for this phase. Using the latter technique I was able to gather information about the attributes participants used in their workplaces and the manner in which they employed them. I was also able to gain some understanding of what participants perceived were the characteristics of a “good” job.

Once the summaries of these interviews had been made, confirmation for fact and meaning was sought from the participants. Expanded profiles of the Phase 2 individuals are presented in the next chapter and it is with this group that the data have been fully analysed. The participants in this phase of the research include, Richard, Leanne, Olivia, Brian, Raewyn, Erica, and Nina.

## **Phase 3**

Five of the Phase 2 participants (Richard, Leanne, Olivia, Raewyn, and Erica) continued in this last phase. Through e-mail conversation (unstructured

interviewing) I gained information as to the status and ongoing workplace practise of these participants.

These unstructured, informal conversations were often initiated by the participants themselves. There was then no preconceived idea on my part as to what would be talked about, or how the conversation might flow. Rather the participants' stories served to "structure" the interviews as they unfolded.

This information was used to further confirm and expand on the data presented in Phase 2.

The Phase 2 and 3 interviews were particularly useful in helping address the suggestion that interviewing within an interpretive study such as this is likely to result in interviewers using language in a different way from what the interviewee intended, ie. no shared common meaning. This in turn can cause errors of interpretation (Becker, 1958; Schatzman & Strauss, 1973).

I found in these later interactions that I was more able to use the language of the participants in the way they used it, and had a better understanding of what reality was for them at a particular point in time.

So by completing these three phases in particular, I was able to consider the data using the concept of crystallization (Janesick, 2000; Richardson, 1994), that is, what we see when we view a crystal depends on how we view it – with the light behind it, out of the light, and so on. And Richardson continues, that crystallization provides us with a much richer illumination of the subject we are studying. By asking participants for information in different ways over a lengthened period of time my understanding of their experiences deepened, but at the same time I was left in doubt of what I really did know.

Prompt questions were prepared for each interview. As the interviews were proceeding I made notes (when necessary) about other questions to ask, and at several points in the interview checked “mentally” to see whether any additional questioning was required. I was conscious that although I might not ask exactly the same prompt questions in the same way, to each participant, the “need” was to elicit the important information from each of the participants. Like Graham (1989), I also found Gorden’s (1969) techniques helpful in this area. These techniques included:

“Retrospective elaboration” – this occurred when it became necessary for me to return to a particular area previously discussed, when I realised I had not initially accessed all of the information that the participant had.

“Retrospective clarification” – this involved returning to a previously discussed area in order for me to ensure I had understood what was meant.

“Immediate elaboration” – when I asked for further expansion of what was currently being discussed.

“Immediate clarification” – this occurred at the times when I did not understand what the participant was meaning, so I would ask specific questions to clarify my own understanding.

“Silent probes” – this involved non-verbal forms of communication such as smiling, nodding and pausing to indicate encouragement to carry on.

“Mutation” – when I redirected the conversation, introducing a new prompt from the guidelines.

I also attempted to take account of what Gorden (1969) refers to as “inhibitors and facilitators” of communication, eg. competing demands for time. The latter was addressed by asking participants to choose the most suitable time and place for them (eg. home, office, park, café) and then being non-judgemental to their response. This meant in reality that whatever environment and time the participant was comfortable with I accommodated willingly and gladly.

Certain practices were also adopted to facilitate communication. These included:

- outlining the purpose of the interview, appreciating that there were times during the interview that were “difficult” for the participant, eg. sharing highly personal, sensitive information;
- motivating participants with the altruistic notion that information from this study would hopefully be used to shape the university’s (from which the graduated) role in the development of generic attributes;
- explaining that by participating in the study they would be able to articulate to employers more sophisticated information about their generic attributes than otherwise would have happened;
- acknowledging the participants’ “positions” and empathising with them on occasions; and,
- creating a climate for interviewing where participants felt they could express themselves in a manner best for them, eg. catharsis.

By addressing these factors, and showing a genuine interest in the experiences of each participant, the communication between the participants and the researcher is greatly improved.

The importance of the quality of the personal relationships developed during the interview process is illustrated by Nisbet and Watt (1978) in the following comment:

Ultimately the success and failure of your efforts will depend on your ability to develop good personal relationships. Inevitable you will be part of the “living” experience you study, and your personal skills within that social environment will be crucial, both in allowing your access to the data you want and subsequently in giving validity to your findings.

(Nisbet & Wyatt, 1978: 20)

### Recording the interviews

All face-to-face interviews and the phone interview were audio-taped with the permission of each participant. The use of a Dictaphone for the purpose of interviewing had a number of advantages over longhand record-keeping of interview information being offered. These included:

- enabling the interviews to take place over a shorter period of time than if I had to record the session in longhand
- making the interview process less tiring for me than if I had to try to record the session in longhand
- giving me a record of all information from participants so that I could make decisions about relevance at a later date
- enabling me to note (in longhand) my own questions of clarification, expansion etc, that I could follow up with the participant during the course of the interview
- establishing better interpersonal relations than if I had had to constantly divert my attention away from the interviewee.

The tapes from each interview were transcribed and as previously mentioned, returned to participants to check for meaning. Any necessary additions, deletions, or changes were made and the transcripts returned to me.

Although the laughter, and other non-verbal aspects of the interviews cannot be provided in taped transcripts the information gained through audio-taping is accurate and more likely to flow than if notes had been taken. Hammersley and Atkinson (1983) note that the unobtrusive nature of a small tape recorder is more likely to result in participants forgetting its presence than if the interviewer is constantly scribbling notes as they are talking.

## **5.6 Validity, Reliability, Credibility, Triangulation and Crystallization**

Broadly speaking “validity” is the extent to which a measurement procedure gives the correct answer and “reliability” is the extent to which it gives the same answer however and whenever it is carried out (Kirk & Miller, 1986).

### ***Validity***

Kirk and Miller (1986) argue that to focus on the validity of an observation or an instrument is to care about whether findings have currency and about whether the variables are properly labelled. In addressing these problems Kirk and Miller suggest the consideration of the notions of apparent validity, instrumental validity and theoretical validity. Apparent validity also called face validity refers to the obviousness of the relationship between a measuring instrument and the phenomena under study. Kirk and Miller warn of the danger of accepting the validity of findings merely “on the face of things”, and that conclusions of apparent validity can be deceptive.

Apparent validity suggests or assumes instrumental or theoretical validity.

(Kirk & Miller, 1986: 22)

Instrumental validity, also referred to as “pragmatic” or “criterion” validity, is said to exist if it can be shown that observations match those generated by an alternative procedure. In most practical applications demonstration of this type of validity is unproblematic (Nunnally, 1959).

Theoretical validity or “construct validity” is said to exist if there is substantial evidence that the theoretical paradigm rightly corresponds to observations (Cronbach & Meehl, 1955).

### ***Reliability***

Reliability depends essentially on explicitly described observational procedures. Kirk and Miller (1986) recognise three categories of reliability: quixotic, diachronic and synchronic.

**Quixotic reliability** relates to the circumstances in which a single method of observation continually yields an unvarying measurement, but can prove to be trivial if for example a researcher only manages to observe/ elicit “party line” or rehearsed information.

**Diachronic reliability** refers to the stability of an observation through time, and is conventionally demonstrated by similarity of measurements, or findings, taken at different times.

**Synchronic reliability** refers to the similarity of observations within the same time period. In contrast to the two previous mentioned types of reliability, synchronic reliability most often involves observations that are consistent (as opposed to identical) with respect to the particular features of the observer. Kirk and Miller (1986) point out that synchronic reliability can be most useful to a field researcher when it fails because a disconfirmation of reliability forces the researcher to imagine how multiple but somehow different, qualitative measurements might simultaneously be true.

## *Credibility*

Credibility of findings is determined by the validity and reliability of a research study (Glaser, 1978; Parse et al., 1985). Researchers from within the interpretive paradigm emphasise that these findings need to be trustworthy and credible (Glaser & Strauss, 1967; Guba & Lincoln, 1982). On the other hand, researchers operating within the positivistic paradigm emphasise the reproducibility and “objective” nature of the findings (Campbell & Stanley, 1963). According to Haase and Meyers (1988) these differences may be a reflection of the different purposes the paradigms set out to achieve. That is, the interpretive paradigm attempts to generate theory, in contrast to the positivistic paradigm, which is concerned with theory confirmation. The strategy of triangulation (discussed in more detail later in this chapter) can be utilised to ensure integrity/credibility of research conducted within the interpretive paradigm.

Credibility has a two-fold purpose in interpretive research; first to ensure that the findings are believable; and second, to ensure that the data are accurately interpreted. The latter is done by returning the data to the participants for verification (Morse, 1989; Nunnally, 1959).

In terms of the validity and reliability of this research it did appear to address these measures in most cases. All three forms of validity are addressed to varying extents. For example, the apparent or face validity was addressed by virtue of having a clear and understandable relationship between the measuring instruments such as interviews, and the phenomenon under study, in this case the participants. Instrumental validity was demonstrated through using alternative procedures, that is face to face interviews, critical incident interviews and email conversation that in the main produced the same or similar “observations”. And theoretical validity existed through having an appropriate paradigm, that is, a naturalistic study correctly matched with the “observations”. Quixotic reliability was perhaps the measure of reliability in this study that was the weakest. That is, I did not get unvarying measurements

with each of my participants, nor did I expect to as I was dealing with participant perceptions that are likely to vary. However, there appeared to be a reasonable degree of diachronic reliability in many of the findings in this study. For example, all participants except one believed that the generic attributes under investigation in this study were learnt primarily outside of the university curriculum and classroom. This one exception (participant's result) was also the contradiction for synchronic reliability in this study. The fact this measure was unsuccessful in the case of this participant, did however help me in picturing how this result could be true as those others that were quite different (Kirk & Miller, 1986).

The credibility of findings can also be enhanced through a variety of techniques, including prolonged engagement, peer debriefing and member checking (all of these were used in this study). Lincoln and Guba (1985) describe prolonged engagement as being in the field long enough to ensure that "all is well". That is, trust is established with the participants, any distortions that find their way into the data are found, and all participants have their "bearings".

During this study I was engaged with participants in the field for a period of between seven months and two and a half years. Member checks (ie. recycling description, emergent analysis and conclusions sent back through the participants, and refining them in light of their reactions) were also a regular occurrence.

### ***Transferability, dependability and confirmability***

All of these “notions” are taken into account in interpretive research.

Transferability in this context is equivalent to external validity. Lincoln and Guba (1985) suggest that it is the reader rather than the researcher who ought to be responsible for applying the results of a specific study to other contexts.

Dependability equates to reliability, and in the context of the interpretive research paradigm is problematic. This is because in this paradigm the assumption of a changing social world is in direct contrast to the concept of consistency (reliability). Confirmability is the construct that incorporates the construct of objectivity. Triangulation, inquiry audit or a combination of both can be used to demonstrate confirmability.

### ***Triangulation***

Another technique that ensures integrity/credibility in an interpretive research strategy is that of triangulation (identified earlier in this chapter and discussed below). Indeed, Mathison (1988) argues that

Good research practice obligates the researcher to  
triangulate...  
(Mathison, 1988: 13)

According to Flick (1998), triangulation is an alternative to validation rather than a component of it. Triangulation serves to add a broader dimension to a research inquiry by increasing its richness and rigor. Denzin (1978) identifies four different modes of triangulation: data, investigator, theoretical, and methodological. He goes further and suggests that as each research method has its own strengths and weaknesses a combination of methods should reduce threats to validity as much as possible. He also extends this view of data triangulation to include time, space and person.

### **Data triangulation**

This involves the researcher attempting explicitly to collect data from as many sources as possible for analysis within the same study. Multiple data sources provide the opportunity to test how an event is experienced by different groups, at different points in time. In this study only one group of participants was involved.

### **Investigator triangulation**

This involves the engagement of more than one investigator, and implies that the same influence is exerted on the interpretation of the study (Denzin, 1978). It has an advantage in that the careful use of multiple investigators independently can lead to more valid and reliable data (Cohen & Manion, 1989). Only one investigator however was used in this study.

### **Theoretical triangulation**

This type of triangulation draws upon alternative or competing theories rather than considering only one viewpoint (Denzin, 1978), and is a way of widening the theoretical framework when trying to interpret the phenomena under study. Denzin argues that researchers ought to be aware of different theories that may be relevant to a particular situation, if they are to find the most appropriate one. Theory triangulation simply

asks the researcher to be aware of multiple ways in which the phenomena may be interpreted.  
(Denzin, 1989. 246)

Theoretical triangulation was not used in this study. Although initially I considered the three different theoretical paradigms (positivist, interpretive, critical) I chose only the interpretive paradigm in which to conduct this study.

### **Methodological triangulation**

This involves multiple procedures for data collection and analysis in a single study. This type of triangulation uses either, two or more data collection approaches within the same method, or combines quantitative and qualitative methods in the same study (Denzin, 1978; Kimchi et al., 1991). The data collection in this study comprised, content analysis (through various documents eg. minutes from university committee meetings, newsletters and limited components of course documentation), and different forms of interview (face to face, phone and reflective).

It is necessary to identify what I set out to achieve with my triangulation strategy. On the one hand I was looking to enhance the validity and reliability of my research findings; that is I intended that the strategy would help me guard against researcher bias and help me assess the soundness of my research data. On the other hand, a triangulation strategy can have real value in terms of its potential to contribute to an enriched understanding of the development and use of generic attributes. It is the possibility of divergent or even contradictory outcomes from the triangulation process that can lead to an enhanced construction of meanings. Triangulation

...can also capture a more complete, holistic, and contextual portrayal of the unit(s) under study.

(Jick, 1979: 603),

perhaps, uncovering some unique variance or suggesting conclusions that a single method might not uncover. Or,

.. it is a technique which provides more and better evidence from which researchers can construct meaningful propositions about the social world.

(Mathison, 1988: 15)

This view captures the essence of social research: not simply uncovering what is happening, but making sense of it.

Although triangulation is the most common means by which researchers attempt to secure an in-depth understanding of the phenomenon in question, there are writers (Janesick, 2000, 2003; Richardson, 1994) who dispute this concept, contending that the notion of crystallization is far more appropriate.

Like many other qualitative researchers I began this thesis with the notion that triangulation would be the most effective way in which to view the design and components of my research. This chapter has therefore described and argued for triangulation as the most appropriate validation strategy. However, over the years the thesis has unfolded, like Janesick (2000) I now believe that the concept of crystallization (Richardson, 1994) provides a more valuable means of gaining an in-depth understanding of the findings of qualitative research.

### *Crystallization*

Richardson (1994) argues that crystallization is the most appropriate method of determining the “validity” of qualitative work, in particular post-modernist, mixed-genre texts. According to Richardson a crystal – an ever-changing prism, creating different patterns, shapes and so on, depending on how we view and approach the world - is a much better metaphor than the two dimensional fixed shape of the triangle.

... crystallization provides us with a deepened, complex, thoroughly partial, understanding of the topic. Paradoxically, we know more and doubt what we know. Ingeniously, we know there is always more to know.

(Richardson, 1994: 522)

In regard to my study, crystallization may well be a better lens through which to view the components of my research study. The manner in which I interacted with participants, eg. the use of silence in interviews, the rhythm and tempo of the interactions (Janesick, 2000, 2003) and the sharing of journal notes are in keeping with notion of crystallization. And some of my apparent contradictory results (presented in Chapter 6), while providing me with a more multifaceted understanding of how graduates perceive and experience graduate attributes, also left me wondering about what my results really meant, and how much more there was to learn (also in keeping with the idea of crystallization).

## **5.7 Data analysis and processing**

Qualitative research has three major components: data collection, analytic or interpretive procedures, and written/verbal reports (Strauss & Corbin, 1990). Analysis of the data is undertaken so as to categorise and order the information, ie. to make sense of it. The final step is to produce a written report that is legitimate, ie. true and accurate. Miles (1979) and Priore (1979) claim that the analysis of qualitative data is perhaps the most demanding and least examined aspect of the qualitative research process.

The scheme followed in this study for the interview analysis was roughly that described by McCracken (1988) in "The Long Interview".

The object of analysis here is to determine the categories, relationships and assumptions that inform the respondent's view of the world in general and the topic under investigation in particular. As the researcher (investigator) I came to this undertaking as McCracken describes,

with a sense of what the literature says ought to be there, a sense of how the topic at issue is constituted in (my) own experience and a glancing sense of what took place in the interview itself.

(McCracken, 1988: 42)

In the first stage of observation the researcher reads the interview testimony with a careful eye both to what data is and what the data “sets off” or “triggers” in the self. In this stage “debriefing” myself after each interview (ie. replaying the taped interview and taking brief notes before formal transcription took place) helped with this “triggering”. The insights provided into the nature of the data, by doing this debriefing proved valuable in this study and enabled me to gain a broader perspective into what “was going on”. Berreman, (1966: 349) claims that this “intuition”, as it is sometimes called, is indeed the most powerful (if most obscure) of the analytic devices at our disposal. It is also during this first stage of analysis that the researcher takes the conclusions of the academic literature and culture review (eg. information/meaning gained through analysis of various documents) and uses them as a guide with which to search out the systematic properties of the interview data. It is important at this stage to postpone generalities for later stages of the analysis (Glaser and Strauss, 1965). As McCracken warns,

Beware premature closure!

(McCracken, 1991: 45)

The second stage of analysis is where the scrutiny of the data is expanded so that all implications and possibilities are identified. When this is complete the observations are related back to the transcript. Following this the findings are related one to the other, looking for similarities and contradictions.

In the third stage of analysis the main focus of interest has shifted away from the main body of the transcript. This is when a field of patterns and themes begins to emerge.

The fourth stage is a judgement phase where the researcher identifies clearly the themes/patterns, and interrelationships are made between them.

The final stage of analysis reviews the stage four conclusions. It is at this stage that the researcher's observations become conclusions and are ready for academic presentation.

### *Relationships and emerging themes*

In this study on the exploration of graduates' perceptions of the acquisition, development and use of generic attributes it has been difficult to isolate separate themes. In the same way that generic attributes cannot be, and are not, used in isolation, the themes that emerged from this study are interrelated:

- Organic
- Holistic
- Multifarious
- Pivotal.

These themes are used in Chapter 7 in considering some of the meanings generic attributes had for participants.

I have chosen a metaphor of an apple, specifically a magic apple, to help illustrate the participants' perceptions of the growth and utilisation of their generic attributes. This metaphor works well for illustrative purposes most of the time in that like apples, generic attributes are holistic and organic in nature; there are many varieties of apples just as there is variation in the way generic attributes are used in the workplace. And finally, apples are important for health. In a similar fashion to the old adage -

An apple a day keeps the doctor away

- generic attributes contribute to the health of participants' lives and their workplaces.

It is important however, to acknowledge that generic attributes, unlike apples do not have a finite life, that is they do not begin breaking down. Hence the idea of the magic apple which like the magic pudding (Lindsay, 1918) is capable of altering its nature and of regenerating itself.

The concept of apple as metaphor is discussed in more detail in Chapter 7.

## **Summary**

A case study approach is an appropriate methodology for the questions asked in this study. Case study is both political and strategic in that genuine insights reached through case study have the capacity to work reflectively to change the particular situation studied (Kemmis, 1980). Case study is therefore emancipatory. The approach may contribute to what Habermas (1974) calls "sciences of social action" which are guided by an emancipatory knowledge-constructive interest.

## **Chapter 6: The stories**

Chapters 2-5 provided the detailed context for the study, and covered both the area in which the study was positioned and the methodology that was used.

It is this chapter that details the participants' stories of the development and use of their generic attributes. Section 6.1 provides an outline of all eleven case studies, plus some of the similarities and differences in participants' perceptions. Section 6.2 supplies detailed information on each of the seven participants who remained in the study for its duration. These stories – narratives grounded in context – illustrate the experiences of these participants in their respective workplaces. They demonstrate the ways in which participants acquire their generic attributes, how they use them in their day-to-day activities, and the importance and meaning they have for them in their current roles in the workplace.

The framework for describing each story, based on Bennett et al., (2000), comprises four categories – the work context, the main generic attributes used initially, the origin of these and other generic attributes, and further development of generic attributes. These categories have been derived through analysis of the whole sample (eleven participants), and represent the main issues and concerns from them.

Section 6.3 provides a summary and proposes three different ways in which the development of generic attributes might be viewed.

## **6.1 Overview**

### **6.1.1 Overview of participants and findings**

Eleven participants began in this study, and all were available for the initial interview. Table V below provides an outline of the four participants, case studies 8-11, who were available for the initial interview only; Table VI below summarises case studies 1-7. These latter participants were available for further interviews and follow-up discussion, and their stories are detailed in Section 6.2 as full case studies.

Information gained from all case studies has been incorporated into the results of this chapter and in Chapter 7, The Meanings.

**Table V** Participants available for initial interview only

|                                  | <b>Aaron</b>                                                                              | <b>Michael</b>                                                                                                  | <b>Edward</b>                                                                                   | <b>Trudy</b>                                   |
|----------------------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------|
| <b>Work context</b>              | Computer Programmer<br>Large Australian web development company                           | Service Officer<br>Multi-national Insurance company                                                             | Engineer<br>Australian civil engineering contracting company                                    | Marketing Assistant<br>Office supplies company |
| <b>Attributes highlighted</b>    | Interpersonal understandings<br>Communication                                             | Interpersonal understandings<br>Communication                                                                   | Interpersonal understandings<br>Communication<br>Problem solving                                | Interpersonal understandings<br>Communication  |
| <b>Origin of attributes</b>      | Sports teams<br>School<br>University course project<br>Part time jobs<br>Life experiences | High school<br>Family life<br>University experience (cf course/classroom)<br>Part time jobs<br>Life experiences | Boarding school<br>University experience (cf course/classroom)<br>Family life<br>Part time jobs | Part time jobs<br>Life experiences             |
| <b>Development of attributes</b> | Sports teams<br>Workplace<br>Life experiences                                             | Workplace                                                                                                       | Workplace                                                                                       | Workplace                                      |

**Table VI** Participants available for both initial and follow up interviews and discussion

|                                  | <b>Richard</b>                                             | <b>Raewyn</b>                                                                    | <b>Nina</b>                                                                  | <b>Olivia</b>                                      | <b>Erica</b>                                               | <b>Brian</b>                                                                      | <b>Leanne</b>                                                          |
|----------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <b>Work Context</b>              | Electrical Engineer<br><br>Large national engineering firm | Marketing Manager<br><br>Urban shopping centre                                   | Solicitor<br><br>Private law firm                                            | Academic Staff Member<br><br>Australian university | Accountant<br><br>“Merged” Accounting Services firm        | Technical Consultant (to financial planner)<br><br>Global financial services firm | Academic Staff Member<br><br>Australian university                     |
| <b>Attributes highlighted</b>    | Interpersonal understandings<br><br>Communication          | Communication                                                                    | Interpersonal understandings<br><br>Communication                            | Critical thinking<br><br>Problem solving           | Interpersonal understandings<br><br>Problem solving        | Interpersonal understandings<br><br>Critical thinking                             | Interpersonal understandings<br><br>Communication                      |
| <b>Origins of attributes</b>     | Sports teams<br><br>Family<br><br>Life experiences         | Part time jobs<br><br>University College (office holder)<br><br>Life experiences | Family<br><br>Life experiences                                               | University classroom<br><br>Life experiences       | Part time jobs<br><br>Family<br><br>Life experiences       | Part time jobs<br><br>Sports teams<br><br>Life experiences                        | Family<br><br>Part time job (university tutor)<br><br>Life experiences |
| <b>Development of attributes</b> | University experience (outside classroom)<br><br>Workplace |                                                                                  | University course (development of some specific attributes)<br><br>Workplace | University classroom<br><br>Workplace              | University experience (outside classroom)<br><br>Workplace |                                                                                   | Workplace                                                              |

One of the interesting findings was the differences among participants (see case studies for details). Sometimes these related to what a particular attribute meant in the workplace and how it was used, in comparison to the university “classroom”. For example, teamwork in the workplace was described by Raewyn (case study 2) as a planned scheduled activity to which all team members were committed, unlike her experience at university in working in teams on assignments and similar events.

Perhaps one of the more extreme differences concerned participants’ experiences of the university “classroom” in the acquisition of the generic attributes groups (in this study) that were useful and used in the workplace (see Figure 1).

Perceptions of the role the university classroom played in the acquisition of generic attributes which are useful in the workplace are displayed in Figure 1 below.

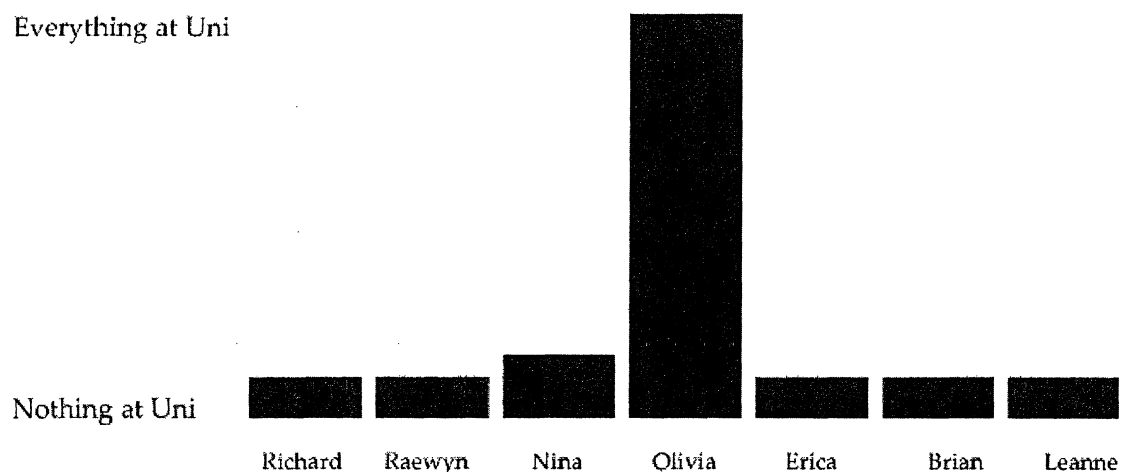


**Figure I Differences in experiences**

While the majority of participants believed they gained very little in the “classroom” in terms of generic attribute acquisition, Olivia was the exception.

It was not until the follow-up discussions that her perception began alter a little (see case study 4).

Although most of the similarities and differences identified in this research relate to the generic attributes that are the focus of this study, participants also identified a number of skills and abilities that, while not the subject of this study are nevertheless important in the workplace. These are included in the outline below.

### **6.1.2 Similarities**

#### ***Initial findings***

(from all eleven participants in the study)

- Confidence is necessary for effective job execution.
- Confidence increases as one's job effectiveness increases.
- High self-efficacy is essential for effective job execution and job advancement.
- Generic attributes that are most useful in the workplace may be those learnt outside of the university "classroom".
- The effective use of generic attributes is vital for survival in the workplace.
- The effective use of generic attributes is vital for advancement in the workplace.

#### ***Concluding findings***

(from the seven participants available for critical incident interviews and follow-up communication)

- All six of the initial findings were reinforced and in fact become more crucial as participants either change jobs or roles.

- Generic attributes involving interacting with others in the workplace are the most challenging.
- Knowing one's discipline (ie. "content") is an important factor in building confidence and self-efficacy.
- Having confidence and high self-efficacy makes using generic attributes easier in workplace.
- Using generic attributes in the workplace in situations that may not be reproducible in the university classroom is a requirement of many jobs.
- Being able to use generic attributes in the workplace is essential to job **satisfaction** and motivation.
- Being able to use generic attributes in the workplace to a level which participants believe they are capable of is essential to job satisfaction and **motivation**.

### 6.1.3 Differences

The main differences in participants' perceptions (those seven available for critical incident interviews and follow-ups), related to three distinct areas:

- Differences in perceptions as to how much impact the university "classroom" and university environment had in the development of generic attributes. For example, from the "classroom" having no apparent impact to something that was seen as life-altering.
- Differences in what generic attributes "looked" like and how they were used in the two different contexts, ie. workplace and university classroom. For example, the meaning and practice of teamwork in the workplace compared with the university classroom.

- Differences associated with the types of attributes required for dealing with workplace situations that may not be reproducible at university and that require particular attributes to be used. For example, accountability – inadvertently exceeding a budget and having to take responsibility to address the situation.

#### 6.1.4 Other generic attributes and qualities

As noted above there were other abilities, skills, qualities that participants identified as being important in the workplace. In particular,

- confidence
- self-efficacy
- ability to work to “real” time and under pressure.

While it is beyond the scope of this study to explore these ideas in any depth, a brief explanation of their meaning and importance for participants is outlined here.

*Confidence, self-efficacy and the ability to work to “real” time and under pressure.*

The literature abounds with studies and theories related to confidence and self efficacy (eg. Bandura, 1977, 1982, 1986, 1993, 1995; Gecas, 1989; Hattie, 1992; Pajares, 1996). For the purposes of this study Bandura’s (1977) self-efficacy theory is the one used to relate to participant’s perceptions. Using this theory, confidence is conceived of as an outcome expectation, that is, an estimate that a given action or behaviour will lead to a certain outcome. Self-efficacy by comparison is a belief, the conviction that one can successfully perform a particular action or behave in a particular manner. For participants in this study the outcomes of increased confidence and self-efficacy meant their belief that

given actions lead to certain outcomes increased over the time they were in the workplace, and they believed themselves to be increasingly capable of successfully performing particular tasks or behaviours.

The ability to work to “real” time and under pressure was noted in all of the case studies. Sometimes it was explicit, for example, the two engineers in the study (Richard and Edward) both commented on the stress associated with deadlines that had to be met; that failure to do so would result in extremely significant consequences; on other occasions, such as in Olivia and Leanne’s cases (the two academic staff members), it was implicit. That is, time and pressure was inherent in nature of their work (for example having to “perform” within a set timeframe such as a one hour lecture slot.)

In all cases participants believed their situations were not reproducible in a university “classroom”. As noted earlier in this chapter (Raewyn, case study 2) the learning associated with situations such as these described above require the context of a “real” role in a “real” workplace (Boreham, 1999; Lave, 1990) . Whether or not these students would have had the same perceptions had they been engaged in programmes that used co-operative education components, simulations, problem based learning strategies and the like, was not canvassed in this study as none of the participants were in programmes where these strategies for learning were employed. Studies involving these types experiences suggest that it may be easier for students to attribute some degree of generic attribute development to their university “classroom” experience, for example (Arconi, 1997; Briggs & Hodgson, 2002; Crebert et al., 2004; De La Harpe et al., 2000; Haigh, 1999; Kember, 2009; Te Wiata, 1993).

## 6.2 Participants' stories

Eleven participants were interviewed initially with seven being available for in depth questioning and further discussion. There were many similarities in the information provided by all participants. For example, all eleven thought the generic attributes researched in this study were essential in the workplace. This and other similarities are outlined above. The stories (full case studies) from those seven participants who comprised the group available for additional interviewing are detailed over the next pages.

### Full case studies

**Richard** - case study 1 focuses on interpersonal understandings (team dynamics, teamwork), and communication, and the increasing importance these have as his role in the workplace changes.

**Raewyn** - case study 2 concentrates on communication in the workplace and its importance in her continued progression with the company for which she works.

**Nina** - case study 3 illustrates again the importance of interpersonal understandings and communication as essential adjuncts to survival in the workplace irrespective of the high level of "technical" skills one might have developed.

**Olivia** - case study 4 illustrates how critical thinking and problem solving are important in her current workplace. She also believed that these two attribute groups were acquired only in the university "classroom".

**Erica** - case study 5 focuses on problem solving, interpersonal understandings as the attributes most important in helping her make decisions regarding her job.

**Brian** - case study 6 provides an example of how critical thinking and interpersonal understandings are enriching his work life.

**Leanne** - case study 7 highlights once more the importance that interpersonal understandings and communication have in the workplace, particularly in roles that have a high degree of interaction with others.

### **Case study 1: Richard**

Richard graduated with an honours degree in electrical engineering, studying for four years to gain his qualification. He obtained a position in a large national engineering firm just prior to his graduation. Richard considers himself to be a good communicator and team worker. He felt he could “handle” himself in the workplace.

#### **The work context**

In Richard’s initial role he was a junior staff member working at the firm’s project office. He was supervised fairly closely in his position, where his work primarily involved the drawing of technical specifications as the company was in the design phase of a major project. In contrast, Richard, although not designated a supervisor, now performs a supervisory role at his current workplace. Although employed with the same company, Richard’s geographic location has moved from the company’s office to on-site, and the nature of his work has also changed significantly as the company moved into the installation phase of a major project. He now assists other supervisors in translating the design work into the actual installation that is seen on site. This work is very time consuming and quite difficult and Richard finds himself working longer

hours than previously. Often he is the person who acts in the role of on-site supervisor. He regards his job “.... as a completely different job now.”

### **Main attributes used initially**

In Richard’s first position within the company he emphasised three categories of generic attributes as being important:

- Problem solving, for example, various aspects of drawings and designs required problem identification, and application of relevant information in order to generate a suitable solution. This was needed so that the project team could continue to progress. Richard was able to develop this attribute in a supportive environment.

*“...like, every day I sort of got a few more questions for them (line managers) so they can see what I'm up to. My designs are checked by the drawing office, checked by my supervisor before being sent off... they're not leaving the whole thing up to me...”*

This reinforces the idea that a community of practice (discussed earlier in Chapter 3) is important in developing and consolidating generic attributes and achieving successful outcomes.

- Interpersonal understandings, for example, working as part of a team, which included other specialists, also engaged on the same project.

*“That’s the real “trick” isn’t it? ... at work sometimes it is quick to get it sorted out...other times... ..the electrical guys want to know how to get the cables..... whether they should stay there..... so you got to go backwards and forwards...yeah doing that takes some time...”*

In this example the team could be viewed as using polycontextual skills (Engestrom et al., 1995). They crossed the boundaries of their own work area in order to collaborate with other communities of practice (Lave, 1990)

- Communication, for example, written reports, drawings and verbal information, on all phases of work, had to be clearly communicated to all staff members. The latter included supervisors and team members who were not necessarily electrical engineers. This made the task even more difficult.

*“Trying to describe a concept over the phone is nowhere near as easy as drawing it on a drawing. If someone doesn’t have a drawing in front of them and you are trying to explain it you’ve got to be very clear and not waffle on and get off the point because it makes it quite difficult for that person to receive your point”.*

Effective communication requires among other things,

...an appreciation for the context or culture in which the communicative act occurs.

(Hyslop-Margison, 2000a: 62)

In contrast to the work of Saunders et al., (2001) communication as presented in Richard’s university course simply did not encompass this appreciation.

### **Origin of these and other generic attributes**

During his time at university Richard was never told or given any explicit instruction regarding the generic attributes he would need in the workplace. For example, he had the all too common misunderstanding of the experience of what is learnt through “group work” (part of the “interpersonal understandings”, category of this study). Although Richard was part of a group on two occasions, he did not have any knowledge of the attributes that

the lecturer may have been attempting to develop in students. He did not therefore value the experience, or find it useful in enhancing his own skills in this area. Richard certainly knew that group work, or teamwork, was an attribute that was valued in the workplace, but viewed it as one learned outside the university. In fact, when asked at his employment interview how he worked in a team environment, he spoke of his experience at playing sports, and managing a soccer team in order to illustrate this.

*"I went to the interview and it was ... they basically just asked how I worked in a team environment..."*

*I said I'd played on team sports before and I was also managing a soccer team at the time...yeah I just said umm...I get on well with people and..."*

Richard's shared purpose as part of his soccer teams, as both a player for one, and coach for another, illustrate Beach's (1999) contention that it is the meaningful and dialogic engagement in a "community of practice" inspired by a shared motive that helps in the development of capabilities such as team work.

Richard credits his communication skills to his family environment.

*"...living in a family environment. You learn to communicate with your parents and brothers and sisters. You learn to share and to value each other's time and be able to make time for each other and be able to stick to that commitment. And they are very important skills as well at work".*

This perception is noted in the literature for example, Virgona et al., (2003: 28) found that most participants in their study regarded generic attributes as the "skills of life", with most believing such skills developed throughout their lives

and over half identified that home and community were the main sources of that skill development.

Where Richard did mention further development of generic attributes at university it was not the curriculum per se but the broader university experience that made the contribution. For example, he commented that he was able to practise his time management skills through, “not running out of time in an exam”.

### **Further development of generic attributes**

The initial role Richard had was challenging and stimulating for him. He enjoyed learning the new skills offered by the workplace, such as, learning how to handle himself as a team member when aspects of the project did not go according to plan, for example, seeing a senior colleague re-negotiate time lines with a small group of team members who had had not met a deadline. Also watching that same senior colleague sort out an awkward interpersonal interaction between another two different team members. Both of these situations have benefited Richard enormously. He found the learning he took from these situations advantageous in his next role within the company.

A year or so after Richard had started work his company moved into the second phase of the major project. Both his geographical location and the nature of his work changed. Richard found himself acting much more as the supervisor, instead of the supervisor “junior”. For Richard, this was the critical incident that he identified for the purposes of this research project. The change of role had a huge impact not only on the emphasis given to particular generic attributes, but also on the level to which he needed to develop and use them, and the frequency with which he employed them.

Generic attributes, according to Hager et al. (1996), are overlapping, and Richard highlighted all four categories as essential in his second role in the

company. Problem solving and critical thinking, although still used, were not the prime attributes he emphasised.

With regard to these two categories though, Richard made the following comments:

- Problem solving, for example converting data from one form to another in order to make the meaning “real” in a different context.

*“I think I am using the skills (problem solving) differently now, yeah. I assist others now in translating our design work into the actual installation you see on site” (as opposed to doing the translation alone).*

- Critical thinking, for example, assessing different aspects of a situation, making decisions about what to do.

*“... you’ve got to make good decisions quickly and you’ve got to be practical and you’ve got to be able to pass your knowledge on to the guys who are doing the actual work”.*

These attributes can be viewed both as outcomes and processes (Hager et al., 1996) and illustrate the more complex learning that Richard has undergone in developing these, compared with how he initially used them.

- Interpersonal understandings, in particular, teamwork (ie. working collaboratively, interpreting team dynamics and so on) was however an attribute that Richard emphasised as essential for the role he now had in the company. For example, to relieve some of his own stress and to enable his team to function more effectively, Richard has found it necessary to spend more time than he initially thought necessary with co-workers.

*"Installation work is a very time-consuming job. Sort of feeling like my job is a little more stressful now than it was. I'm starting earlier and finishing later, spending more time with people."*

Through acknowledging the common pressures he and his co-workers are experiencing, he is developing camaraderie, and a shared understanding of issues. Although initially thinking that the other aspects of his job took priority, Richard genuinely values this extra time he has spent with team members. He is finding that his stress levels have dropped and the team is responding well to the challenges that they face in working together on a substantial project.

*"I enjoy contributing (to the team). I don't feel that I am any different to anyone else and I enjoy the friendship and being able to discuss things with other people."*

Once again it is the "community of practice" (see Chapter 3) that defines the norms and behaviours for a work group. Richard's camaraderie in the group, like Giddens's survey workers (Giddens & Stasz, 1999) are both part of an "intimate" situation – one where members rely on one another in an atmosphere of mutual respect.

- Communication, in particular negotiating, listening, describing.

*"... especially when it's stressful it always helps if you're courteous to each other and just think about them for a minute rather than always focusing on your own problems. I think it makes it a lot easier for other people to do their work. More work gets done and everyone's happy about it."*

Communication skills need to be sophisticated in stressful situations that may be potentially adversarial (Giddens & Stasz, 1999). Richard is an effective communicator - he has learned and continues to learn how to communicate in a variety of contexts. Falk et al., (2002) contend it is this constant re-learning and

not the application of skills from one context to another than enables a person to be effective in using generic attributes. Combined with the increasing development in his confidence, Richard is able to demonstrate his communication skills in a variety of “communities of practice” (discussed in Chapter 3) in a purposeful way.

Along with the above attribute categories that Richard emphasised, he spoke about his need to “self-manage”. He has had to adjust to and manage his feelings and expectations about “keeping on top” of his work. While this had been easy for him in his previous role, he finds now that he “... sometimes spends the whole day putting out fires... before even getting to your own work”.

He has also had to get used to no direct supervision. Initially this was unsettling for him but he now believes he has the capability and is trusted enough, to complete a task independently. As Sandberg (2000) suggests, the key to moving forward in the development of more sophisticated and complex use of generic attributes is in understanding how the learner conceives a task. Richard has had to re-think his conceptions about his role and his tasks and although his new role is somewhat stressful, he finds it very enjoyable.

*“I’m definitely liking the challenge – I’m enjoying what I’m doing”.*

## **Case study 2: Raewyn**

Raewyn graduated with a double degree in arts and commerce. She studied for three years to gain her qualification and started her current job on graduating. Raewyn describes herself as enthusiastic and organised. She enjoys having a fair degree of responsibility and thinks she works “better under pressure”.

### **The work context**

Raewyn is a marketing manager in her current job with the same company she

started with after graduation. This role is different from the two she initially had with the company – the first as an assistant to a marketing manager, and the second where she was engaged in sales analysis. Although employed with the same company, Raewyn's geographic location has changed and, while she enjoyed her first two roles, the nature of her current work is what she believes she is qualified to do best and what she really likes doing.

### **Main attributes used initially**

Raewyn's initial role with the company was that of assisting the marketing team in a moderately large urban shopping centre. She began this job with a minimum amount of induction (half a day), and believes the attributes she required to "survive" in this environment are best described in the following categories:

- Communication, where she found herself constantly asking her manager for the guidance she needed to perform her tasks.

*"My first day at X (the shopping centre) I was working as an assistant. I was always turning to my manager to ask, "what am I doing?" There was no list of things you were supposed to be doing..."*

- Interpersonal understandings, in particular having to work collaboratively with other members of the Centre team.

*"As the marketing assistant I just had to try to get on with everyone. Because I had been heavily involved in running my college back at uni I had built up a lot of teamwork skills... they really helped."*

The above attributes coupled with qualities such as initiative, confidence, self-efficacy meant that although she was, "...thrown headlong into it (the job)", she not only survived but went on to take up a different position at the company head office after three months of work.

### **Origin of these and other generic attributes**

From her time at university, Raewyn cannot remember any explicit instruction regarding the generic attributes she would later find useful in the workplace. Having said this, she does remember on a few occasions being aware of the lecturer(s) asking her and her classmates to do particular exercises in order to learn certain skills. For example,

*" In some group assignments they'd (lecturers) say 'You've got to do it in groups so you can build up your teamwork skills'..."*

Although on the face of it teamwork is one of the workplace useful generic attributes (a subset of "interpersonal understandings"), the nature of teamwork "taught and learnt" in the classroom is quite different from that Raewyn experienced in the workplace, (Berge, 1998; Candy, 1991; Giddens & Stasz, 1999). To highlight her point, Raewyn said,

*"It (the classroom) is such an artificial situation...when we're in a job we are all working in the same office together and we have scheduled times when we can get together and we're all committed. When we were at uni, I was working with someone who lives... (in another town) and someone who lives ... (a long way from uni.) It was just dumb. We found other ways around it that were completely different to how you would do it in a work environment."*

So, for Raewyn the learning of generic attributes had to be both relevant to her work and in an authentic environment. This did not happen for her in the university "classroom". Instead, the majority of her generic attributes were initially learnt in environments outside of the university "classroom", for example, in the university college where she was an office holder, and in workplaces (both as a part time and full time employee).

*"I was heavily involved in running my college back at uni, ... so I've built up all the problem solving, teamwork, communication, that all came from there. I also worked all the way through uni, and built up a lot of skills in communication there, and also just what I've learnt on the job."*

Raewyn does however believe that she has at least one "practical thing" from university - the marketing jargon. Her statement of, *"I can now sound like a marketing person"*, might appear superficial but on closer examination actually means that she has increased confidence in performing in her role. She stated,

*"... this jargon has given me the ability to express my marketing ideas in the way a marketer would".* She believes she *"already had the ideas but being able to express them in jargon buys me credibility."*

This notion of "identity," of being able to "look and act like a worker in a particular context" (Falk et al., 2002: 53), is important in enabling effective communication to take place.

### **Further development of generic attributes**

In her second position, the nature of Raewyn's work was vastly different from what she had been doing. Having survived one "sink-or-swim" situation, Raewyn coped well with only 3 days of on-the-job-training to prepare her for her role as Reporting Analyst. In this role, Raewyn found herself analysing sales figures for staff from several divisions of the company.

She emphasised the following two categories of generic attributes as being particularly important.

- Communication, for example, presenting information in diagrammatic form, negotiating time lines with other workers.

*"Often, I make sure that everyone gives me a timeframe of how soon they need it. Sometimes I'll have the General Manager saying 'I need this' but he doesn't need it for a week, and I've got a Centre manager saying 'I need this in two hours' so obviously I know that I can push the GM back a bit and worry about that later... it's one of the big skills that I have learnt while I've been at work, having to say 'I can do that for you, but I'm not going to be able to do it until next week.'" So it's been something that I've had to sort of master."*

- Problem solving, for example, analysing information, synthesising and applying information relevant to a problem.

*"It's generally, it's a lot of problem solving, a lot of things I get asked to...I do a lot of work on spreadsheets, it's all numbers based... I get asked to plot a trend over the last 3 years of how a particular company's gone to compare, say, sales of white goods to sales of books, all that kind of thing."*

Because she was now engaged in a more global role, ie. working across several different divisions of the company, she had to learn how to juggle the competing needs of senior staff members while maintaining a reasonable workload herself. Raewyn was warned that this was one of the pressures she would face. This warning came from both her direct manager and another staff member. Being told by her manager that an inability to prioritise had been a problem for the staff member previously in Raewyn's role, and knowing that she could check priorities at any time with the General Manager if necessary, helped Raewyn develop the skill of prioritising. She has learnt how to manage the timeframes that the various staff members give her through asking for their time frames and then negotiating those if necessary. This skill of prioritising is one of the "big" skills Raewyn believes she has learnt in the workplace. Having the ability to say, "I can do that for you, but I'm not going to be able to do it until next week", to senior managers requires a degree of self-assuredness that Raewyn believes was/is unable to be taught or experienced in the university

"classroom". Bandura's (1977) work in social learning theory shows us how important the experiential base is particularly for the development of self-efficacy, ie. believing that you can perform certain actions. For Raewyn, her workplace was the necessary base.

Raewyn's third position started in the second year of her employment with the company. She was appointed to a position as Marketing Manager at a facility in another city (two hours away from Head Office, where her last job had been).

The generic attribute that is the focus of Raewyn's critical incident illustrates the role of communication in the workplace. As mentioned at the beginning of this chapter, no one generic attribute is used in isolation and indeed this was also the case here, where Raewyn had to also draw on other attributes and specific skills. Hager (1999) notes that generic attributes are not "free floating" but are used in unison in actual work situations along with other more specific competencies. Unlike the previous case study, where Richard's critical incident could be labelled as "positive", ie his move into a "new" role and job with the company, Raewyn's incident, was a less pleasant occurrence.

It occurred about one month into her new role and is best described within the following generic attribute category:

- Communication.

The incident involved a significant misunderstanding on Raewyn's part in negotiating work that another agency would be doing for her (and her company). She inadvertently agreed to give the "other" agency extra work, which resulted in a significant "blow-out" of her budget.

*"I was working with the (other) agency... they would say something like 'we can do this here', and at the time it sounded like a really minor thing and I would say 'yeah that's a great idea' not realising that what they were saying to me was 'we could do this here*

*and it would cost you \$5,000'. So it was one trivial bit in the whole landscape... but having suddenly blown my budget, I went 'oh no what have I done?!'"*

Although the incident left Raewyn somewhat shell shocked, she knew that she needed to address the situation promptly. She did so by first apprising her manager of the situation, informing (via email) the other agency that all agreements would need to be in written form in the future, and by altering her own practice (ensuring all communication with this agency was followed up in writing – to ensure a shared understanding is reached).

Admitting to her manager that she had made a mistake was not particularly difficult for Raewyn, as she believed her manager and indeed her work environment was supportive and as such would welcome its employees learning through their mistakes. She appeared to be correct in this belief.

*"I have a really good relationship with my Centre Manager...he was understanding knowing that I was thrown in the deep end (into her current job).*

*"I said .... 'So look you know, I've made a mistake... I'm going to be careful about it in the future.' He obviously went a bit 'Oooh gee, ok – we've lost a bit of money'... and then just said, 'we really need to work and make sure that we do get everything in writing'."*

Once again, this illustrates that communication skills needed to be sophisticated in order to achieve a satisfactory outcome. For Raewyn, who was working in a potentially adversarial position to the "other" agency, her ability to negotiate with other parties, to give them a fair hearing, and to maintain these under pressure, were paramount. As Giddens and Stasz, (1999) comment,

An amicable and professional demeanour is highly valued in all spoken communications. Such a demeanour is perceived to improve the ability

and willingness of the listener to engage in communication.

(Giddens & Stasz, 1999: 12)

This was certainly the case for Raewyn.

This experience was simply not reproducible in the “classroom” or indeed in a work experience situation as part of a formal curriculum. It required the context of a “real” role in a “real” workplace for Raewyn both to experience and to deal with the misunderstanding and its consequences. That is to say, participation in “communities of practice” (discussed in Chapter 3), and consequently shaping by the actual context of work (Boreham, 1999).

In further conversation about the generic attributes she is currently using and the contexts in which they have been developed, Raewyn is now using all those attributes described at the beginning of the chapter, but in particular the “interpersonal understandings” and “communication” groups. She restated (initial statement was in her first interview) that she believes she developed the generic attributes outside of the university curriculum (including her University College experience as College Captain, and “on the job”) and stated that she did not believe that any exposure to generic attributes in the university curriculum enabled her to “*take something*” into the workplace.

### **Case study 3: Nina**

Nina graduated with an honours degree in law and a degree in arts. She currently works as a solicitor for a small law firm. Nina regards herself as an ethical person with a high degree of integrity. She is confident and stands fast to her principles, believing these qualities are vital not only to practising in the area of criminal law, but to all work situations.

**The work context**

Nina first went to university straight from school in 1986. After having to leave because of failing too many subjects she entered the workforce, working in a variety of roles including teaching horse riding and working as a secretary. She also attended secretarial college and later a College of Technical and Further Education (TAFE). Nina re-entered university as a mature age student in 1996, enrolling in a law degree.

During her time as a student (post-1996) Nina gained a summer vacation clerkship with a large law firm in a large city about one and a half hours away from where she lived. When university re-started, she continued at the firm, on a part-time basis for the rest of the year. Her role was primarily that of researching intellectual property on behalf of one of the partners. (For the purposes of this case study, this firm is regarded as her first employer.)

After her graduation from university, a position became available in the city where she lived. This, her second employer, was a government department and Nina worked in the area of criminal law, initially as an assistant solicitor, then as a solicitor. She resigned her position with the department after one year of employment.

Nina is now practising as a solicitor in a private law firm (third employer). She has been employed on a part-time basis (not her preference) and is engaged in both commercial and court work.

**Main attributes used initially**

The overriding attributes for success in each of her workplaces are, in Nina's view concerned with interpersonal understandings and communication. While she used all attribute groups described in this study in her first two workplaces, she spoke primarily of these two attribute groups below:

- Interpersonal understandings, for example learning about team work and team dynamics.
- Communication, such as being able to analyse and synthesize various forms of information and prepare reports. Oral communication was also important for Nina. This included abilities such as advocating, and arguing – as part both of her discipline work and her workplace relationships.

In Nina's first workplace, a large private law firm in a major Australian city, she worked initially as a summer clerk. She had secured this position by competing with a large number of people from around Australia.

*"Something like 800 people apply each year – for a clerkship. They gave 14 in the year I got one. People realise if you get a place here you get a job afterward.*

She subsequently became a research assistant to one of the partners (in the firm) engaged in researching intellectual property. Although she utilised all four generic attribute categories described in this thesis, she believed that the two outlined above were those that enabled her to be successful in her work environment.

*"At (name of firm) you are working with people who are very confident – in who they are, how to communicate and how operate. They don't see other people as a threat. It is easy to learn from them."*

It was also with this employer that Nina was first exposed to "brown nosing" as she called it, "having a partner look out for you". She accepted and understood this, saying "it is part of the game". This, for Nina, was a trusted and acceptable part of the team and organisational practice and culture. The idea that trust is determined by the interplay of people's values, attitudes, and feelings, is

explored by Jones and George (1998). They propose that unconditional trust in an organisation can produce "teamwork synergy", (Jones & George, 1998: 542), and in doing so the organisation can develop and enhance its own capabilities. Nina believed this to be the case here.

*"This is a top key firm, like in the top three in Australia. They can afford to be choosy and they are. If you get a job ... you're set for life – that is the way the industry works."*

Because Nina felt there was transparency in how both the employer and employees operated, that is, it (brown nosing) was done in a "professional" manner, that is, "above board" and with a shared understanding by all, she both enjoyed and was successful in working in this environment.

### **Origin of generic attributes**

Nina credits her family and life experiences before undertaking her law/arts study as being instrumental in the development of the interpersonal understandings and communication attributes she has found indispensable in the workplace. For example, the communication in her family life played a large part in developing both her skills and her confidence,

*"My parents are very confident people and they're very verbal... a lot of banter, stirring... we've always been a very verbal family."*

This confidence was reinforced in her school experience,

*"... at school ...I was the lead actor in the plays.... being in a position to speak in public has never bothered me".*

Nina's part-time jobs (between her first university experience and when she re-entered in 1996) also gave her experience in working in teams, and she believes she had developed good skills in this area prior to her studying law.

As mentioned previously her first university experience was unsatisfactory – both from her perspective and that of the university administration, and she does not recognise or acknowledge the development of any of the generic attributes being considered in this study. However she views her second experience differently, and identifies the development of problem solving and critical thinking as significant. Nina believes that the acquisition of both of these groups of attributes enabled her to enter employment (in law) with a heightened sense of confidence. That is she learnt how to act like a lawyer – to argue like one, to think like one. As in Raewyn's case study (case study 2) this notion of "identity," of being able to "look and act like a worker in a particular context" (Falk et al., 2002: 53) is important in enabling effective communication to take place.

#### **Further development of generic attributes**

Nina's second employer was a large government department engaged in the area of criminal law. Her initial work involved analysing crime scene information and preparing reports for solicitors. These reports were used to assist the solicitors with trials. During her time with the department she completed her graduate diploma of legal practice, which meant she could then practise as a solicitor, and near the end of her employment with this department Nina had two trials where **she** was the solicitor. She enjoyed this role very much and felt she did a good job. The two important generic attributes for Nina in this job were:

- Interpersonal understandings, for example understanding the features of relationships in her office, making inferences about feelings, attitudes, motives, values, personality.

*"Because initially I was doing post-graduate study I did not notice what was going on... how people were being treated, how they were punished or rewarded for things that really had nothing to do with their jobs. I saw some people working really hard, getting criticised all the time and others getting away with doing practically nothing."*

- Communication, for example interpersonal communication – listening to the message.

After Nina realised that some of her colleagues were being overlooked for promotion and further opportunities, she decided to communicate this to her supervisors. Although she was ignored on the many occasions she brought this apparent discriminatory behaviour to their attention, she attributed this to *"their insecurities"*. Although some of her team members supported her appraisal of the situation (which she was finding increasingly untenable), with comments such as,

*"Look if you leave too it just means that we've lost another good person and we're left with people who behave like this (unprofessionally)",*

none of them were willing or able to support her enough to show team dissatisfaction to their supervisors. This apparent lack of team cohesiveness and support did not stop Nina from making one final effort at communicating the dissatisfaction she and other team members felt, but once more her individual voice went unheard.

Nina's team dynamics were interesting. While she considered herself part of a team, and in terms of Langford, et al's, (1997) typology received emotional support from some of the team members, there were others who showed no feelings either way towards the actions she was taking. In terms of informational and instrumental support, Nina felt she was making contributions to other team members in both these areas, but made no mention

of receiving either advice or information (informational support), or offers of help (instrumental support) from other team members. Appraisal support, which includes sharing common values and beliefs with some other team members and supervisors, was very disjointed. This appeared to be a major problem for Nina, who, while having good knowledge about the discipline area and enjoying the particular field of work, found herself becoming so affected by the differences in values and standards that she felt she had to consider resigning.

Nina finally made the decision to leave the department after a colleague was given a position that she had been led to believe she would be taking (she was more qualified, and had been *“in training”* for months). When she questioned her supervisor as to what was happening, it was made clear to her that she was not going to receive promotion in this particular workplace. She therefore decided the best course of action was to resign.

Although Nina could talk through some of the issues she felt were important with her colleagues (her team members), including those affecting staff both positively and adversely, she was unable to communicate successfully to her supervisors and eventually found the work environment untenable. As she says,

*“I grew to understand that I didn’t fit in there because they wouldn’t let me, and they grew to understand that they didn’t want me there either... because I’m not that much fun.”*

Nina may have become a victim of the “culture” of her organisation.

Culture is an abstraction, yet the forces that are created in social and organisational situations that derive from culture are powerful. If we do

not understand the operation of these forces, we become victim to them.

(Schein, 2004:3)

These forces are manifest in the patterns of behaviours/practices that particular groups engage in (Brown, 1998; Schein, 2004; Wilson, 2001). Organisations and/or groups may have such strong norms and values of self-protection that these override any inclusion of a “new” or “different” person, practice or idea. Schein (2004) illustrates this in his work with staff at Alpha Power who overrode new requirements imposed on the company by the courts. In Nina’s case, despite her apparent competency in the job, the group (that is the supervisors and some of her other colleagues) had its own safety as the paramount concern, and no person or practice that was different from the group culture was acceptable.

Nina currently works in a private law office (her third employer since graduation). She is employed on a part time basis, not something she planned for or would ideally like. However, her work environment while not tremendously stimulating is providing her with an opportunity to further develop her skills in her chosen profession (she described these as generic attributes associated with the “technical” nature of law), such as,

- problem solving, for example, planning a timetable and course of action, and
- critical thinking, where she would gather and assess facts and instructions from the client.

She is once again enjoying a workplace that she described as professional and transparent in its practices.

It is obvious from Nina’s experience that simply having the knowledge of a discipline, albeit a very good knowledge is not enough to be successful in a

workplace. Effective use of generic attributes such as those highlighted by Nina (ie. communication and interpersonal understandings) is essential to achieving and maintaining a healthy and satisfying worklife. The inability to do this, as we saw with Nina, can very easily change the course of a person's employment and perhaps career.

#### **Case study 4: Olivia**

Olivia has a commerce degree with an accounting major. On graduating she worked as a graduate accountant for a global accounting firm. She changed career pathways after a year and is currently working as an academic in an Australian university. Olivia is an outgoing young woman who thrives on intellectual challenges.

##### **The context**

After high school Olivia had a nine-month period of work in the hospitality industry. It was during this time that she decided to go to university. This decision was made partly because travelling to her job (in another city) was becoming tedious and partly because she had always desired a university education. Olivia's first two positions after graduation were with the same company, working as an accountant but in different roles. In both of these roles the work became boring and repetitive and Olivia resigned to seek work as an academic. She is now employed as an academic staff member at a medium sized Australian university and regards the work she does in this position as stimulating and rewarding and sees herself as having a long-term career in academia.

##### **Main attributes used initially**

In each of the positions Olivia has held critical thinking and problem solving are the generic attributes she identified as being important.

- Critical thinking, thinking reflectively. In her teaching career, after she had a bad experience conducting her first tutorial she commented,

*I'm not going to be able to do this... I didn't think seriously of giving up ... just going to be a bad tutor.... I got home and thought about it and saw one of my colleagues and he gave me a few tips. Another friend at... gave me similar advice."*

She thought about what they said and what her experience meant, made some adjustments, and, now feels more confident going into that particular class again.

In her both positions as an accountant critical thinking was not a generic attribute she believed was valued in employees at the bottom of the hierarchy (as she was). In fact, it was her skill in this area that led her to question (and ultimately make a judgement about) whether or not accounting was the profession in which she wanted a career.

- Problem solving, for example, identifying a problem (doing group work) and generating possible solutions to how she was going to manage this in her tutorials.

*"I try to gauge how they (students) wanted things and the overwhelming response was 'We hate group work. We don't want to do it'. I could empathise... so maybe it is not the best approach now. We talked about it and instead we do more teacher-student work. The theory questions I present to the class, and then get someone to respond. But I do think it is worthwhile having group work experience at university... maybe later on when things are going well and I have more experience."*

In her earlier accounting positions problem solving was a major part of her work, for example, doing audits without direction and/or guidance. Although this attribute was being used it was in Olivia's view problem solving at a basic level and the work became "boring and repetitive".

### **Origin of these and other generic attributes**

Unlike the other participants in this study in her first interview Olivia believed she had developed all of the generic attributes in this study in the university classroom.

*"Definitely, everything from those four categories I've got from uni. I wouldn't have had them otherwise. There is no way."*

In her professional life she uses her problem solving skills each day,

*"... with an accounting major, that was the whole point – to analyse information..."*

In her current teaching position Olivia believes she often draws on the critical thinking skills she learnt during her time as a university student.

*"We had just about a whole course on critical thinking..."*

It is interesting to consider Olivia's belief that she would not have any of the four generic attributes if it had not been for her university teachers, ie. the origin of these attributes was the university. Unlike most of the other participants in this study Olivia describes herself before starting university, as not being particularly confident. Although she had many part time jobs before she began university, including in retail and hospitality, she did not perceive herself as having any particular skills other than being able to communicate reasonably well (seemingly a contradictory statement to the one she made above). It would be hard to imagine working (Olivia deferred her first year of

university and worked for nine months in the hospitality industry), and not having developed for example, any ability to make a reasoned judgement, or reflect on a given situation and so on. So was/is Olivia's perception perhaps not as sophisticated as it might be? Could the original development of the four generic attributes have originated before university? Could it be that her university experience gave her the opportunity to develop them further and the confidence and ability to recognise and acknowledge that they exist at what she now perceives is a reasonably high level? This may very well be what happened and is perhaps illustrated by the following statement Olivia made about her confidence levels,

*"Uni helped me, yeah.... I always thought I could do something, but I am too scared to do it. And through studying at uni and just like getting the respect of the lecturers or people saying - 'you're getting good marks'... I thought I must be doing something right. I've got a mind that I can use..."*

It is beyond the scope of this study to explore these questions further, however the whole notion of what critical thinking might mean and how the skills might be developed and used is worthy of further research.

In her second interview, Olivia believed that she had actually developed the other generic attribute categories (communication and interpersonal understandings) before her university experience, from both her high school experience and her work in part time jobs. Her university "classroom" experience further enhanced her skills in the above categories. Interestingly too, Olivia made no mention about her overall university experience playing a part in the development of the generic attributes being studied here, in fact when asked specifically about the impact of the university environment she commented,

*"I had friends... and all that sort of thing, but there was no way I took advantage of the social aspect of uni the way other people do. I'm more a study type person and concentrate on the work rather than the social."*

It was not until one of the later interviews that Olivia credited some of her attribute acquisition to her university experience as a whole. This alteration in perception may be due to her developing an understanding that generic attributes are contextualised within a given workplace as opposed to simply being transferred. Through interviewing Olivia it also became apparent that what she learnt at university degree level about accounting, prepared her well for her initial employment in accounting firms. In contrast to some of the other participants in this study, it appeared that she developed generic attributes that were not too different from what she needed at work. The process that enabled Olivia to alter her perception may have been that of coached reflection, ie. ongoing engagement with me as interviewer, for example through reflective note taking necessary for the critical incident interview, and so on. (The concept of reflection and coached reflection is discussed more fully at the end of this chapter.)

### **Further development of generic attributes**

Olivia believes she started her first accounting job with the attribute groups this study is investigating. Being employed by one of the largest accounting enterprises in Australia was exciting for her and she believed that she would be in a stimulating and challenging environment where she would further develop the skills she had.

*"The company had a reputation for being one of the best firms, very progressive, train in this, and we do this for our staff."*

The problem for her was this was not at all how she experienced the workplace. She was at the bottom of a very hierarchical company and learnt fairly quickly

that any opinion she might have would be dismissed without consideration. She illustrates this is the following statement,

*"I wouldn't even... there'd be no way I could impart any critical judgement on the procedures or whatever 'cos they'd just be like, 'we don't care what you think, you're just a graduate, you don't have any good ideas'. Even if you had been here for 10 years or whatever."*

So rather than further development of her skills, she felt stifled and unable to work to her own perceived level of capability. Even in her second job with the same company she faced similar issues. So facing the dilemma of having a job that she expected to love but finding that the total work environment frustrated her, meant a bit of 'soul searching' for Olivia.

In thinking about what she loved about her university experience, what skills she really enjoyed using, what she was passionate about, Olivia decided that an academic career was what she really wanted and might be best suited to. In the time she has been practising as a junior academic staff member she has used and developed further all four groups of generic attributes being studied here. The two categories that she highlighted in her critical incident are as previously stated - critical thinking and problem solving, and the incident involved both of these categories in an intertwined manner.

- Critical thinking and problem solving

The incident, labelled as "negative" by Olivia involved a "calamitous" experience with her first class during her first week of teaching. Her preparation for the class had been meticulous but in her own words.

*"Nothing went according to plan, I got nervous and flustered."*

While there had been contextual factors (over which Olivia had no control) that affect her teaching she was confident of some degree of success as she entered the teaching environment. It became obvious fairly early on in the class that the expectations she had of what would happen in class were not congruent with those of her students. They also brought other issues into the room that impacted on how the session would end up. The issue in the classroom for Olivia became one of her trying to decide what the problem was, what to do about things “*not going according to plan*”, which information and feelings to take account of – her own or the students, or both – how to evaluate all of the information she was receiving and what, if anything she should do about it.

The result of this class was that students received some factual information, aired their views and the class finished at an earlier time. Olivia then began her own critical reflection on the event. Collegial support provided her with the confidence she needed to facilitate the same session with other classes later on in the week, and to face her first group again the following week.

Like the preceding case studies, the experience that Olivia had could not be reproduced in the classroom when she was a student. Despite learning and practising critical thinking and problem solving skills at university it was in the context of her own work practice, that is, her own classroom where she was the “teacher”, that she was required to give these skills meaning and relevance, and to deal with the consequences.

### **Case study 5: Erica**

Erica has a degree in Arts with a Commerce major. She was initially enrolled major in a foreign language but switched to commerce when a position became available with an accounting firm. The firm merged with another accounting business a year after Erica began her employment, and she remains working for the “new” firm. Erica believes she is a dedicated hard working employee who

aspires to work in an organisation where staff morale is high and sound employee relationships are valued.

### **The work context**

Erica is an accountant with a local accounting services firm. She is unsure how long she will stay as her conditions of work could be described as “less than ideal”, something she finds disappointing, as she had hoped for improvement after the merger.

### **Main attributes used initially**

Erica’s first position with the firm was very much one of trainee accountant. She did a lot of administrative work, eg. financial reports and tax returns, so her written communication skills were being used in a fairly basic way. She does not believe that her oral communication skills or any of the other generic attribute categories were utilised in this trainee position. The work had become repetitive,

*“... you can’t just be a robot which I guess is what they want...”*

and Erica handed in her resignation not long after the merger.

However after some negotiation with her employer she decided to remain with the company and now has the role of accountant.

Her second position is still with the “same” company as both she and her employer have negotiated a different role for her along with some improved conditions of work. In her new role as accountant Erica now has clients contact her directly and has been given more responsibility for her team and how it functions.

While she still uses communication in her role, it is at a more advanced level. She deals directly with clients (eg. face-to-face meetings) as opposed to being

given requests from clients, by a senior staff member, and is responsible for the message that is communicated to them.

The two generic attributes she highlighted as using in her current position are problem solving, and interpersonal understandings:

- Problem solving, both with clients and her own team members – where she finds herself helping people work through difficulties and identify solutions.
- Interpersonal understandings, where she is using, and further developing skills related to teamwork and working with different staff members.

### **Origin of these and other generic attributes**

As mentioned earlier Erica believed she had been developing the four attribute groups in this study in both her personal and work life, before starting university. For example, Erica believes her communication skills were fairly highly developed as a result of her exchange visit to Japan (as a secondary school student). Living in a city with many different cultures and interacting with students from different backgrounds (ethnic, cultural, religious and so on), as she does, also helps to hone her communication skills.

She is unsure of whether her university course helped with further development, but certainly believes her total experience there did,

*"I can't just say that, well I learnt that at university... but I am sure being at university helps – being exposed to international students, you had to see how they reacted differently to things."*

She does remember practising communication. For example communication was an integral part of learning Japanese, her first major in her degree. In terms of problem solving, she has no memory of being explicitly taught skills in this area but imagines that she probably did do assignments where problem solving was necessary. However she did acknowledge there were a few times where terms such as critical thinking were stated explicitly

*"...in the ... department you did assignments which were labelled critical thinking or something like that. Mostly they did not say you are going to be using (a particular attribute group) it was just ' Here is the assignment and this is what you have to do, go and do it.' "*

She thinks that her problem solving and critical thinking skills initially came from her family environment eg. listening and being part of "serious" conversations; learning when not to interrupt; deducing what was happening, how to behave and so on.

### **Further development of generic attributes**

In Erica's new role within the company she has moved from being a trainee accountant to accountant. It was this new role and its negotiation that Erica identifies as her critical incident. As mentioned previously, this new role has meant she has had an increase in responsibility eg. she now interacts personally with clients rather than having their work referred to her by a senior member of staff.

In this role she highlighted the following two categories of generic attributes as being particularly important:

- Problem solving, such as helping clients identify problems relating to tax issues, and/or generating and exploring solutions with clients. (Problem solving in a staff team situation is covered below.)

- Interpersonal understandings, such as helping team members with problems and issues that they identify; and getting people to work effectively together.

In her current role, Erica finds the work somewhat more rewarding than what she was formerly doing,

*"I am doing much more rewarding work now.... Before I felt like a data entry person..."*

As well as using her problem solving abilities with clients, Erica is using them, plus those within the interpersonal understanding attribute category, to work within her team. She is finding this both enjoyable and challenging,

*"Yeah, well we've got a few junior members... you see what problems they're having...try to help... so everyone is OK about things again."*

Working in an environment where the staff turnover is high and morale fairly low is making this particular aspect of Erica's job rather difficult. Although she has been given more responsibility and has a more interesting job than previously, the salary increase she was promised was delayed for a time and the change in work conditions she was promised never eventuated. This has meant that Erica feels she is not being adequately rewarded for the role she is now playing.

Even after a three-week break during which time Erica expected improvements to be made in the work environment, staff turnover is still very high, morale is even lower than before she went away, and rumours are rife. The promises that the company made regarding her work conditions have still not been actioned and once again she is considering her future with the company.

## **Case study 6: Brian**

Brian's undergraduate qualification is in commerce, with a subsequent postgraduate qualification in financial planning. After completing his first full time year of study Brian also secured a full time job in call centre (working for a financial services company). He remained at university and completed his degree while continuing to work full time and carry a full time student workload. Brian changed employers during this time and his second position was with a stock broking and financial services firm. He remained with this firm until shortly after his graduation. His current position is with a global financial services company in a large Australian city. Brian believes he is a competent hard-working employee who enjoys challenging work.

### **The work context**

Brian is currently employed as a technical consultant to a financial planner. As mentioned above this is his third position in the workforce (three different employers). He regards this job as what he *"really wants to do"*; his previous positions offered him only aspects of this current one.

### **Main attributes used initially**

In Brian's first position (in a call centre) his communication skills were utilised daily,

*"... I was on the phone a lot on an advisory line so what we did there was communicate basically on the phone all day every day and written communication via letters and things like that".*

He had no memory of drawing on any of the other generic attributes employed in this study.

In his second position (with a stock broking and financial services firm) Brian's position meant he did *"... a bit of everything really"*. Although this included

working with superannuation funds, checking stock markets, and assisting clients with investing portfolios he regarded this as administrative duties and did not feel that he was drawing on any attribute category in this study other than communication. While he wished to work in areas that would utilise the other attributes, he was the junior at this particular firm and not regarded as having sufficient expertise to do so.

In Brian's current position (his third), with a global financial services company, he is working directly with financial planners – something he was unable to do in his previous jobs. He finds he is now,

*“... definitely using a whole host of skills that weren't being used.”*

While all four generic attributes are being drawn on, Brian highlighted critical thinking and interpersonal understandings as the two generic attribute categories that he uses more frequently than in his previous positions.

- Critical thinking, such as making, and helping clients make judgments about their portfolio profiles.
- Interpersonal understandings, for example, learning about team dynamics, and teamwork.

### **Origin of these and other generic attributes**

During his time at university Brian has no memory of being taught explicitly about any of the generic attributes that he would use in the workplace. He believes in retrospect that some skills associated with interpersonal understandings and communication were probably what students were meant to be learning from tutorial experiences however he does not attribute his learning of these to the university “classroom”. He was, in his own words,

*"too busy learning the content, not thinking why ..."*

For Brian, like Richard (case study 1), it was mastery of the content that provided him with the confidence he felt he needed to operate successfully in the workplace. He commented,

*"... they'd (clients) be asking curly questions and I'd be like 'Ooh...' so it really knocks your confidence around when you don't know what you're saying."*

As far as the generic attributes covered in this study are concerned Brian believes he learnt most of these outside of the university "classroom". When asked where he had developed his generic attributes, Brian answered,

*"Not uni. I can quite safely say that 90% of the stuff that I do here has been through past experience (various workplaces)."*

For example, in his first job at a call centre, although he was not given explicit training in answering telephone calls, by listening to others and practising with a buddy, he was able to manage by himself. His development of the skills associated with this form of verbal communication then increased over the time he was in this particular workplace. Generic attributes such as critical thinking and problem solving were and continue to be developed both in Brian's current workplace and in his personal life. His workplace practice has provided him with opportunities to work with others in problem solving activities, including working with the financial planners in exploring solutions to a client's investment query, and so on.

In his personal life, his changing of occupations has meant he has drawn on his ability to think critically. He has for example, made a judgement about what ethical practice is in his occupation, and taken appropriate action (ie. moved from one company to another.)

### **Further development of generic attributes**

As mentioned earlier, Brian gained his first job (call centre) after one year of full time university study. Although in this position, he was “*basically thrown in...*” he was able to develop his verbal communication skills associated with this job fairly quickly.

The generic attributes of critical thinking, interpersonal understandings and problem solving were drawn on in his experiences in, and of, his second and third workplaces (stockbroking/financial services and financial services firms), but Brian did not feel particularly challenged in his second workplace in terms of working with the generic attributes,

*“I would probably use communication. I should have been using problem solving if we (the company) were doing our job properly”.*

This statement although seemingly simple is in fact an indicator to why Brian moved to another employer.

*“I knew that certain circumstances existed and other incidents were happening... I thought a lot of the work being done was unethical.”*

In order to make this judgement, Brian had to draw on the skills comprising the problem solving and critical thinking attribute categories. In analysing his situation, identifying the issues as he perceived them; weighing up the arguments and implications, and finally in making a judgement, both of his workplace and what to do about it (ie. taking the action to move), Brian was using high level thinking skills. This situation could not have been provided in a university “class room” setting. Once again the skills required the workplace to give them authenticity.

In his third workplace Brian believes he is,

*"... definitely using a whole host of skills that weren't being used (in his other jobs)."*

He highlighted critical thinking and interpersonal understandings as those generic attributes he is now a lot more aware of developing.

- Critical thinking, in particular in making judgements of data and risk factors (following analysis).

It is this type of information that is important in Brian's job as it supports and assists a client's choice to make decisions on investing, buying/selling shares, and so on – in short, it helps clients make an informed assessment as to what is included in their investment portfolios.

- Interpersonal understandings, in particular teamwork (ie. working collaboratively, optimising team effectiveness and so on.)

Brian's understanding and thoughts on teamwork, both as he experienced in the university "classroom" and in the workplace are interesting in that the term group work has a particular connotation for Brian. Brian says of group assignments (at university),

*"... we didn't really do them as a group as such – we'd get together... and allocate each person a task and get together a week or two later..."*

He goes on to say about his workplace,

*"Everyone has their own specific tasks. I've never actually been in a position whereby everyone's doing the same task together at the same time".*

In his current position Brian is part of a supposed team – staff members attend meetings as a team (group) where tasks are allocated, and later get together again to collate the results. In terms of understanding Brian's team and the support that might be provided by members, it is useful to consider Langford et al.'s, (1997) typology of four attributes that can be assigned to social support, namely *informational* support, *emotional* support, *appraisal* support and *instrumental* support. Brian appears to be receiving support in some areas but not in others.

The areas where Brian appears to be given assistance include both *appraisal* and *instrumental* support. For example, when his team meets to collate their work Brian is most likely to be receiving some *appraisal* support. He does have a sense that he and other team members share similar values and are working towards common goals. *Appraisal* support according to Langford et al., (1997) involves affirming the appropriateness of acts or statements made by another. And as a junior member of staff, Brian has some support in his role as a team member, that is, he can ask for assistance and is not left to "sink". It appears then that Brian is receiving *instrumental* support, that is, he believes assistance will be provided if and when it is needed.

However, Brian's current team appear to lack both *informational* and *emotional* support (Langford, et al., 1997). *Informational* support is defined as information that is provided to another during a time of stress or when problem solving is required. It focuses on the complementary nature of skills within a team (Gmelch, 1984; Stewart, et al., 1999). The synergy associated with such action has never been apparent in this or, any team of which Brian has been a member. What is also missing for him is the **feeling** of being part of a team. For Brian the overriding factor absent from his "team" is *emotional* support, that is, support that involves the provision of caring, empathy, love and trust (Langford et al., 1997; Moss, 1973). As in Parris's (2003) work with teams, Brian's lack of *emotional* support detracts from his sense of being part of a team.

## **Case Study 7: Leanne**

Leanne graduated with a degree in information technology (IT). She initially enrolled in a double degree in IT and Law, but decided during her first year of study that her real interests lay in IT so withdrew from Law and studied IT for another three years to emerge with an Honours degree in that subject.

Leanne's first position was as a consultant for an Australian based e-Commerce firm. Her second took her into a different field, that of higher education where she was employed at a university as a junior academic staff member. Leanne thinks she is an intelligent well-balanced individual. She feels that a balance between work and other aspects of life is vital to sustaining effectiveness in the workplace and enjoying life.

### **The work context**

Although Leanne was first employed in the private sector in the field of IT (see above), her current role is as an academic staff member at a medium sized Australian university. The change from the private to public sector was made in part because her work in the former had become "*soul destroying and unrewarding*" but also to give her the balance between work and the rest of life that she mentions above (ie. an increased quality of life to that she was experiencing.) While she acknowledged that academic life would be busy she believed she would have more flexibility and control over her time and workload as an academic and would be supported in a collegial environment. As a consultant in her initial job, she did not feel she had any of these advantages.

### **Main attributes used initially**

In her first position as an e-Commerce consultant, the most important generic attribute for Leanne was:

- Problem solving, for example analyzing information provided and developing a plan to improve an existing situation. Leanne described her

work environment as,

*"...this is just a big brain in here. There is not a lot of group problem solving either.... If you have a problem you fend for yourself...."*

So problem solving for Leanne was very much a "sink or swim activity".

She mentioned two other attribute groups – not because they were highlighted in her workplace but because she believed they were important but not necessarily acknowledged as such by the managers or supervisors of the company:

- Communication skills in relation to the client were important, eg. presentation sessions, reports, and plans. Leanne's experience was that because she had highly developed written communication skills she was given the tidying up of other consultants' reports to do.

*".... My written skills are quite high so that means I get to do all the cleaning up of rubbish that gets put around the office and sent out to clients."*

- Critical thinking - Leanne remarked,

*"Critical thinking in here? Nobody does it because you are always running at the last minute... really annoying because there are times that you do need to stop and think...."*

### **Origin of these and other generic attributes**

The initial development of her skills Leanne attributes to her parents.

*"Most of them (skills) stem back to my parents... I have always had good communication and problem solving skills. ... I have always been confident in myself*

*and my own abilities."*

During Leanne's time at university she was exposed to the four categories of generic attributes being investigated in this study but has no memory of any explicit instruction regarding the generic attributes she would find, or indeed finds, useful in the workplace.

Having said that however, she did talk about some of the generic attributes that were covered in her formal degree program that she felt were not useful in the workplaces she entered. These included particular problem solving techniques – very structured ways of approaching problems in a defined discipline area, and ways of thinking in a critical fashion. In her first year as a law student she believed that both of the attribute areas mentioned above were taught but,

*"...did not necessarily translate into useable thoughts anywhere else."*

Communication skills she felt were also taught specifically for those who would practise law.

*"The negotiation skills doing a law degree are aimed at you as if you are a lawyer this is how you approach 'life'."*

Once again she did not find this particularly useful outside of the discipline of Law.

In her three years doing her IT degree she noted that the approach to teaching (in the classroom) the generic attributes of problem solving and critical thinking was far less sophisticated than in her first year (as a law student) and was far more focused on research skills. (At the time of her last interview she had not taken advantage of the latter skills in either of her two jobs, but hoped to do so as she started doctoral studies.)

### **Further development of generic attributes**

Having mentioned what she did not find useful in her university experience, Leanne did highlight one aspect of university life that she had found extremely valuable - her role as a tutor to students in second and third year IT subjects. To illustrate some of her learning in this role, she made the following comment,

*"... in terms of critical thinking, anything I (as tutor) said to the students had to be well argued...you really had to think about what you said before you did blurt out whatever was on your mind."*

Leanne believes that her role as tutor

*"...put you in a workplace, rather than a student sitting there being taught..."*

The tutoring setting created an authentic environment in which to practice and further develop the generic attributes that she would need on entering the full time workforce. Leanne believes all the attribute groups in this study improved dramatically through this role.

Leanne believes strongly that beyond her personal life her tutoring experience held the key to her further development of the skills comprising the four generic attribute categories in this study. Her communication skills improved dramatically, as did her ability to understand the different aspects of interpersonal relationships. She also highlighted the importance of a mentor in her tutoring role. The mentor, a senior academic staff member,

*"... helped get me to the stage of being able to tutor and being able to do it well."*

In her second position as an academic staff member in a university - a career change in which the work is vastly different from that she was doing previously - Leanne is now teaching in the discipline area in which she did her degree and

initially practised. In this job she uses all of the generic attributes under examination here but highlighted the following two as particularly important, commenting that her frequency of use has risen dramatically along with the level at which she perceives she is operating.

- Communication, for example, getting ideas across to students both orally and in a written or diagrammatic form.

*"You are this teaching figure that the students, especially the first years, look up to you... Students rely on you a lot. I give them notes, and other materials and explain things to them in detail. They need you to tell them how to do everything."*

Communication in this job is much more varied and complex for Leanne than in her previous job as a consultant where she worked with a client – a leader of a group of adults who had expertise in a specialist industry area. She is working at further developing her communication skills as an academic staff member to ensure she can help her students reach their maximum potential in her classes.

- Interpersonal understandings, for example, getting students to work effectively together.

*"Dealing with more than 300 students is hard. You have to juggle classes of about 50, and the student population is really diverse. They need to work effectively in class and sometimes in groups. And they can have family dramas that interfere with their studies. I deal with conflict, mediation...I counsel... actually parental guidance is the best way of describing it."*

When asked where she believed this particular attribute originated she thought it was an almost "innate" ability, something "pulled" from her parents experience and her own past personal experiences. She also commented that

being younger than most of her students (except for the undergraduates) seemed to give her an ability to relate to them in an effective way.

Leanne is finding her role as an academic staff member stimulating and challenging. Although busy, she has found what she believes is a job that gives her a better quality of life than she had previously. She plans to remain in academia.

## **Reflection**

All participants in this study engaged to a lesser or greater degree in reflection on their experiences both inside and outside of the workplace.

To avoid confusion in discussions about experiential learning, a clear distinction must be made between experience and what has been learned through experience. Evans (1988) regards as crucial, the "intellectual test" of moving from a description of experience to identifying the learning derived from that experience. In this study, the critical incident interview in particular required participants to do this, however, it is acknowledged that as with the tacit components of skills, part of one's experience (learning) must remain unexpressed.

The concept of experiential learning can be traced back to the ideas of philosophers and psychologists such as Dewey (1916), Husserl (1970), Rogers (1967) and Shaffer (1978). Kolb (1984) defines experiential learning as the creation of knowledge through the transformation of experience. In Kolb's four-stage cycle (concrete experience, reflection observation, abstract conceptualisation, active experimentation), the concrete experiences form the basis of observation and reflection. This reflective process is the necessary condition for the formation of new abstract concepts and generalisations that can then be tested against reality in new situations in an active experimentation phase. However, for learners to develop their full potential, the development of

skills in Kolb's four quadrants is necessary. For Kolb it is the dialectic tensions between the poles of the dimensions that are the catalyst for new learning.

While Kolb's model has been enormously helpful in educational endeavours (for example in planning and designing courses), the reflection process was not elaborated. Boud et al.'s, (1985) work on the importance of reflection in experiential learning has led to their proposing a three-phase model leading from experiences to reflection, and onto outcomes or action. They divided the reflection phase into three stages, returning to experience, attending to feelings, and re-evaluating experience. Boud et al., stress the importance of recalling detail as a prompt to remembering emotions and responses while refraining from making judgements about the events.

Systematic reflection on experience is a matter of discerning the relation between what one tries to do and what happens in consequence: it implies "pausing" and "looking backward" on one's actions (Boud et al., 1985; Dewey, 1938;). Or as Schon (1983, 1987) describes it, a pause in the midst of action or afterwards. Such reflection serves to develop concepts and theories (Stanton, 1984) and to carry forward what is learned from one's actions (Freire, 1970).

Reflection-on-action is a contemplative experience that may be facilitated by someone other than the learner. However, reflection-on-action is distinguished by Schon (1983) from reflection-in-action in that the former has no direct connection to present action. It is reflection-in-action that is central to the art through which practitioners cope in practice (Schon, 1983, 1987). All participants in this study were learning to reflect on their actions. Their ability to use professional artistry (that is the kinds of competence practitioners sometimes display in unique, uncertain, and conflicted situations of practice) would necessarily develop over time and with critical reflection on their experiences. Artistry may for example encompass the art of problem framing or posing. This "art" was part of the problem solving category (of generic

attributes) considered in this study. Participants could be regarded as novices to the process of reflection-in-action, in that they are at the early stages of developing their skills of reflection generally.

Coached reflection may be described as a structured approach to reflection. In contrast to reflection-in-action and reflection-on-action, it is essentially a formal intervention ( Seibert, 1999; Te Wiata, 1993) (See Table VII for comparison.) It may involve such exercises as reflective sessions using structured questions and guidelines, and critical incident interviews, and is facilitated by someone other than the learner. Whereas coached reflection involves helping individuals think through a past action, (ie. reflection-on-action), reflection-in-action is

... an informal and natural cognitive response to an unfamiliar and stretching experience.

(Seibert, 1999: 55)

In my study, the participants were given a number of opportunities to hone their reflective skills, including, reflective note taking, semi-structured interviews, email dialogue and critical incident interviews. The extent to which this coached reflection impacted on subsequent perceptions of their experiences is not known, and was not the subject of this study. However, it is one plausible explanation for why Olivia (case study 4), in particular may have altered her understanding of the contexts in which she developed the generic attributes at the centre of this study.

**Table VII Comparison of coached reflection vs reflection in action**

(Seibert, 1999: 57)

| <b>Coached</b>                                                | <b>In-action</b>                                                     |
|---------------------------------------------------------------|----------------------------------------------------------------------|
| An intervention designed to promote review of an experience   | A spontaneous mental process intended to make sense of an experience |
| Facilitated by someone other than the learner                 | Conducted by the learner him/ herself                                |
| Occurs at discrete points in time                             | Is ongoing                                                           |
| Is planned using formal, structured tools                     | Is unplanned and informal                                            |
| Occurs by physically removing the learner from the experience | Occurs in the midst of the experience                                |
| Is contemplative                                              | Is active                                                            |

### 6.3 Summary

This chapter has provided an account of the contexts in which generic attributes are learnt, their development and their use in the workplace. It has shown that among other things, a number of generic attributes that are used in the workplace appear to be learnt best there and in some cases may only be able to be learnt there.

We might consider the development of generic attributes in three different ways:

- naïve view – where generic attributes are regarded as generic and transfer unproblematically;
- sophisticated view – generic attributes are somewhat generic but need to be contextualised in new situations. This means that transfer is not unproblematic but requires learning;
- anti-generic view – the so-called generic attributes are not generic – rather they are unique to each different context.

Although universities appear at the time of this study (either implicitly or explicitly through their policies and practices), to hold to the naïve view, the data from this study primarily supports the sophisticated view of generic attribute development. Support for the third view also appears to be indicated in some of the information from participants.

These views are further illustrated and considered in the next two chapters.

## Chapter 7: Meanings

It was proposed in Chapter 6 that the development and use of generic attributes could be viewed in three ways: naïve, sophisticated, and anti-generic. Results from participants in this study primarily support the sophisticated view, that is, context and/or contextualisation play an important part in the success of generic attribute use in the workplace. A few results also suggest a small number of generic attributes that can only be learnt in the workplace (supporting the anti-generic view). If these findings are the case, universities then may, at best, only be able to lay ground-work that facilitates the later development of generic attributes in the workplace.

This chapter considers the three views above when discussing some of the meanings generic attributes had for participants, along with the organic, holistic, multifarious and pivotal themes identified in Chapter 5. The chapter begins with an explanation of the metaphor “Magic Apple”, used to develop the themes. Section 7.2 then discusses the “what, where and why” of generic attribute acquisition and development. Section 7.3 describes the “what and how” of generic attribute use in the workplace, and section 7.4 covers the “how and why” generic attributes were important for participants.

## 7.1 Introduction

### Explanation of the metaphor “Magic Apple”

In Chapter 5, four themes were identified:

- Organic
- Holistic
- Multifarious
- Pivotal.

To conceptualise the acquisition, development and utilisation of generic attributes, the magic apple metaphor is very useful. Apples are:

**Organic:** Generic attributes, like apples, are organic in nature. They begin with a seed and blossom into fruit, just as generic attributes develop over time. Participants in this study began acquiring a number their generic attributes before they reached university and will undoubtedly continue to do so long after they leave. This development over time raises significant questions about the plausibility of lists of graduate attributes generated by educational institutions.

**Holistic:** Just as apples are regarded as whole fruits, rather than as separate individual components, so generic attributes ought to be viewed as combinations of related elements organised into a complex whole. For example, in the workplace generic attributes are used in an intertwined manner, and not able to be atomised and used as separate elements.

**Multifarious:** There are many variations in apples - different colours, flavours, textures and so on - again like the diversity in participants’

generic attributes, in the contexts in which they were learned and used. There are also differences in the way generic attributes are understood (naïve, sophisticated and anti-generic views) by different stakeholders in the education-workplace interface. These variations do of course have implications for all parties involved in the education and subsequent employment of university students.

Pivotal: The health of a country is dependent to a large extent on the health of its communities. Just as apples might be regarded as important for the health of individuals, so the generic attributes in this study are crucial to the education and well being of the participants, and their universities and workplaces. For example, where employers understand and value the meaning that generic attributes can have in a participant's performance in the workplace they are more like to retain a motivated employee. This usually results in a healthier workplace (both in social and monetary terms). Of course there are also health benefits for the employee (which may include monetary rewards.)

The depiction of an ordinary apple to conceptualise generic attributes is, however, unsatisfactory. Ordinary apples have finite lives and ultimately degenerate. Generic attributes in contrast suffer no such fate. As Lindsay's (1918) magic pudding is everlasting, and capable of changing itself, so too are generic attributes. Or, at least as long as there are humans they will exhibit generic attributes.

## **7.2 Acquisition and development of generic attributes - where, what and why?**

### **7.2.1 Where were generic attributes acquired and developed?**

The previous chapter showed us that for all but one of the participants, the university classroom was not perceived to be the primary source of acquisition or development for those generic attribute categories described in this study, that is, critical thinking, problem solving, communication, and interpersonal understandings.

Where the university was mentioned, it was most often the experience itself **not** the course curricula that was regarded as the important factor in further developing generic attributes at university (even if teachers, on occasions stated explicitly that particular strategies would focus on development specific generic attributes). The example given most often was the importance of the university experience in forcing one to manage oneself. This included aspects such as planning and managing timetables, and managing and evaluating one's own learning, understanding and managing one's own feelings, being sensitive to others and working collaboratively. This finding confirms Atkins' (1999) supposition that it was likely that university life (outside of the formal curriculum) was responsible for developing what he termed, generic process skills and personal attributes, that employers believed they were looking for.

A variety of other settings were also noted as contributing significantly to the development of these generic attributes before and during study at university. These contexts included family environments (where negotiation, communication, and getting along with people were often mentioned); workplaces for part-time work, (where team work was mentioned along with learning how deal with people, resolving conflicts, and making judgements); and sports teams (where, apart from team work, attributes such as learning about oneself, identifying difficulties, evaluating situations, and planning

strategies were noted). Smith and Comyn (2004) in their study on teenage workers also noted the importance of part time work as a means for developing generic attributes in young people (some as young as 13-14yrs). And confirmation that generic attributes are developed in contexts other than the university curriculum and workplace also comes from Virgona and Waterhouse (2004), who found that family life and community contexts are also important environments.

One notable exception to the general perception that the university curriculum was not important in the development of generic attributes was the view expressed by Olivia (Case study 4). She believed that all of the attributes categorised in this study, plus gaining her job as a university academic member, were directly attributable to her experience in the university in "classroom". For example, she believed that her ability to mount a coherent and persuasive argument, to *"get the message across"* was one of the factors that worked in her favour at her interview. As mentioned in her story in Chapter 6, Olivia's perceived lack of acquisition of any generic attributes before or outside of her university course may have been mistaken. Through the process of coached reflection (described earlier in Chapter 6), that was an integral part of this study, Olivia did recognise in one of her later communications (via email) that she had acquired and developed some of the generic attributes from sources other than the classroom.

*"I think I did get the skills from both, but to a greater extent the university curriculum itself."*

There are several possible explanations for why it took Olivia some time to alter her perception about the contexts in which she developed generic attributes. Perhaps her memory of being "taught" some generic attributes in the classroom was very strong and they may have been reinforced on her return to a university environment. The two academic staff involved with Olivia had been

very explicit in what they were doing, and actively promoted the importance of generic attributes for and in the workplace. This promotion is viewed by Callan (2004) as important strategy to improve the take up of generic attributes. Coupled with this, having discipline experts “teach” generic attributes in the context of a subject has also been shown to be effective for development (De La Harpe et al., 2000). Another explanation may be that if indeed generic attributes are developed through experiential learning, guidance and practice, as argued by Haigh and Kilmartin (1999), Olivia may have only realised for the first time in the classroom (with the two specific staff members she mentions) that she was developing a number of generic attributes. As with the students discussed by Haigh and Kilmartin (1999), the situation may reflect in the same way, her stage of development within the experiential learning cycle (Kolb, 1984).

Another interesting point noted by three participants was that their university curricula had helped with generic attribute development that was related to a specific discipline context. For example, in the study of law, learning how to argue and/or negotiate like a lawyer was viewed as being helpful. The two participants here did not however find this use of generic attributes helpful in dealing with life situations (that is outside of the professional law context). Another cited example, by a third participant, was a university subject that she was studying that explicitly modelled how to think and act like a manager. Once again she found this of use in her specific workplace environment as opposed to other contexts. These illustrate what I have previously termed an “anti-generic view” of generic attributes. That is, so-called generic attributes are not in fact generic but rather unique to each different context. This view is supported by various writers including (Balin et al., 1999; Barrow, 1987; Hinchliffe, 2002; McPeck, 1987; Perkins & Salomon, 1989). These writers all argue that context has a major impact on the use of generic attributes, and, that if an attribute is to be effective it needs to be developed in each specific environment, ie. it cannot be common to different contexts.

### **7.2.2 What was learnt in the university “classroom”?**

So, the perception of most participants was that the generic attributes described in this study were not acquired or significantly developed in the university classroom. This then compels one to ask the question, what if anything did they perceive they learnt? First, all participants believed the content knowledge of the discipline itself was acquired through the curriculum, primarily through classroom activities. Second, their confidence was developed. This was one of the most important factors participants believed helped them to demonstrate their generic attributes in the workplace. Some identified a strong link between the confidence in “knowing” the subject matter of a discipline, which then gave them confidence in themselves, and ultimately their ability to demonstrate a particular generic attribute and or to talk about their discipline to an employer. Others spoke of gaining confidence in speaking in front of others (where this was practised in the classroom). Last, the jargon of their chosen profession was learnt. As mentioned in Raewyn’s story in Chapter 4, learning the jargon of marketing enabled her to sound credible in her workplace.

Some of these examples may initially appear to be illustrations of communication and therefore contradict these students’ earlier perceptions about development of their generic attributes. However this may not necessarily be the case. The participants who gained confidence through either an increased discipline knowledge base or by learning some of the jargon of specific discipline believed they already had the skills that make up the communication attribute. That is, they were already skilful at conveying information; what they sometimes lacked was the actual information to convey (eg. the content). Once their confidence in the content (or jargon) had increased then they were able to demonstrate their communication skills in various forums (eg. the university “classroom”).

Other questions arising from this study include:

Does it matter if generic attributes are not or might not be developed in the university classrooms?

Whose interests are being served by developing these generic attributes in the university curricula?

Should developing generic attributes be the purpose, (or part) of university education?, and

Ought we to be concerned that the generic attributes we espouse are being developed at university might not be?

These are significant questions and areas for further research and debate. While final answers are beyond the scope of this study, this research suggests limited answers that I consider in Chapter 8 (Reconsiderations).

It is within the scope of this study, however, to consider the following question more fully.

### **7.2.3 Why was not the acquisition and development of generic attributes in the “classroom” as successful as it might have been?**

Given the external environment at the time of this study (ie. a major focus on generic attributes with government funding and initiatives, industry advocacy, and prospective students wanting to be competitive in the workplace), it is reasonable that the university from which participants were drawn believed it should play a leading role in helping its students acquire and develop particular generic attributes. Since this was part of its role, and given that there were policies and practices in place supposedly enabling this to happen, why

did the perceptions of the majority of participants in this study differ from those of the university? Some of the possible explanations are outlined below.

First, at the time this study was conducted it appeared that the policy of the university (from which participants were drawn) was confused and contradictory about exactly what generic attribute acquisition and development meant (see Chapter 2). The discourse related to the area was jumbled and unclear, and it appeared that the university staff responsible for advancing the policy held a naïve view of generic attribute development and transfer, (ie. uncomplicated and straightforward), while other staff held conflicting views about the phenomenon of generic attributes (Milne 1998, University of Wollongong Comprehensive Information Literacies Working Party 1997). Glover et al., (2000) found that one of the most important factors in the success or otherwise of generic attribute acquisition and development was whole staff understanding. That is, all staff need to be aware of the meaning, implementation and assessment of generic attributes. The idea of meaning for staff is highlighted as problematic by Barrie (2003, 2004, 2006) where he showed that academic staff can hold very different conceptions about generic attributes – their conceptions, acquisition and development. (This is discussed earlier in Chapter 3, Section 3.1.1 and Section 3.1.3.)

Second, like a number of other universities, the university from which participants were drawn also had its graduate attribute list - a public declaration attesting to the prowess of the university to develop generic attributes in its students. Policies and practices at the university during this time gave the impression that if generic attributes were embedded in the curriculum then students would not only learn them, but also be able to transfer them to the workplace and use them effectively. Not surprisingly the thinking in curriculum development at the time had not been extended to consider what, if any, contextualisation might be needed in order to make the transition from university classroom to workplace successful. Rather the whole

process was seen as uncomplicated. The approach taken to embedding generic attributes into the curriculum (as opposed to an add-on unit) appears on the face of it to be a sensible way forward (De La Harpe et al., 2000; Medlin et al., 2003), giving the generic attributes the same status as subject knowledge (James, 2000). However in this study as in Burke et al.'s (2005) more recent work, this strategy did not appear to work well. Whether or not this was due to the uncertain perceptions of participants' and/or staff about what was wanted and expected, or whether or not the problem lay with differences and uncertainties in conceptions of generic attributes and transfer (Barrie, 2003, 2004, 2006; Eunson, 2004; Glover et al., 2000) is unclear.

Third, the participants in this study did not generally perceive they were being "taught" any generic attributes, let alone those useful for the workplace.

The participant who believed she developed all the attributes described in this study attributed this to two specific teachers she had during her degree course. These staff members were explicit in informing students about the expected learning outcomes ie. development of particular generic attributes, using appropriate teaching strategies, and in explaining how the generic attributes might be applied to a workplace environment. These particular staff members illustrate a more sophisticated view in conceptualising generic attribute development in that they recognise that the transfer from one context to another requires learning. This was not the norm at the university at the time participants were undertaking their degree courses. Research shows that embedding that is not made explicit is ineffective. It is necessary to both embed the generic attributes into the curriculum and to have an explicit focus on them in the teaching, learning and assessment processes. When this is done, along with the problematic nature of transfer being recognised, it appears that students learn how to shift their learning from one context to another more successfully than if they are left to gain this learning through some form of osmosis (Callan, 2003, 2004; Crebert et al., 2004; Dawe, 2002; Te Wiata, 1993).

Fourth, lack of authentic experiences may have also been a factor in the majority of participants perceiving no or little development in generic attributes through the university curricula. Very few degree courses had any work experience components in them. Whether or not the staff responsible for course design had regarded transfer as unproblematic (naïve view) is not known, but having some form of work experience may have helped with the transfer of generic attributes between contexts. There is wide support in the literature for the use of authentic experiences (such as work placements, eg. co-operative education, work shadowing, simulated work experiences or clients, problem-based or case-based learning activities) as both supporting and enhancing the development of generic attributes (Crebert, 2002; Crebert et al., 2004; Hager et al., 2002; Haigh & Kilmartin, 1999; Nightingale et al., 1996; Te Wiata, 1993, 2001). Although some courses had various forms of simulated work-place tasks (eg. moot court, information technology and engineering projects), participants did not generally perceive that any attributes developed from these situations were particularly transferable to their respective workplaces. This may have been because the links between contexts were not made explicit enough or it may be an illustration of the anti-generic view of generic attribute development. Perhaps the attributes supposedly taught here were unique to specific contexts (that is, demonstration of an anti-generic view).

Last, although the university from which the participants were drawn had policy regarding the development of generic attributes (see Chapter 2), the staff may have been either unable or unwilling to comply with it. Even if staff were keen to help further the development of generic attributes they may not have felt they had the expertise to do so. In an effort to gain a staff perspective on this issue I approached a number of academics (from the departments which I had drawn the research participants) to ascertain whether or not they would be willing to share their understandings and feelings with me on generic attribute development at the university. Five staff members agreed, one each from information technology, marketing, law, management, and accounting. I did

not establish whether or not any of them had taught the student participants in this study, as I wanted the conversations to be as informal and unstructured as possible. Our conversations ranged in length from 30 to 90 minutes and I simply sought their understanding and feelings about generic attributes and their teaching practice, with a focus where possible, on the attribute groups at the centre of this study. Staff members were comfortable with my taping our conversations, and after transcription and verification I was given permission to use the information if I wished. A number of distinct views were represented in our dialogue and are discussed below.

First, some staff were unclear as to what a generic attribute was, others had an idea but were uncertain about what “embedding” the attributes into the curriculum meant in terms of what they were supposed to do in the “classroom” to support the policy.

Second, there were also staff members who were apparently reluctant to comply with the policy. Both informal comments and anecdotal evidence suggests there were a variety of reasons for this. For some staff, anything apart from what they were currently doing was just extra work. They viewed “embedding” the attributes into the curriculum as another exercise to increase their already overloaded working lives. For others it was a case of holding opposing philosophical views either as to what generic attributes were, or what contexts they could be developed in, and/or which of those contexts was the most appropriate. Some of these academic staff members believed that the so-called generic attributes were not generic at all but were unique to specific contexts (anti-generic).

There is widespread support in the literature for the need for appropriate staff development opportunities, support, and teaching resources. For example, Barrie (2003, 2004, 2006), Briggs & Hodgson (2002), Burke et al. (2005), Clayton et al. (2003), Crebert et al. (2004), Dawe (2002), De La Harpe et al. (2000), Glover

et al. (2000) and Te Wiata (1993) all highlight the importance of professional development activities designed to enhance both the development of policy, and understanding and teaching of generic attributes.

Another view was that a university education was about teaching and learning the content of a specific discipline, not about developing negotiation skills and the like. This is the view held by Hyslop-Margison (2000b) who argues that teaching knowledge and understanding of a subject is much more in the interests of students than trying to teach a generic attribute such as critical thinking. He believes that the latter is pointless, claiming it,

... mirrors the search for miracle tonics often peddled by snake oil salesmen as a medicinal cure-all....researchers (should) abandon the discourse in its entirety to avoid the various fallacious assumptions it embodies.

(Hyslop-Margison, 2000b: 1)

Despite the policy documents that continued to be written, modified and advanced, these staff members would not intentionally incorporate the teaching of generic attributes such as the above into their day-to-day teaching practices. Rather, they believed that these attributes ought to be, and were best, learnt outside of the university "classroom".

And finally, yet another related view espoused by some academics (both at the university from which participants were drawn, and the wider university community) was that generic attributes such as problem solving and critical thinking were important to develop within an academic context. That is, the ability to judge objectively the validity of an argument, analyse lines of reasoning and so on, ought to be learnt and tested in an academic manner, most often through writing of some sort – typically an essay. Model answers to similar previous questions, for example, were provided to help students

develop their ability to think critically. It should be noted though, that many aspects of these types of exercises are not suited to the development of most generic attributes. For those participants in this study who thought that some of their generic attributes had been enhanced through the university curricula, this only happened in cases when explicit links were made with the workplace environments, and where staff showed the value of those links.

Any or a combination of the reasons described above may have been responsible for, or played some part in the varying success of generic attribute development (from the university curricula) in participants. What was clear from this study was all but one of the participants believed they developed generic attributes much more effectively and to a greater degree outside of the university “classroom”.

### **7.3 Use of generic attributes in the workplace – what and how?**

As we saw in Chapter 6 (Results) all of the participants believed they had used all of the generic attributes categorised in this study. Table VIII illustrates how some of the generic attributes were used.

**Table VIII Generic attributes in the workplace**

| Generic attribute category                                                                                                                                                                                                                            | Situation                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Critical thinking, eg.</p> <ul style="list-style-type: none"> <li>• reflecting</li> <li>• evaluating</li> <li>• judging</li> </ul>                                                                                                                 | <p>Making decisions over the strength and credibility of evidence.<br/>Deciding what material to put into lessons and how to conduct the sessions.<br/>Looking back at a situation and considering how and why it happened.</p> |
| <p>Problem solving, eg.</p> <ul style="list-style-type: none"> <li>• exploring, identifying and generating solutions</li> <li>• analysing information relevant to the problem</li> <li>• translating and representing features of problems</li> </ul> | <p>Devising solutions with clients to suit their needs.<br/>Analysing information and writing reports for clients.<br/>Translating diagrammatic representations of problems into written forms.</p>                             |
| <p>Interpersonal understandings, eg.</p> <ul style="list-style-type: none"> <li>• optimising team effectiveness</li> <li>• working collaboratively in a team</li> <li>• identifying individual differences and cultural diversity</li> </ul>          | <p>Sharing stories and experiences with team members<br/>Discussing and sharing tasks at regular team meetings<br/>Learning and accepting that others may work differently to oneself</p>                                       |
| <p>Communication, eg.</p> <ul style="list-style-type: none"> <li>• organising information</li> <li>• clarifying information verbally</li> <li>• presenting factual information via diagrammatic forms</li> </ul>                                      | <p>Writing effective lesson plans.<br/>Describing concepts over the phone so they are understood.<br/>Completing drawings that can be interpreted by other team members.</p>                                                    |
| <p>Other, eg.</p> <ul style="list-style-type: none"> <li>• increasing levels of self efficacy and confidence</li> <li>• managing oneself</li> <li>• knowing and using the jargon of the profession</li> </ul>                                         | <p>Handling moral/ethical dilemmas –personal and professional.<br/>Dealing with the pressure of “real” time.<br/>Being credible to colleagues and/or managers.</p>                                                              |

It can be seen in Table VIII that although the situations are categorised into generic attribute groups they do in fact involve using the attributes in unison. Writing effective lesson plans for example, involves many aspects of communication along with decision making about what material and strategies to include and what is most appropriate in a given situation. The latter may also involve personal and/or professional dilemmas, such as whether or not to use group work if a new staff member believes it would be a sound educational strategy, yet knows the students will be very resistant to its use. Finding the best solution to this predicament also requires problem solving skills, and to cap it off, the whole exercise is constrained by time, ie. the next class time is fixed.

Similarly, the case studies in Chapter 6 highlighted one or two generic attributes for each job that participants held. Once again the attributes were used in unison in an intertwined fashion rather than in isolation. Leanne (case study 7), for example, in her first position as an e-Commerce consultant found that although problem solving was the primary generic attribute category she used in her actual work, communication and interpersonal understandings were interwoven with this as she attempted to make sense of her relationship with others in the organisation, and what was involved in working for this particular company.

This overlapping and intertwining of generic attributes could be likened to what Barnett (2004) termed a supercomplex system. He provided the image of intertwined spaghetti strands where the,

... strands are so interwoven that any attempt to engage with one strand will have repercussive and unforeseeable impacts on many, if not all the other strands.

(Barnett, 2004: 249)

The generic attributes then, viewed in this entwined manner provide a description of the environment that faced participants in this study in their professional lives (workplaces).

The generic attribute category highlighted by all participants as crucial for survival in the workplace was that of interpersonal understandings. Every critical incident also involved this category. Understanding the aspects of workplace relationships, interpreting team dynamics, identifying individual differences and diversity all played an important role in helping participants work through their respective dilemmas. Participants believed that they had learnt about interpersonal understandings (and communication) before their university study and depending on the level of sophistication, these understandings were further developed at university (though with the exception of one participant, outside of the course curricula). This latter finding supports Atkins' (1999) work on what he terms "employability skills". He suggested that contexts outside of the university curricula (eg. membership of clubs, living away from home, community work, etc) were more responsible for developing the types of attributes (eg. interpersonal understandings) for which employers said they were looking. And, Virgona and Waterhouse (2004) also found that generic attributes are primarily developed in contexts outside the formal curricula, particularly in the workplace. Employers do of course look for evidence of these extra-curricular activities through the interview process, believing they are beneficial for employability. For example, in my study, Richard, (case study 1) was asked at interview about his teamwork skills. He cited his experience in both playing in, and managing a sports team as developing his generic attributes of interpersonal understandings and communication.

Interestingly though, after facing a major dilemma in their work life, all of the participants who had critical incident interviews felt their generic attributes were not as well developed as they had initially thought. This perception is in

line with that of their initial beliefs on entering the workforce, when except for the two mature-age participants, all the others in the study did not feel prepared for the workplace, despite their perceived acquisition of a number of generic attributes. For them, the (full-time) workplace environment was full of uncertainty, indeterminacy and ambiguity, having at the same time as many potential learning opportunities as it did hidden possibilities. Although participants wanted to be part of the full-time workforce, they felt disoriented and unsure about what it would bring. It was primarily the experiential learning they had gained outside the university curricula that gave them a sense of confidence when entering the fulltime workplace for the first time.

The perceptions of participants regarding the development of their generic attributes are of course in keeping with the notion of generic attribute development as a process over time (that is organic), rather than merely the acquisition of products. This orientation towards process is encompassed in the concept of lifelong learning. A profile of a lifelong learner proposed by Candy et al., (1994: 43-44) includes five major categories:

- An inquiring mind, eg. a love of learning
- Helicopter vision, eg. breadth of vision
- Information literacy, eg. ability to retrieve information using a variety of media
- A sense of personal agency, eg. a positive concept of oneself as capable and autonomous
- A repertoire of learning skills, eg. range of strategies for learning in whatever context one finds oneself.

It appears obvious that the types of attributes outlined above cannot be fully developed in a formal education programme alone, especially over a specified time, yet it appears that employers look for, and often state they require, these types of capabilities at the end of an undergraduate degree programme.

Undergraduate degrees need to be viewed realistically as the foundation for employment with workplace learning and lifelong learning increasing in emphasis. Hinchliffe (2006) notes,

... we seem to want graduates with all the attributes of the expert without investing in the years it takes to develop them.

(Hinchcliffe, 2006: 92)

In the Australian context discussions on lifelong learning have tended to emphasise skill training and employability issues rather than the processes that enable these outcomes to be developed (Beckett & Mulcahy, 2006: 262). These writers believe that the accomplishment of “employ-abilities” depends on two things:

- A prior commitment to undergoing diverse and socially located experiences from which one can learn, and,
- A continuing commitment to the articulation of reasons for one’s judgments at work.

One of the aspects regarding lifelong learning that is clear from the literature is that generic attributes are developed throughout a person’s life in a variety of contexts. And while workplaces and formal education institutions have an important part to play in the development of lifelong learning. Hinchliffe (2006) reminds us,

... it is the *learner* who takes on the mantle of pedagogy: the learner must become his or her own *teacher*.

(Hinchliffe, 2006: 94)

## 7.4 Importance of generic attributes in the workplace

All participants in this study believed that generic attributes were vital to their survival in the workplace. All seven who undertook a critical incident interview regarded the proficient use of generic attributes as crucial also to their progression in their chosen professions. This particular result is contrary to that found by Hawke (2004), where the learners in his four case studies did not in general see generic attributes as important in practice, especially when compared with technical skills. Indeed these same learners also believed that most generic attributes were not learnable. Although Hawke's learners were not new university graduates (they were existing employees who had been through a number of workplace changes, and received training in a variety of ways), it is important to note the difference between his results and those of my study, because it raises implications as to how generic attributes are promoted and fostered. Whether or not Hawke's findings were unduly influenced by the upheavals the four organisations experienced is not clear. What is apparent is that the whole area of generic attributes – their conceptualisation, acquisition, development and promotion – is problematic and as such much more dialogue and research still needs to take place.

Another important point identified by participants in my study was that generic attributes were also viewed as both satisfying and motivating factors in participants' lives, if and when they enabled them to make meaningful contributions to their workplaces. Where participants were able to utilise particular attributes to a level **they** perceived they were capable of, then they regarded themselves as having a good job and were likely to stay with that employer. Many writers, as mentioned, have previously investigated the different expectations and perceptions of various aspects of generic attributes. Hawke (2004) provides clear examples of quite different perceptions by employers, management, employees (learners) and providers. This study provides an example of yet another difference – the level to which different

stakeholders perceive generic attributes to have been developed and capable of being used. In this study Richard and Raewyn have stayed happily employed with their original employer. Both participants have had role changes and been given opportunities and challenges at the times they have needed them. Both have also been given support and encouragement when needed. It is little wonder then that they remain loyal employees. The importance of support and encouragement for novice workers (first full-time job), whether formal and informal has also been demonstrated by Smith and Comyn, (2003, 2004). For many employees and employers in their study there was a high degree of satisfaction when employees became confident, happy, and effective in the workplace.

In contrast, those who did not feel they were enabled or encouraged to work with their generic attributes to the level **they** believed they were capable of, were not motivated to continue in the same job and became quite dissatisfied with the situation. These participants' energies went into finding jobs where they believed they would have the challenges and opportunities **they** needed to use the attributes **they** believed they had developed. Olivia for example had two positions in her first year after graduation with the same company. Both were using her accounting skills (her qualification was in accounting) and, although she asked repeatedly for more challenging work, this did not occur. She became bored and restless with the repetitive nature of her roles and resigned. In securing another job, as an academic staff member at a university, Olivia believed the generic attributes she had developed are used every day to help her meet the challenges of her new role and she is highly motivated to remain in her current employment. She also believed her use of some generic attributes - communication for example (learnt and practised in a variety of contexts) - helped her to secure her current position.

When employees feel their efforts are going unrewarded they are faced with the dilemma of either staying with an employer (usually in the hope that things

will change) or moving on. In the current workplace environment there is seemingly a new set of values about expertise, loyalty, and so on (Virgona & Waterhouse, 2004; Virgona et al., 2003). It appears that the participants in this study believed they should be valued for their present level of expertise without waiting for the depth of experience traditionally gained over years of employment with the same company.

As mentioned above participants in this study viewed generic attributes as vital to enabling them to progress within their chosen workplace. Whether progress was perceived promotion, a pay rise, attendance at a conference, or something else, it was the effective and efficient use of generic attributes in the workplace that participants believed gained them this benefit. Raewyn for example believed that her increasing sophistication in the use of negotiation and interpersonal understandings has been pivotal in helping her rise from assistant status to management status in a shorter than usual period of time (about twelve months as opposed to at least twice that normally). Erica, too, although dissatisfied with the company she is with, believed that the effective utilisation of some of the generic attributes she had developed (for example, communication and problem solving) has been very important in enabling her to gain a more responsible and interesting position than she had previously held.

Apart from the importance generic attributes had in the workplace, participants also believed that by developing their attributes they learnt more about themselves as workers, and as individuals. For example, when Richard described his learning from his critical incident interview he spoke about self-discovery. He discovered through a change in his role and job that he likes and needs a workplace that can provide him with change and challenges. He went on to say that this was not something he had "*really recognised*". The satisfaction and ensuing excitement he felt when significant phases of a project were completed and the team progressed to another phase also highlighted this

desire for Richard. In learning about themselves as individuals Raewyn, too, provided an interesting example of how a “forced” change in her practice challenged her own beliefs about herself as a person. Before her nominated critical incident at work Raewyn believed that she was not “*the sort of person*” who would involve herself in exercises she regarded as unnecessary (eg. providing documentary evidence to ensure she could prove what she had done or was about to do); and considered those who did engage in such practice, “*overly fussy*”. Having to modify her own practice to do the same as others in her firm has been very difficult for her. She is resigned to the fact though that she “*must simply cover*” herself if she is to function effectively in the workplace. Her ideal world and what she believed herself to be, were shown to be flawed and she is still coming to terms with this.

Taking responsibility for managing oneself, learning to live with others, negotiating relationships and thinking and acting reflectively, are all attributes that the DeSeCo project (OECD, Directorate for Education, 2002; OECD, 2003a, 2005b) also used as its base (from which to draw competencies - see Chapter 2). It is worthwhile remembering that this project has a broad orientation, including not only workforce participation but also strong personal and community aims. The use of generic attributes (as categorised in this study) was viewed by participants as helping them to create better workplace outputs for both their organisations and themselves, to have a competitive edge that benefited both themselves and their workplace, and to be more adaptable both as workers and individuals. The ability to learn through reflection on experience is central to the concept of lifelong learning (Handy, 1998), and participants in this study demonstrated an increasing capacity for critical reflection over the period the study was conducted. This was particularly evident with their major dilemmas (as evidenced in critical incident interviews), and the manner in which the participants were changed as a result of their experiences.

The “appropriate” use of generic attributes is crucial to what participants perceive is a “good job”; appropriate in that participants need to be able to use their attributes to a level of which **they** perceive they are capable, which in this study was not necessarily obvious to the employer or indeed the same as the employer thought. For example, on occasion, even when there was dialogue between participants and employers, as in Erica’s case, other factors (such her perception that she could not really trust her employer to do what they had agreed to), militated against her believing she had a “good job”. A “good job” then is challenging and stimulating, one that not only supports and enables learning to occur but also encourages and embraces the notion of life-long learning. A good job is one where participants believe they are able to use and develop their generic attributes further in an increasingly complex and sophisticated manner. Coupled with this is the need for organisational values and workplace practices to be congruent with individual participants’ beliefs and values.

The importance of generic attributes to work performance is described by Virgona and Waterhouse (2004) and Virgona et al. (2003) . In their study of older displaced workers, the majority (74.3%) of participants believed generic skills were important to performing well in the workplace (Virgona et al., 2003: 36), The participants in my study also believed (before they entered the full time workforce) that generic attributes were important in the workplace. After eighteen months in the workplace this statement had “real” meaning for them, and was restated as generic attributes are vital for survival in the workplace. And once again, as Virgona and Waterhouse, (2004) and Virgona et al. (2003) had found, participants in my study also believed that experiential learning was the key mode of acquisition for developmental of generic attributes. Being placed in what they described as “*sink or swim*” situations brought participants face to face with honing their attributes such as communication and critical thinking and interpersonal understandings. After survival came the satisfaction and challenging aspects of using generic attributes to develop lifelong learning

skills as their job responsibilities changed and grew. Even when a job was described as “*bad*”, generic attributes were perceived as vital for enabling an improvement, either in the existing environment, or for finding and taking opportunities to move to another employer.

Finally, the participants in this study who reported major dilemmas (critical incidents that they considered were not replicable in a university course of study) believed that having generic attributes, (such as those described in this study) to work through these difficult situations was and is crucial to survival and success in the workplace.

## **Summary**

This chapter has covered the meanings participants ascribed to the acquisition, development and use of the generic attributes they used in the workplace. It has identified a number of implications for universities and, to a lesser extent, employers, to consider and address. These are addressed in the next, and final chapter – Reconsiderations.

## **Chapter 8: Reconsiderations**

This chapter completes the thesis and highlights that the role universities play in the development of generic attributes is complex and problematic. It also asserts that the role generic attributes play in the workplace can affect employee motivation and satisfaction. Section 8.1 introduces the chapter by way of advancing some tentative answers to the questions raised in Chapter 7. This sets the scene for the other sections, which are concerned with three different aspects of generic attribute development that must be reconsidered if we are to move forward successfully with the generic attributes agenda in universities in particular. Section 8.2 considers the implications theoretical aspects of generic attribute development have for universities, and to a lesser extent, for the workplace. Section 8.3 looks at aspects related to the ethos or culture of an environment and what this might mean for the development of generic attributes. And Section 8.4 addresses the empirical aspects of generic attribute development in both universities and the workplace, and how the experience may be optimised for students/employees.

## 8.1 Introduction

A number of significant questions were raised in Chapter 7, that while unable to be fully debated here, nevertheless are ones to which limited answers can be advanced from the work done in this thesis. These are outlined below:

1. Should developing generic attributes be the purpose (or part) of university education?
2. Whose interests are being served by developing these generic attributes in the university curricula?
3. Ought we to be concerned that the generic attributes we espouse are being developed at university or might not be?
4. Does it matter if generic attributes are or might not be developed in the university classrooms?

First, for many years, the purpose of university education has been and still is one of the most contentious and vexing issues in academia. In Australia, like many other countries of the world, the days of the elite institutions where only limited numbers of students could enter are gone. Classical studies have declined and been increasingly replaced by newer areas of studies more likely to provide students with jobs when they graduate.

The modern university is a broad church and no longer an elitist monopoly for a privileged minority to indulge in what many now view as esoteric irrelevancies. The modern university caters to all, tailoring its courses to fit its students' interests and aptitudes.

(Jones, 2004: 27)

For many, this dichotomy does not sit well. Where, it could be argued, scholars once immersed themselves in the disciplines they were studying in order to educate their minds, the modern day student is primarily focused on the outcome or product a university qualification can bring them. Some would say

that universities have entered an era in which commercialism has replaced professionalism. Since around the early 1990's successive Australian governments, along with employer groups, appear to believe that part of the role of the modern day university is to assist university students in the development of their generic attributes. This is the impression gained from the government directions and initiatives, and from employer reports noted in this study. The theme advanced is that it is in the interest of both the student and, ultimately of national competitiveness to do so. This in turn shows that the higher education sector is making a contribution to the economic prosperity of the country. Those who oppose the employability agenda, do so because they do not see the university, as having as one of its key aims, serving the economy and profitability of employers. Indeed, it is argued that the intentions, systems, and ideas of what constitutes a university are, or ought to be, different from those in the commercial sphere. Universities must be able to preserve their autonomy and be protected from the controls of both government and the market place. This study confirmed the views of other writers – that there is philosophical opposition by a number of academic staff members (in universities) in particular, to the idea that the purpose of a university is to develop generic attributes. Just how widespread this dissension is, is unknown, but it is certainly a major obstacle to be overcome if universities are to move beyond paying lip service to exactly what attributes their graduates may have. Information gained from participants (students) in this study appeared to confirm the belief that the university did have a role to play in the generic attribute arena. While there were varying degrees of success in how effective universities were in helping the participants develop generic attributes they could use in the workplace, there was a sense that it was part of the university's responsibility, particularly with the advent of graduate attribute lists.

In exploring whose interests are being served by having generic attribute development as part of the university's role, it is also necessary to consider how each group or party might or might not be advantaged by this. For

students/graduates – they may leave the university in a stronger position to secure a job, that is they may be more marketable, have a competitive edge. (In fact this is one of the arguments I used to engage potential participants for this study). Graduates may also achieve promotion faster, and/or get their career pathways organised faster and more effectively than those employees who do not demonstrate their generic attributes successfully. Graduates may also be better prepared for the workplace through having further developed their generic attributes at university; they are better able to “hit the ground running” as it were. And last, because developing generic attributes is a process that happens over time, as part of the life long learning process, universities must be part of the process. For employers/workplaces – they can have graduates who are better able to start a job and be useful in contributing to the enterprise from the first day. The workplace would then not have to invest as much or any resources in training or educating graduates. Thus the staff, time and money that might otherwise be diverted from the main business operation does not have to be used in helping their employees develop generic attributes. In this study it appeared that employers believed that their interests were being served by having graduates enter the workplace with a bundle of generic attributes that could be used from the first day of employment. Government would appear satisfied in that they are seen to be responding to employer needs, (something that appears to be necessary in the political environment). For universities (in particular the management group), their reputation among employers and students in particular may be enhanced. Having lists of graduate attributes that can be marketed to prospective students is one method of increasing market share, particularly in increasing the numbers of first year students. Graduates are also more marketable to employers, and universities can benefit from this through closer relationships with business/industry and increased kudos.

Having outlined some of the ways in which the various higher education stakeholders’ interests might be served, it is also important to note that there is

also a down side for some of these groups. For example, students may miss out on some of the technical content they would have studied at the expense of developing generic attributes. Although none of the participants involved in this study expressed that concern, it is certainly one highlighted by some academics. Some academic staff feel the generic attributes policy and practice at their universities increase their workload and downgrade the content of the content of their discipline – certainly not serving their interests. General staff may also be disadvantaged in that there is likely to be an increased workload in supporting the generic attribute initiative in the university. University management may also need to reallocate some of its funds (to supplement government funding) in order to develop and implement a generic attribute development policy. Finally, Government needs to provide funds for such an initiative, which means that other areas of government spending may have to be refined as funds are redistributed.

One area that would benefit from further research would be investigating whether or not students are attracted and retained at a higher rate by universities that have programmes containing explicit elements of generic attribute development compared with those who universities that do not. Enquiry into what, if any, advantage, graduates had in gaining employment after such programmes could also yield useful data.

The third question raised relates to whether or not we ought to be concerned if the generic attributes we espouse are being developed at university might not be developed? Given the current climate, that is one where there is a general expectation by groups such as students, communities, employers and government, that graduates have developed sets of generic attributes, then the answer is yes, we ought to be concerned. For example, students may perceive themselves as missing out on something that adds to their marketability in the workplace. They may seek other institutions where they believe they will get a better deal. This means that universities may be disadvantaged through losing

students, and as a consequence, their reputations may be diminished. Participants involved in this study favoured those times (courses or parts of courses) when generic attributes that were useful in the workplace were being addressed in their programmes. It is also hard to imagine that employer groups would not be concerned. After all, the generic attribute agenda has been driven to a large extent by the pressure these groups put on government. If universities did not work toward helping their students/graduates develop generic attributes that employers find useful then employers would have to invest the time, money and effort in doing so - either that, or have no university graduates who could make a "first day" contribution to the company, enter their workplaces. Both of these options are obviously unacceptable.

One group who might not be too concerned about whether or not generic attribute development is occurring in the universities are those people, for example, some academic staff, who believe this is not the purpose of university education.

Last, does it matter if generic attributes are not or might not be developed in the university classrooms? In the current climate where universities are expected to play a role in further developing generic attributes, yes it does matter. It matters for students because it wastes their time and energy, and they do not achieve what they need to - a sentiment expressed by some of the participants who took part in this study. It matters for universities because it is a waste of their money, time and resources if the effort is not going into the appropriate strategies. This study, along with others, has shown that generic attributes are best developed in experiential environments, including the workplace. If the "classroom" is not effective in this area then consideration could be given to other strategies, some of which are outlined in both the previous chapter, and later in this chapter.

Employers may or may not be concerned. Where they are seeking an association with universities, or in partnership with them, they would want that affiliation to be working as well as possible in order to get “value for money”. This may mean working with the university on matters related to the curriculum, for example, developing a cooperative education or other work experience programme in order to optimise the relationship. Some other employers may not be particularly concerned; their focus is on having graduates who can be useful members of their workforces from the first day of employment with the assumption that it is the responsibility of the universities to provide such graduates. Government concern is likely only if universities are not demonstrating some forward movement in the area of generic attribute development. They are likely to be concerned with “value for money” rather than how this is achieved.

## **8.2 Moving forward**

### **8.2.1 Reconsidering theoretical or conceptual aspects**

The theoretical or conceptual aspects relate to the ideas that people hold regarding generic attributes. This study supports Barrie’s work (2003, 2004, 2006) that university teachers, at least, hold differing views of both what generic attributes mean, and therefore how they are learned and how they ought to be taught (if at all). Sharing some sort of conceptual understanding and implementation processes seems to be fundamental to helping students develop the generic attributes they will find useful in the workplace. This does not mean that everyone has to agree on the same conceptualisation, rather it means that those involved in higher education in universities need to think about and share their ideas more fully. How their ideas and beliefs affect their practice ought to be considered, along with whether or not particular strategies

can work if they are born of different theoretical positions. If theoretical positions are divergently opposed, and as such practice is hugely varied, then one must ask what, if anything, can be done to find a way forward? At all levels of the university - departmental, faculty, and administration - issues such as these ought to be fully debated before spending more time and effort on producing refined lists, creating more and different curriculum options and the like, assuming that somehow one or more of these strategies will provide an answer to the university's dilemma.

Universities in Australia all have graduate attribute lists; they all espouse that the development of these attributes occurs at the university, and they all claim either implicitly or explicitly that these attributes will be useful for when graduates enter the workforce. It would seem dishonest at the very least if universities did not take all possible steps to ensure this was happening.

Having regard to Barnett's (2004) work it may be, however, that we need to consider where the emphasis in universities should be placed. That is, should higher education institutions get or continue to get caught up in the generic attributes discourse, or ought they look through a different lens and reconsider the personal qualities that may enable a person to succeed in a modern day workplace and world? Results from my study suggested that those participants with higher degrees of self-confidence and self-efficacy managed their lives both at university and in their workplaces, more successfully than those who had doubts about themselves. Those with this strong sense of personal agency were pro-active in many different situations, including changing employers and improving their positions in the workplace. Even when they believed they had made mistakes in their job, they were pro-active in accepting responsibility for this and moving on.

### **8.2.2 Reconsidering aspects related to ethos or culture**

Ethos and culture in the context of this study refers to the fundamental nature of a group that is characteristically expressed in attitudes, habits and beliefs. This study supports the belief that the most successful manner in which generic attributes are acquired and developed is through immersion in the culture of particular environments. The ability to communicate, for example, was first acquired in family environments and honed to varying degrees by participants depending on family circumstances. Further development at university and in the workplace was sometimes not an activity in which they were cognisant of engaging. That is, when the environment was holistic (values, beliefs and practices all aligned) participants did not necessarily need to make any deliberate attempt to enhance their ability to communicate with others, but nevertheless were successful in doing so.

If universities espouse a particular set of ideas or principles, then success will only come if practice is congruent with these. Currently, universities have staff members who not only hold many different views about the development of generic attributes at their institutions, but also engage in quite different practices in respect of this. In this situation the development of generic attributes is highly problematic.

In contrast, employers usually have fairly clear-cut beliefs about their organisations and reasonably definite ideas about what they want from employees (in terms of generic attributes). And although they may be unable or unwilling to use resources to help their employees (further) develop some of the attributes needed for effective workplace practice, this is not always the case. Where employers have the inclination, resources and expertise to make a workplace an environment that operates in a congruent fashion (that is beliefs and practices are in harmony), employees may be able to develop generic attributes useful in the workplace successfully.

### **8.2.3 Reconsidering empirical or practical aspects**

#### **Optimising the acquisition, development and use of generic attributes**

This study has shown that generic attributes appear to be significantly contextual. Those generic attributes useful in the workplace appear to be most effectively and efficiently learnt in a workplace setting. Although some generic attributes may lend themselves to development at university provided the environment is right, results from this study suggest that even with altered environment (for example, curricula that encompasses workplace experiences), universities can at best, only help lay the foundation that will facilitate the development of generic attributes in the workplace. It is the workplace itself that is crucial for cementing the process and shaping the outcomes.

#### **Implications for universities curricula**

Graduates' perceptions of generic attributes outcomes and their usefulness are an essential component in enhancing teachers' understandings of the impact that courses of study are having on their students, and their subsequent workplace practice. If universities are to be responsive to employers' needs, and at the same time ensure that their claims (either as stated lists of attributes, or as unstated "understandings") about what graduates can do are authentic, the curriculum needs to be closely examined.

In examining and (re) designing curricula the questions that ought to be asked and/or reconsidered include:

- Should (more) account be taken of prior learning of generic attributes that are useful in the workplace?
- Should the context in which students perceive they learn these attributes be (more fully) taken into account?
- Could the universities encompass creative ideas such as "free time" in their curricula in which students have no structured experience but rather are

given the opportunity and responsibility for further developing their generic attributes?

- Are the meanings of generic attributes that are promoted in universities the same as those sought in the workplace?
- Should the advancement of the generic attribute agenda be a focus of post-graduation activities rather than undergraduate studies?

Notwithstanding the answers to these questions it is worthwhile considering a number of strategies that appear to optimise the acquisition and further development of workplace useful generic attributes. These are to:

- include work-based experience in the curriculum
- incorporate hands-on projects that include interactions with “real” clients
- use simulated workplace experiences as part of a subject
- encourage activities such as tutoring, mentoring of other students
- utilise the experiences and learning of students’ outside activities in classes
- consider developing a subject or subjects that specifically enhance(s) some of the workplace useful generic attributes (either university wide or within a specific program of study)
- draw attention to the importance of contexts outside the university for the development of generic attributes
- enable students to have the time to pursue opportunities outside of the university in order to develop further those attributes likely to be useful in the workplace
- provide intensive programmes for (un)employed graduates
- incorporate further generic attribute development into post-graduate programmes

### **Enhancing satisfaction in the workplace through the use of generic attributes**

This study has also identified the importance of generic attributes in determining job-satisfaction levels, and the effect that employer attention to this has on employee (participant) motivation. Where employers and participants shared an understanding of the use of generic attributes in workplace practice (that is, both the type(s) of attributes, and level to which the participant was capable of using it/them), participants remained motivated in their jobs and satisfied with their employers. Of course, the converse was also true, and participants in this study were prepared to (and did) move to alternative employers to ensure they were located in satisfying, meaningful workplaces.

Another complexity identified in this study is that the development of generic attributes is ongoing as job responsibilities change and grow. The appropriate deployment and level of application of generic attributes is essential for job satisfaction and motivation. These two factors can play a major role in determining whether or not a job is perceived as stimulating and challenging. In today's global workplace employees recognise that a degree is only the first step in the continuous learning process. If their job(s) do not enable and indeed embrace the notion of life-long learning and provide a motivated environment for employees to work in, they will move on. How might workplaces address this need for their employees to reach and work to their potential? It may be that a closer relationship with institutions of higher education is one way to ensure that workplaces too consider how well they are fitting their employees for their future working lives.

### **8.3 Final comment**

This study has focused on the voice of the student/new graduate and their perceptions of generic attribute acquisition, development and use, in different contexts. The findings suggest that the university “classroom” or curriculum is not the primary context in which generic attributes that are useful in the workplace are developed. Ideas about the importance of this, why it might be happening, and the impact it has on their job performance have been discussed and offer fertile ground for further exploration.

There is also a strong indication from the results of this study that new graduands entering the full-time workplace for the first time place a high value on the utilisation and further development of their generic attributes. Employers would do well to be cognisant of this. Closer relationships between universities and employers where issues raised in this study are discussed and addressed may well offer a way forward for all parties.

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## **Appendix 1**

### **Interview Protocol Phase one**

The interview itself will focus primarily on the activities you undertake at work and your learning from them.

- Did you receive formal instruction during your university study in any or all of the following generic skill areas: critical thinking, problem solving, communication skills, interpersonal understandings?
- Were the instruction, guidance and assessment clear?
- Were there other contexts where you acquired and/or developed these skills?
- How useful were these contexts?
- Did you feel equipped to use any/all of these generic skills in the workplace?
- Can you tell me about any time/times where you used any of these generic skills at work?

**NB I am only focusing on 4 generic skills (descriptions below)**

(Supplementary questions may need to be used to ascertain further information. For example whether or not the learning/development of generic skills at university played a part in the deployment of generic skills)

## Appendix 1 cont.

**Critical Thinking:** reasonable, reflective thinking that is focused on deciding what to do or believe. It will include some/all of the following aspects:  
analysis - to identify definitions used, claims being made, arguments, lines of reasoning, assumptions, points of view, evidence for and against arguments, logical implications of statements, relevant unstated information;  
evaluation - to objectively judge the validity of arguments and claims and the strength and credibility of evidence.

**Problem Solving:** a mental activity leading from an unsatisfactory state to a more desired "goal state". Aspects typical of the Problem Solving Process include:

- identify, comprehend, restate a problem;
- analyse information relevant to a problem;
- represent features of a problem;
- identify, synthesis and apply information relevant to a problem;
- explore, identify, generate solutions;
- evaluate solution strategies and their outcomes.

**Communication skills:** includes communicating in writing, orally (including interpersonal communication) and visually. The types of abilities that are included here are: arguing, describing, advocating, interviewing, negotiating and presenting, listening.

**Interpersonal understandings:** understanding the features of interpersonal relationships which enable people to work and live together. Aspects include:  
identification of roles and relationships;  
making inferences about feelings, attitudes, motives, values, personality;  
identification of features of effective team workers and factors that could affect team performance;  
interpretation of team dynamics  
application of interpersonal understandings to solve problems and optimise team effectiveness;  
identification of effective interpersonal communication and listening skills;  
identification of individual differences and cultural diversity

## Appendix 2

### Interview Protocol Phase two

Dear

You may remember at our first interview that I mentioned I might be taking a slightly different approach to things after I had met with my supervisor.

The “new” focus that my study is taking is as follows:

I am going to talk with you (face to face or by phone) about critical incidents (see below). What I intend to do is ascertain the generic skills you used in dealing with these incidents, and where you think you developed them (eg. home, school, workplaces, university, sports teams etc.)

Since you have indicated that you would be willing to have me talk with you again (obviously much shorter, more focused discussions than previously), I will contact you again (by phone) shortly to try to arrange a schedule of some sort.

Can you please email me the best phone number for me to contact you on in order to make these arrangements.

Thanks.

Regards  
Ina

PS The note below is a description of what a critical incident is and where to “find” one. I will also help you “find” them by asking appropriate questions if and when necessary.

## Appendix 2 cont.

### Critical incident– note to participants

#### *What is a critical incident?*

A critical incident is an incident/situation that occurred that has affected the way you think, feel or act in relation to your work or workplace.

**NB The actual incident doesn't have to have occurred at work.**

The actual incident can be one

- where the experience did not go to plan (these may be positive or negative)
- that went well
- that is an ordinary experience
- that reflects your values and beliefs
- that identifies the contribution of qualified practitioners (eg. experienced colleagues, supervisors, managers, mentors)
- that allows you to identify that you have learnt something

Remember what is important is that it **affected the way you think, act or feel** in relation to your work or workplace.

#### *How do you "find" a critical incident?*

- an incident might be drawn from past experiences where the experience made an impact on the way you operate in the workplace eg. having a difficult basketball coach and learning to deal with her/him may have an impact on how you operate with other difficult people in your current workplace.
- an incident might happen to you in your current job or activities, and can have just as much effect on the way you work eg. your work team is called into the manager's office to discuss a problem that a customer is having with one of your team members. This may have an immediate effect on the way you personally deal with customers.

- an incident might just be one (or more) of the situations you faced during your day that you think about on the way home from work. In analysing your experiences you may decide eg. to continue operating in particular manner, especially if the feedback from colleagues has been positive, or alternatively, to modify your behaviour if the feedback has been unfavourable.