

GRADUATE ATTRIBUTES, LEARNING AND EMPLOYABILITY

Lifelong Learning Book Series

VOLUME 6

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Aims & Scope

“Lifelong Learning” has become a central theme in education and community development. Both international and national agencies, governments and educational institutions have adopted the idea of lifelong learning as their major theme for address and attention over the next ten years. They realize that it is only by getting people committed to the idea of education both life-wide and lifelong that the goals of economic advancement, social emancipation and personal growth will be attained.

The *Lifelong Learning Book Series* aims to keep scholars and professionals informed about and abreast of current developments and to advance research and scholarship in the domain of Lifelong Learning. It further aims to provide learning and teaching materials, serve as a forum for scholarly and professional debate and offer a rich fund of resources for researchers, policy-makers, scholars, professionals and practitioners in the field.

The volumes in this international Series are multi-disciplinary in orientation, polymathic in origin, range and reach, and variegated in range and complexity. They are written by researchers, professionals and practitioners working widely across the international arena in lifelong learning and are orientated towards policy improvement and educational betterment throughout the life cycle.

Graduate Attributes, Learning and Employability

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EDITORIAL BY SERIES EDITORS

This volume is a further flowering from the *International Handbook of Lifelong Learning*, which was jointly edited by David Aspin, Judith Chapman, Yukiko Sawano and Michael Hatton, published by Springer (formerly known as Kluwer Academic Publishers) in 2001. In the *International Handbook* we laid down a set of agenda for future research and development, analysis and expansion, strategies and guidelines in the field of lifelong learning. It had become clear that the domain of lifelong learning was a rich and fertile ground for setting out and summarising, comparing and criticising the heterogeneous scope and remit of policies, proposals and practices in its different constitutive parts across the international arena. Certainly the scholars, researchers, policy makers, and educators with whom we discussed this matter seemed to agree with us that each of the themes that were taken up in the individual chapters of the original *International Handbook* would merit separate volumes of their own – to say nothing of the other possibilities that a more extended mapping, analysis and exploration of the field might quickly generate.

This volume is an outcome of the important issues that were raised in the *International Handbook*, in particular, by the questions of the development of graduate attributes and their relationship to learning and employability. It is the work of our colleagues Paul Hager and Susan Holland, who have gathered together contributions to this important theme from a range of international scholars and writers in that field. The writers analyse the nature, development and function of generic attributes in an age of uncertainty. They look at the relationship between graduate attributes and changing conceptions of learning, as well as the relationship between graduate attributes and employability, in a world where opportunities for employment and their concomitant requirements are constantly changing. They pay particular attention to the evolution from institutional specifications of skills development to a more student-centred approach, in which the needs, interests and aspirations of the learners themselves play a far greater part in determining the structures and directions of the learning programs that are set up to cater for them. Particular attention is paid to the changing nature, type and function of generic attributes and learning in workplace settings.

Paul Hager and Susan Holland have done us all a signal service in the preparation of this book. Their work has demonstrated a clear commitment to the emancipatory potential of lifelong learning. Their argument is that the contemporary focus on the transition to work and the role of generic attributes, whether for school leavers or graduates, needs to be conceived more realistically and coherently as part of an ongoing and interactive lifelong learning process. The work environment can provide individual and collective opportunities to build on and integrate learnings gained from classrooms, lectures and laboratories. Workplace learning, they argue, is an important part of lifelong learning, as it is a site for personal and general forms of learning, as well as for the further development of technical and professional knowledge. For them, the issue of how to enhance the employability of new entrants to the workforce, by which employers usually mean general capacities like communicating, relating to people, and using technology, is a matter of encouraging better learning, prior to entering and while engaged in the workplace. They believe generic attributes have a valuable role in enhancing learning and hence employability.

We believe that this important work comes forward at an especially significant and fruitful time when the worlds and institutions of learning and work are in a state of considerable, not to say radical change and upheaval. We believe that both employers and institutions will benefit enormously from reading and reflecting on the messages contained in this iconoclastic work. We are pleased that the work helps carry forward the agenda of the Springer Book Series on Lifelong Learning. We thank the anonymous international reviewers and assessors who have considered, reviewed and assessed the proposal for this work and the individual chapters in the final manuscript and who have played such a significant part in the progress of this work to completion. We trust that its readers will find it as stimulating, thought-provoking and controversial as we who have overseen this project and its development have found it. We commend it with great confidence to all those working in this field. We are sure that this further volume in the Springer Series will provide the wide range of constituencies working in the domain of lifelong learning with a rich range of new material for their consideration and further investigation. We believe that it will encourage their continuing critical thinking, research and development, academic and scholarly production and individual, institutional and professional progress.

March 2006

David Aspin and Judith Chapman

CHAPTER 1

PAUL HAGER AND SUSAN HOLLAND

INTRODUCTION

The idea for this book began a few years ago when we, together with another colleague, were invited to write a position paper (Hager, Holland & Beckett 2002) on a similar topic for the Business/Higher Education Roundtable in Australia. Subsequently, in line with our recommendations, this group decided to produce a further position paper showcasing progress and good practice in embedding and assessing generic attributes in universities in Australia (B-HERT 2003).

Since these developments we have had an opportunity to reflect on both the theoretical and practical issues we raised. Not surprisingly these issues have remained topical. Indeed, particularly in these changing and competitive times, there continues to be policy, business and educational interest in the general or generic outcomes of undergraduate programs, and the relationship between graduate attributes and what has come to be termed 'employability'. Our respective research and professional projects are such that we have long had an interest in, and commitment to the emancipatory potential of learning, and the importance of setting undergraduate education in a broader framework of a lifelong learning process rather than as an end in itself. We believe that this kind of approach is important for school leavers as much as for mature adults re-entering formal education with the intent of pursuing degree level or other studies.

Furthermore, we consider that the contemporary focus on the transition to work and the role of generic attributes, whether for school leavers or graduates, needs to be conceived more realistically and coherently as part of an ongoing and interactive learning project. The work environment can provide individual and collective opportunities to build on and integrate the kinds of learning gained from the classroom, lecture or laboratory. Given certain conditions, workers at any level can continue to develop their knowledge and understanding as well as their repertoire of skills and dispositions.

We see work-based learning as an important part of lifelong learning as it is a site for personal and general forms of learning as well as for the further development of technical and/or professional knowledge. As such it is a necessary adjunct to the more structured forms of learning usually encountered in academic programs. For us, the issue of how to enhance the employability of new entrants to the workforce, by which employers usually mean general capacities like communicating, relating to people, using technology, and so forth, is a matter of encouraging better learning prior to entering, and while engaged in the workplace. We believe that despite the flaws in the way that generic attributes are often described, seemingly taught and assessed, when their limitations are properly understood and accounted for they have a valuable role in enhancing learning and hence employability.

1. GRADUATE ATTRIBUTES AND RELATED TERMINOLOGY

In an international context there has been increasing educational attention paid to what are variously called ‘generic skills’, ‘core skills’ or ‘basic skills’, or, more recently, ‘employability skills’. Sometimes they are referred to as ‘competencies’ rather than as ‘skills’. The term ‘generic skills’ and its cognates are widely used to refer to a range of qualities and capacities that are increasingly viewed as important in all walks of life, though the main focus is usually on their role in work and in education viewed as a preparation for work. Typical ‘generic skills’ cluster around key human activities such as communication, working with others, gathering and ordering information, and problem solving.

This contemporary focus on generic skills has spread across education systems, including the university sector, where they are often called ‘graduate attributes’ or ‘graduate qualities’. For the purposes of this book, we will use ‘generic attributes’ as the meta-level, more encompassing term to refer to these ‘skills’ or ‘competencies’. When we are referring specifically to the higher education sector, as will be the case for much of this book, the preferred term will be ‘graduate attributes’.

From the perspective of higher education, a range of ‘graduate attributes’ has gained attention. These include thinking skills such as logical and analytical reasoning, problem solving and, intellectual curiosity; effective communication skills, teamwork skills, and capacities to identify, access and manage knowledge and information; personal attributes such as imagination, creativity and

intellectual rigour; and values such as ethical practice, persistence, integrity and tolerance. This collection of various qualities and capacities is distinguished from the discipline-specific knowledge and associated technical skills that traditionally are associated with higher education.

Generally when people talk about ‘generic attributes’ they are referring to a very diverse range of supposed ‘things’ – skill components, attitudes, values and dispositions. Some of these so-called ‘skills’ may not be the kind of thing that can be improved with practice, in the usual sense of guided repetition. Likewise, even when considering those that most look like they might be genuine skills, some have significant physical components, e.g. body language in interpersonal communication, others are mainly mental, e.g. analytical reasoning. There may be significant differences here that are masked by the blanket term ‘skills’. Still others of these so-called ‘skills’ are, strictly speaking, not so much skills as attitudes and dispositions. As such, they might be more accurately thought of as relational complexes that connect persons and particular contexts, rather than as unitary ‘things’. It may be that these attitudinal and dispositional qualities are better seen as products of cultural, ethical and social circumstances that may be refined and modified by knowledge and reflection.

These are the reasons why the more neutral term ‘attribute’, as preferred in this book, is probably a better descriptor of the collection of diverse qualities that together constitute so-called ‘generic skills’. In keeping with our aim to reflect different perspectives there is some variation in the precise terminology adopted by the chapter authors. In a few instances we, and other authors in the book, use the term ‘capabilities’, particularly in relation to a sense of agency in the workplace, to describe essentially the same constellation of values, dispositions and personal qualities. Some authors have adopted another variation, ‘generic graduate attributes’. While we wish to highlight broad rather than narrow understandings, we recognise the wide currency of the term ‘generic skills’ both in popular usage and in the literature generally. In this regard we trust that the attentive reader will have no difficulty in deploying the thinking behind our usage to a reading of the wider literature on the subject.

2. WHY ARE GRADUATE ATTRIBUTES IMPORTANT

The growing emphasis on graduate attributes in higher education has several sources. One is the increasing evidence of demand from business and employer

organisations for graduates to possess generic attributes (or generic skills). This trend reflects recent economic and technological developments. As well, there are a number of educational considerations that have brought graduate attributes to wider attention. The contemporary focus on graduate attributes in higher education is really part of a bigger, as yet unresolved, debate about the purpose of university education and how to develop well educated persons who are both employable and capable of contributing to civil society. So the increasing importance of graduate attributes in higher education policy reflects various cross-sectoral influences.

2.1 Demand for Generic Attributes from Business and Employers

As much recent literature claims, a major feature of current knowledge-based economies is that workers increasingly require a diverse range of generic attributes or skills. These typically include such items as ability to work flexibly as part of a team, the ability to work autonomously, capacity to adapt to change, ability to work creatively, and so on. These diverse generic attributes are increasingly being grouped together with other general job-seeking attributes under the rubric of 'employability skills'. General job-seeking attributes include such things as self-belief and the capacity to obtain and retain employment.

The supposed shift to a knowledge-based economy, that has stimulated this stampede by employers and employer groups to embrace the mantra of generic attributes and employability skills, seems to stem largely from the correct observation that the nature of work has both changed and continues to change, particularly with the continuing spread of micro-electronic technology. As well, there is the ongoing long-term shift to a service economy where information and social skills are increasingly important. But the question is whether these changes are really so fundamental that workers are now required to be new kinds of workers with different sorts of attributes. Even where the term 'knowledge worker' is used, suggesting that the new workplace involves continuous knowledge creation, generic attributes are the core contributors to these work activities. In fact, for most people it is more a matter of locating, managing and disseminating knowledge, rather than creating it.

Nevertheless, a climate has arisen in which workers have seen their tenure in the workforce become more precarious as jobs increasingly require them to exhibit attributes that previously were not so important for most workers. Indeed with rapid and often unexpected changes in the workplace a new kind of attribute

has come into demand. The capacity to adapt quickly to changes in the nature of work and take responsibility for self-managing subsequent career shifts is now an important factor influencing success in the workplace. Against this background there is growing interest in lifelong learning. The attributes that are commonly taken to characterise lifelong learning are heavily reliant on a range of generic attributes. This is well illustrated by the following ‘profile of the lifelong learner’ proposed by Candy, Crebert & O’Leary (1994: 43-4):

An inquiring mind

- a love of learning;
- a sense of curiosity and question asking;
- a critical spirit;
- comprehension, monitoring and self-evaluation;

Helicopter vision

- a sense of the interconnectedness of fields;
- an awareness of how knowledge is created in at least one field of study, and an understanding of the methodological and substantive limitations of that field;
- breadth of vision;

Information literacy

- knowledge of major current sources available in at least one field of study;
- ability to frame researchable questions in at least one field of study;
- ability to locate, evaluate, manage, and use information in a range of contexts;
- ability to retrieve information using a variety of media;
- ability to decode information in a variety of forms: written, statistical, graphs, charts, diagrams and tables;
- critical evaluation of information;

A sense of personal agency

- a positive concept of oneself as capable and autonomous;
- self-organisation skills (time management, goal-setting, etc.);

A repertoire of learning skills

- knowledge of one’s own strengths, weaknesses and preferred learning style;
- range of strategies for learning in whatever context one finds oneself; and
- an understanding of the differences between surface and deep level learning.

Linked to these developments is the emerging notion of the 'learning organisation'. The nature and range of generic attributes of staff, including their collective capacity to adapt to change and learn new skills, are coming to be regarded by business leaders and employers as important as the traditional factors of production, labour and capital, in determining the sustainability of enterprises. In these circumstances, there has been a proliferation of attempts to set out discrete lists of generic attributes and employability skills. While much commonality is evident in these various lists, there is also significant diversity. These differences are a reflection of the fact that despite the aura of tangibility provided by codified descriptive lists, much about these supposed generic attributes remains intangible and elusive. However, this has not deterred some employers from the view that they can readily assess the extent of applicants' generic attributes on the basis of job applications and interviews. As various contributions to this book will demonstrate, such confidence is very likely misplaced.

These rapid and accelerating changes have placed pressure on the front-end approach to vocational and professional education. This is reflected, for instance, in growing dissatisfaction with courses for professions (Hager 1996). More and more, a formal two, three or four year course at the start of a career whether in the vocational or higher education sector, is seen merely as the necessary foundation for the early years of practice, rather than as the sufficient basis for a lifetime of practice. Hence the increasing interest in lifelong learning and the growing emphasis on learning in the workplace.

2.2 Adoption of Generic Attributes by Educational Providers

At the same time as business and employers are calling for more emphasis on generic attributes, so too are educational providers. This interest is stimulated, at least in part, by a desire by some to appeal to business and employers in an era of increasing competition and accountability. Some writers (e.g. Bennett, Dunne & Carre 1999; Barnett 1997) have taken issue with the assertion that universities should do what business says it needs merely on the assumption that the outcomes will be beneficial. However, responding to calls from business and employers is not the only reason for the interest in generic attributes by educational providers. There are sound educational arguments for the increased focus on generic attributes. There is growing awareness that well-founded sets of generic attributes have the potential to deliver several educational advantages to course providers

whether vocational and/or educational in emphasis. These advantages can be grouped as follows:

- course development
- course delivery and assessment
- quality assurance.

In the area of course development the advantages offered by a sound set of generic attributes are multiple. They add a further dimension to discipline-specific discourse by providing the basis for a consistent terminology for describing course outcomes. The common lack of such consistency, particularly in the higher education sector, means there is no agreed reference point when, for example, academics attempt to develop transdisciplinary courses. So, the terminology of the generic attributes that are required by contemporary work practices not only facilitates links between particular courses and the world of practice, but also creates links between courses of different kinds. These sorts of links are vital, for instance, in incorporating work-based learning in higher education courses. This integration of theory and workplace learning in the vocational sector is less problematic due to different pedagogic traditions.

Generic attributes are, typically, significant components of initiatives to improve teaching and learning. Such initiatives take many forms and have diverse aims. But whether they seek to encourage deeper learning, to make learners more reflective about their learning or to develop more self-directed learners, they characteristically require learners to deploy some combination of generic attributes if they are to be successful. It seems that the strategies needed to develop generic attributes are also the ones that lead to good learning outcomes. Thus, by embedding the development of generic attributes in courses we can improve learning overall. The emphasis here is on how people learn best rather than on how to develop generic attributes. Erik de Corte (1996) has identified a useful set of features of powerful learning environments:

They:

- have ‘a good balance between discovery learning and personal exploration, on the one hand, and systematic instruction and guidance, on the other’;
- require students to ‘progressively increase’ their ‘share of self-regulation...at the expense of external regulation’; ‘provide

opportunities to use a rich array of resources’ and for ‘social interaction and collaboration’;

- ‘allow for the flexible adaptation of the instructional support to accommodate individual differences and stages of learning’;
- ‘facilitate the acquisition of general learning and thinking skills’ throughout the curriculum. (pp. 123–124).

Research on generic attributes teaching and learning methods indicates that they are best developed by active approaches (Moy 1999). Thus, there is a strong and recurrent link between the development of generic attributes by learners and teaching and learning methods that exhibit such features as:

- adult learning principles
- holistic approaches to learning
- problem-based learning
- lifelong learning skills
- learning how, why and exploring what if ... , not just learning received facts
- learner reflection, evaluation and articulation on learning experiences as a critical aspect of the learning process
- active, learner-centred approaches in which integrated thinking and action occurs on tasks that are relevant and meaningful to learners
- the teacher assuming multiple roles, such as mentor, coach, facilitator, evaluator, that include demonstrating/modelling the generic attributes to learners.

But as de Corte’s list suggests, these are precisely the features of powerful learning environments.

A good example of a set of generic attributes being deployed to enhance learning is the ‘profile of the lifelong learner’ (Candy, Crebert & O’Leary 1994) outlined in the previous section. The work of Candy et al. provides a range of ways in which the profile can be incorporated into the pedagogy of various types of courses, thereby fostering the development of lifelong learning capacities by students. A common theme in the literature on teaching and learning of generic attributes is that success depends crucially on the generic attributes being made explicit for students. Leaving them implicit, as happens in many traditional

courses, does little to encourage significant learning and development of the attributes.

Generic attributes can also play a significant role in quality assurance measures that are suitable for use in higher education. For example, having a consistent terminology for describing course outcomes can improve course development across an institution. It can also improve communication to those outside of the institution. Likewise, higher education institutions could use well-grounded sets of generic attributes to facilitate recognition and accreditation of prior learning, e.g. of non-graduate students into post-graduate programs. Such a procedure could generate greater public confidence in the assessment decisions that are made by educators.

3. BASIS OF THIS BOOK

In conceiving this book our intention has been two fold. Firstly, we wish to contribute to a fuller and more critical understanding of generic attributes, including their potentialities and limitations in practice. Secondly, we are committed to a progressive agenda for graduate attributes in relation to lifelong learning because of their role in enhancing better learning and employability. Chapter authors were chosen for various reasons. We deliberately left the brief fairly flexible and encouraged diversity of view in an attempt to broaden rather than constrain our present understanding of generic attributes and lifelong learning. Because of our professional commitment to developmental processes we invited some less well known academics, who have undertaken relevant doctoral research, to contribute as well as those with very well established, international profiles. While all the chapters draw on research and practical experience to a greater or lesser extent, inevitably some are more theoretical in orientation than others.

To ensure balance there are different but complementary theoretical perspectives about the nature and purpose of graduate attributes. There is also a chapter concerned with policy issues in an international and cross-sectoral context. A number of case studies highlight direct practical experiences of students or academics in designing and delivering a curriculum that advances a generic learning agenda, in one case on the basis of credit for work-based learning. Others detail, respectively, the experience of mature adults re-entering education, and graduates in the workplace in terms of their perceptions of the

value of generic attributes. To reflect something of the developmental potential of generic attributes for lifelong learning, the educational settings for the chapters range across the post-compulsory years of schooling to include re-entry programs, vocational and university study, as well as work-based learning programs.

In some chapters the focus is on generic attributes *per se*, in others the concern is with the generic aspects of higher education, specifically undergraduate programs. In these cases, as already noted, the term ‘graduate attributes’, is used to distinguish this particular situation from other kinds of educational or work-based settings. The title of the book was chosen as *Graduate Attributes, Learning and Employability* because of the considerable policy and educational debate concerning graduate outcomes in particular. However, we have endeavoured to reflect more than these contemporary concerns by the inclusion of cross-sectoral material. We would have liked to include more discussion of, and case studies pertaining to, the employer perspective. But, despite several attempts, we were unable to elicit this kind of material in any appropriate form.

4. OVERVIEW OF THIS BOOK

Given both the depth and broad spectrum of issues concerning graduate attributes, learning and employability covered by the book, it could have been organised in a number of ways. To assist the reader who may be interested in some aspects more than others, the chapters have been arranged so that the meta-level conceptual discussion comes first followed by the case studies and frameworks. These in turn are divided according to whether the main focus is on learning and educational settings, or on employability and the workplace. Accordingly there are three parts to the book: Meta-concepts, Graduate Attributes and Learning, and Graduate Attributes and Employability. Part One addresses the meta-concepts which are germane to understanding the nature, value, and difficulties in applying generic attributes. Part Two deals with graduate attributes and their relationship to learning. Part Three goes beyond the formal learning context to embrace work-based learning and graduate capabilities in terms of the notion of employability.

In Part One: Meta-concepts, the chapters are primarily theoretical, although their respective arguments are frequently sketched in practical terms. Hager explains why generic attributes remain important in a postmodern world, before examining the typical ways in which they are described and assessed. He argues that learning is primarily a process, and that graduate attributes are inherently holistic and contextual in character. He goes on to argue from this base that there

are a number of flaws in the way that graduate attributes are commonly perceived, although he still concludes that they can be valuable in encouraging better forms of learning. All of this has implications for employability.

From another meta-level perspective, Barnett considers what ‘graduateness’ means in a new, super complex, world order marked by contestability, changeability and uncertainty. He argues that these substantive changes require new knowledges, new adaptations and new skills, including the need for new forms of ‘being’ in the world. For him the major educational challenge is an ontological one and the graduate attributes of most importance are to do with the development of ‘authentic’ human beings, including the capacity for engagement with the world, inquisitiveness, and personal qualities like courage, resilience and quietness.

Winch sets out some useful tests for generic attributes that are similar to Hager’s characteristics; namely, developmental capacity, coherence, and context independency. And, if, all of these conditions are met, then he posits a final condition to do with transferability. He concludes that a graduate attributes approach in higher education does not easily align with cognitivist and behaviourist models of teaching and learning. On the other hand technical, as opposed to technological, forms of higher education, may provide more opportunities for the development of the generic capacities of graduates, because of the greater time spent in practicum and thus immersion in the social world of the workplace. From his perspective the challenge in developing graduate attributes is not so much ontological as a curriculum or teaching and learning issue.

The last chapter in the first part is by Hinchliffe who explores graduate attributes and the notion of employability. Citing research that examined recruitment policies, plus a number of practical scenarios, he argues that the current expectations of employers concerning graduate attributes are unrealistic for a number of reasons. He suggests that this is so primarily because degree level programs provide insufficient time and opportunity for individuals to develop the kinds of self-narrative apparently expected for success in the workplace. Hinchliffe further develops his argument by indicating the importance of situational understanding for learning. This involves both the recognition of the limits of self-knowledge and an understanding of the inevitable dependency on others in the workplace. His conclusions have pedagogic implications for higher education in general and work-based learning programs in particular.

Part Two of the book, which is concerned with graduate attributes and learning, opens with a policy oriented chapter. Here Gonczi outlines several large

scale cross-national projects, which have been auspiced by the Organisation for Economic Co-operation and Development (OECD), that have significant implications for the development and assessment of generic attributes, particularly beyond the compulsory years of schooling. The Definition and Selection of Competencies (*DeSeCo*) project, which extended the scope of an earlier project the Programme for International Student Assessment (PISA), is important for several reasons. Apart from being international in perspective, *DeSeCo* dealt in some depth with generic capacities across a broad spectrum of contexts, including foundations for further learning, transition to work, personal development, and community engagement. Furthermore, the project was unique in that it involved discipline experts from different domains in considering how best to define and construct the kinds of cognitive and personal attributes, which transcend particular levels or situations of learning.

The rest of the chapters in Part Two are essentially case studies concerning the development of generic attributes and related curriculum issues in different educational settings. Scanlon traces the learning experiences of a group of mature-aged students undertaking a bridging program as a preparation for tertiary study. Reflecting on their progress as adult learners re-entering formal study the students highlighted a number of generic attributes as being of particular importance. They also identified teacher attributes deemed to be essential in providing the kinds of learning contexts in which they experienced success. The chapter concludes by emphasising the significance of generic attributes in shaping adult learner identities. This is an important insight in relation to the factors involved in facilitating lifelong learning.

Based on the perceptions by academics of the efficacy of various curriculum strategies used to promote the teaching of generic aspects of undergraduate education, Barrie has derived a phenomenographical framework for generic graduate attributes. His chapter outlines the findings from this research, which he argues provides a conceptual base for lifelong learning. The chapter also describes the way that his framework has been applied in practice at a strategic and curriculum level at an established, research intensive university in Australia. He concludes that any credible attempt to teach generic type capacities must be transdisciplinary in approach and, also, be based on a cluster of attributes rather than individual skills.

Atlay also draws on practical experiences but, by contrast, he is engaged in research in a very different kind of university in the United Kingdom. He describes a longitudinal study of changing approaches to curriculum planning, where an important goal of the undergraduate program has been to facilitate the

general learning capacities and personal attributes of a culturally and educationally diverse body of students. Over a ten year period shifts in national policy regarding higher education, as well as feedback from staff and students, have led to significant changes in the way that the undergraduate programs, specifically the Personal Development Program, are designed and delivered. Overall, in an effort to better meet the educational needs of the students, most of whom are the first of their generation to attend university, and to adequately prepare them for the workplace, a more student-centred approach has been adopted with an explicit focus on personal and career development.

The chapters in Part Three of the book each describe aspects of workplace learning and in that sense have something to say about graduate attributes and employability. Down, draws on action theory to argue that workplace performance depends on the ability to learn from workplace experiences and the capacity to adapt practice to meet the challenges encountered at work. From her qualitative analysis of interviews with supervisors, trainers and workers in different vocational settings, she considers that workplace agency and what she terms 'affordances' determine access to opportunities for learning at work. She concludes, given her view of the duality of work as learning and learning as work, that tertiary students, including those engaged in vocational forms of study, would benefit from a capability-driven approach to curriculum design.

Exploring the theme of work-based learning from another perspective, Boud and Solomon recognise it is the nature of the work itself that provides the basis for the curriculum. Furthermore, to legitimate this kind of learning in higher education it is often necessary to adapt programs and courses to reflect the unique work experience of the learner. In their chapter they outline the processes and problematics involved in credentialling work-based learning at another university in Australia, one which has made a strong and explicit commitment to promoting practical forms of learning. In engaging with colleagues to validate work-based learning as the curriculum, they have encountered several logistical and conceptual issues. Against this background they agree with Barrie that a transdisciplinary framework affords the best opportunity for academics to build shared understandings of, and create consensus for, the teaching and learning of graduate attributes.

Reflections on critical incidents was the approach adopted by Te Wiata to capture the realities of the first few years of work experience for recent graduates employed in different professions. This set of novice professionals identified a number of clusters of generic capacities in relation to workplace success. These generic capacities which included, critical thinking, problem solving,

communication and interpersonal understandings, were seen by the novices as being important for several reasons: in underpinning and helping to make sense of their daily work routines; in conducting technical or technological aspects of their work; and in enabling them to meet unexpected or challenging situations with a sense of purpose and confidence.

In the context of an increasing emphasis on 'knowledge' work, as well as the contingent nature of work, Beckett and Mulcahy consider how best to describe the kinds of attributes that are regarded by employers as being valuable in contemporary workplaces. They argue that rather than merely citing lists of functional type skills, a better way to capture the kinds of attributes that employers value is to regard these kinds of generic attributes as 'employ-abilities'. Using cases of professionals in practice they illustrate that enacting personal agency in the workplace, deciding what to do and how to proceed, is powerfully shaped by communal self-correcting processes, particularly those judgements which are articulated by and amongst peers. They suggest that their approach provides a more sophisticated account of the role of graduate attributes in professional formation.

The final chapter in the book, by Holland, outlines a lifelong learning framework for graduate attributes. This chapter is a synthesis in that it attempts to reflect both the theoretical discussion in the first part of the book and the case studies described in the second and third parts of the book. Holland argues that the development and acquisition of generic type capacities is an ongoing process requiring engagement in learning in both educational and work-based settings. She suggests that the characteristics of graduate attributes of most relevance to their application in practice are their tendency to cluster, to be contextual and to have contingent aspects, including their limitations with respect to transferability. While her focus is on personal agency and development, she also recognises the importance of collective forms of learning. Holland posits three distinct phases: tertiary study, professional practice and ultimately, leadership development, in a lifelong learning agenda, which is concerned with developing and refining generic capacities through exposure to a mix of learning and working settings, reflection and self-development, peer judgement and feedback. She identifies the learning outcomes from each phase as respectively, graduate capacities, professional capabilities and leadership capabilities.

While the content of the chapters in each part is broadly similar, there is nonetheless some overlap as few of the authors are entirely theoretical or practical in approach, nor are they necessarily only concerned with the issues flagged by the title of the respective parts. This means that the book can be fruitfully read in

any order depending on the purpose of the reader. Overall, the chapter order is broadly consistent with the logic of the framework developed in the final chapter, but this is not intended to direct the reader to only these conclusions. The book attempts to answer many questions about generic attributes, learning and employability, but it is also the case that much remains problematic in this increasingly debated area of educational policy and practice.

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CHAPTER 2

PAUL HAGER

NATURE AND DEVELOPMENT OF GENERIC ATTRIBUTES

1. INTRODUCTION

It is surely a scandal that much contemporary educational policy makes assumptions about learning that are directly contradicted by the best research and theorising of learning that has occurred over the last decade and more. This worrying mismatch is largely attributable to adherence by policy makers (and other key stakeholders such as employers), to common sense notions of learning transfer, notions that have long been abandoned by researchers and educational theorists. Employability skills, generic attributes, key skills, and learning to learn skills all provide clear examples of policies based on simplistic notions of transfer. As nations have sought to respond to globalisation by enriching, expanding and better recognising the skills profiles of their labour force, policies to promote and reward employability skills, generic attributes, key skills, and learning to learn skills have become common concepts at all levels of education systems. However, almost invariably, these purported skills are envisaged as being a series of discrete, decontextualised atomic elements or competencies, which learners are thought of as needing to acquire one by one. Once acquired, it is assumed that these skills can be transferred unproblematically by learners to diverse situations. Certainly, in policy literature emanating from employer groups, this assumption is very common (Hager, Holland & Beckett 2002). Yet as contemporary theoretical and research-based accounts of learning at work suggest, the contextuality of actual work processes severely curtails naïve expectations of unproblematic generic transfer. From the perspective of this chapter, what is especially revealing in this type of policy literature is the way the two metaphors of transfer and acquisition are employed ubiquitously to reinforce and support one another.

As was noted in Chapter 1, though people commonly talk about ‘generic attributes’ as if they are all of a kind, in fact they include a range of diverse and fundamentally different kinds of entities such as skill components, attitudes, values and dispositions. This lumping together of significantly distinct kinds of entities is enough in itself to muddy the waters. It results from the common but dubious assumption that if a term such as ‘generic attributes’ can be applied meaningfully to a diverse range of entities, then they must have something significant in common. Whereas what actually might be occurring here is the lazy use of language. This possibility becomes more than likely when the putative entities that are supposed to be pretty much alike turn out, on closer inspection, to be significantly diverse, abstract and elusive, encompassing such varied ‘things’ as skill components, attitudes, values and dispositions. However, and importantly, this is not the only misconception about generic attributes that arises from taking them at the face value suggested by common sense. This chapter will begin by outlining five common conceptual mistakes that, it is argued, bedevil thought and talk about generic attributes in general. In the process, it will become abundantly clear that much of this thought and talk about generic attributes does indeed involve uncritical use of language and easy reliance on common sense metaphors, the applicability of which is very debatable. The five common conceptual mistakes about generic attributes are:

I That they are viewed as *discrete or atomic entities*, thus they can be acquired and transferred singly.

II That the learning of each of them is thought to be a relatively quick, once-off event. They are *acquired complete and finished* (this follows on from I).

III That they are thought of as being acquired by *individual* learners. So the learning is located within individuals. (This view is often linked with I, but is actually not at all entailed by it).

IV It is thought that we can *readily recognise them* when we see them. (It is easy to conclude from I and II that if typical generic attributes are discrete entities and can be acquired readily, then it must be straightforward to identify when someone exhibits them).

V It is thought that they are *readily and unequivocally describable in language*. Hence it is straightforward to develop descriptive understandings of typical generic attributes and to convey these understandings to others in written form. (V may seem to follow from IV, but this is not the case, as will be shown below).