Enterprise, education and economic development: an exploration of entrepreneurship’s economic function in the Australian government’s education policy

Thesis

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Abstract

This research explores the relationship between enterprise, education and economic development found in the communication of the Australian federal government’s education policy. The stimulus for this research was grounded in the perceived economic importance of entrepreneurship. However, the experience of the researcher as an educator in entrepreneurship led to a questioning of the extent of the economic impact of new ventures created as a result of much available entrepreneurship education.

The contribution to knowledge of this research is twofold. First, it demonstrates a novel method of theory building in the entrepreneurship field. Second, it builds upon the early work of Schumpeter (1961) and argues the case for distinguishing entrepreneurship from business studies and for distinguishing enterprise from the firm, in terms of their contribution to fundamental economic development, as compared with incremental economic growth. The author also argues that entrepreneurship education policy, when laden with economic rationality, needs to adopt an approach that targets the development of multidisciplinary enterprise skills and encourage career pathways for the broad range of individuals who engage in enterprise.

The central research question that guided the research was:

*How does national government policy portray entrepreneurship education to serve the purpose of achieving economic development?*

The theory building methodology needed to accommodate a paradoxical and poorly defined phenomenon. Several options were considered to approach theory building before a hybrid design was adopted that had similarities to a metaparadigmatic method modelled by Lewis and Grimes (1999). Public policy communications (texts) became the subject that supported the theory development, sourced from a publicly available website of the Australian government department responsible for policy development and leadership in education.

It was found that Australian entrepreneurship education policy did not align well with the concept of enterprise as the driver of economic development. Instead, Australian policy broadly reflected an attitudinal and behavioural approach to enterprise. Entrepreneurship education in Australian policy communication also reflected the burden of frequently meeting a range of different expectations. Aside from being thought of as responsible for economic development, other expectations placed upon it included being a way of learning and teaching about commerce and industry, a means to stimulate regional and community development and an avenue to create more work and employment.

The author contends that there are several actors that bring about economic development, apart from the entrepreneur, including those who create, manage, advise, support and stimulate new, innovative and market disruptive economic activity. Recognising a distinction between the activities of enterprise and the firm, and the need to prepare individuals for different roles in enterprise, is important if the paradoxes presented by entrepreneurship between the interests of the individual and broad economic outcomes are to be reconciled and understood within the context of education and policy.
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Finally, in preparing the re-submission for final examination I wish to acknowledge the contribution of Tina Morganella who has provided the professional editing. Tina provided valuable guidance and assistance in checking the language, completeness and consistency of the final document.
Declaration

I, Allan O’Connor, declare that this thesis entitled:

Enterprise, education and economic development: an exploration of entrepreneurship’s economic function in the Australian government’s education policy

contains no material which has been accepted for any other academic award and to the best of my knowledge contains no material previously published or written by another person except where due reference is made.

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1 The research overview

1.1 Introduction and chapter overview

This chapter provides an overview of the research. It explains the rationale and development, previews the methodology, and highlights the major findings and recommendations. The contribution to knowledge of this research is twofold. First, it demonstrates a novel method of theory building in the entrepreneurship field. Second, it builds upon the early work of Schumpeter (1961) and argues the case for distinguishing entrepreneurship from business studies and for distinguishing enterprise from the firm, in terms of their contribution to fundamental economic development, as compared with incremental economic growth. The author argues that entrepreneurship education policy, when laden with economic rationality, needs to adopt an approach that targets the development of multidisciplinary enterprise skills and encourage career pathways for the broad range of individuals who engage in enterprise.

From the outset of this research the importance of entrepreneurship was assumed to be grounded in its economic significance. While entrepreneurship as a human activity might have been enacted intuitively and without formal education since the early days of human kind, it was the field of economics that first signalled its importance to a nation and society. This line of thought established the background rationale for the study. However, while the economic significance of entrepreneurship at an intellectual level was apparent to the researcher, the experience of the researcher as an educator was somewhat different. As an educator, the common practice of teaching purely business start-up as entrepreneurship seemed insufficient; there needed to be a clearer understanding about how education of entrepreneurship could intentionally contribute to the development and growth of broader units of economic analysis. It was this combination of factors that initially stimulated the research and the early literature search reinforced the need to build theory in this area which ultimately culminated in the research question.

Joseph Schumpeter (1961) is commonly referred to as a foundational author for entrepreneurship who first perceived the economy through the idea of two distinct
conditions. The first was the steady state condition that resulted in gains in productivity and economic growth and the second, a dynamic condition which contained the disruptive influence of innovation, contributing to economic development by creating fundamental shifts in the status of products and markets. Schumpeter’s framing of entrepreneurship focused on the second condition arguing that the entrepreneur engaged in enterprise to introduce products and services that resulted in market disruption and consequently was a key driver to national economic development. It is from this earlier viewpoint of Schumpeter that this research is launched following the suggestion by Barreto (1989) that early economic theories should be reconsidered in the wake of the later divergence of economic theory away from the original attention given to the activities of the entrepreneur.

Deciding a methodology for this theory building research task proved problematic and this chapter outlines the difficulties of dealing with paradoxical and poorly defined phenomenon and the decisions regarding research design that subsequently followed. Several options were considered to approach theory building before a hybrid design was adopted that had similarities to the metatriangulation method (Lewis & Grimes 1999) developed in organisational studies. It was clear that lack of agreement on what entrepreneurship was and how it was practised would influence the type of data that could usefully inform the research. Data collected from observational or first hand accounts would likely provide uneven or even biased viewpoints that could skew the research toward findings that were un-representational of national perspectives. Therefore, public policy communications (texts) were selected as empirical data and became the subject of the exploration. This type of data overcame many of the challenges posed by the research question as it contained multi-representational viewpoints aggregated by policy-makers into a national and broad reaching perspective. These texts were sourced from a publicly available website of the Australian government department responsible for policy development and leadership in education.

This chapter next outlines the progress of the study which followed three stages. The first stage provided the groundwork and developed a conceptual framework that guided the study resulting in a number of explanatory propositions. Stage two contained the analysis of the data which explored the correspondence between the explanatory propositions and
alternate explanations for entrepreneurship education found in policy communications. Stage three engaged in theorising and drew out implications, recommendations and further research opportunities.

To conclude this chapter a summation of the specific findings relative to the Australian case are provided. The research suggests that enterprise education in Australia reflects a general attitudinal and behavioural approach with only minor attention paid to the broader roles within enterprise that contribute to national economic development outcomes. This chapter, therefore, provides the context for the author’s contention about enterprise career roles and pathways and sets the scene for the more thorough explication of the research by the remaining chapters.

1.2 Background rationale for the study

A significant starting point for this research was the author’s professional experience of entrepreneurship education. As a teacher of entrepreneurship, the researcher was prepared to challenge the idea that the business concepts being created within the classroom could actually have an economic impact at a national level. Many of these business concepts were either simply too small-scale, tackling problems or issues that would satisfy personal ambitions of the entrepreneur, or were merely opportunistic with respect to gaps in a localised market place. Arguably, these types of business concepts would be relatively insignificant with respect to affecting national economic outcomes. Few students, if any, legitimately leveraged new knowledge that could disrupt existing markets and therefore, their business concepts were unlikely to have any appreciable affect on a national economy.

A national education policy that upheld promotion of entrepreneurship education of this kind was more likely to produce self-employment and low or limited growth businesses that might at best result in a slow, unevenly distributed and marginally incremental national economic growth. It occurred to the researcher that public policy statements developed with the ambition of making substantial improvement in a nation’s economic well-being, within any reasonable time frame, needed to be based on a different conception of entrepreneurship.
Therefore, the research commenced from a point of curiosity about how entrepreneurship education could be connected to national economic outcomes. Unlike Perren and Jennings (2005), who argued that it made no sense for governments to maintain a logic that the entrepreneur and small business had a role in the ‘machine’ of the economy and were implicitly responsible for economic results at the macro level, this author believed the contrary and that it was this very logic that made the field of entrepreneurship and its research important. It seemed that the relationship between the entrepreneur, entrepreneurship education and national economic performance lacked a clear theoretical basis. Obviously, any relationship between entrepreneurship education at the micro level of activity within a particular classroom, would be vastly removed from the macro national economic conditions which the accumulated efforts of entrepreneurship were meant to influence. Therefore, the objective and ambition for this research was to find and propose a theoretical relationship between these levels that could be useful and informative for developing a policy for entrepreneurship education.

From this point the researcher began to engage with the literature in the hope that this apparent gap could be bridged. Instead, much of the early search only reinforced the notion of a gap as the entrepreneurship policy and education literatures tended to uphold the assumption that education focused on starting new businesses generally would contribute positively to an economy without making apparent how this would or could be substantiated. The Global Entrepreneurship Monitor project, to which the author contributed as a member of the Australian research team in 2004 and 2005, was an example of research based upon an assumption that business ownership or intended ownership was the equivalent to entrepreneurship. However, studies by Birch (1979; 1987) who had conducted extensive studies in the United States of America (USA), and Storey (Acs & Storey 2004), who conducted similar studies in the United Kingdom (UK), found that economic growth at any one time was only attributable to a relative few dynamic businesses.

This surfaced a major muddle with respect to the entrepreneur and entrepreneurship as there appeared to be lack of any agreement on definition. This research is dedicated to the task of helping to surface and clarify a number of confusions about the economic
function of the entrepreneur and the intent of education in the field of government entrepreneurship policy. In much the same way as Eisenhart (2001) expressed the need to deal with muddles found in other areas of social science this research needed to grapple with muddles in the entrepreneurship field.

With little satisfaction emerging from the contemporary entrepreneurship literatures, ultimately the search turned toward economic theorists, including Schumpeter (1961) who was repeatedly cited as one of the founders of economic thinking about entrepreneurship.

1.2.1 Finding clarity in the Schumpeterian perspective

The author argues that Schumpeter’s (1961) early theory of economic development contained useful distinctions that focussed on a particular economic phenomenon, that of economic development, and a specific entrepreneurial activity, that of enterprise. Schumpeter’s approach also disentangled the role of the entrepreneur from that of a business owner by emphasising the entrepreneur as one who introduced innovation into a market via disruptive goods and services. These points positioned the theoretical inquiry and located a specific logic for entrepreneurship that attended to an economic function.

This approach to the research is supported by Barreto (1989) who interpreted much of the theoretical debate on entrepreneurship in economics as reflecting the disappearance of the entrepreneur from microeconomic theory around the middle of the 1900s. He found that the theory of the firm replaced the entrepreneur in the study of entrepreneurship as an economic function. Barreto claimed that the centrality of the firm in neo-classical economic theories became settled on three core assumptions inherent in firm behaviour that removed the complexity of issues associated with individuals as entrepreneurs. These assumptions were; (1) that firms served the production function in a market economy, (2) that firms made decisions based upon the logic of rational choice, and (3) that decisions were based upon perfect information (Barreto 1989, pp. 140-141). Barreto further claimed that over time these assumptions had become eroded and his closing remark suggested that:

It would be wise, therefore, to review past entrepreneurial theories – using the history of economic and entrepreneurial thought as a guide in avoiding previous mistakes and as an indicator of the most promising available routes (p. 144).
This idea prompted the author to re-visit the early theory of economic development proposed by Joseph Schumpeter (1961). Schumpeter’s prominence in citation levels (Grégoire et al. 2006) and reference by many authors\(^1\) to his works as foundational and/or pioneering suggested his ideas were highly regarded. However, Schumpeter (1976) also tended toward theories of the firm in his later years and this has resulted in a demarcation between his early thinking—referred to as Schumpeterian I—and his later approach labelled as Schumpeterian II (see also Granstrand & Alänge 1995). Despite this shift in interests in the economic unit of analysis, Schumpeter did remain true to his early theoretical ideas and continued to argue that enterprise and market disruption were separable and distinct from the productivity function of the firm (Schumpeter 1954).

1.3 Aims and Objectives

Schumpeter’s perspective was useful in providing a context for thinking about entrepreneurship in an economic framework. It clearly linked the entrepreneur with the conduct of an economic activity, referred to as enterprise, which had the effect of disrupting markets through innovation, subsequently leading to an economic function, that of economic development. The central research question extended from this position and framed the research in the context of economic development to provide a focus on a specific economic function. This background prompted and framed the guiding research question:

*How does national government policy portray entrepreneurship education to serve the purpose of achieving economic development?*

The aim of the research was to understand how entrepreneurship education policy could be developed with an explicit intent to influence the economic function of economic development. The early work of Schumpeter provided a reasoned and broadly accepted view that could be useful. However, Schumpeter’s theory was nearly a century old and

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needed to be reconsidered within the context of the contemporary understandings of entrepreneurship. Therefore, the first objective of the research was to establish how economic theorists had developed the concept of entrepreneurship and made explicit association to Schumpeterian economic development. Answering this question was important for framing the relevance of the Schumpeterian view and isolating key distinctions in the literature. Understanding the economic viewpoint was considered critical for examining entrepreneurship education policy that harboured explicit intent to affect economic development at the macro-level. Therefore, the first sub-research question was:

How have economic theorists developed the concept of entrepreneurship when considered from the perspective of the Schumpeterian view of economic development?

The second research objective was to determine the types of enterprise roles that were inherent in the activities of entrepreneurship that jointly contributed to macro-level economic development outcomes. Establishing a set of roles was considered critical to progress the study toward examining how entrepreneurship education was provided to those who undertook the various enterprise roles. This objective resulted in framing the second sub-research question:

How have entrepreneurship theorists distinguished the enterprise roles of those who attend to Schumpeterian economic development?

With some articulation of roles in hand, the third research objective turned attention toward entrepreneurship education to establish whether theorists dealing with entrepreneurship education generally made clear a career pathway for those who wished to become involved in the activities of enterprise that resulted in economic development. If entrepreneurship education policy was to be effective with respect to influencing macroeconomic outcomes, it must be supported by education institutions that align their practices with the objectives of government. If this was not the case, the task for policy was to address this shortcoming and frame initiatives and programs that encourage and assist
the institutions in bringing about a supporting educational framework. Therefore, the third sub-research question asked:

*How have entrepreneurship education theorists distinguished the career pathway for the roles of those who attend to Schumpeterian I theory of economic development?*

The next task of the research was to move from the general and theoretical concepts of entrepreneurship education for economic development to examine a test case. The national Australian education policy of the time explicitly espoused a connection between innovation and economic development and introduced enterprise education as a specific policy initiative. The fourth objective of the research was to establish whether actual entrepreneurship education policy that contained economic development objectives adhered in any way to the Schumpeterian I framing of entrepreneurship for economic development. Establishing the extent to which the theory aligned with practice would provide initial insight into the legitimacy of the theory and focus attention on the gap between theory and practice. The fourth sub-research question is then stated as:

*How does the Australian government’s education policy reflect Schumpeterian I economic development through articulated entrepreneurship policy for enterprise roles and career pathways?*

The fifth objective of the research was to expose other rationalities for entrepreneurship education that may influence policy and compete with aims to achieve economic development outcomes. Entrepreneurship has attracted a broad range of interests, for instance, one perspective considers it to have emerged as a societal phenomenon (Davidsson 2003). If this is the case, entrepreneurship education may also be held accountable for a diverse range of ambitions. In turn, this may distract entrepreneurship education policy away from economic outcomes and direct efforts toward education programs and initiatives that achieve aims other than those held by an economic agenda. While these other aims may be worthwhile and appealing, it is essential that the ambitions for entrepreneurship education are clear and distinct for reasons that include the need to
construct an appropriate evaluation framework. Therefore, this objective was to make transparent the competing ambitions for entrepreneurship education encountered in Australian education policy. The resulting sub-research question then asked:

*How does the Australian government’s education policy reflect alternate views with respect to entrepreneurship education?*

Designing the research around this series of objectives and sub-research questions provides findings that contribute toward arriving at a theory of entrepreneurship education specifically for economic development outcomes. While this work will have implications for a range of stakeholders, the primary aim of this research is to elaborate a theory that is useful to policy-makers responsible for national economic outcomes.

### 1.4 The challenges encountered in choosing a methodology

The research questions posed a number of challenges for establishing a research methodology and operationalising a theory building research design.

The first challenge related to the lack of theoretical underpinning. Entrepreneurship has suffered from the perennial problem of having no universally agreed definition (Gartner 2001; Hansemak 1998; Lindsay & Hindle 2002; Low & Macmillan 1988; Hill & McGowan 1999) which particularly vexed the field of entrepreneurship education (Hansemak 1998). The entrepreneur in entrepreneurship proved difficult to pinpoint and Kilby (1971) likened it to hunting for the *heffalump*, a mythical beast in Milne’s *Winnie the Pooh* children’s books. Everyone would see the elusive beast but no description of it was ever the same.

Grant and Perren (2002) argued that entrepreneurship research was pre-paradigmatic. Kuhn (1996) defines a paradigm as a unified view that a majority of scientists agree on, which in turn allows the scientific field to progress on a daily basis with empirical research. Brazeal and Herbert (1999) also argued for a strengthening of the entrepreneurship paradigm. They claimed that ‘[a]greement on the content of a field of knowledge—including its theories, methods, beliefs of causality, and standards—is important in the development of the field through its paradigms…” (Brazeal & Herbert 1999, p. 30). This
echoes earlier sentiments by Bygrave (1989) who said, ‘if [entrepreneurship] is to grow in stature as a separate discipline, it will need to develop its own distinct methods and theories’ (p. 7). Many years later, Busenitz et al. (2003) claimed that entrepreneurship was still an emerging area of investigation and they made a clear plea for much more theoretical work to develop adequate boundaries unique to the entrepreneurship domain. Grégoire et al (2006) highlighted that there was no dominant single disciplinary conceptual anchoring in entrepreneurship research and that generally any convergence of ideas was relatively low.

These factors supported the idea of undertaking theory development research and suggested a need to define entrepreneurship for the context of education to specifically highlight its contribution to economic development. Therefore, for this research entrepreneurship is defined as a social process involving the efforts of individuals in enterprise activities that has economic implications at a regional and/or national level. The reported diversity of views on entrepreneurship also suggested that data collected from individual accounts through either interviews or surveys would likely be unreliable due to the lack of agreement about what entrepreneurship was and how it would manifest within an economy and society.

A second challenge emerged when entrepreneurship was viewed from the perspectives of education and economics which makes apparent a number of paradoxes. There is the paradox of academic studies of entrepreneurship that converge many disciplines, creating a distinctive single discipline (Audretsch 2004; Hart 2003) which hence operates from isolated schools at university institutions. This can be contrasted with entrepreneurship in practice that resides in multiple disciplines and manifests itself in a multitude of ways (O’Connor, Cherry & Buckley 2007) suggesting that entrepreneurship belongs in many disciplinary areas and can not be isolated. There is the paradoxical notion that entrepreneurship responds to economic issues of global competitiveness (Audretsch 1999; Begley & Tan 2001; Bates & Dunham 1993; Kotkin 1993; Van Praag 1999) but is simultaneously grounded in local and community dynamics (OECD 2001). Another paradox occurs when one considers the positive broad social implications of entrepreneurship that are embodied in narrowly defined capabilities and capacities of individuals (Cécora 2000; Hytti & O’Gorman, 2004) that are primed by self-interest (Foster
2006). These paradoxes influence the motivations and expectations about entrepreneurship in both policy and educational environments.

Bohm (1996) discussed the nature of a paradox and contrasted it with the nature of a problem. He suggested that ‘as long as a paradox is treated as a problem, it can never be dissolved’ (p. 63). The foundation of his argument is that at the extremes of a paradox there is an unambiguous position, and that neither extreme is a resolvable problem relative to the other. In essence they inevitably co-exist. This implies that the research question of this thesis would resist resolution as a problem as it was dealing with a paradoxical phenomenon. Therefore, it became apparent that the aim of the research should not be to resolve a problem but to bring to the surface the issues embodied in the phenomenon of policy for entrepreneurship education with an economic objective and propose the considerations required in making policy that would reconcile the macro and micro interests of entrepreneurship.

This suggested again that the research design would need to accommodate competing perspectives. Data collected from observational or first hand account would need to avoid parochial viewpoints limited by domain, geographic region or located exclusively in social or individualist perspectives. The data would need to be multi-representational comprising views clearly aggregated into a national and broad reaching perspective.

A third challenge arose when one considered the realm of policy-making. The research question specifically referenced national policy. Peters (2001) made the point that policy-makers faced the task of:

weaving often incomplete, partial explanations and new and largely untested approaches to construct policy approaches and narratives with a coherent definition of vision (within the political parameters of government policy manifestos) (p. 6).

It is contended that while a diversity of thinking about entrepreneurship and its economic function in many ways enriched the theoretical debate, it also ‘problematised’ policy development with varied and often divergent thinking. Furthermore, the field of entrepreneurship in its pre-paradigmatic and emergent state was far from offering complete and incontestable theories. With respect to policy for entrepreneurship education, policy-
makers faced the task of navigating the terrain with a sketchy and incomplete map and policy would be equally entangled with paradox and contentious definitions that are characteristic of the entrepreneurship field as a whole.

Walters and Haahr (2005) also claimed that ‘[p]olitical reason is embedded in the ways we are governed, but often in ways we are not fully conscious about’ (p. 6). The data therefore also needed to be appreciative of policy in practice, embedded with rationality that may or may not be explicit. This implied for this research that explicit rationality may not tell the whole story and the research would also need to draw attention to alternate rationalities that might be concealed within policy brought about by its very process of development and construction.

Various attempts to verify the efficacy of entrepreneurship policy specifically with respect to education and human capital development suggested that the theories were failing to uphold and substantiate economic rationality (Bögenhold & Staber 1991; Greene 2002; Meager, Bates & Cowling 2003). Therefore, while the research design needed to maintain a clear definitional stance it also needed to come to terms with some of the paradox in entrepreneurship, education and economic development. It required being appreciative of competing rationalities embedded in policy. To arrive at new understandings that could be useful to policy-makers, educators and researchers, the research had to be respectful of national entrepreneurship education policy as a holistic but multi-perspectival and paradoxical phenomenon.

1.5 Theory building as a methodology

To accommodate the challenges articulated above, three different methods of theory building were considered: case study, content analysis and discourse analysis. Each approach had its merits and limitations. Ultimately, the research design most appropriate seemed to be a hybrid of different methods and analytical approaches that contributed to theory development. The required design for the study was more similar to a meta-paradigmatic method proposed by Gioia and Pitre (1990) and later operationalised by Lewis and Grimes (1999). A meta-paradigmatic method of theory building is used for research in areas where there is no unified agreement by its theorists. The theory building in
this circumstance is not considered a search for ‘truth’ but instead seeks to reconcile paradox. Ezzy (2002) suggested that ‘theory is a contribution to an ongoing dialogue between people with a variety of vested interests’ (p. 30); the intention of this research was to contribute to the dialogue between policy-makers, entrepreneurship researchers and enterprise or entrepreneurship educators.

Theory building is supported by a thesis of cycles (Bourgeois 1979) that suggests interplay between deductive and inductive methods, to respectively explain and explore. Theory building utilising prior theories is described as a deductive process (Gioia & Pitre 1990) and is grounded in a functionalist research tradition (Burrell & Morgan 1992). However, exploring phenomena in theoretically sparse fields involves moving from empirical data outward toward generalised theory and is referred to as an inductive process (Eisenhardt 1989; Gioia & Pitre 1990; Glaser & Strauss 1967; Lewis & Grimes 1999; Mintzberg 1979; Strauss & Corbin 1990), grounded in the interpretive research tradition (Burrell & Morgan 1992). The hybrid design of this research drew upon both traditions and first used a deductive approach to explain the phenomenon in question, that is, entrepreneurship for economic development, and then employed an inductive process to explore and reveal competing explanations of entrepreneurship education that resided in national education policy.

In adopting a theory building method, reviewing the literature becomes embedded into the methodology. Therefore, the sequence of this research thesis differs to traditional approaches. The methodology chapter precedes the literature review chapters and the manner in which the literature is reviewed becomes a critical element of the methodology itself in developing an explanatory frame of reference.

By utilising contrasting explanatory and exploratory research methods employing different paradigmatic assumptions, the research exposed inconsistencies between the different sources of theory. Gioia and Pitre (1990) described these disputatious areas as transition zones. Lewis and Grimes (1999) argued that exploring the transition zone helps theorists to explicate potential disparity and complementarity. The hybrid research design displayed characteristics consistent with a multi-paradigmatic theory building method and therefore drew reference from the metatriangulation method meticulously detailed by Lewis.
and Grimes (1999). Chapter 2 deals with the methodological issues of this study more extensively although Chapters 6 and 7 exhibit aspects of the method more precisely.

1.6 Progressing the theoretical inquiry

Lewis and Grimes (1999) suggested that theory building was generally conducted in three phases. The first phase laid the groundwork, the second conducted the data analysis and the third engaged with theory building. The first phase of this study involved the development of a conceptual framework that established the logic and groundwork of the explanatory research stance. The aim was to establish theoretical propositions that could be used in a comparative way with the findings revealed by the second phase of the study which explored the empirical data of policy communications. The propositions provided a context and frame of reference to compare with the findings of the data analysis. The third phase explored the direct implications of the findings for policy, education providers and consumers and entrepreneurship theory.

1.6.1 Phase one: providing the groundwork

The first major task undertaken in this theoretical inquiry was to explore the historical and contemporary perspectives on the relationship between entrepreneurship and economics, and develop a clearer conceptual framework that exposed the logic that made connection between these broad concepts. By adopting Schumpeter (1961) as a starting point this task highlighted the importance of re-focusing attention on the connection between entrepreneurship, enterprise and economic development and provided the groundwork to demonstrate the significant implications for education policy (if it were to become an effective macroeconomic intervention aimed at creating the environment for fundamental economic development).

Schumpeter’s *Theory of Economic Development* provided some clear thinking about the concepts of enterprise, innovation, market disruption and economic development, and the entrepreneur and the entrepreneur’s role in establishing market disruption. He signalled demarcation of responsibilities in producing market disruption and recognised the pragmatic difficulties in holding these distinctions while acknowledging the need to do so.
Chapter 3 attends to the first objective and sub-research question of the research. It establishes key economic distinctions developed through conducting a context literature review (Neuman 1994) that explored and elaborated the economic credentials of entrepreneurship and its economic function. This review revealed that entrepreneurship was thought to be responsible for two distinct economic functions, i.e. economic development and economic growth. A second concept that emerged was that the entrepreneurial activity of enterprise was distinct from general business. However, none of these important distinctions seemed to be consistently held within the field of entrepreneurship theory and therefore a diversity of thinking about entrepreneurship was also likely to infiltrate policy.

Establishing the economic concepts for entrepreneurship drew attention to the idea of different human capital roles within an economy that contributed to enterprise and the subsequent chapter attends to the second research objective and sub-question. Chapter 4 describes a conceptual historical literature review (Neuman 1994) to establish the enterprise roles. This method of review was conducted in order to trace the development of Schumpeter’s thinking by reviewing, in a systematic way, a series of prominent entrepreneurship authors who engaged with entrepreneurship in relation to economics. This explored how a purposefully selected sample of entrepreneurship theorists evolved and transferred concepts from the field of economics to the field of entrepreneurship.

Essentially, this review identified generally where and how consistency and/or departure from Schumpeter’s views arose and considered how these consistencies or departures might influence contemporary understandings of the relationship between entrepreneurship and economic development. The review concluded by distinguishing several attributes of enterprise roles. While these roles could be clearly distinguished, they were not necessarily unique to different individuals and so a multidisciplinary concept with respect to roles was considered useful to describe the nature of the multiple tasks undertaken by any individual engaged in enterprise.

Chapter 5 addresses the third research objective and sub-question, exploring the provision of education for those who adopt an enterprise role within an economy. Clearly, the nature of this exploration moved the inquiry beyond the scope of economic literature and instead it engaged with entrepreneurship education literature in the manner of a
Ch 1 The research overview

1.6.1 Phase one: the theoretical literature review

Theoretical literature review (Neuman 1994). Two observations emerged from this review. The first was that, within the entrepreneurship education literature, it seemed that enterprise was not usually distinguished from the concept of general business but instead described as an attitudinal and behavioural form of education. The second was that an entrepreneurship career pathway was almost always considered via the role of the entrepreneur as a business owner.

Chapters 3, 4 and 5 culminate in a set of propositions that articulate characteristics of education policy that would reflect a position of entrepreneurship education expressly for economic development. To achieve economic development in a coherent manner the literature reviews suggest a clear rationality should be explicit in policy communication, a set of roles should clearly identify who contributes to enterprise and consequently economic development, and career pathways should be developed for those who adopt the different enterprise roles.

1.6.2 Phase two: the data analysis

Drawing upon the conceptual framework and armed with a set of propositions the next item on the research agenda was to explore how government policy portrayed entrepreneurship education to serve the purpose of achieving economic development. It seemed that if the entrepreneurship economic theorists were not making distinctions about such critical concepts as entrepreneurship function and roles, and entrepreneurship educationalists were not generally concerned with providing career pathways for the full complement of enterprise roles, then government policy would intervene to provide direction for entrepreneurship education with respect to achieving national economic development.

Chapter 6 describes the first level of analysis to meet objective four of the research by comparing a selected cases’ data with the explanatory propositions arising out of Phase One of the research. In Australia, much effort had been dedicated since at least the early 1990s to developing an entrepreneurship education agenda within the national government’s education policies. By 2006, this had become part of the government’s drive ‘to encourage and support innovation and enhance Australia’s international competitiveness, economic
prosperity and social well being’ (Commonwealth of Australia 2001). Interestingly, an increasing economic influence in Australian policy agendas had been noted by several authors (Marginson 1993; Meredyth 1998, Perren & Jennings 2005). The Australian policy position was also not unique and other governments were actively incorporating enterprise and entrepreneurship education into specialised programmes and/or the education and training system in a similar way to Australia (Lundström & Stevenson 2005, p. 233).

Therefore, Australian education policy seemed to be an ideal case through which to continue the theoretical inquiry as it exhibited a clear intent to encourage and support innovation, held an economic rationality that expected innovation to be associated with economic outcomes (international competitiveness and prosperity), and it held a clear agenda for enterprise and entrepreneurship within its education policy. Hence, the selected data for the second phase of the research was drawn from the Department of Education, Science and Training (DEST) website which hosted much of the Australian government’s policy on entrepreneurship education. Pages appearing on the website that exhibited relevant key concepts were extracted for analysis across two days, 11–12 September 2006 to maintain a tight frame of currency for the data and provide a coherent snapshot of the education policy.

Content analysis was used as the primary means to locate key terms within the texts extracted from the public policy website. Content analysis is a research tool used to detect the presence and frequency of key terms and concepts within texts. Discourse analysis techniques were also used as a complementary tool to analyse meanings and relationships between terms and concepts. The analysis particularly sought to explore the significance, contextual relationships, associations, and situated meanings of the key concepts with respect to entrepreneurship education.

The findings from the explanatory analysis tended to confirm Stevenson and Lundström’s (2002) claim that Australia’s policy view of enterprise education is one belonging to the school of thought which adheres to the notion that entrepreneurship education should attend to developing the personal attributes, attitudes and behaviours required by those who run a business. However, particularly through the use of the term entrepreneurship, the policy communications also revealed some evidence of a departure
from the business starter concept by emphasising the role of the inventor or innovation creator.

Chapter 7 deals with the fifth research objective and describes the exploratory analysis and findings. Four further documents were isolated from the DEST website and these provided an historical context for the explanatory analysis of the contemporary pages of the website. These documents were not policy documents per se but were research and/or reports commissioned or compiled by the Australian government to inform policy-making. The four documents were concerned with two main areas of investigation—enterprise education and economic development. Again a combination of content and discourse analysis techniques were employed to isolate key terms and explore assumed meaning and implied associations.

The exploratory analysis revealed that enterprise and enterprise education concepts were related to four distinct conceptual areas: economics, regionalism and community, educational models, and work and employment. The sum of the analysis suggested that the Australian government’s education policy only tacitly encouraged the Schumpeterian-derived notion of economic development and lacked a precise definition of the phenomenon. Overall, there was little recognition of the roles and pathways of a career activity in enterprise and therefore the education, skill development, economic reasoning and long-term social benefit of enterprise were overlooked in favour of generic work and life skills.

1.6.3 Phase three: theory building

The third phase of the research explored the research findings for direct implications for entrepreneurship theory, education providers and recipients, and policy concluding with a number of propositions and further research opportunities. The aim of the research is reached and the discussion brings into focus a new understanding of how entrepreneurship education policy could be developed to achieve an explicit influence on economic development.

Chapter 8 aggregates the findings from the series of sub-research questions and objectives to provide a summary of all the analyses and offer a discussion of the
implications for four main areas: entrepreneurship theory, education providers and institutions, education consumers and practitioners, and policy. In order for policy to achieve economic development through entrepreneurship a number of needs are highlighted such as: the need to be explicit about the purpose of entrepreneurship; the need to avoid defining the entrepreneur and entrepreneurship only by association to business; the need to move toward recognising the economic impact of entrepreneurship; the need to acknowledge the number of roles that are multidisciplinary and interdependent in nature; and, the need to appreciate the variation in the form of entrepreneurship that will be most essential in influencing different regions and communities.

The implications also highlight a number of further research opportunities aimed at testing a set of propositions that are offered as a result of the research. Furthermore, research could consider analysing different sets of data from various policy perspectives, exploring the implications of the research at more refined levels and developing the means, methods and approaches to distinguish entrepreneurship from business disciplines. Further, while this research exposed how one particular national government portrayed entrepreneurship education, it remains to show how a national government can develop entrepreneurship education to achieve economic development. This line of research could be developed by focussing on the institutionalised nature of entrepreneurship in education policy to facilitate exploration of such things as: ideological stances, a multiplicity of voices and competing demands, and changes in the power relationships between the state, the community and the business sector.

1.7 The major recommendations

The major recommendations arising from this research take the form of propositions for policy-makers to consider when formulating entrepreneurship education policy for economic development. These are propositions because of the nature of the research and the theoretical rather than hypothetic derivation. The propositions can be subjected to hypothesis testing and validation, although the logic of the inquiry can also be appreciated on its own merits to shape policy and provide a framework for contextualising a more specific and bounded study.
Proposition one makes the claim that policy-makers should consider enterprise within its economic context and not merely as an attitudinal or behavioural characteristic. By downplaying the economic framing of enterprise, the work that it produces to influence an economy is downplayed and instead it encourages a broad proliferation of attitudes and behaviours with outcomes that may be dispersed but poorly directed.

The second proposition suggests that when considering entrepreneurship education policy, policy-makers need to recognise variation in local/regional demand for enterprise work and emphasise the education appropriate for the prevailing economic circumstances of local/regional milieus. This picks up on the fact that a national economy is not homogenous and a variation of economic circumstances exist that will influence the type of entrepreneurship education that is most warranted for any particular region.

The heterogeneity of a nation and the localised nature of power dynamics give rise to proposition three. This considers that education in regions and communities will respond to local demand that may not be in the best interest of broader or long-term community needs. Policy-makers therefore need to ensure local/regional milieus are serviced by entrepreneurship education that not only deals with demands placed upon it by current day circumstances but also with education that responds to counter-cyclical circumstances and specifically economic development. Because economic development is disruptive, it is likely that those who benefit from maintenance of the status quo would attempt to dominate the education agenda and resist the introduction of education that may serve to displace or change the existing market place. Therefore policy-makers need to appreciate and use their unique position to influence the local market dynamics.

Proposition four addresses the multidisciplinary and interdependent nature of enterprise roles. It suggests that policy needs to portray enterprise work as central to the entrepreneurship career choice and provide education pathways that intersect at different points over an individual’s working lifetime, accessible from different levels and disciplines within the education system. This also fosters the idea that business ownership is not the determining career choice in entrepreneurship but instead there are multiple roles that contribute to enterprise and participants in enterprise come from many disciplines across the education sector.
1.8 The findings relating to the Australian case

This research was not intended to be normative or to test hypotheses but rather it set out to explore the relationship between entrepreneurship, education, economic function and government policy. The research sought to understand how public policy portrays entrepreneurship education for economic development, and build theory by undertaking an analysis of policy communications in the Australian setting. It is hoped that others will see merit in its findings and continue with investigations by adopting theory testing and further theory building techniques.

It was found that Australian entrepreneurship education policy did not adhere well to the concept of enterprise as an economic function that involved several distinct roles to form the basis of careers in entrepreneurship. When considered through an economic lens, it is argued that individuals have specific roles to play in enterprise that lie outside of business ownership and that these could be advantaged by multidisciplinary education and interdisciplinary training pathways. Instead, Australian policy reflects an attitudinal and behavioural approach to enterprise directed broadly across the secondary school system while narrowly targeting one role – that of creating the scientific and technological grounds for innovation, via entrepreneurship education directed toward the science and technology fields in higher education. Enterprise education in Australian policy communications finds alternate meanings and can be associated with a model of education that engages with teaching and learning about industry and commerce, regionalism and community, work and employment as well as issues of economic development.

The author’s contention that entrepreneurship has legitimacy as a career with several roles and functions is compatible with the perspectives of individual, social and economic outcomes. The proposal, that governments need to encourage entrepreneurship education options with respect to the roles that individuals may wish to play and provide accessible learning pathways at different points throughout an individual’s working life, is concerned with providing informed choice to education consumers. Entrepreneurship education as a career has several aspects although at the core is economic change. There are several actors that bring about this change, one of which is the entrepreneur and others are those who create, manage, advise, support and stimulate new, innovative and growth-oriented
economic activity. The rewards for actors participating in entrepreneurship range from purely the intangible satisfaction of social contribution through to the monetary gains of successful venturing and every combination in-between. However, recognising the distinction between enterprise and business and the need to prepare individuals for different roles in enterprise, is important if the paradoxes presented by entrepreneurship between the interests of the individual and broad economic outcomes are to be reconciled and understood within the context of education and policy.
2 The methodology

2.1 Introduction and chapter overview

This chapter sets out to refine and define the method of theory building undertaken by this research. It first outlines the research question arising from the preliminary musings about economics and entrepreneurship education. It then considers the challenges that this question raised and the implications for the research design.

The research question prescribed a number of features necessary for the research design and the data it analysed. Both the research method and the data needed to accommodate the weak base of theory but simultaneously sustain a clear theoretical position that enabled the surfacing and reconciliation of paradox. A number of theory building techniques were considered including case study, content and discourse analysis methods. However, none of these were entirely appropriate and instead a hybrid design containing elements of each had more appeal. Synthesising the different options drew attention to a multi-paradigmatic research method and the final design took reference from a metatriangulation methodology that accommodated the parameters dictated by the research question and accepted both explanatory and exploratory approaches to the data.

The discussion moves on to address the first phase of the research methodology that provides the groundwork. This phase incorporated a series of literature reviews that developed and refined a conceptual framework to facilitate the explanatory component of the study. The first review was a contextual review that grounded the economic concepts for entrepreneurship. The second literature review utilised a conceptual-historical approach. In a systematic way, this review explored how the concepts of economics evolved and how they related to the field of entrepreneurship with particular emphasis on making apparent the roles played by those engaged in entrepreneurship within the economic frame of reference. The third review was a theoretical review that was concerned with how education adapted the economic theory in entrepreneurship to develop and provide particular career pathways.
The chapter next explains the justification and selection of the case data. It demonstrates the suitability of Australia as a case due to underpinnings of economic rationality in its policy formation. It then discusses the suitability and merits of using a website to isolate relevant publicly available data for analysis. It also shows how an analysis of Australian policy has potential relevance to other nations that may adopt a similar economic stance and education policy approach.

The analysis of the data is then described with respect to its methodological argument. Analysing the data incorporated techniques from both content and discourse analysis and was applied to two different data sets drawn from the same site to be consistent with the selected method of theory building. The analysis draws out findings from both the explanatory approach to the data, referring to the propositions consistent with the conceptual framework, and an exploratory approach, that surfaced a number of competing perspectives. Using the explanatory propositions also allows a comparison across the two sets of data. In each case the relationships between the key terms can be contrasted with the proposed economic rationality of relationships. Consistency and divergence can then be discussed with respect to the implications.

The concluding sections of this chapter discuss how the competing perspectives were considered for their implications to different sectors and audiences. It also outlines other necessary steps that conclude a theory building study. These include an outline of policy propositions that arise from the study, a critique of the methodology, the proposal of future research opportunities and finally a personal methodological note that recognises the presence of the researcher within the research process itself.

2.2 The research question

Although it took some time to emerge through the early stages of the inquiry, the central question which ultimately came to drive the process of this theoretical inquiry was:

*How does national government policy portray entrepreneurship education to serve the purpose of achieving economic development?*
The nature of this research question raised a number of challenges discussed in the introduction to this research. The exposed challenges extended across a range of issues including entrepreneurship’s lack of clear theoretical underpinning and the elusiveness of agreed definitions that combined to undermine its paradigmatic base. The field of entrepreneurship was also found to be laced with paradox due to its spanning between broad macro level social conceptions and interactions stemming from micro levels of individual behaviour. These two challenges also influenced the policy-making process itself which presented the third challenge. Policy in this area was unstable, contested and questionable in its legitimacy and efficacy. Combining these points implied that the research design must be respectful of a policy phenomenon that was informed by limited theoretical agreement, national in its context and represented by data that was holistic but multi-perspectival. Furthermore the design needed to produce findings that would reconcile paradox.

2.3 Deciding the method

The nature of the question prescribed a number of features that the research method and the data needed to accommodate. If the method and the data were to anchor the theory development they also needed to exhibit several attributes. The concerns and focus of this study made clear the need for an exploratory research focus. Its intent was to build a theoretical base for understanding the connection between entrepreneurship education and economic development policy objectives. The data needed to be clearly representative of the research, with national scope, and be explicit about a relevant economic purpose. The data also needed to be discreetly discernible with respect to its heritage to allow transparency regarding its implicit embedded rationalities.

Exploring phenomena in theoretically sparse fields is referred to as an inductive process (Eisenhardt 1989; Gioia & Pitre 1990; Glaser & Strauss 1967; Lewis & Grimes 1999; Mintzberg 1979; Strauss & Corbin 1990) that moves from empirical data outward toward generalised theory. The case study method had appealing characteristics that appeared to some extent to meet the requirements of an inductive theory building study. Notably, Yin (1994) makes the point that particular cases can be used to generalise for
theory but should not mistakenly be used to generalise for other cases. Yin further notes that a single case can represent a significant contribution to knowledge and theory building when it tests what is considered to be well-formulated theory. Given the theoretical development required to define entrepreneurship for economic development, this had resonance with the objectives of this research.

However, a case study is defined by its in-depth collection and analysis of a range of informing data in order to understand a particular person or circumstance (Leedy & Omrod 2001, p. 157). This includes observations, interviews and text-based and/or visual documentation. Given the aforementioned difficulties of definition, paradox and rationality, observations and interviews were not likely to deliver an objective or holistic account of what the policy says or does. The aim of the research was to understand how the framing of entrepreneurship education within national policy could be directed toward achieving an objective of economic development. The nature of the phenomenon itself plays a part in deciding the extent of usefulness of case study data. Observations and interviews would provide subjective accounts influenced by the histories, perspectives and preferences of the interviewee and/or observer. Instead it was the policy itself that would most accurately reveal its content with respect to the phenomenon in question rather than expressions of opinions and ideas about what the policy contained.

This insight suggested an alternate method, that of content analysis. This method is appropriate when the aim is to identify the specific characteristics of a body of communicated material (Leedy & Omrod 2001, p. 157). Content analysis is a technique for examining information, or content, in written materials which involves creating a system for recording specific aspects of it (Neuman 1994, p. 29). Content analysis requires identification and sampling of specific material and coding of the material to predetermined and precisely defined characteristics (Leedy & Omrod 2001, p. 157). This objectively functional method on the one hand satisfied the requirement of holding a clear definitional stance although it seemed also inadequate with respect to appreciating paradoxical phenomena and surfacing embedded competing rationality that may be concealed within the data.
Engaging with policy as communicable material also relates the research to the field of discourse analysis. Walters and Haarh (2005) explained that research that attempts to make political reason more intelligible is grounded in the critical field of governmentality and discourse research. This current research deals with the economic reasoning of education policy that results in economic development and also asks what other competing rationality may be behind the portrayal of entrepreneurship education in policy communication. Therefore, techniques drawn from the interpretive discipline of discourse analysis (Chilton 2004; Fairclough 2004; Gee 2005) were also deemed to be useful in analysing the data.

The research design most appropriate seemed to be a hybrid of different methods and analytical approaches that contributed to theory development. It was partly a case study although it necessarily dealt with only one aspect of case study data—a set of communicated documentations. It was partly content analysis, except that the analysis needed to move beyond the recognition of predetermined and defined characteristics to appreciate other characteristics and rationality within the data. It was also partly discourse analysis, although it did not extend to examine an array of discourse data but instead one component of a broad discourse.

2.3.1 Synthesising the method options

Theorising at the level of government policy can be referred to as meso level theory building. Neuman (1994) suggests that studies at this level are relatively rare as they attempt ‘to link macro and micro levels or to operate at an intermediate level’ (p. 42). However, Hjalmarsson and Johansson (2003) demonstrate how particular conceptions of institutions and discourse may facilitate research that investigates linkages between the micro and macro perspectives.

Research engaging the communication of national policy fits the meso level theory description as it mediates between macro conceptions and aggregations of ideas that are designed for broad social benefit and the micro level actions of individuals, small groups and localised communities. Public policy communications (texts) stand alone and between the macro and micro levels. It is both deliberately constructed by the makers of policy and
is open for deconstruction and interpretation by the consumers of policy, mediating between one and the other. As such, it is both institutionalised as part of the national fabric of society and an aspect of discourse. Furthermore, it is readily and openly available for scrutiny.

The hybrid design of this study is more akin to what Gioia and Pitre (1990) proposed as a meta-paradigmatic method which was later operationalised by Lewis and Grimes (1999) under the heading of metatriangulation. A meta-paradigmatic method of theory building is useful for research in areas where there is no unified agreement by its theorists. The theory building in this circumstance is not considered a search for ‘truth’ but rather a search for comprehensiveness stemming from analysis grounded in different worldviews; in essence, it seeks to reconcile paradox. This approach, arising in the organisational literature nearly two decades ago, dealt with many of the same issues currently facing entrepreneurship research. Particularly pertinent is that it is a form of research design that supports a process of theory building that appreciates multiple perspectives.

Gioia and Pitre (1990) argued that ‘traditional approaches to theory building are not entirely consistent with the assumptions of alternative research paradigms’ (p. 584) and ‘that the use of any single research paradigm produces too narrow a view to reflect the multifaceted nature of organizational reality’ (Burrell & Morgan 1992; Frost cited in Gioia & Pitre 1990, p. 584). Gioia and Pitre (1990) suggest an atypical definition of theory that is sufficiently broad to encompass the scope of paradigmatic theoretical representations as ‘any coherent description or explanation of observed or experienced phenomena’ (p. 587). The method facilitates the exploration of consensus and conflict within data by applying contrasting research methods grounded in different philosophical research approaches. It attempts to gain a broader meta-theoretical perspective while appreciating the relative positions of different research approaches.

Gioia and Pitre (1990) explain that there are blurred boundaries between theories built from within different paradigms and they refer to these areas as transition zones; that is, the areas of research that are not clearly delineated within one paradigm or another. Lewis and Grimes (1999) argue that exploring the transition zone helps theorists to examine the boundaries and focus paradigmatic assumptions while assisting to explicate
potential disparity and complementarity. The proposed hybrid research design displays the characteristics of a multi-paradigmatic theory building method and can draw reference from the metatriangulation method detailed by Lewis and Grimes (1999).

The research method is designed to examine how policy communications position entrepreneurship education relative to theoretical economic development rationality but then further explores policy to explicate other embedded rationality for entrepreneurship education. The method therefore adopts a dual paradigm approach to the data. One that first seeks to explain the phenomenon by comparing the data to an objectively deducted theoretical position and the other that abandons the functional predisposition to explore the data using an interpretive lens to appreciate alternate viewpoints and any paradox embedded within the data. One seeks to explain and the other explore.

2.4 Establishing an explanatory conceptual framework

In order to progress the study in a scholarly way, development of a conceptual framework was required to establish the logic and groundwork for the study. Morgan (1983) reinforced the notion that science was a process of interaction and suggested that researchers engaged with a topic by interacting with it through a particular frame of reference. Lewis and Grimes (1999) suggested that theory building was generally conducted in three phases. The first phase laid the groundwork, the second conducted the data analysis and the third engaged with theory building. The development of the conceptual framework was a major step in the research building method to establish the groundwork and frame of reference for the data analysis.

The conceptual framework established a theoretical underpinning that might explain how entrepreneurship education could be positioned in policy rationalised by economic thinking. The first phase of the research engaged with different literatures that straddled economics, entrepreneurship and education. Strauss and Corbin (1990) suggested that technical or academic literature could: ‘…stimulate theoretical sensitivity; …be used as secondary sources of data; …stimulate questions; …direct theoretical sampling, [and]; be used as supplementary validation’ (pp. 51-53). Academic literature was clearly a source of data that could legitimately be incorporated into the theory building strategy although there
is difference in opinion about when literature should be introduced into the theory building process depending upon ones ontological and epistemological stance (Burrell & Morgan 1992).

Initiating theory building utilising literature reviews and prior theories is described as a deductive process (Gioia & Pitre 1990) and grounded in a functionalist research tradition (Burrell & Morgan 1992). However, the aim in the current research was not to build hypotheses for testing with statistical methods, as is the case in most functionally grounded research, but rather, to establish theoretical propositions that could be used in a comparative way with the findings revealed in the data. The propositions provided a context for comparing competing explanations of entrepreneurship education that were found to reside in national education policy.

2.4.1 Delimiting the focus of the study

This research adheres closely to Schumpeter’s early notions of enterprise and the entrepreneur and distinguishes this theory from that of the firm. This approach isolates the theoretical inquiry to the issues of creating, developing and introducing market disruptive goods and services into a market economy and excludes close examination or integration of alternate theories about entrepreneurship within economics.

Hérbert & Link (1982) identified twelve themes commonly portrayed in the economics literatures that associated the entrepreneur with economics and concluded that there were three major traditions: the Chicago tradition, the German tradition, and the Austrian tradition. These traditions emphasised differences in function where the Chicago tradition entrepreneur lead markets back to equilibrium, the German tradition focussed on the entrepreneur who instigated instability and disequilibrium into the market through ‘creative destruction’, and the tradition of the Austrian entrepreneur who concentrated on profit opportunities occurring after exogenous market shocks. Although there is much overlap and contradiction between individual authors in economics, the three traditions model was seen to be useful.

Hérbert and Link (1982) attempted to describe the traditions through the clustering of authors; however, it is perhaps more appropriate to consider the basic traditions from the
perspective of new venture creation and relationship to market dynamics. The entrepreneur might be thought to start a new venture based upon either: a demand interpreted opportunity that emphasises competitive market behaviours (Chicago tradition); an imitative or follower new venture that exploits opportunity derived from the differential between demand and supply (Austrian tradition); or an innovative new venture that creates opportunity and new demand driven by new supply dynamics (German tradition).

The focus of this research originates and identifies with the entrepreneur belonging to the German school of thought and particularly that of Schumpeter as an explanatory platform for the phenomenon of economic development. Following this approach delimits the research and focuses it on the form of entrepreneurship that explains market disruptive activity and excludes other economic schools of thought that have other ideas regarding the role and function of the entrepreneur. Aside from the Chicago and Austrian lines of thinking exposed by Hérbert & Link (1982), this also excludes any deep consideration of entrepreneurship within the contexts of classical and neoclassical economic schools of thinking which deal more substantially with labour, productivity and equilibrating market behaviour (Bannock, Baxter & Davis 2003) and tend to locate the firm as the central market actor rather than the entrepreneur (Barreto 1989). Instead, the conceptual framework seeks to differentiate forms of entrepreneurship and distinguishes entrepreneurship for economic development from other concepts such as economic growth or even the more broadly based economic concept of productivity.

2.4.2 Three steps to building a conceptual framework

The first step in building the conceptual framework involved a context literature review (Neuman 1994) that developed the economic distinctions first suggested by Schumpeter (1961) in reference to entrepreneurship. Here enterprise is drawn out as a key concept that contributes to economic development. The activity of enterprise is distinguished from the activity of business that serves a different economic purpose. It also suggests that enterprise involves a number of roles and disciplines that complement and work with the entrepreneur and these are subsequently elaborated in the subsequent step.
The second step moves from preoccupation with the field of economics to conduct, in a systematic way, a conceptual historical literature review (Neuman 1994). This explored how entrepreneurship theorists evolved and transferred concepts from the field of economics to the field of entrepreneurship. The authors and works were purposefully selected for their breadth of engagement with economists and their ideas in their attempts to synthesise the economic theories for application to entrepreneurship. Of particular interest was how they introduced and related the early Schumpeterian economic ideas to entrepreneurship theory. Attention is focussed on the roles associated with enterprise and the review reveals a number of characteristics that differentiate the roles within enterprise from roles within business.

Step three involved a theoretical form of literature review (Neuman 1994) which looked at the concept of entrepreneurship education. The aim of this review was to reveal how the economic and entrepreneurship concepts relating to roles associated with enterprise were generally developed and provided for via career pathways. The review identified the main theories of entrepreneurship education and explored the core concepts with respect to economic discipline and conceptions of enterprise roles. The combination of literature reviews expanded and refined the conceptual framework for the study. This led to the development of propositions that might be expected to explain entrepreneurship education policy designed to focus entrepreneurship education on achieving economic development objectives. This provided an economic context and a position of comparison that could be taken to the case data.

These three steps are outlined in separate chapters. To assist the reader to navigate through this series of literature reviews and sustain the flow of logic, several text boxes are dispersed through the ‘Introduction and chapter overview’ sections. These boxes are used as a literary device to provide the reader with space and prompt a reflective pause. They summarise the point being made, drawing the reader’s attention to the critical elements of the logic, and provide a bridge between key areas of argument.
2.5 Selecting the case data

Policy-making in Australia was recognised as being strongly influenced by economic thinking (Marginson 1993; Meredyth 1998; Perren & Jennings 2005). According to Marginson (1993), the federal government’s role in setting education policy had been increasing and, with this, so too had the influence of economic perspectives. This suggests that if entrepreneurship education is perceived as an economic instrument, then the Australian federal government’s education policy was well suited for the analysis of this research.

Developing enterprise education in the schooling system was made a national goal for the twenty first century by the Australian federal government (Ministerial Council on Education, Employment, Training and Youth Affairs 2000). This became part of the government’s drive ‘to encourage and support innovation and enhance Australia’s international competitiveness, economic prosperity and social well being’ (Commonwealth of Australia 2001). The assumption behind the Australian government’s education policy appeared to be that developing enterprise education would have a positive impact on the national culture and assist in inspiring continued economic growth and development. The policy of enterprise education seemed to be grounded in theory that suggested innovation was the cornerstone of economic and social prosperity. It further apparently assumed that innovation was a fundamental activity of enterprising people and the net affect of stimulating enterprising people would be greater innovation and continued positive economic influence. The federal policy therefore satisfactorily met the economic rationality and the national perspective criteria for selecting a case study site.

Silverman (2001, p. 135) claimed that ‘public records constitute a potential goldmine for sociological investigation. First, they are relevant to important issues – revealing how public and private agencies account for, and legitimate, their activities. Second, they are accessible; the field researcher does not have the problem, so common in observational work, of negotiating access’. The key federal government department in Australia for education is DEST whose role in public policy is described by them as:
DEST provides national leadership and works in collaboration with the States and Territories, industry, other agencies and the community in support of the Government’s objectives. We develop and implement policies to ensure the continuing relevance of education, science and training to contemporary needs and the growing requirement for lifelong learning. We also ensure high quality and value for money in delivering Government funded programmes (Department of Education, Science and Training 2005a).

This department therefore was an appropriate place to seek policy documentation on entrepreneurship education.

Perren and Jennings (2005) claim that ‘Government websites are concentrated depositories of ‘texts’ authored by or on behalf of their agencies’ (p. 175) and that increasingly, the internet is becoming a universal medium for the communication of government texts. They also note that ‘Internet sites are relatively easy to maintain and are, therefore, likely to be up-to-date, suffering minimal temporal distortion’ (p. 175). Therefore, the DEST website provided both a source of policy documentation and ready access to the right sort of data.

In a multi-paradigmatic theory building research design, Lewis and Grimes (1999) suggest two strategies for collecting and containing data. The first is to collect data that offers representations of an empirical reality gathered for a specific audience or purpose that can be subjected to multi-paradigmatic lenses. The second approach to which they refer is the collection of different data for each paradigmatic lens from within the same site. Hassard (1991) was offered as one example. Hassard utilised a single work place but conducted four independent studies using different paradigmatic perspectives operationalised on distinct data sets gathered from the same site.

In discourse analysis there are also two forms of data to consider. Fairclough (1992, p. 103) claims that texts have dimensions of intertextuality in horizontal and vertical planes. Vertical intertextuality is represented by documents that are more or less contemporary but essentially exist in the same space and time. Horizontal intertextuality refers to historical documents that precede the contemporary texts. The DEST website not only allowed access
to current documentation but also to archived and linked historical documents. Therefore, the website could provide two sets of data from the one site that could be contextualised vertically and horizontally and be treated differently in research approach. The vertical intertextual documentation could accommodate the explanatory-based analysis of current policy portrayals of entrepreneurship education. The horizontal intertextual texts could then be subjected to exploratory analysis for alternate portrayals of entrepreneurship education that informed the contemporary policy positions.

The Australian federal government’s education policy communications exhibited by the DEST website provided a suitable case data site for this research. The government had made explicit links to economic rationality through the ‘Backing Australia’s Ability’ (BAA) policy released in 2001 which acted as a primary reference point and attested the Australian government’s support for innovation and entrepreneurial business (Commonwealth of Australia 2001). The influence of this overarching policy statement affected many policy areas including education. In 2004, the government reconfirmed its ten year commitment to this policy by both extending and enhancing the programs, initiatives and funding (Commonwealth of Australia 2004).

The Australian position on enterprise education was also not unique and many governments were actively incorporating enterprise and entrepreneurship education into specialised programs and/or the education and training system (Lundström & Stevenson 2005, p. 233). The importance of enterprise had been raised in the international context with respect to alleviating youth unemployment. This issue was highlighted by an Organisation for Economic Co-operation and Development (2001) report that concluded that all governments should have articulated policies that favour and boost youth entrepreneurship for not only the employment benefit but also for ‘economic growth, job creation [generally], local and regional development and economic dynamism’ (p. 93). Australia had adopted this stance and formulated policy that encouraged an entrepreneurial spirit in educational environments that was in common with other nations such as the Netherlands, Finland and the UK (Stevenson & Lundström 2002). Therefore, the Australian case data would have relevance to other nations, although care is needed in extrapolating
implications beyond the theoretical level when there may be significant differences in alternate socioeconomic and political environments in other nation cases.

### 2.6 Analysing the data

The logic presented by the conceptual framework is then taken into the data analysis via a set of propositions. The propositions detail an expected relationship between a number of key terms. The analysis begins by isolating two sets of data from the website following the recommendation of Lewis and Grimes (1999) and the principle of document intertextuality outlined by Fairclough (1992, p. 103). A set of relevant current or contemporary texts were located that corresponded with vertical intertextuality. During the analysis of these, a set of related historical or informant documents were identified that represented horizontal intertextuality.

The analyses of both these data sets were then conducted independently. The transparency of the research is best displayed by example rather than abstract description and therefore the specific analysis procedures are elaborately exhibited and described in the relevant chapters and the accompanying Appendices. In this current section, an overview of the empirical research is provided that discusses the logic and research traditions that underpin the approaches to the data.

The contemporary data was first isolated from the website by using the website’s search tool for the key terms and the findings. A large number of found pages were recorded. In order to handle the volume of data and reduce the incidence of irrelevant analysis, a decision was made to analyse only pages that reported the coincidence of two or more key terms, with one exception. The term entrepreneurship returned a relatively low number of pages and therefore this suggested analysis of all pages to establish its relevance and association to the core concepts. The method of analysis on the refined data set used a content analysis technique called conceptual analysis (Busch et al. 2005) to record the presence and relative frequency of occurrences of the key terms in the texts. To facilitate comparison with the developed propositions, relational analysis (Busch et al. 2005) was used also informed by the field of discourse analysis (Gee 2005) to identify the relationships between the terms (if any) or the relationship between the term and the core
concept of the returned page. The aim of this analysis was to check whether the relationships found within the texts resembled in any way the relationships between the key terms provided by the propositions.

The second analysis engaged with the informant documents. This analysis sought to explore the ‘situated meaning’ (Gee 2005) of the key terms found in the texts of documents that contributed to the contemporary portrayal of entrepreneurship education in the education policy communication. Before dealing with the relationships between the key terms, the conceptual analysis located the terms and the presence and frequency was recorded. To aid the exploratory analysis the researcher avoided directly interpreting meaning of the terms occurring in the texts by seeking qualification of the terms from the texts themselves. In this way assumptions by the document’s authors with respect to meaning were exposed (Fairclough 2004) and the influence of researcher bias was limited. Assumed meanings in texts by authors tend to declare the assumption of common knowledge between them and their reader and this analysis exposed the number of different meanings both explicit and implied that were associated with the key terms.

The explorative analysis then progressed to a form of relational analysis to map the cognitive relationships (Busch et al. 2005) associated with the key terms. Gee (2005) referred to this form of analysis as ‘building connections’ and suggested that the researcher would pose the question on the text similar to: what sort of connection – looking backward and forward – is made within and across the utterance of the term and the larger stretches of the interaction? This exposed where and how the key terms were associated and what other associations were being made by the texts that had contributed to the assembly of the contemporary policy communications. Through this analysis the different portrayals of entrepreneurship education and its closely related concepts could be revealed, summarised and tabulated. From this, the influence of different and competing conceptions of entrepreneurship education on policy was made clear.

The findings from the exploratory analysis were also compared with the findings from the explanatory propositions analysis applied to the contemporary documents. This was conducted as a means to assess the extent of alignment between the two sets of data analysis and aid the assessment of reliability.
2.7 Concluding the study

The final step in the research method was the theory building itself. Lewis and Grimes (1999) claim that the theorist needs to think paradoxically and consider conflicting views simultaneously. Poole and Van de Ven (1989) state that ‘[s]ocial science loses an important resource for theory if the incompatible or inconsistent theses which inevitably arise … are ignored or are eliminated’ (p. 562). Theorising between paradigms openly accepts incompatibility and grapples with the apparent incommensurability to explore the possibilities of bridging the transition zone between paradigm located theories (Gioia & Pitre 1990).

First, a summary of the analysis and findings are presented and the areas of analysis that are either coherent or inconsistent between the propositions and the two levels of analysis are highlighted. This makes clear and exhibits the existence of paradox and prompts the researcher to consider how these may be negotiated within different contexts. This then provides the basis for developing implications conceptualised for a number of different areas. In this case there are four areas that are considered including policy, education providers and institutions, education consumers and practitioners and entrepreneurship theory.

As the focus of this study has been on entrepreneurship education policy and its ability to influence an economic development agenda, the implications for policy are further extruded to assemble a set of propositions that policy-makers might specifically consider. The theoretical nature of the research also suggests a number of limitations for the study and, in accordance with suggestions by Lewis and Grimes (1999), a critical review of the method and its findings is provided.

To conclude the study the future research opportunities are examined and discussed. These culminate from a review of the analysis, findings, implications, propositions and the critique of the research method.

2.8 A personal methodological note

Lewis and Grimes (1999) suggest one key to authenticity in the theory building project is to articulate critical self-reflection. Etherington (2004, p. 83) suggests the theorist
shares their experience with the reader to acknowledge the presence of the theorist in the process. Before concluding this chapter, this short section will give the reader some insight into the personal experience of the researcher with the theory building process.

This research originated due to influences of personal history and has been informed by professional practice in entrepreneurship education. Prior to the conduct of the research, the researcher had independently been a practitioner engaged in a number of activities in entrepreneurship education. The contexts of this practice varied across institutional levels of education (secondary and tertiary – technical/trade, undergraduate and postgraduate) and geographic location (Australia, UK and Canada). During which time students, teachers, lecturers, educational environments and at times just off-hand incidents were encountered as both a participant and non-participant observer. This extended period of time ‘in the field’ was not the subject of this research but provided a backdrop to the inquiry and has heightened the researcher’s sensitivity to the issues inherent in the research. Appendix D lists many of the associated publications arising from this contextual immersion.

Much of the researcher’s background and experience created a specific worldview laden with assumptions about entrepreneurship. Recounting and assessing these assumptions revealed to the researcher how many personal perspectives had shifted across the theory building process. The clearest indication of this is in the adoption of enterprise as a legitimate concept instead of a competing frame of reference to entrepreneurship. There was also a notable and significant shift in ideological positioning away from one of advocacy and toward a critical disposition. This suggests an influence on the theory that is captured in a tendency toward objectivism.

Ultimately policy-making is concerned with regulation and/or social change and therefore the theory, if it is to serve the purposes of policy-makers, needs to be recognisable within that paradigm. The aim of the theory building exercise conducted in this study was to bring new understandings to the paradox of entrepreneurship education that attended to national levels of economic development and to enable policy-makers to better appreciate the number of alternate perspectives competing for attention. To this end, the theorist has remained true but the journey of discovery has brought the theorist at times into conflict with personal views and at others into new understandings.
2.9 Conclusion

This chapter has outlined the methodological approach to this study. A theory building methodology was selected and justified due to the nature of the phenomenon – underpinned by limited theoretical development; loosely defined; paradoxical in social origin and impact, and diverse in its development of applied data. The design of the study incorporated two approaches to data drawn from the same site. The logic behind using Australian policy as a legitimate basis for the case was explored and discussed. The selected site was a website created and maintained by the Australian department claimed to be responsible for leadership in education policy development. The two types of data isolated from this site were of contemporary texts representing the most current position on entrepreneurship education policy and informant texts that influenced policy development.

The methodology was designed to deal with paradox rather than resolve or propose a solution to a problem and incorporated text-based analytical techniques informed by content and discourse analysis. The analysis of data took two forms. The first was an explanatory approach applied to contemporary texts to reveal whether the policy communication complied with an economic rationality when compared with a specific set of purposefully derived propositions. The second analysis was exploratory and applied to informant texts. This second approach to data analysis drew out the competing perspectives for entrepreneurship education and was then contrasted with the economic view.

This chapter has detailed the theory building method that was used to explore the paradoxical notions of entrepreneurship within the context of national education policy. The method allows the researcher to draw out implications for various audiences and pay particular attention to the policy domain leading to a set of concluding propositions for policy-makers. Critique of the theory building method and future research opportunities arising from the research are discussed in a later chapter.
3 Entrepreneurship’s economic function

3.1 Introduction and chapter overview

In this and the next few chapters the reader will encounter text boxes contained within the flow of text of the ‘Introduction and chapter overview sections’. These aim to highlight the key logic flow developed in each respective chapter. As a literary device they are designed to assist the reader by providing space and a reflective pause. It summarises the key points and bridges between key ideas.

Entrepreneurship is a complex phenomenon that has attracted the interests of many academic disciplines. This is largely because entrepreneurship and new enterprise are considered fundamental to national and global economic growth and development (Atherton 2004; Audretsch 1999; Begley & Tan 2001; Bates & Dunham 1993; Kotkin 1993; van Praag 1999). However, economies are obviously driven by many things and economists argue about what these things are and how particular things specifically influence economic conditions and outcomes. Entrepreneurship is no exception in this economic debate and a lack of agreement amongst economists has the potential to affect the theory building of other disciplines.

Hébert and Link (1982) have traced the history of entrepreneurship in economic theory from the time of Richard Cantillon’s (1680-1734) posthumous publication of Essai sur la nature du commerce en général in 1751. While Cantillon first introduced the entrepreneur into the economic debate, it was Joseph Schumpeter (1961) who developed clear insight about the entrepreneur and the activity of enterprise as a disruptive influence on a market that leads to economic development. Many now make reference to his concept of creative destruction to explain the importance of the entrepreneur to an economy.
Entrepreneurship was conceived by Schumpeter (1961) originally as the economic disruption of markets, resulting in genuine economic development, not just incremental growth. The introduction of goods and services that disrupt markets was considered to be a distinct activity termed enterprise.

Schumpeter’s conception of the economy framed the distinction between the steady state condition of production (which produces economic growth as long as the existing conditions allow it) and the disruptive influences of innovation (which produce economic development by creating fundamental shifts in the current constellation of ideas, products and markets). Although, in practice, the dynamics of functioning economies cannot be easily defined and isolated in these terms, it is argued in this thesis that making the fundamental distinction between ‘steady’ state and ‘disruptive’ dynamics is critical. These two dynamics work together, albeit in complicated ways, as ideas that once were radical become ‘mainstream’ and those ‘mainstream’ assumptions, in turn, invite challenge and disruption. Arguably, policies and practices that are designed to contribute to economic growth will be more effective if they are framed with a clear sense of which dynamic is being targeted in particular ways, at particular times. In this thesis, it is argued that public policy in relation to entrepreneurship education, as a key case in point, has been potentially compromised by a failure to be clear about the difference between the disruptive dynamism of entrepreneurship and business activity in general.

Entrepreneurship has been modified in the literature, blurring the lines between genuine enterprise and more generic business, moving away from a clear focus and understanding of entrepreneurship as an economic phenomenon. This has implications for how we understand entrepreneurship at the level of the individual.
Economists have attempted over the years to reconcile the activities of the entrepreneur within economic theory and generally this has resulted in the entrepreneur being subsumed into the firm as the economic unit of analysis. It can be argued that this has had a major influence on entrepreneurship theory, with two specific consequences. First, the entrepreneur as a specific innovative actor becomes lost within this frame of reference and for convenience instead becomes identified as the business owner. The second consequence flows from the first in that firms have a broader influence on an economy than the one Schumpeter distinctively attributed to the entrepreneur, namely, the potential to disrupt markets through innovation. The consequence is that not only is the particular nature of individual entrepreneurial activity lost, but so too is the specific influence of the entrepreneur on the economy.

However, the study of the individual in entrepreneurship did not cease with the diversion of the economists’ attention. Instead, the study of the entrepreneur largely shifted from the field of economics to the fields of psychology and sociology. For instance a lot of effort was placed on identifying entrepreneurial characteristics by psychologists while sociologists attempted to explain how the entrepreneur emerged to contribute to social progress. However most of this work has been inconclusive. It is argued that two shortcomings of these inquiries have been; first, a general lack of distinction in respect to the type of economic contribution made by entrepreneurship, and second, a continuing assumption that the entrepreneur was one and the same as the business owner.

The Schumpeterian notion of entrepreneurship and enterprise keeps us focused on the entrepreneur within the context of innovation and market disruption, rather than just business owner or business starter. Schumpeter’s economic framing of entrepreneurship also stands in contrast with the subsequent focus of much of the literature on the psychological and social profile of entrepreneurs.
The aim of this chapter is to present in more detail the line of argument just summarised and to highlight the importance of re-focusing attention on the connection between entrepreneurship, enterprise and economic development. As later chapters attempt to demonstrate, this focus has very significant implications for education policy as an effective macroeconomic intervention aimed at creating the environment for fundamental economic development.

3.2 The complexities of entrepreneurship as an economic phenomenon

The complexity of entrepreneurship is evidenced by the number of disciplines that have contributed and at times converged in attempts to explain it. Hart (2003) suggests that economics, geography, management, psychology and sociology are primary areas producing research in the field. Similarly, Audretsch (2004) claims that ‘entrepreneurship does not correspond nicely with any established academic discipline…’ (p. 167). Davidsson (2003) refers to the diversity of interest in entrepreneurship as a ‘societal phenomenon’. Pittaway (2005) goes to the nub of the problem in the observation that ‘the concept of the ‘entrepreneur’ and the function of entrepreneurship in society have ranged extensively within theories’ (p. 201). At an earlier point, Barreto (1989) conducted a thorough review of the concepts of the entrepreneur and economic theory and concluded that ‘entrepreneurship is above ‘formalization’’, also noting that ‘it cannot be neatly packaged within a mechanistic, deterministic model’ (p. 141).

Attempts to define the economic function of entrepreneurship have been made by numerous authors. For example Hébert and Link (1982) dealt substantially with the economic function of the entrepreneur to produce a ‘Theory Types’ taxonomy. They presented four theories relating the entrepreneur to economics, each with distinctive characteristics: Type A – Pure Uncertainty; Type B – Pure Innovation; Type C – Uncertainty and Ability/Innovation; and Type D – Perception and Adjustment (ibid., p. 109). Interestingly, as they developed their discussion they conceded that the greatest homogeneity existed among Type B and Type D theorists. Type B theorists tended to treat

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2 He further notes that political science is notably absent in the production of entrepreneurship research.
the entrepreneur as a disequilibrating force within a market whereas Type D theorists regarded the entrepreneur as an equilibrating mechanism.

The analysis by Hébert and Link is enlightening although it is apparent that their portrayal of function slips between units of analysis. At one point they refer to the individual characteristics of the entrepreneur, for example the ability to deal with uncertainty or attributes of perceptive behaviours, and at another point they refer to the market influence of the entrepreneur such as disequilibrating or equilibrating. This inconsistency between units of analysis somewhat clouds efforts to sort out the economic function of entrepreneurship.

Another perspective on function was offered by Barreto (1989) who outlined the case for four entrepreneurial functions which he argued reflected ‘diverse theories of entrepreneurship by functional role’ (p. 42). Barreto categorised these entrepreneurial functions as: coordination, arbitrage, innovation, and uncertainty-bearing (ibid., p. 42). While this seems similar to the Hébert and Link representation of entrepreneurial theories, there are variations in the way Barreto associates these ideas about functionality with the various economic writers. This point aside, Barreto developed the link between these entrepreneurial functions and the work conducted by the entrepreneur as represented in Table 3-1.

**Table 3-1 Function and work relationship (Source: Barreto 1989, p. 43)**

<table>
<thead>
<tr>
<th>Entrepreneurial Function</th>
<th>Description of work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordination</td>
<td>'the entrepreneur hired and combined the other productive agents'</td>
</tr>
<tr>
<td>Arbitrage</td>
<td>'His role is that of an equilibrating mechanism, noticing profit opportunities and moving to fill the gap'</td>
</tr>
<tr>
<td>Innovation</td>
<td>'the entrepreneur shattered the circular flow and forced progress'</td>
</tr>
<tr>
<td>Uncertainty-bearing</td>
<td>'the agent who conquered uncertainty, allowing the productive process to continue'</td>
</tr>
<tr>
<td></td>
<td>▪ ‘allowing exchange to take place’</td>
</tr>
<tr>
<td></td>
<td>▪ ‘giving him the power to direct production’</td>
</tr>
<tr>
<td></td>
<td>▪ ‘responsible decision-maker…accountable for the results of a decision liable to error’</td>
</tr>
</tbody>
</table>

The arbitrage and innovation functions describe behaviours which impact at the market level in different ways, where arbitrage serves as an ‘equilibrating’ and innovation as a ‘disequilibrating’ (both disruptive and progressive) mechanism within a market.
Arbitrage contributes to the achievement of market equilibrium; arbitrage influences supply toward a perfectly balanced price point with demand (Bannock, Baxter & Davis 2003). Profitable arbitrage opportunities in a given market and with a given good or service therefore must decrease over time as competition directs the supply and demand relationship toward equilibrium and market optimal profit levels. Competition then provides the equilibrating effect and therefore the goods and services cannot (under this scenario) embody newness or novelty in such a way that it would immunise the business to competition for any significant period of time. Kirzner (1973, p. 128) suggests that this form of entrepreneurship manifests in short-run movements exercised by imitators in a market who squeeze out profit opportunities and beat down the market price toward equilibrium.

The innovative economic function, by contrast, is to disrupt by introducing new combinations of products and services that create new markets, while delivering a monopolistic position for a firm for some period of time (Schumpeter 1954, p. 897). The disequilibrating innovation function therefore has two possible affects at the market level. It either makes redundant some parts of a market by providing more desirable products or services and displacing the demand for older goods, or it adds new offerings ‘never before seen’ into the market, industry or society therefore expanding the choices for spending provided within an economy. Either way the circular flow of markets for existing products are pressured by shifting spending patterns, demand and, potentially, supply of other goods and services. Kirzner (1973) claims that these forms of entrepreneurship ‘manifests… in long-run economic development of the capitalist system’ (p. 127).

These contemporary models which attempt to tease out the economic significance of entrepreneurship reflect a much longer history of debate about the issue which is explored in more detail in the next section.

3.2.1 The history of the debate

Hébert and Link (1982) have traced the economic history of entrepreneurship back to the time of Richard Cantillon’s (1680-1734) posthumous publication of *Essai sur la nature du commerce en général* in 1751. However it is Joseph Alois Schumpeter (1883–1950)
who has been cited as the architect of economic development theory in which the entrepreneur is central (Cassis & Minoglou 2005; Chell, Haworth & Brearley 1991; Baumol 1995; Kilby 1971). He was labelled as a radical for his groundbreaking emphasis on the disequilibrating force of the entrepreneur (Hébert & Link, 1982). Identified as the first to distinguish the ‘entrepreneur’ from ‘businessman’ (Stevenson & Jarillo 1990), and he has been consistently cited as a foundational point of reference for many authors (see for instance Begley & Tan 2001; Cécora 2000; Davidsson & Wiklund 2001; Cheah 1990; Grandstrand & Alänge 1995; Lindsay & Hindle 2002; Litz & Kleyson 2001; Raines & Leathers 2000; Wu 2000).

Schumpeter was quite precise about making the case that his work was bounded by the science of economics. Bottomore (1976) confirms Schumpeter’s commitment to economic reasoning in his introduction to Schumpeter’s 1943 text, Capitalism, Socialism and Democracy; ‘Schumpeter is concerned only with the economic reorganization of society, and [for instance] when he asks whether socialism can work, what he means is whether it can be economically efficient and productive’ (Bottomore 1976, p. xi).

The first chapter of Schumpeter’s (1961) text, Theory of Economic Development, deals extensively with his concept of the ‘circular flow’ of economic life. In this, he develops the case for a state of equilibrium within the context of the cycle of production, acquisition and exchange of goods (Schumpeter 1961, p. 3). He describes this economic circular flow as ‘static’ but further notes that he does not mean it in the sense of ‘stationary condition’ as he allows for changes within the circular flow in response to new information (ibid., p. 83). Instead, he means static in a hermetic sense, which is by considering the circular flow, in an abstract way, as isolated from external influence.

In this static market condition Schumpeter assumes that the trading cycle tends toward a point of continuous and virtuous harmony or equilibrium. Only upon establishing this context does Schumpeter then explore the impact of the entrepreneur and the activity of enterprise as a disruptive force on the trading cycle that introduces innovation and hence new information into the circular flow. He refers to this enterprise activity as the ‘theory of development’. Notably, in the Preface, Schumpeter (1961) states ‘that this body of theory might usefully be contrasted with the theory of equilibrium’ (p. xi).
Schumpeter (1961, p. 74) argued that entrepreneurs are individuals whose function it is to create new combinations of ideas, products and markets in an economy and this activity he termed enterprise. However, how the entrepreneur influences a market economy, or the work that an entrepreneur performs in an economy, has never been entirely agreed upon amongst economists and subsequently the debate has flourished.

In a review of the economic contribution of the entrepreneur, van Praag (1999) asked: ‘Given the importance of entrepreneurship in economic practice today, the question readily arises: What is its role in economic theory and how did it develop?’ (p. 311). Van Praag seems to agree with Schumpeter that the entrepreneur is responsible for the ‘introduction’ of goods into a market. Barreto (1989) and van Praag (1999) both point out that the neo-classical economic model, with its focus on production and its logic of rational choice and perfect information (the equilibrium model described by Shumpeter) left no room for the entrepreneur as innovator. As van Praag notes, ‘His [Schumpeter’s] theory was the first to treat innovation as an endogenous process’ (p. 319).

Peneder (2005) agrees:

‘…variations in industrial structure are significant determinants of aggregate income levels and growth. The empirical evidence thus substantiates the evolutionary emphasis on Schumpeterian development, which in addition to the endogeneity of innovation in Schumpeterian growth models, comprises growth and structural change as two inseparable elements’ (p. 216, emphasis in original).

Peneder also directly quotes the following from a later Schumpeter (1976) text:

As a matter of fact, capitalist economy is not and cannot be stationary. Nor is it merely expanding in a steady manner. It is incessantly being revolutionized from within by new enterprise, i.e. by the intrusion of new commodities or new methods of production or new commercial opportunities into the industrial structure as it exists at any moment (Schumpeter cited in Peneder 2005, p. 203, emphasis added).

A similar view was also acknowledged by Kirzner (1973) who claimed that Schumpeter’s treatment invoked ‘entrepreneurship as an exogenous force lifting the
economy from one state of equilibrium [to another]’ (p. 73). Note however, that the description of entrepreneurship as a force has shifted from endogenous to exogenous which signals a point of confusion.

Pittaway (2005) interprets the function of the entrepreneur in Schumpeter’s writings slightly differently and argues that the entrepreneur acts as the source of revolutionary equilibrium. Pittaway suggests that Schumpeter argues for cyclical market behaviour oscillating between static and dynamic states:

Schumpeter moves away from equilibrium theories by arguing that creative destruction involves periods of stability in economic systems followed by periods of transformation, within which he places the entrepreneurial function (Pittaway 2005, p. 213).

While certain writers, rightly or wrongly, characterise Schumpeterian development as involving simultaneous processes of both stability and qualitative transformations in the economy (see for example, Peneder 2005, p. 204), the distinction between these two dynamics seems to have been blurred in later writing. This has resulted in some confusion as to whether entrepreneurship is inside or outside of the stable market dynamic which corresponds with whether entrepreneurship is directly associated with development or growth of that which is already developed.

Early evidence of the crossing over of these concepts can be found in Kilby (1971). Interestingly, the Preface of Kilby’s work describes his context and states that: ‘The search for a ‘missing component’ in the growth process of underdeveloped countries is now a long-established tradition’ (p. v, emphasis added). Notably, while the title of Kilby’s text suggested that economic development was the principle interest, a close reading of the book itself reveals that the major focus is not on the engines of innovative or disruptive enterprise but on the expansion of products and markets already created. Kilby claims that economic growth in the underdeveloped countries is due largely to the importation of ideas, goods and services innovated in more developed economies. Therefore, Kilby’s entrepreneurship moved away from development and focused instead on growth.
More contemporary examples of the ways in which the terms economic development and growth appear to be used interchangeably can be found in a special edition of *Regional Studies* on Entrepreneurship and Regional Development (Kitson, Martin & Tyler 2004). In this edition there are seven articles (aside from two editorials); three focus on firm creation (Lee, Florida & Acs 2004; Van Stel & Storey 2004; Fritsch & Mueller 2004), two deal with job and employment growth—one of which linked both firm creation and job growth (Acs & Armington 2004; Van Stel & Storey 2004), a further two investigate regional and macroeconomic growth (Hjelm & Borgman 2004; Varga & Schalk 2004), and the last examines economic performance (Audretsch & Keilbach 2004). For a dedicated issue on matters of development, traditional sources of growth actually appear extensively as the dominant point of discussion.

**Figure 3-1 offers some distinctions which can be helpful in considering entrepreneurship through an economic lens.** At the top level, entrepreneurship has been associated with macroeconomic outcomes for a country; some directly (economic development triggered through innovation) and some indirectly (where the fruits of innovation eventually become the mainstream engine of economic growth). At the level of microeconomics, entrepreneurship has been associated with market influence and is divided between two camps of thought; those who see entrepreneurship as an equilibrating influence through arbitrage opportunities, and those who consider entrepreneurship to be a disequilibrating influence through innovation.
Cheah (1990) offers an alternate viewpoint by portraying these two models of entrepreneurship as a yin and yang. A group of Austrian economists distinguished themselves from Schumpeter by suggesting that entrepreneurs reinstate equilibrium into a market by adopting follower and imitator roles (Cheah 1990). Cheah explained that:

Instead of treating these as contradictory concepts between which we are forced to choose, it would be more fruitful to perceive Schumpeterian and Austrian entrepreneurship (and their associated activities, opportunities, and processes) as opposites and yet complements to each other… (p. 343).

Cheah suggests that one form of entrepreneurship gradually rises to a peak but also ‘gives way’ to its opposing form of entrepreneurship.

While this is a neat intellectual solution at the level of our understanding of markets, at another level of microeconomics, that of the behaviour of individuals and firms, the

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3 Cheah characterised and grouped the three economists Ludwig von Mises (1881-1972), Friedrich von Hayek (1899-1992) and Israel Kirzner (1930- ) to represent the Austrian school of thought.
literature again reflects very different ways in which economists have perceived these activities. The next section deals with this area of discussion.

### 3.3 Distinguishing enterprise from business

Schumpeter himself expressed limited interest in new firm creation and only to the extent that ‘new combinations are, as a rule, embodied, as it were, in new firms, which generally do not arise out of the old ones but start producing beside them’ (ibid. p. 66). A close reading of Schumpeter’s work suggests a distinction between *enterprise*—the source of innovation and disruption to markets, and *business*—the means of production within existing markets carried out by the firm. However, it is clear that at the level of the firm and the individual, the subsequent literature has replicated the sort of confusion that characterises macroeconomic treatments of entrepreneurship and microeconomic treatments at the level of markets. Views about the activity of the entrepreneur vary considerably, framed as both business activities and enterprise activities, and sometimes as a confused combination of both.

This is apparent in the following quote from Knight (1940):

> The work of forecasting and at the same time a large part of the technological direction and control of production are still further concentrated upon a very narrow class of the producers, and we meet with a new economic functionary, the entrepreneur (p. 268).

In this quote it is claimed that the entrepreneur is responsible for both the forecasting and technological direction which may be considered part of the disruptive enterprise activities along with the activities of production which align with regular business activity.

Hawley, according to Barreto (1989), was another who attempted to locate the entrepreneur’s seat of power in the productive process. For Hawley, it seemed the entrepreneur used power to assume responsibilities by virtue of ownership rights of a business (ibid., p. 42). Notably, Schumpeter (1954, p. 894) criticised Hawley by including him amongst those who superimposed the term enterprise onto business.
There have also been some almost whimsical misappropriations. Hébert and Link (1982) suggested twelve conceptions of the entrepreneur and linked these to various economists before distilling the theories into four types. They referred to enterprise as being mentioned by only two economists—Friedrich von Wieser (1851–1926) and Arthur Pigou (1877–1959), who each were claimed to have conceived the idea of the entrepreneur as a proprietor of an enterprise. Throughout their analysis, Hébert and Link purposefully omitted von Weiser and Pigou from the taxonomy of entrepreneurship theories, claiming that the concept of entrepreneur as an enterprise proprietor belonged with the economic theorists who dealt with static markets. Hébert and Link claimed that entrepreneurship had only operational meaning for dynamic market conditions, a point consistent with Schumpeter. Therefore, enterprise—although far from being a word intended to represent a static state according to Schumpeter’s theory—was excluded from further discussion. Hébert and Link distinguished the static and dynamic markets in accordance with Schumpeter but placed enterprise on the side of the static market, contrary to Schumpeter’s original proposition.

Another alignment of the entrepreneur with business rather than enterprise can be found in the work of Casson (2003). Casson presents a definition of the functional entrepreneur upon which he constructs his theoretical work:

An entrepreneur is someone who specializes in taking judgmental decisions about the coordination of scarce resources (2003, p. 20).

In developing support for this definition, Casson (2003) articulates a set of entrepreneurial qualities for an individual (ibid., pp. 29-32). He notes that this set of qualities is needed to adjust to change (ibid., p. 32), which seems to suggest a predisposition to the equilibrium theory of the market.

However, by contrast Casson (2003) declares that ‘Schumpeter’s analysis accords well with our [Casson’s] concept of the market-making firm’ (p. 230). Casson states that ‘Schumpeter’s entrepreneurs do not merely adjust markets, they make them and destroy them. They are not just the mechanism, or the agents, through which the market system operates they are the very creators of the system itself’ (ibid., p. 230). Clearly, Casson is
not intending to align with equilibrium theory. However, while Casson appears to frame the economic work carried out in a market, he then places the entrepreneur within the organisational context of a business owner/manager. Schumpeter’s early work did not define the entrepreneur through the activities of a firm, although he did allow for that case to exist. Instead, as already pointed out, Schumpeter framed the market-making activity within the context of enterprise.

Casson espouses a clear connection between the entrepreneur and the firm when he claims that the ‘firm is the institution through which the entrepreneur operates in a market economy; indeed, the entrepreneur is often identified as the founder, or as the owner or manager, of a firm’ (Casson 2003, p. 17). Casson appears trapped by the conception of the entrepreneur as a business owner. Indeed, Casson openly declares the entrepreneur and the owner manager to be in fact, if not in theory, one and the same. This conception of the entrepreneur overlooks the fact that it is not the entrepreneur nor the business that disrupts markets but the product or service novelty that the entrepreneur introduces into the market that has the microeconomic effect of disequilibrium.

Another clear example of the blurring of these distinctions can be found with Kilby (1971) who makes little distinction between enterprise and the general term business. For example, Kilby (1971) states that, ‘[a] basic managerial function in any productive enterprise is to synchronize the work of various individuals or groups…’ (p. 37). He also argues that ‘in late modernizing economies, the critical entrepreneurial inputs are related to achieving and maintaining efficient production, in contra-distinction to innovation or marketing activities’ (ibid., p. 40, emphasis added). It is plain that Kilby places the entrepreneur in the context of productivity and denies scope for the entrepreneur to be engaged with market disruptive innovation.

Chell, Haworth and Brearley (1991) drew heavily on the work of Hébert and Link (1982) to frame a discussion of the personality of the entrepreneur. In this discussion the term enterprise was not at all isolated as a distinct term and where it was mentioned it was as a passing reference to the business entity. Chell, Haworth and Brearley’s account of the entrepreneur ultimately led to a description of the entrepreneur as any person making decisions in business, and combined all the functions that the economists argued to
differentiate. It would appear that the earlier work done by Hébert and Link (1982), of unravelling the entrepreneurship threads, was disregarded. As the focus shifted toward the entrepreneur in a human capital sense, the economic function was left undefined.

A principle reason that enterprise may have become indistinguishable from business in economics was alluded to in both Casson (2003) and Hébert and Link (1982) when they referred to the adoption of historical analysis methods to study the entrepreneur. Casson (2003) observed that these methods exposed ‘entrepreneurship as a personal quality which enables certain individuals to make decisions with far-reaching consequences’ (p. 10). Similarly, Hébert and Link (1982) suggested that the methods yielded the discovery of ‘a unique central factor present in all economic activity. This factor was the enterprising spirit, the Unternehmer, or the entrepreneur’ (p. 74).

From both accounts it suggests that the entrepreneur, for historical analysis purposes, has been uniquely characterised by personal traits. To facilitate historical analysis, the successful business owner can be readily identified, studied and labelled as an entrepreneur. This is implied in Casson’s (2003) remarks claiming that by ‘acting differently from other people, and achieving success in doing so, [the entrepreneur’s] example caused other people to change their mind, and thereby altered the course of history’ (pp. 10-11). This identification of the entrepreneur as a successful business person has had a significant influence on entrepreneurship research by intertwining the term ‘entrepreneur’ with ‘business owner’. Further, it directed entrepreneurship toward the field of psychology with implications that are discussed briefly at the end of this chapter.

Barreto (1989) traced much of the theoretical debate on entrepreneurship in economics and identified the disappearance of the entrepreneur from microeconomic theory at around the middle of the 1900s. He found that the theory of the firm replaced the entrepreneur in the study of entrepreneurship as an economic function. Indeed, Schumpeter too tended toward theories of the firm in his later years and this has resulted in a demarcation between Schumpeter’s early thinking—referred to as Schumpeterian I—and his approach later in life labelled as Schumpeterian II (see also Granstrand & Alänge 1995). Barreto claimed that the centrality of the firm in neo-classical economic theories became settled on three core assumptions inherent in firm behaviour that removed the complexity
of issues associated with individuals as entrepreneurs. These assumptions were; (1) that firms served the production function in a market economy; (2) that firms made decisions based upon the logic of rational choice; and (3) that decisions were based upon perfect information (Barreto 1989, pp. 140-141).

Interestingly, the term enterprise in modern economics has become synonymous with the business entity. For instance, the *Penguin Dictionary of Economics* defines enterprise as: ‘one or more firms under common ownership or control’ (Bannock, Baxter & Davis 2003, p. 119). Similarly, enterprise is found in the common acronym ‘SME’ that symbolises the reference to firms as *small and medium enterprises* (Lundström & Stevenson 2005). The Macquarie Dictionary (1998) states one of four definitions of enterprise to be ‘a company organised for commercial purposes’ (p. 369). It would seem that in the economics literature, and in general parlance, the meaning of enterprise has become interchangeable with a generic description of a business entity or firm.

By reinforcing the concept of the equivalence of a business owner as entrepreneur, entrepreneurship theorists may also have reinforced the idea that enterprise is equivalent to business. This results in observations such as this by Casson (2003): ‘[i]n practice, though, entrepreneurship is closely identified with private enterprise in a market economy’ (p. 21) and ‘it is assumed that entrepreneurs operate their business purely with a view to maximising the profit they obtain from a given amount of effort’ (p. 21). It is argued that this representation sidesteps the complexity of entrepreneurship which has significant implications for macroeconomic education interventions.

### 3.4 The value of making distinctions

In the light of the preceding discussion, Figure 3-2 offers some distinctions that might be helpful in approaching an understanding of the economic function of entrepreneurship. A distinction is made between entrepreneurship in a business context incorporating arbitrage that influences the equilibrium of a market that flows onto economic growth (white boxes), and entrepreneurship in an enterprise context giving rise to market disruption or innovation that accounts for economic development (black boxes). The
different shading indicates the vertical relationship between the concepts at each of the levels while the arrows indicate the order and direction of the relationships.

![Chart](image)

**Figure 3-2 Mapping the relationship between entrepreneurship’s economic distinctions (Source: Author)**

Having made these distinctions, there is one theorist who noted the inevitable difficulty of maintaining them, particularly when it comes to individual entrepreneurs. Again it was Schumpeter (1961) who argued that ‘the entrepreneur’s essential function must always appear mixed up with other kinds of activity, which as a rule must be much more conspicuous than the essential one’ (p. 77). Schumpeter certainly seems to have been aware of the functional confusions and meticulously set out to argue the distinctions in his early work *The Theory of Economic Development: An Inquiry into Profit, Capital, Credit, Interest and the Business Cycle*, a view often referred to as Schumpeterian I (Granstrand & Alänge 1995).
The models of disequilibrium and equilibrium outlined earlier are of course simplifications of the complexities of economic dynamics in a real system. Each can be challenged on conceptual grounds.

The equilibrium school of thought can be shown to be based upon illusionary assumptions. The logic follows this sequence; to achieve equilibrium it requires optimising behaviour’s on the part of the actors, which in turn requires perfect rationality according to economic laws and this suggests the need for perfect information and foresight (Grebel, Pyka & Hanusch 2003; Knight 1942). However, Kirzner (1999) points out the dynamically competitive nature of the market that retards and thwarts the progress toward equilibrium and similarly van Praag (1999) suggests that in all probability the situations of ‘perfect’ and ‘optimal’ will never be reached.

On the other hand the innovation theory of disequilibrium also faces challenge. Kirzner (1999) suggests that the Schumpeterian entrepreneur’s disruptive behaviour is merely a part of the continuous flow of market dynamics. He assumes that the disruptive intention of the Schumpeterian entrepreneur aims to establish a monopoly position which in turn is driven by a profit motive. However, unless exogenous market factors are introduced—such as government intervention or regulation—market theory will always prevail to whittle away any acquired temporary monopoly. Further, the disruptive event is merely another form of reaction to the market that continuously creates the circumstance and need for lower cost goods, refined solutions and satisfaction of latent demand.

However, despite these obvious limitations, the present writer argues that these conceptual distinctions are worth holding. While the ways in which they operate in practice are undoubtedly complex, to simply do away with the distinction altogether is not helpful. Markets are subject to transformative disruption and the way in which entrepreneurship contributes to this disruption is important to understand. And the better we understand the way in which entrepreneurship behaves as a market force the more responsibly and effectively it can be directed toward the interests of economic and social advancement through education.

Barreto (1989) has noted that economics as a field has all but abandoned the entrepreneur in favour of the firm to provide explanations of entrepreneurship as an
economic function. But the closing paragraph of his text makes the prediction that the entrepreneur will reappear as an important element in explaining technological change (Barreto 1989, pp. 143-144). The unit of analysis in neo-classical economics was, according to Barreto, located with the productive unit, that of the firm, and therefore it suggests it deals with growth and efficiency theories. Emphasising economic development theory requires the focus to return to the entrepreneur and, specifically, enterprise as a distinct unit of analysis within the economy. Some have attempted to link the entrepreneur as an individual to economic performances and before leaving this chapter this approach is briefly discussed.

3.5 A note about other entrepreneurship theories of the individual: social and psychological

In the absence and reluctance of economists to deal with the individual as a force in economics, other disciplines consequently picked up the debate which resulted in a diversity of theories in entrepreneurship. Kilby (1971, pp. 3-4) noted that, depending upon the field of a scholar from which a perspective is offered, the emphasis of causal analysis shifts. Further, Kilby (1971) portrays three perspectives in his review of entrepreneurship theory and highlights three major contributors; Schumpeter (economics), Max Weber (social) and David McClelland (individual). Similarly, Brouwer (2002) elegantly contrasts Weber (social), Schumpeter (economic) and Knight (individual) along dimensions that might be said to occur along the same theme. Including the work of such authors shifts the causal analysis of economic disruption from one of an economic origin to one grounded in human psychology on one hand or social heritage and structure on another. However, neither of these approaches are entirely fulfilling when attempting to explain entrepreneurship as economic disruption.

From the field of psychology McClelland (1967) offered a major contribution with his study that proposed the correlation between the number of high achieving individuals within societies and the prosperous economic performance through entrepreneurship achieved by those societies. However, the positive economic relationship suggested by McClelland showed a lag of high achievement social indicators behind the evidence of
economic performance of somewhere between 1 to 250 years Kilby (1971, pp. 20-21). Furthermore, other studies based in psychology have been inconclusive in, for instance, differentiating achievement motivations between those that might be claimed to be entrepreneurs and those who are considered managers (Stewart et al. 2003).

Approaching entrepreneurship through psychology also attracts criticism from another point of view. Armstrong (2005, p. 215) argued that a society that emphasised ‘achievement’ risked fostering unintended consequences in the form of deviance. Moreover, Casson and Godley (2005, p. 33) suggested that promoting an ‘enterprise culture’ based upon modelling behavioural characteristics risked encouraging individuals with a poor sense of judgement to make risky decisions which were ultimately wasteful.

Approaching the development of entrepreneurs from a psychological standpoint tends to influence individual behaviour that can arguably lead to controversial outcomes not easily associated with any specific economic performances. Criticisms of the psychological approaches to entrepreneurship gained momentum until Gartner (1988) argued that the field of psychology lacked the ability to predict entrepreneurial outcomes. Generally, there was a lack of distinction in the type of economic contribution that psychological approaches to entrepreneurship were able to explain, although the psychology of the individual as entrepreneur still seemed to play some part.

While psychology struggled to explain entrepreneurship in economic terms, social theorists tended to focus on the emergence of the entrepreneur without necessarily adopting an economic frame of reference. Findings from this line of enquiry resulted in theories about the entrepreneur such as that offered by Max Weber who proffered that work ethic fostered through religious heritage was a critical influence in entrepreneurship (Swedberg 1998). The sociological project in entrepreneurship research seems more often to be an exploration of the structural link between individual human actions and outcomes that reflect the creation and growth of business. However, it must also be noted that structural theorists have divergent and very different views on the concept of structure (Turner 2003).

Structuralist social theory is increasingly being used in entrepreneurship in an attempt to explain, or at least understand, human agency within the entrepreneurial process (Gorton 2000; Stathopoulou, Psaltopoulos & Skuras 2004). Downing (2005) and Jack and Anderson
(2002) are two examples of the agency-social structural analysis of entrepreneurship who located entrepreneurship through the study of those who started a business. More particularly, Jack and Anderson adopted structuration theory to consider the embeddedness of a variety of business owners who were labeled as entrepreneurs. These entrepreneurs operated businesses that provided professional services, a retail clothing outlet, a hotel, a glass blowing studio, electrical contracting services, construction services and a fruit shop. The embeddedness construct was concerned with the establishment and growth of the businesses but did not consider the economic disruption factors via change to the economy or innovation. Sociological studies have tended to concentrate on business owners as actors in entrepreneurship but have placed little consideration on the economic impact of the business or its owner beyond the mere act of business creation and growth. Notably, structuralist social theory is claimed to most aptly deal with concerns of culture and communication (Giddens 1997).

Swedberg (1998) argued that there are ‘some economists and sociologists who believe that progress in the understanding of certain economic phenomena can be made only if interests [of individuals] and social structure are combined in one analysis’ (p. 3). This viewpoint might also explain a shift observed in the academic literature on entrepreneurship toward the study of the abilities of entrepreneurs and firms to operate in wider social and political networks (Tornikoski 1999). An example of this shift may be seen in Bygrave and Minniti (2000) who discussed the social dynamics of entrepreneurship in terms of the entrepreneur as a catalyst for economic activity that affected the aggregate level of an entire economy.

It has become more widely accepted that entrepreneurship involves different units of analysis ranging from micro to macro levels (Davidsson & Wiklund 2001). From the perspective of economics, the term ‘evolutionary economics’, with its base in Schumpeterian economic theory, has been introduced into the literature (Granstrand & Alänge 1995; Lanzilotti, Dinopoulos & Canter 2005). This theory suggests that evolution and structural change at the industry and macro levels of society occur due to the nexus of the tripartite relationship between the individual, social and economic influences.
This trend in entrepreneurship theory reflects the failure of any one field of study to successfully explain the phenomenon of entrepreneurship. It is argued here that in order to advance these types of investigations there are two principles that must be held quite firmly by theorists. First, the phenomenon of entrepreneurship as economic disruption can not be solely located with the role of a single individual and second the multiple roles performed by a group must be clearly defined within the parameters of the specific economic function. The following chapter explores the concept of roles more fully within the context of enterprise and economic development.

3.6 Summary of distinctions

Throughout the historical theoretical exploration of the economic function of entrepreneurship, confusions and contradictions were consistently encountered concerning some fundamental concepts pertinent to entrepreneurship and economic development theory. It is contended that these confusions may impact upon government objectives, particularly when policy-makers consider innovation as a driver of economic development.

To summarise, the entrepreneur has been represented as a principle actor in both economic development and the achievement of market efficiencies and economic growth. The economic development entrepreneur engages with enterprise to introduce innovation and disrupt the static market conditions by establishing new markets. A broader view casts the entrepreneur as one who engages with introducing efficiencies to existing markets to reduce costs and improve the distribution of goods and services or, in other words, improve productivity. Both these types of entrepreneurship involve the dynamics of enterprise to the extent that they create, develop and introduce new goods, services, resources, supplies or means of production to alter the condition of the static markets. Even if this broader view is taken, this writer still contends that it is useful to distinguish between enterprise and business, where business is essentially concerned with productivity and managing the capacity to produce and distribute goods and services once entered into a market.

Table 3-2 summarises the concepts that converge with the macroeconomic theory of economic development and those which diverge away from this theory at this first stage of theoretical analysis. The converging concepts are disequilibrium, enterprise and innovation.
or market disruption. These concepts also relate to different units of analysis; starting with disequilibrium, the focus of microeconomic analysis; enterprise, which describes the microeconomic form of organisation which delivers disequilibrium; and innovation or market disruption which is the particular activity undertaken by enterprise.

The diverging concepts tend to fall under the macroeconomic theory of economic growth and include equilibrium, business and productivity. These concepts provide counterpoint units of analysis to economic development with equilibrium belonging at the microeconomic market level, business being the form of organisation engaged in producing equilibrium and production and arbitrage being the activities undertaken by business.

Table 3-2 Summarising distinctions and supporting concepts (Source: Author)

<table>
<thead>
<tr>
<th>Economic Function</th>
<th>Economic Development</th>
<th>Economic Growth</th>
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<tbody>
<tr>
<td>Supporting Concepts</td>
<td>Disequilibrium</td>
<td>Equilibrium</td>
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<tr>
<td></td>
<td>Enterprise</td>
<td>Business</td>
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<tr>
<td></td>
<td>Market disruption</td>
<td>Production</td>
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<td></td>
<td>Innovation</td>
<td>Arbitrage</td>
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Against this conceptual background, the next task is to explore more specifically the nature of the enterprise roles within entrepreneurship that contribute to economic development.
4 Enterprise roles in economic development

4.1 Introduction and chapter overview

Having distinguished the economic functions of entrepreneurship in the previous chapter, the focus now turns to distinguishing the various attributes of the enterprise roles that carry out the particular economic function of economic development. In the preceding chapter it was argued that the individual entrepreneur had become lost within the field of economics and was replaced by the firm as the dominant unit of analysis. This meant that the precise economic contribution of the individual within entrepreneurship was also lost and the distinction between enterprise and business was blurred.

It was anticipated that the lack of clarity by economists would in turn influence entrepreneurship academic writers and researchers. Entrepreneurship theorists have tended to cluster and categorise economic theories to either argue for one or the other position or, in some cases, to put the arguments to one side altogether and simply assume that entrepreneurship is just universally good for an economy.

Holding to an economic framing of entrepreneurship allows us to identify a number of other key roles through which the economic work of entrepreneurship is enacted. Enterprise roles have a number of distinguishing attributes that arise from the creation of, development of, market introduction and subsequent growth of market disruptive goods and services.

The early work of Joseph Schumpeter (1961) provides a clear exception to most theorists who have purposefully considered the roles of those engaged in entrepreneurship through the lens of economics. Schumpeter not only argued for distinctions, he also largely held them consistent over sustained periods. This clarity of thinking is instructive in this chapter where the roles that contribute to economic disruption are in focus. That said,
Schumpeter was not infallible and slippages in the construct of role raises questions about whom and how individuals contribute to economic disruption. Further, although Schumpeter notes a number of disciplinary attributes of the entrepreneur role, there is no elaboration of other roles that engage in enterprise that contributes to economic development.

This chapter proceeds by undertaking a conceptual-historical review of entrepreneurship literature, systematically examining how the specific concept of roles is introduced and discussed by theorists with respect to those who participate in enterprise. Many theorists have attempted to synthesise the economics literature to argue the role of the entrepreneur in entrepreneurship theory, however, in many cases they have simply failed to recognise the number of roles involved in the broader pursuit of economic development. Further, in the instances where a number of roles are recognised, there is no adherence to the distinct economic functions or how the roles may vary between the economic functions. Overall, there is a lack of clarity in the literature on these issues and this tends to obscure the type and nature of roles involved in the economic activity of market disruption.

Nevertheless, this chapter contributes to the understanding of the roles in enterprise by aggregating a number of different perspectives. The conclusion of this conceptual-historical review argues that entrepreneurship as disruption is not merely the responsibility of the entrepreneur but rather there is a raft of roles that contribute to this economic phenomenon. In singling out the entrepreneur, it is somewhat overlooked that many across a socioeconomic spectrum are responsible for creating, developing and introducing innovation into a market driven economic system. The economists generally recognised the multiplicity of roles when they abandoned the individual for the group of individuals that constitute a firm. However, entrepreneurship theorists appear to have been fixated upon a single role, that of the entrepreneur, and have tended to follow the economists by locating the entrepreneur within the activities of a firm. It is argued that by distinguishing business and enterprise, isolating the specific units of analysis relevant to entrepreneurship, the types of roles that are contained within these different forms of organisation can also be examined. It is to this argument that this chapter is dedicated.
Before proceeding, it should be noted that excluded in this research, is any in-depth consideration of the psychological profiles of those occupying the role or the decision-making or cognitive processes inherent in role. These are considered beyond the scope of the study and are thought to be more relevant to the pedagogical issues of teaching those who assume roles within enterprise rather than pertinent to the provision of educational pathways to support the career of those who choose to engage in enterprise.

4.2 The Schumpeterian view of roles

In the history of economic thought on entrepreneurship, Schumpeter was quite unique. Schumpeter was one who argued and largely maintained clarity about distinguishing enterprise and the entrepreneur.

With respect to the most obvious role in enterprise—the entrepreneur—Schumpeter, (1961, pp. 88-89) clearly connects entrepreneurship with ‘doing the thing’. New ideas, he says is not enough as it is the connections, resourcefulness and actions that are the key attributes of the role of the entrepreneur. Through these remarks Schumpeter makes clear that the entrepreneur is the one who undertakes actions through application of mental and physical labour. However, the type of labour performed by the entrepreneur has been the subject of much debate. Early economists such as Turgot (1727-1781) held that the ownership of capital and the investment of that capital into a business was the determining factor of an entrepreneur (Tuttle 1927). Turgot’s entrepreneur was described as the independent organiser and manager of a business, and the labour of the entrepreneur was described as organising, inspecting and directing; the labour, in contemporary terms, commonly attributed to a manager. Turgot combined the capitalist and the business manager into the one role, which he termed the entrepreneur.

Schumpeter on the other hand made the roles distinct and claimed that:

…most economists up to the time of the young Mills [1806-1873] failed to keep capitalist and entrepreneur distinct because the manufacturer of a hundred years ago was both; and certainly the course of events since then has facilitated making of this distinction… (Schumpeter 1961, p. 77).
Schumpeter also shared some common ground with Cantillon who first raised the idea of the entrepreneur versus capitalist. Schumpeter and Cantillon both distinguished between the capitalist, with ready access to capital, and the entrepreneur, who lacked capital. In both cases the entrepreneur organised the market introduction of productive capacity while being capital poor. Cantillon made reference to an entrepreneur that may have been penniless and risked loss through opportunity costs (Chell, Haworth & Brearley 1991, p. 13) and Schumpeter’s entrepreneur was endowed with capital disadvantage and therefore must resort to credit sources to take an innovation to market. This distinction between entrepreneur (those without financial resources) and capitalist (those with financial resources) can be observed as a recurring theme throughout the economic literature (Tuttle 1927).

An example of the arguments being made about the differences between the entrepreneur and the capitalist can be found with another early economist who attempted the demarcation. According to Hennings (1980), Mangoldt (1824-1868) observed that the entrepreneur assumed a position whereby an economic rent\(^4\) was earned from their labour and, in addition, the rent had a scarcity value achieved through market monopoly even if it were temporary. This he contrasted with a capitalist who did not incorporate their labour, nor did they necessarily seek a return from a position of scarcity. Mangoldt’s distinction pushes the entrepreneur firmly toward those that secure a monopoly rent and into a particular band of economic activity that involves innovation to the point that it is unique within a market place. The capitalist on the other hand was neither concerned with a contribution of labour or with the distinguishing feature of a monopoly position. While the distinction Mangoldt made was useful, it did not specifically discuss the nature of the entrepreneur’s labour.

According to Schumpeter, while reflecting Mangoldt’s view, the labour of the entrepreneur role remains with the bringing together of new combinations. Again Schumpeter (1961, p. 88) insists that it is not the entrepreneur’s role to find or create new

\(^4\) An economic rent is defined as the ‘difference between the return made by a factor of production and the return necessary to keep the factor in its current occupation’ Bannock, Baxter & Davis (2003).
possibilities, as they already exist, but rather to carry action to these possibilities, to ‘bring them together’. This, therefore, implies the ‘alertness’ characteristic of the entrepreneur as highlighted by Kirzner (1999). However, this also leaves open the question about the role of the entrepreneur and suggests that they are only concerned with the identification of new opportunities to bring things together. If the entrepreneur isn’t responsible for creating, then another character must enter the plot and, therefore, it is noted that the inventor must play a distinct role in the theory of economic disruption (Schumpeter 1961, pp. 88-89).

Schumpeter (1961) also reveals another very specific aspect of the entrepreneur’s labour when he refers to the leadership role. Schumpeter claims that the entrepreneur is not the charismatic or political leader but rather an economic leader in terms of leading capital into the venture that offers the new combination into the market. In other words, the entrepreneur’s leadership abilities are directed toward the banker and/or capitalist to attract the funding required for the venture. Schumpeter also describes the entrepreneur as leading in another unwilling way; that is, leading competitors to the potential of imitating the new combination which in turn gradually leads to an erosion of profits, (ibid., p. 89). To this end, Schumpeter makes reference to the entrepreneur as a ‘captain of industry’ (ibid., p. 78).

According to Schumpeter (1961) the market introduction of new combinations also requires educative and perhaps selling abilities in order to penetrate new products and/or services etc., into a market by convincing the market or consumer of the benefits and reliability of the new combination (ibid., p. 87). Lastly, part of the entrepreneur’s labour is directed toward delivering the service as it is only they in the first instance who have the deep and specialist knowledge required to produce the new combination, (ibid., p. 89).

Perhaps the clearest way to convey the diversity of roles involved in enterprise as portrayed by Schumpeter (1961) is to cite the following passage:

The entrepreneur of earlier times was not only as a rule the capitalist too, he was often...his own technical expert, in so far as a professional specialist was not called in for special cases. Likewise he was (and is) his own buying and selling agent, the head of his office, his own personnel manager, and sometimes, even
though as a rule he of course employed solicitors, his own legal adviser in current affairs (ibid., p.77).

In summary, through Schumpeter a number of roles that comprise the activity of enterprise are encountered that act concurrently to produce market discontinuity for economic development. These are:

- the leadership role playing the part of being alert to the opportunity and acquiring the capital;
- the capitalist, financier or banker providing money to the venture;
- the inventor or the creator of the various aspects that contribute to innovation;
- the producer who manufactures or assembles the innovation in the special circumstance for the first time, developing it to be ready for routine production within a business setting;
- the manager or coordinator attending to the office functions and administration of innovation and new venture activity, and;
- the legal advisor and possibly solicitor.

Each of these roles could potentially be conducted by the entrepreneur, although it is contended more likely that the activity of enterprise with respect to economic development is a shared responsibility belonging to more than a single person. Therefore, as a baseline attribute of roles in entrepreneurship, it can be said that they are multidisciplinary although maintaining distinctions between roles is at best difficult.

4.2.1 The difficulty of maintaining role distinctions

Schumpeter (1961) makes a clear statement about the task of the entrepreneur: ‘his characteristic task — theoretically as well as historically — consists precisely in breaking up old, and creating new, tradition’ (p. 92, emphasis added). However, it is in this statement that the difficulty of defining the entrepreneur as the sole economic functionary is encountered. It was noted earlier that Schumpeter elsewhere in his texts, and later in his life, clearly excluded tasks relating to creating opportunities as part of the entrepreneur’s
role and yet he seems to allude to the opposite when he says the entrepreneur’s role ‘consists precisely in breaking up old, and creating new, tradition’ (Schumpeter 1961, p. 92). In a similar passage where Schumpeter is attempting to delineate the role of the ‘promoter’ from that of the entrepreneur he states that the promoter ‘is not [the innovation] creator nor the driving power in the process’ (ibid., p. 78). This suggests that the entrepreneur, therefore, is the driving power embroiled in the role of creating. Even for Schumpeter, maintaining the distinction between the creator and introducer of market disruptive goods and services proved difficult. It is argued that this occurs because economic disruption cannot be isolated to the solitary role of an individual who is called entrepreneur.

To re-state the position, it is suggested that there are multiple roles inherent in enterprise that deliver the economic disruptive function of economic development. However, although the entrepreneur may perform many of these roles without division in the unit of labour, it is equally likely, if not more so, that the entrepreneur may join with others in the activities of enterprise. With respect to this thesis, and maintaining an interest in education, it is argued that education will need to serve in preparing all who wish to engage in the activity of enterprise. This leads to the clear need to identify more precisely the roles that are inherent in enterprise while remaining mindful of the case that roles could be either occupied independently by a number of individuals or be equally concentrated to a few people or, at the extreme, occupied by only one person.

4.3 A conceptual-historical review of enterprise and roles

Schumpeter discussed the historical development of the entrepreneur role to lay a foundation for his differing perspective. This is considered instructive for the considerations here as he explained how modernisation may influence clarity:

…because increasing specialisation may allow functions and qualities to stand out sharply, which are more difficult to recognise in more primitive conditions when mixed with others (Schumpeter 1961, p. 76).
Building on this position, it is argued that enterprise is increasingly becoming a specialised activity which means that the ‘functions’ and ‘qualities’ are starting to stand out more sharply as they demand the attention of theorists. This next section explores a number of texts by entrepreneurship theorists who drew heavily upon the economic context. Through this process the roles considered by the theorists can be synthesised to gain a more contemporary perspective and to articulate the number of different activities encountered by the various contributors to economic disruption.

### 4.3.1 Reviewing entrepreneurship theorists

The theorists reviewed in this section have used economic theory to historically review entrepreneurship. The works, purposively chosen, provided a systematic basis and historical anchor points for elaborating the roles encountered within entrepreneurship. The selected works include Barreto (1989), Chell, Haworth and Brearley (1991), Casson (2003), Hébert and Link (1982), Kilby (1971), Pittaway (2005) and van Praag (1999). Figure 4-1 shows the chronological and citation relationships between the works and Table 4-1 briefly outlines the nature of each work. The description of each text will be expanded on at appropriate points throughout this chapter.

This systematic review of entrepreneurship theorists is designed to gain a general appreciation of what and how terms have migrated from one field to another. Through the purposive sampling technique, it may be that some authors not included in the review may have more consistently dealt with the migration of concepts across the two fields of interest. However, it is a general view about consistency that is sought here rather than a full or comprehensive one. The manner in which the sampled authors evidence consistency, or otherwise, might imply a general condition, revealing the specific issues that arise when entrepreneurship theorists attempt to borrow from the field of economics.
Figure 4-1 Chronological and citation relationships between historical texts (Source: Author)

Table 4-1 Summary of texts offering historical perspectives (Source: Author)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Date (Edition)</th>
<th>Title (Form)</th>
<th>Aim of text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kilby, Peter</td>
<td>1971 (1st)</td>
<td>Hunting the Heffalump (Book chapter)</td>
<td>To review major theoretical constructs in economics, sociology and psychology on the entrepreneurial phenomenon.</td>
</tr>
<tr>
<td>Hébert, Robert F. &amp; Albert N. Link</td>
<td>1982 (1st)</td>
<td>The Entrepreneur: Mainstream Views and Radical Critiques (Book)</td>
<td>To explore the relationship between entrepreneurship and economic activity.</td>
</tr>
<tr>
<td>Casson, Mark</td>
<td>2003 (2nd)</td>
<td>Basic concepts of the theory and Alternative Theories of the entrepreneur (Book chapters)</td>
<td>To define the role of the entrepreneur and introduce basic concepts.</td>
</tr>
<tr>
<td>Barreto, Humberto</td>
<td>1989 (1st)</td>
<td>The entrepreneur throughout the history of economic thought (Book chapter)</td>
<td>To highlight the many varied roles the entrepreneur has played throughout the history of economic thought.</td>
</tr>
<tr>
<td>Chell, Elizabeth, Jean Haworth &amp; Sally Brearley</td>
<td>1991 (1st)</td>
<td>The economists view of the entrepreneur (Book chapter)</td>
<td>To set out the variety and to some extent the development of various economists’ views of the entrepreneur.</td>
</tr>
<tr>
<td>Van Praag, Mirjam C.</td>
<td>1999</td>
<td>Some Classic Views on Entrepreneurship (Journal article)</td>
<td>To give an overview of six important classic historical contributions to give some insight into the determinants of successful entrepreneurship.</td>
</tr>
<tr>
<td>Pittaway, Luke</td>
<td>2005</td>
<td>Philosophies in entrepreneurship: a focus on economic theories (Journal article)</td>
<td>To analyse the philosophies underlying economic studies in entrepreneurship and to explain how they contribute to the understanding of entrepreneurial behaviour.</td>
</tr>
</tbody>
</table>

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The first text by Kilby (1971) is cited by many authors as a foundational reference work, including the authors of the second selected text, Hébert and Link (1982), who offered an exploration of the entrepreneurship field across a vast range of economic authors. The third text by Chell, Haworth and Brearley (1991) placed substantial weight on the work of Hébert and Link, although the focus of their work was on the personality of the entrepreneur. Together, these three texts provided a primary lineage of investigation.

To provide a counterpoint to the primary lineage, a secondary approach was also incorporated to assist with validation of the findings. Casson (2003) had reviewed the historical economic evolution of entrepreneurship with the purpose of filling a perceived gap in economic theory by building the case for its relationship to the entrepreneur. The nature of this work, its coverage of the economic authors and its grounding as independent to Kilby\(^5\) suggested itself as a suitable departure from the primary lineage. To continue the second line, Barreto (1989) was included as the next text because the work provided a distinctly different approach to the historical review influenced by Casson but with a clear divergence from the primary lineage. To complete the second lineage van Praag (1999) was included for similar reasons.

These selected theorists' texts held a common focus and were particularly concerned with linking the entrepreneur to the field of economics. In this research the nexus between the individual and economic influence is of critical importance in considering the different roles that the entrepreneur may occupy. However, in an effort to draw contemporary conclusions a final work was included that linked both lines of historical review together. Pittaway (2005) differed to the other authors. Pittaway drew heavily on the various historic economic perspectives and was in search of a meta-theory and a philosophical base for the field of entrepreneurship. The inclusion of Pittaway provides a form of capstone that is informed by most of the other texts, reflects contemporary thinking and adds a philosophical perspective on the historical economic evolution of entrepreneurship that contextualised the emphasis on the individual.

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\(^5\) Casson listed Kilby (1971) in the Bibliography of the text but did not cite Kilby as a reference for the Chapters selected for review.
The contribution of each of these theorists is now considered.

4.3.2 Kilby: the role of carrying out market introduction

Considering the first theorist, Kilby (1971), the following passage is informative:

The array of all possible entrepreneurial roles encompass the perception of economic opportunity, technical and organizational innovations, gaining command over scarce resources, taking responsibility for the internal management and for the external advancement of the firm in all its aspects (p. 4).

Kilby held a primary interest in what he called late developing economies or those that were relatively under-developed. With this in mind he considered economic development of the kind established by Schumpeter to be largely irrelevant due to the ‘backlog of unapplied production techniques and the existence of large, well mapped out import markets’ (Kilby 1971, p. 6). In essence, his claim was that the technological and industrial resources of more advanced economies would serve as the source of economic development negating the need for pioneering innovation in the slower developing economies.

More contemporarily, evidence of this can be found in the Global Entrepreneurship Monitor (GEM) data where middle level income countries (as expressed through Gross Domestic Product or GDP) experiencing high growth (considering change in GDP) seem to have greater opportunity to diffuse new technologies within their national boundaries than countries exhibiting higher GDP income (Minniti, Bygrave & Autio 2006). Kilby would describe the middle income–high growth countries (including South Africa, Argentina, Brazil, Thailand and Latvia) as late developing economies. The source of the growth reported by GEM was attributed to the diffusion of technologies from those nations with high income but relatively lower growth; nations such as UK, USA, Canada, and Australia.

Accepting Kilby’s emphasis on growth, he conveniently provides a list of entrepreneurial tasks that he suggests an entrepreneur may need to perform to ensure enterprise success. He groups these into four subgroups: exchange relationships, political administration, management control, and technology. Two things are notable about this list.
First, it contains no development function involving the creation of market disruptive goods or services; presumably this is the case because of Kilby’s claim that these are acquired from more advanced economies. In keeping a focus on economic development, this suggests that in contrast to the Schumpeterian model, interpreted as economic development, the tasks of development are to be found elsewhere.

The second point is the extent to which the list relates to the activities of an operating business and therefore the entrepreneur as the operator of that business (Kilby 1971 p. 27). This is consistent with Kilby’s representation of the industrial entrepreneur in underdeveloped economies and evidences the different views between Kilby, who considers enterprise within the context of economic growth, and Schumpeter who argues for enterprise as attending to economic development.

Kilby stresses that the entrepreneur, in the strict model prescribed by economists, would perform only two tasks; perception of market opportunity and gaining control over resources. He also argues that a more liberal interpretation would see the entrepreneur in practice including two further activities; purchasing inputs and marketing of the product. The first two activities seem to reflect Schumpeter’s view of the entrepreneur as leader while the latter two activities are also necessary in the Schumpeterian perception of ‘doing the thing’ and bringing action to the concept. Therefore, there appears to be consistency between the two theorists about the role of the entrepreneur.

Through Kilby, a list of tasks is found that are contextualised within activities relating to economic growth. Interestingly, Kilby’s discussion appears to neglect roles involving economic development because the development function is considered by him to be accomplished by other nations. However, generally there are similarities with Schumpeter in the scope of the tasks and, like Schumpeter, Kilby suggests a number of different roles that contribute to the economic outcome. Common to both theorists is the framing of the entrepreneur as the one who engages with introducing the opportunity into the market.

4.3.3 Hébert and Link: team leadership and role interdependency

Hébert and Link’s (1982) historical review of the economists led them to present a summary of twelve views on the nature and role of the entrepreneur in the economy. These
were synthesised into four generic types of entrepreneurial theories and two of these were highlighted as the dominate themes of equilibrating and disequilibrating forces within a market economy. The review of the role distillation found in Hébert and Link, results in the presentation of these mapped by relationship to the theory in Figure 4-2. Here the roles are displayed as they were represented – clustered as static or dynamic activities. Within the dynamic role cluster, were the four dynamic market theories and the figure shows the relationship to the equilibrium and disequilibrium market forces.

Figure 4-2 Map of Hébert and Link’s Roles in Market Influence (Source: adapted from Hébert and Link 1982, pp. 107-109)

Through this process some key points can be noted. First, several dynamic role attributes (shaded) are common to both the equilibrating and disequilibrating theory groups and, therefore, are not helpful in distinguishing the unique human capital between the two
economic forces. Notably, the factors which remain (unshaded) may be indicators of the different activities of business and enterprise. For instance, the equilibrating factors remaining are the entrepreneur as arbitrageur and the one who allocates resources to alternate uses. As previously explained, the arbitrageur influences the market efficiency of firms in the circular flow. Similarly, allocating resources suggests that resources are in hand to allocate as would be the case in an existing firm. Therefore, the entrepreneur performing both arbitrage and resource allocation, fit well with the notion of the entrepreneur as a firm owner/manager.

For the disequilibrating roles of an innovator, a contractor and an industrial leader remain. The role of innovator and its relationship to the enterprise activities of economic development as distinct to business were drawn out earlier. The role of contractor also conveys an independent status from a firm that could reasonably be considered in the context of enterprise activities. The industrial leader suggests a link to a broader unit of analysis that also conforms well to the enterprise context and Schumpeter’s notion of a ‘captain of industry’ (Schumpeter 1961, p. 78). The presentation of these ideas by Hébert and Link tends to support the proposition that a distinction between business centric equilibrating forces and the enterprise activity of disequilibrating holds some credence.

The second interesting observation that can be drawn from this map is that the roles referred to as static elements contain rudimentary components of enterprising activity. For instance, given the distinction between the entrepreneur and the capitalist described earlier, it would seem that the role of the entrepreneur, grounded in dynamic market activities, is somewhat dependent on the role of the capitalist lender who more generally belongs to the static market or productivity activities. Furthermore, if the dynamic roles outlined in Figure 4-2 are considered independently, it is apparent that the entrepreneur would achieve nothing without engaging with the roles of those who more regularly attend to market productivity. In order for market equilibrium to be affected—one way or another—capital, production and management must be drawn into the enterprising task. Leadership, arbitrage, innovation, resource allocation and contracting etc., as roles undertaken by the entrepreneur all require the cooperation and input from multiple roles in order to be effective in achieving market influence. This suggests an interdependency of roles within
enterprise and the close relationship between the roles found in the static and dynamic market activities which make distinguishing the two functions ever more difficult.

It can be observed that the entrepreneur when considered through the concept of dynamism seems to be designated to a leadership role in achieving market disruption. This conception also seems to support the proposition that enterprise is a team activity that is responsible for introducing the disruptive factor into a market rather than that of the entrepreneur acting alone. The notion of leadership implicitly implies the presence of followers.

### 4.3.4 Chell, Haworth and Brearley: innovators in enterprise and business

The conclusions on the review of economists by Chell, Haworth and Brearley (1991) outlined six key points of which only some are relevant to this discussion. Despite the fact that they sought issues pertaining to the entrepreneur’s personality, they did conclude some issues with respect to roles. The first of these was a note that the British economic tradition tended to supplant the entrepreneur for the capitalist. This meant that the entrepreneur received little attention from the British school of economists which included the renowned economist Adam Smith. Instead, apparently in Britain it was the capitalist who received the bulk of the attention.

Their second reference to roles is captured in the following:

The entrepreneur is not simply an overseer, a superintendent or a ‘caretaker’, he actively pursues and initiates change. This has been taken to mean, by some, that he is an innovator in so far as the pursuit of change was not change for change’s sake. In the Schumpeterian sense, he might develop new products, exploit new markets, introduce new technologies, capture a new source of supply, use imaginative ways of investing in the business, reorganise systems and structures to accomplish efficiencies in operations and/or bring about the reshaping of an industrial sector (p. 28, emphasis added).

Notable in this paragraph, is the reiteration of a Schumpeterian view of the entrepreneur and the tasks to which an entrepreneur attends. However, in the above there is
also an addition that blurs the early Schumpeterian meaning. This occurs in the words highlighted in italics where Chell, Haworth and Brearley refer to the business, systems and structures and operational efficiencies. As has already been made clear, the early work of Schumpeter was not concerned with firms already in existence, the reorganisation of their structures and systems nor their operational efficiencies (although later in his life Schumpeter did introduce this layer of added thinking in the context of cyclic economic change).

The work of Chell, Haworth and Brearley, when considered through their appraisal of the development of the entrepreneur in economics, highlights the blending of the entrepreneur within enterprise with the role of the entrepreneur within business. It is argued that the lack of distinction between the activities of enterprise and business is the source of much confusion to the field of entrepreneurship when considering innovation as an economic disruptive activity. Yet the role of the entrepreneur within enterprise is difficult to distinguish from the role of the entrepreneur in business, as innovation is relevant to both contexts of activity. However, by holding to the distinctions argued in the previous chapter, it can be said that the microeconomic market outcomes of innovation in each of these contexts will be different whereby within enterprise it will lead to disequilibrium and within business it will lead to equilibrium of markets.

4.3.5 Casson: the role and appropriation of an entrepreneurship career

In Casson’s (2003) work, the majority of his efforts are given to developing the theories with respect to the entrepreneur’s function and drawing inference regarding the qualities and attributes of the individual in performing that function. Little attention is paid to the roles of enterprise in terms of the tasks performed. Casson aligned his theory with Schumpeter and perhaps this is best evidenced in this passage:

In Schumpeter’s theory, the purely entrepreneurial act occupies the entrepreneur for only a small proportion of his time. There may indeed be only one quite ephemeral act, namely the creation of a new firm to effect an innovation. What the entrepreneur does the rest of the time is to manage the growth of his business by building up his organization and defending its strategic interests (p. 231).
This passage suggests Casson’s interest in the entrepreneur seems to only consider activities beyond the point of new firm creation and considers nothing by way of the activities that carry-on prior to the new firm creation. This is reinforced when he summarises his work to express how the theories he reviewed interfaced through the institutional theory of the firm (p. 231). However, it is argued that by the time a new firm is ready for growth the Schumpeterian task of enterprise (that is, introducing innovation into a market and disrupting the equilibrium) would be completed and thereafter the task is directed toward a different function, that of growth in economic terms through the business entity. Therefore, Casson does not distinguish between the terms development and growth and instead attempts to capture the Schumpeterian entrepreneur in the context of a business, consequently focussing on the issues of economic growth.

However, there is some accordance between Casson’s view of the ephemeral entrepreneurial act and Schumpeter’s opinion on the extent to which entrepreneurship is a career occupation. Interestingly, Schumpeter claimed that ‘carrying out of new combinations can no more be a vocation than the making and executing of strategical (sic.) decisions, although it is this function and not his routine work that characterises the military leader’ (Schumpeter 1961, p. 77, emphasis in original). In this quote Schumpeter is making the assertion that the strategic decision-making of the military leader itself is not a vocation but rather one activity contained within the military commander’s chosen career. To draw the parallel, the entrepreneur might be characterised by a decision to establish a business although this decision does not satisfactorily describe the entrepreneur’s career. Instead it is one function that characterises the type of career. Casson draws attention to a vocational argument, relating to the roles within enterprise which will be explored further in the following chapter.

4.3.6 Barreto: common roles, different contexts

In Chapter 3, Barreto’s (1989) economic functional positions and the work to which the entrepreneur attended within those positions were summarised. By referring back to Table 3-1 it can be noted that innovation and arbitrage portray function at the market level; that is to equilibrate or disequilibrate. While the remaining two functions of coordination and uncertainty bearing describe roles at a more operational level. As earlier portrayed
through Hébert and Link, these roles are found to be common in both types of development and growth economic functions. In Barreto’s case, the roles of hiring and firing productive agents, facilitating exchange, directing production and making responsible and accountable decisions are not tasks that are easily distinguishable between the Schumpeterian disequilibrating function and the Austrian equilibrating viewpoint. Barreto, in the same way as others, demonstrates the difficulty theorists have had in maintaining distinctions between the operational roles that are contained in the activity of economic disruption, described by Schumpeter as enterprise, and the economic productivity function carried out by business. This makes more apparent the issue of common roles but different contexts.

4.3.7 Van Praag: roles distinctions based upon contextual differences

Van Praag (1999) tends to deal extensively with the roles of the entrepreneur as she progresses her discussion of each of the economic theorists. However, the portrayal of the various economists’ treatment of the role of the entrepreneur tends to shift in focus between the industry/market, the firm and the individual with no unit of analysis being consistent throughout. This can be evidenced during van Praag’s discussion on the comparison of views held by the economists where at some points the role and tasks of the entrepreneur are directed toward the market; for instance in this extract: ‘an essential role [is given] to the entrepreneur as mover of the market’ (p. 327). At other times the role is considered at the connection to the firm level, for example: ‘the entrepreneur [is considered] in the position of independent owner, decision maker and manager of the firm’ (p. 327). At yet another point the entrepreneur role is used to describe the individual’s behavior in task performance: ‘The various descriptions of the entrepreneur’s main tasks partly overlap. All but Schumpeter’s entrepreneurs are responsible for risk-bearing…’ (p. 327). It seems fairly clear that role has not been given a precise meaning neither by the economists being discussed by van Praag nor in van Praag’s analysis.

However, an interesting viewpoint does arise out of van Praag’s discussion with respect to a classical thought on entrepreneurship as proffered by Jean-Baptiste Say (1767-1832). Say suggests that there are three distinct operations within ‘human industry’ that ‘are seldom performed by one person: (a) theoretical knowledge construction, (b) the application of knowledge and (c) execution’ (van Praag 1999, p. 315). Van Praag continues
to cite Say, declaring that an entrepreneur’s occupation is ‘the application of knowledge to the creation of a product for human consumption’ (van Praag 1999, p. 315).

Here, two issues are confronted: first, according to van Praag’s account of Say, each operation within human industry is seldom performed by a solitary person, suggesting that the occupation of the entrepreneur is also most likely to be shared. This contention supports the concept of enterprise as a shared responsibility and it can also be noted that Say incorporates creation in this activity. Second, the application of knowledge cannot be independent from either knowledge construction or execution but rather is connected to both. Therefore, while theoretically they may be distinct operations, in practice they must overlap as knowledge passes from the construction phase to application and through to execution. It is contended that this transition from constructed knowledge to practical execution is the activity of enterprise while once knowledge is situated within the execution phase it becomes the performance of business. The functional disciplines of the roles in enterprise in this case are therefore not necessarily different or distinguishable from the areas of knowledge construction or knowledge execution in the market; rather the distinctions are not discipline based but contextually located.

Van Praag’s review of economic authors says little about the development of roles in the activity of enterprise although she does elaborate extensively on the success determinants for the individual entrepreneur. Generally, the specific tasks and role of the entrepreneur, and therefore that of enterprise, have been left indistinct crossing units of analysis; although the portrayal of Say and the occupation of the entrepreneur are meaningful for this thesis which suggests that the context of the roles for entrepreneurship are particular although not necessarily unique in terms of their functional disciplines.

4.3.8 Pittaway: the cognitive and agency attributes of the entrepreneur role

Pittaway’s (2005) interest was in the philosophical positions of each of the economists he investigated. This leads Pittaway to largely remain at a macro level and his text was most helpful in the discussion of economic function. With respect to the issue of operational roles it is found that he mostly avoids engaging with the topic. However, one element of discussion is extremely insightful.
Pittaway brings to light a contrast between the Kirznerian and the Schumpeterian entrepreneur when he discusses Kirzner’s view of the entrepreneur as the one who recognises opportunities and makes decisions, as opposed to Schumpeter who considers the entrepreneur as the one ‘doing the thing’. Through this contrast Pittaway (2005, p. 208) brings into focus the interaction between the environment and the individual where the environment hosts the opportunities that the individual entrepreneur recognises. This also highlights the difference between the cognitive elements of entrepreneurship roles, posited by Kirzner, and the agency of entrepreneurship actors described by Schumpeter. O’Connor and Ramos (2006) make a connection between cognition and agency and argue that cognition only partially contributes to agency. Other factors such as skills and knowledge, attitudes and motivations, social and organisational boundaries all also affect the agency of an individual in the context of entrepreneurship.

Pittaway, however, describes how both cognition and agency are vital to the roles contained within entrepreneurship operating in a market economy. This suggests also that both the human condition and the environment within which they operate are integral to enterprise. This view is supported by sociologists like Giddens (1982) and others studying entrepreneurship who maintain that social structures are inseparable from human actions. The interest of this current research is in the types of roles that contribute to the undertaking of enterprise. Pittaway’s insight raises the issue of initiating enterprise and distinguishes the entrepreneur as the one who recognises the market opportunity and proactively draws other actors into the enterprise in order that the market may be influenced by an economic development function. Consistently, the entrepreneur seems to be described as playing a leadership role in this activity. However, by introducing cognitive factors of the environment into the debate, the roles of other actors who contribute to the social structuring for enterprise are also implicated. The corollary therefore, is that the roles of those responsible for enterprise in an economy are more expansive than just those who are directly engaged in ‘doing the thing’ and especially so when it is even more narrowly defined as the entrepreneur and his or her leadership role.
4.3.9 The findings of the conceptual-historical review

Consistent with the findings of the previous chapter, this systematic review of entrepreneurship theorists reveals evidence of inconsistencies in such issues as market function, economic growth and development and the distinction between units of analysis. These inconsistencies infect the discussion on the operational roles that contribute to market disruption although there were also some commonalities encountered across the texts.

The most obvious consistency is the role of the entrepreneur. However, also consistent was an interlocking pattern of cognitive and agency activities. In Kilby, this was encountered with his distinction between a set of four roles; exchange relationships, political administration, management control, and technology, which contain both cognitive and agency dimensions, distinguishing the entrepreneur from that of other roles in his version of enterprise. Similarly, in Hébert and Link it was noted that the dynamic role descriptions of the entrepreneur could not be isolated from the static roles and the two needed to operationally combine in some form in order to be functional in a market. The static and dynamic perspectives intertwine which bring together both cognitive and agency attributes. Through Casson, vocational discrepancy was encountered between the strategic decision-making (cognitive) and the acts (agency) arising from those decisions. In van Praag’s review, Say offered an interesting insight into how the entrepreneur played a part in the transformation of knowledge into executable applications using cognitive abilities to form action. Finally, in Pittaway’s text, an explicit reference was found that made the distinction between the cognitive attributes and agency factors of the entrepreneur.

These viewpoints are entirely consistent with the argument for enterprise with respect to the role of the entrepreneur who undertakes mental and physical labour. Perhaps more importantly, it also strongly suggests that the cognitive and agency ability of the entrepreneur leads others into the activity of enterprise. Following from this point then, other roles could usefully be informed and skilled in the occupation of enterprise and therefore education may have an important part to play in developing the entrepreneur and others involved in the economic function of market disruption.
Another aspect that this viewpoint raises is whether enterprise only commences from the time that a market opportunity is recognised by the entrepreneur or whether the roles of those who create, develop and host an environment for opportunities are also integral to and part of enterprise when considered as the market disruptive activity. The predominant theorist consideration of the entrepreneur seems to shift the analysis of enterprise toward the point of conception of opportunity which in turn leads directly into the formation of a business venture making enterprise and business difficult to distinguish.

A compounding confusion can be observed in Chell, Haworth and Brearley when innovation is also taken into the context of business systems and productivity and thus loosing the distinctive attributes of innovation for economic development. Instead innovation becomes an equally valid activity within the context of business increasing productivity and firm growth. This, however, is not market disruptive activity\(^6\) and therefore cannot be termed in accordance with the function of economic development. This suggests that in order for innovation to be relevant it must be considered within the contexts of the microeconomic market disruption which in turn suggests that all the contributors to market disruption should fall within the scope of enterprise.

Therefore, this warrants an exploration of the team attributes and role interdependencies occurring in team and network theory noted from Hébert and Link that is also encountered in the entrepreneurship literature.

### 4.4 Entrepreneurship: teams and networks

It has been argued by some that there is no typical entrepreneur (Hébert & Link 1982) and by others that entrepreneurship is a team activity (Ensley, Carland & Carland 2000). This suggests that there may be no singular prescriptive entrepreneurial ‘way of being’. Furthermore, others have claimed that an entrepreneur emerges and acts from within their own unique setting and circumstance (Aldrich & Martinez 2001; Gartner 2001) which in

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\(^6\) It must be acknowledged, however, that market disruptive activity may arise from this activity although following the lead of Schumpeter it implies that it is an unlikely occurrence as businesses tend to protect and expand current offerings.
turn suggests that the tools, practices and methods of an entrepreneur may suffer from abundant variation (Jack & Anderson 1999).

In a special issue of *Entrepreneurship Theory and Practice* dedicated to finding the entrepreneur in entrepreneurship, Gartner et al. (1994) provided the meta-themes that emerged from the set of published articles. One of their findings was that the ‘entrepreneur’ in entrepreneurship was more likely to be plural than singular. They provided a list of those that may be associated with entrepreneurship that included: ‘individuals that share equity ownership in the venture; individuals that share debt ownership in the venture; individuals that share decision-making roles in the venture; individuals that serve in leadership and subordinate roles in the venture; spouses, family, close friends, advisors; and critical suppliers and buyers’ (p. 6). Berglund, Dahlin and Johansson (2006) also drew attention to the range of co-producers, co-creators and co-operators at the individual and institutional levels involved in an entrepreneurial endeavour. While not all of those listed as associated with entrepreneurship may fall into the category of careerist enterprisers, certainly it again highlights a range of associated careers and professions that engage with enterprise.

Foley and Griffith (1998) also found that enterprise teams rather than solo entrepreneurs were more prevalent in their study of ‘high quality’ entrepreneurs who they defined as those who established firms with significant technological content and/or export potential. Similarly, with respect to the growth of businesses, Storey (1994, p. 130) argues that businesses with more than a single owner are more likely to grow. However, Ensley et al. (1999) reported significant variation in the literature with respect to teams in entrepreneurship that led them to conclude that the issue of an equity stake in a business caused a ‘blind spot’ with respect to considering who is an entrepreneur and who are members of an entrepreneurial team.

Ucbasaran et al. (2003) examined entrepreneurial founder teams by exploring the aspects of membership turnover, entry and exit. They found that small teams were more likely to recruit new members to supplement deficiencies in human capital. This supports the notion of a leader role, although again their study was based on established, operating, privately owned businesses and not teams engaged in the enterprise activities of pre-business formation.
Van de Ven (1993) investigated the infrastructural perspective for entrepreneurship and concluded that ‘the process of entrepreneurship is a collective achievement requiring key roles from numerous entrepreneurs in both the public and private sectors’ (p. 211). Van de Ven emphasised the social system perspective highlighting that actors in the public and not-for-profit sectors played crucial roles. From this viewpoint research that explored the social capital and social network issues take prominence. For instance Nahapiet and Ghoshal (1998) argued that social capital facilitates the creation and exchange of resources, and McFadyen and Cannella (2004) found that the development of new knowledge in a community of scientists was dependent upon the number and strength of direct relationships.

Taylor and Plummer (2003) elaborated the benefit of developing local and community coalitions with respect to growing the capacity for opportunity recognition in new business and potentially new industry. Echols and Tsai (2005) claimed a relationship existed between high network embeddedness, the extent to which a firm offered distinctive products and processes, and a firm’s performance. Furthermore, Brüderl and Preisendörfer (1998) found that the probability of survival and growth of new firms is increased with network support, while Jack, Dodd and Anderson (2004) claimed entrepreneurial performance was improved with effective utilisation of support networks. However, Liao and Welsch (2005) observed that the type and amount of social capital did not differentiate entrepreneurs from non-entrepreneurs but rather it was the extent to which this converted to working relationships that made the difference.

In sum, the broader literature also suggests that entrepreneurship involves teams and networks of people and institutions to produce economic outcomes more so than being solely the responsibility of an individual who starts a business. The issue of roles in enterprise therefore is one more expansive than the singular entrepreneur.

### 4.5 The distinguishing attributes of enterprise roles

Before moving to explore the literature on entrepreneurship and education, there is first a need to present the summarised distinguished attributes of enterprise roles that have evolved through the preceding analysis. From the perspective of Schumpeter the opening
position of this analysis stated that roles in entrepreneurship are inherently multi-disciplinary. Through Kilby the entrepreneur role was described as the one responsible for market introduction (consistent with Schumpeter’s perspective). This view reveals the attribute of dependency of the entrepreneur role upon the creation and development of innovation achieved by others; in Kilby’s case by those in more developed economies.

The analysis of Hébert and Link continued the suggestion that entrepreneurship was a team activity and the roles were interdependent. This became apparent through the segregation of theories and dynamic and static role factors.

Through Chell, Haworth and Brearley the issue of innovation surfaced in the unit of analysis of the firm and highlighted how confusion arises between the role that pertains to market disruption and the roles within business that innovate to provide incremental increases in growth and productivity. Barreto further establishes the risk of confusion as the analysis of his text highlights how roles within enterprise are found to be common with roles in business. However, it is argued that the demarcation can be made apparent if the unit of analysis that is affected by change stays with the market level, emphasising the distinctions between the market activities of enterprise and business.

Van Praag compounded the potential for confusion by moving through multiple units of analysis discussing the implications of roles across microeconomic through to the macroeconomic platforms. However, through this exposition it also became clear that entrepreneurship transformed knowledge through different states. Say claimed that entrepreneurship moved knowledge from its place of construction through to development of applications of knowledge and ultimately into executable knowledge into the market. In this light, the roles of entrepreneurship relate to the ‘go-between’ that is performed by teams while the particular skills of the roles are not functionally unique but rather, contextually unique.

Pittaway consolidates the idea of multiple roles in entrepreneurship by drawing attention to both the cognitive and agency factors involved. This allows the suggestion of other actors being engaged in enterprise roles who create the environmental dynamics that host opportunities. The entrepreneur recognises these opportunities and brings action to them, introducing them into the market causing disruption. The entrepreneur also engages
others in this process which is consistent with the notion of entrepreneurship being a team activity.

Casson drew attention to the distinction between particular tasks within the role and the vocational career of the entrepreneur. Casson highlights that enterprise may not be a career or vocation in its own right but, potentially, an aspect of other careers.

Therefore, in sum, the distinctive attributes that describe the roles of enterprise are said to be:

- multi-disciplinary, in the sense that more than one disciplinary knowledge base is likely to be held by an individual;
- interdependent across communities and between the roles of creation, the introduction of market opportunities and the growth of market opportunities;
- dependent on multiple actors that constitute enterprise at a team level;
- relevant to the unit of analysis at the market level;
- contextually located within transitioning new knowledge;
- inclusive of those who create and support the conditions for knowledge to move from creation to market execution.

Sager, Fernández and Thursby (2006) explored the implications of multidisciplinary education which might also typify an education in entrepreneurship. They argued that:

Roles are no longer defined by professional training; instead, people are forced to venture outside of their comfort zones. Interactions among multi-professionals require adaptation, dynamic thought, facility of expression, and open-mindedness (p. 68).

The task now turns to exploring the literature on how education in entrepreneurship has evolved to provide career pathways that develop and support individuals attracted to multi-disciplinary, interdependent, team-oriented enterprise roles that are responsible for
transitioning knowledge from creation to execution that disrupt the status quo of established markets.
5 Enterprise career development

5.1 Introduction and chapter overview

Having explored the economic function of entrepreneurship, and the attributes of the enterprise roles that attend to innovation and market disruption from an economic perspective, the next literature review is a contemporary theoretical exploration that considers entrepreneurship education provided by education institutions. This third stage of the research aims to broaden the understanding of how education generally provides pathways for the career development of those who wish to be or find themselves engaged in activities that amount to economic development.

It is apparent that governments and education providers are committing considerable public and institutional resources on the education of entrepreneurs. However, if thinking about the purpose of educating entrepreneurs reflects the confusions found in the previous chapters then this has serious consequences for the ultimate efficacy of education with respect to impacting economic outcomes—most particularly market disruption.

Originally, entrepreneurship education followed an assumption and justification that business start-up and ownership generated a sort of economic growth. Education and training was provided that supported business start-up and ownership as a career opportunity. Entrepreneurship education on these grounds does not specifically address the variety of roles encountered in enacting market disruption and often the businesses created are not significantly different to those started by those who are not trained in entrepreneurship. Instead, this stance tends to address work, labour, and employment issues as the entrepreneurs become self-employed as an alternative to being a waged employee.

An alternate view of entrepreneurship education has also been developing since about the 1980s. An attitudinal and behavioural form of education has gathered momentum with the emergence and development of what has become identified as enterprise education. This form of education is based upon a holistic conception of entrepreneurship education that assumes that a broad population base that exhibits entrepreneurial behaviours will ultimately benefit a nation, partly by injecting more disruptors into the economic system.
and partly by addressing issues of employment, particularly through the promotion of self-employment. However, this assumption has been criticised and seems to provide a poor basis upon which to rest hopes for economic development. Both career and economic function become neglected in favour of an approach to education and educating that promotes particular attitudinal and behavioural attributes that ultimately is believed (and hoped) will result in a positive influence on the economy.

**If we are interested in economic development, education in entrepreneurship should focus on the specific context of innovation and market disruption.** If it is too narrowly focused on the entrepreneur as business owner, or too broadly conceived as imparting attitudinal and behavioural change, the likelihood of producing genuine economic development in Schumpeterian terms is substantially reduced.

Throughout the literature exploration it is constantly apparent that entrepreneurship education has tended to focus on the one actor, that of the entrepreneur. It is argued that the undertaking of enterprise involves several actors and through this discussion an entrepreneurship career takes on new meaning as it is embedded in a broad scope of disciplines that are potentially influential to market disruption. The entrepreneur is merely one actor among many who contribute to economic development.

This raises the question about who owns entrepreneurship education in a disciplinary sense. In establishing the education pathways for entrepreneurship, the dominance of the field of management studies and the business school as a major stakeholder is encountered. The assumption is that entrepreneurs start businesses and therefore the aim of entrepreneurship education is to improve the business and management skills of the business owner. This has significant implications for the educational pathway and the objectives of entrepreneurship education. This approach somewhat neglects the enterprise
activities that carry on outside of business that creates, develops and introduces new products and services that disrupt existing markets that results in economic development.

Enterprise, conceived in Schumpeterian terms, has a distinct economic implication and the roles within enterprise have been shown to have distinguishable attributes. Education that is intended to influence economic development should therefore focus on developing those who undertake the particular roles of enterprise. These roles have been found to be difficult to distinguish upon disciplinary grounds although on contextual grounds they are the roles across community and industrial sectors that are responsible for creating, developing, introducing and subsequently growing market disruptive ideas from a society’s base of new knowledge. Career pathways therefore will need to be created across a number of disciplines and focus on developing multidisciplinary skills that enhance the ability of individuals to work in small teams and in interdependent enterprise roles.

Holding the focus of entrepreneurship education on innovation and market disruption draws attention to the importance of creating multiple career pathways that support and develop a broad range of multidisciplinary and interdependent enterprise roles. Enterprise roles, in sum, are responsible for creating, developing and introducing new knowledge and ideas into the market that disrupt the stability of existing goods and services.

This chapter explores these arguments. It is found that entrepreneurship education initially focussed on business, and particularly start-up business, as its main area of career priority. Over time an attitudinal and behavioural form of education has also emerged that is based on the assumption that enterprising attitudes and behaviours will generally be a positive influence on a nation’s economy. It is argued that a major policy implication is that there is a need to establish career development pathways within the education sector for enterprise that is dedicated to the issues of economic development rather than adopt unfocussed strategies of either the broad attitudinal and behavioural education or the too
narrowly defined concept of business start-up. This chapter concludes by offering three propositions that based upon the arguments developed throughout the literature reviews in this and the previous two chapters might be expected to reflect the policy positions of a national government which has declared and aligned its interest in entrepreneurship education with economic development objectives.

5.2 The purpose of entrepreneurship education

Educators world-wide are observing growth and persistent demand from individuals and governments to deliver entrepreneurship education (Atherton 2004; Caird 1990; Fayolle 2004; Gibb 1996; Hytti & O’Gorman 2004; Jack & Anderson 1999; Katz 2003; Klapper 2004; Leffler & Svedberg 2005; Plaschka & Welsch 1990; Solomon, Duffy & Tarabishy 2002). Some quarters have claimed that everybody in the dynamics of the contemporary economy could be an entrepreneur (Casson 2000) or should be exposed to entrepreneurship training and development (Gibb 2002). Governments also having apparently identified a link between entrepreneurship and economic imperatives have been forging ahead to formulate policy for educational environments that encourage an entrepreneurial spirit—see for instance the Netherlands, Australia, Finland and the UK (Stevenson & Lundström 2002). It would seem that many in political, educational and academic circles have arrived at the conclusion that a nation would benefit if its people were more enterprising and/or entrepreneurial.

Entrepreneurship education has been categorised into three types; education ‘for’, ‘through’ and ‘about’ enterprise (Caird 1990; Scott, Rosa & Klandt 1998). Each of these types of education programs, it is claimed, serves a different purpose. Education ‘for’ entrepreneurship is occupationally oriented toward those seeking to start a business. Education ‘through’ entrepreneurship aims to increase life skills; such as skills in group work, communication and leadership. Education ‘about’ entrepreneurship aims to develop awareness and understanding of business and industry (Caird 1990).

With respect to economic function, education ‘for’ entrepreneurship assumes the very specific case of the work of an entrepreneur to be the starting of a business. Education ‘through’ entrepreneurship neglects the specific economic work of an entrepreneur
altogether in favour of developing generic life and work skills, although granted, these will be important influences in an individual’s enterprise activities. Meanwhile, education ‘about’ entrepreneurship expands beyond the occupational level and into the general world of commerce and industry. These three conceptions of entrepreneurship satisfy a broad range of interests. However, the work of entrepreneurs engaged in enterprise remains fixed about business start-up and there seems to be a lack of appreciation of the concept of enterprise in the economic terms of market disruption.

Rasheed (2002) investigated two variations of entrepreneurship education, one that aimed at raising awareness for career purposes and provided skill training and the other that included class-room based ‘enterprise’ activities. The former might be loosely considered as education ‘for’ entrepreneurship (although it also seems to contain elements of the ‘about’ category), and the latter might be thought of as education ‘through’ entrepreneurship. The results were compared with a control group not receiving any form of entrepreneurship education. The findings showed that the class-room based enterprise activity learning had much the same effect as the awareness based entrepreneurship education except for two major differences. The group experiencing the education for entrepreneurship in career awareness displayed a gain in achievement motivation while the enterprise activities group or the education through entrepreneurship group showed an increase in levels of innovation. This study demonstrates the variation in outcomes that may result from current different entrepreneurship education practices and further suggests that directing entrepreneurship education into any one of these categories may be unhelpful when considering a holistic view of individuals within an economy. Surely, the awareness of career and heightened levels of innovation, are both integral to the professional practice of enterprise that translates to economic function while heightened achievement motivations would potentially benefit not only those in enterprise careers but in any sort of career choice.

Peterman and Kennedy (2003) drew attention to the wide variety of entrepreneurship programs on offer in the market place and suggested that while positive results may be found from a study of one program it could not be assumed that all programs would have similar results due to variations in content, pedagogy and learning styles. This observation
is consistent with Falk and Alberti (2000) who claimed that there was little uniformity in content and approach among courses, and entrepreneurship education research needed further development. This view has also been more recently echoed by Greene, Katz and Johannisson (2004) and Harrison and Leitch (2005).

Verheul et al (2001) distinguished general education from a specific entrepreneurship education that was claimed to focus on ‘the promotion of entrepreneurship and stimulating entrepreneurial skills and knowledge’ (p. 34). However, with respect to education and economic performances, the relationship is not necessarily specific to entrepreneurship education but rather it tends to refer, generally, to higher levels of education attainment. For instance the entrepreneurship research literature consistently finds that (generally) entrepreneurs in developed countries exhibit higher rates of success when they have higher levels of education (Foley & Griffith 1998; Lee 1997; Leffler & Svedberg 2005; Van der Sluis, Van Praag & Vijverberg 2003) and even more so when this education is combined with experience (Scott, Rosa & Klandt 1998). This is despite the fact that some high profile entrepreneurs manage to achieve success without a solid formal educational background—see for instance the biographies of Richard Branson (2002) from the UK or Frank Lowy in Australia (Margo 2001). Further, Minniti, Bygrave and Autio (2006) reported a relationship between higher levels of education attainment and start-up business activities generally among the nations contributing to the Global Entrepreneurship Monitor study. More specifically, Hindle and O’Connor (2005) found in Australia that those business owners with partial or complete higher education seem to more frequently turn start-up business activities into operating young businesses.

Taylor and Plummer (2003) address education and enterprise as a human capital issue in community growth and development. They have suggested that education in the entrepreneurship field ‘is about equipping people to work within a global sphere of economic activity’ and ‘providing individuals with an understanding of facets of the economy and society they live in, and the processes of change that run through them’ (p. 559). They also make a distinction between education and training claiming that the latter is ‘essentially short-termist, supporting current activities and profit streams, not strategic’ (ibid., p. 559).
In sum, the purpose behind entrepreneurship education varies across the spectrum of preparing an individual to start, own and manage a business, providing generic life and work skills and introducing students to the world of commerce and industry. Further, it would seem that higher levels of general education are more important than specifically entrepreneurship education with respect to having more people successfully start and grow a business. In any case, it would seem that entrepreneurship education is inconsistent in its content, pedagogy and general approach and notably it seems to avoid or neglect dealing directly with economic function. However, some are drawing attention to the significance of entrepreneurship for community growth and development, implying a broader relevance. These circumstances may well be associated with the findings of the previous chapters, in that the specific work that an entrepreneur and enterprise do within an economy, has remained relatively unclear which, in turn, makes the purpose of entrepreneurship education vague and lacking a specific career focus excepting that of the commonly perceived start-up business owner.

5.3 Entrepreneurship education and the business start-up career

The early conception of an entrepreneurship career pathway considered the transition of an individual toward business ownership and/or management. For instance, Cooper and Dunkelberg (1986) elaborated several entrepreneurship pathways toward business ownership. These included starting, purchasing or inheriting a firm and being promoted or brought in to manage a firm.

The entrepreneurship and enterprise literature on careers appears dominated by the concept of business start-up and management. However, Reynolds and White (1997) suggest that most would-be entrepreneurs under the business owner definition never succeed in creating a new venture. Therefore, it would seem that the group that entertains the prospect of starting a new business is actually much larger than those that progress to that particular undertaking. Those engaged in the antecedent step to active business ownership have been termed nascent entrepreneurs (Reynolds 1997; Ucbasaran, Westhead & Wright 2001) and this notion reinforces the connection of the entrepreneur to business ownership.
The decision to pursue a start-up business career seems to be subject to many types of influence, and the education and career literatures provide evidence of this (Carter, Gartner & Greene 2002; Carter et al. 2003). For instance, Scott and Twomey (1988) found that those who aspired to self-employment were significantly influenced by a range of factors, but most importantly, part of their findings suggested that having a business idea independently mediated between the predisposing and triggering factors affecting the career choice. Other studies have addressed such things as the perception of barriers (Kouriloff 2000) and, person-entrepreneurship fit (Markman & Baron 2002). In each case the authors investigated either a singular or a limited range of factors that contributed to the individual’s decision toward entrepreneurship, considered as business ownership and/or management.

Other studies have also shown interconnectedness and relationships between factors of socioeconomic status, familial, academic and self-referent influences on career trajectories (Bandura et al. 2001; Scott & Twomey 1988). Matlay (2005, p. 637) concluded from a review of entrepreneurship education in UK business schools that socio-economic and political conditions along with personal, family and peers were influences on entrepreneurial aspirations, motivations and potential. Birley and Westhead (cited in Shaver et al. 2001) also examined the reasons that entrepreneurs start businesses to list seven factors that ranged from psychological ‘needs’ through to tax reduction. A business can be started for many reasons but very few of these reasons are likely to lead to the formation of a business that will have serious market disruption capacities or economic development implications.

In the entrepreneurship and enterprise literature on careers, the overwhelming assumption is that it comprises of an individual who starts and manages a business and furthermore that this equates to entrepreneurship. Explicit examples of this conceptualisation can readily be found with Carter et al. (2003) who investigated the career reasons of nascent entrepreneurs; Katz (1994) who modelled entrepreneurial career progressions; Scherer, Brodzinski and Wiebe (1990) who considered gender and socialisation issues, and; Henderson and Robertson (1999) who examined attitudes of young people toward an entrepreneurial (starting a business) career. Interestingly, Politis
and Landström (2002) offer an example of an exception to the start-up business owner conception of an entrepreneurship career in their investigation of informal investors. This suggests that there is at least some acknowledgement of the enterprise career being a broader notion than ownership of a start-up business.

An example of the limitation of entrepreneurship education that maintains a business ownership, start-up and management perspective can be found with Fletcher and Rosa (1998). Fletcher and Rosa outlined a model for a UK graduate enterprise program that was designed to ‘stimulate entrepreneurship and to change attitudes’ (p. 62). The program was developed with the idea that recent graduates would have specialist technical skills and knowledge that could be channelled into innovation and result in fast growth businesses. The program seems to have focussed on aspects of economic disruption that are central to the concerns of this thesis and the primary aim of the program was to create career choice by promoting the prospect of self-employment. Interestingly, upon evaluation of this program that extended across a period of six years, the assumption that graduates would produce high growth and wealth creating businesses was proved unfounded. Fletcher and Rosa (1998, p. 75) reported that in the main most graduates tended to have relatively low value business ideas. This conclusion was re-confirmed in a later study by Rosa (2003) that contrasted a sample of graduates who participated in an enterprise support program with a bench mark sample of graduates who did not. The study concluded that those who participated in the support program, while performing marginally better, were largely engaged in small and unimaginative businesses.

In these cases, observed by Fletcher and Rosa (1998) and Rosa (2003), the preoccupation of the education support programs was starting a business. The education that was provided covered such topics as business planning and strategy, market research and marketing, financial management, operations, quality and personnel management. This list of topics is quite legitimate for the new business that is built upon a disruptive idea but as was noted by Fletcher and Rosa the disruptive or ‘high value’ idea was missing by the majority of the participants in the first instance. The recognition of enterprise as a specific economic function seems not to have been observed and therefore the education associated with the program instead focused on topics associated with the operation of a business.
Scott and Twomey (1988) claimed that the ‘creation and validation of a business idea should be incorporated as a central part of any program designed to assist aspiring entrepreneurs and promote interest in self-employment’, (p. 11). With respect to enterprise in careers, education may have a key role in assisting students to achieve their aspirations by providing the tools and methods of idea creation and validation. However, this Scott and Twomey quote also reveals a concern for the promotion of interest in self-employment as a career option which might reflect an ideological position more concerned with inspiring others to be self-employed rather than maintaining a focus on economic contribution.

A shortcoming in the business start-up approach to education and careers appears to be a lack of role definition for the participants in the economic function of disruption. It seems assumed that every participant would occupy the entrepreneur role and it aims to equip the participants with a set of skills relevant to the management of business. Perhaps if entrepreneurship programs held an aim to educate students for the creation, development and introduction of market disruptive ideas in collaboration with others rather than a focus on starting a business, then they would be more closely aligned to enterprise that fulfils an economic function. Identifying the participant’s role within that activity would perhaps also more clearly shape the learning pathway and context.

5.4 The emergence of enterprise education

Enterprise has increasingly become a part of education since the 1980s (Gibb 1996). It is notable, however, that the term enterprise has moved away from referring to business start-up specifically and is instead directed toward developing social and human attributes. This approach also diverts attention away from economic interests. The influence of this diversion is most clearly evidenced by Béchard and Grégoire (2005) who in a thorough review of the entrepreneurship education literature outline seven education theories, along with corresponding theoretical anchors, none of which deal specifically with economics except as may be captured under broad references to political science or social theories.

Cromie (2000) asserts that an enterprising individual and an entrepreneur have similar attributes, however an enterprising person may not necessarily be an entrepreneur and their skills and characteristics may be exercised in different contexts. Hytti and O’Gorman
(2004) found in a study of 50 European enterprise education programs that enterprise education was commonly interpreted to mean the developing of entrepreneurs; however the objectives of specific programs varied dramatically and that in practice it meant much more.

Entrepreneurship education has been reported as having a positive influence on entrepreneurial behaviour (Kolvereid & Moen 1997) and entrepreneurial tendency, (Henderson & Robertson 1999; Lüthje & Franke 2002; Sexton & Bowman 1983). However, in similar findings to the entrepreneurship career literature, a tendency or inclination toward entrepreneurship (or entrepreneurial propensity) does not appear to be isolated to a solitary cause. Instead, it has revealed coupled or multiple links between education and individual personality characteristics (Lüthje & Franke 2002) and also personal cognitive infrastructure (Krueger 2000; Mitchell et al. 2002). Further, entrepreneurial cognition seems to be supported by other factors such as social context and cultural values (Mitchell et al. 2002). Wang, Wong and Lu (1999) also found support for a complex three stage model that took into account key demographic, educational, motivational attitude, perceived interest and feasibility factors in their nation wide study of Singaporean technical and business students. This range of studies shows the increasing depth and number of factors encountered in the literature that influences engagement by individuals in entrepreneurship. This also suggests that as yet no one model of entrepreneur development through education has gained theoretical supremacy.

It was McClelland (1967) who claimed a link between the concepts of enterprise and entrepreneurship and the high achievement motivations of individuals. McClelland argued that high achievement motivations were a positive influence on the general economic condition of societies which was related to the extent of entrepreneurial activity. This line of thinking led to an important monograph by Gibb (1987) who argued that ‘when education is linked with desirable behavioural outcomes that some very close parallels can be drawn between it and entrepreneurship’ (p. 16). However interestingly, McClelland had also stated that achievement motivation was not strongly influenced by the content of education as such, but rather it was the ideological posturing of the educational environment that played a more important role (McClelland 1967, p. 417).
Frederick (2005) explored the concept of enterprise education and found that most often the expression of enterprise in this context reflected the spirit embodied in the science fiction series, Star Trek and the ‘Starship Enterprise’ as proposed by Bridge, (cited in Frederick 2005). He then points out that enterprise is not strictly, nor only, relating to business; it can also relate to political and social decisions. Frederick (2005) goes on to develop a number of different entrepreneurshipships, for example, in areas such as arts, sports and design and here he brings forth the interdisciplinary nature of entrepreneurship and enterprise. He progresses this argument through Kearney and Ball (cited in Frederick 2005) who define enterprise as:

... the capacity and willingness to initiate and manage creative action in response to opportunities or changes, wherever they appear, in an attempt to achieve outcomes of value. These outcomes can be personal, social, cultural and of course economic. Typically, enterprise involves facing degrees of difficulty or uncertainty (no page numbers provided).

Through this expression of enterprise the breadth of effects that enterprising actions is perceived to have is revealed, that is personal, social, cultural and economic. Enterprise education when conceived in this way moves well beyond the economic function of interest to this research and shifts the focus of the term toward a general human quality. The diversity of interest in entrepreneurship that this creates, Davidsson (2003) refers to as a ‘societal phenomenon’ and perhaps this explains its broad appeal to the education sector.

Hence, entrepreneurship education has gradually been shifting to include the shaping of entrepreneurial attitudes and behaviours. However, Cécore (2000) claims that this strategy is partly about a response to labour-market deficiencies and appears to offer little to entrepreneurship and the long term economic well-being of a region. A strategy to increase self-employment does contain some benefits for an individual in terms of self-empowerment, which in turn may lead to more strident entrepreneurial activity given the right institutional and environmental conditions (Belussi 1998). Although the potential downside is an abundance of self-employed workers operating in marginal areas of
economic activity, experiencing high business failure rates and job instability and ultimately contributing insignificantly to job growth (Bögenhold & Staber 1991).

Given the array of enterprise and entrepreneurship education activities available and a relatively weak base of theory that connects it to market disruption, there is no way of concluding the type, quality or quantity of enterprise education that might stimulate, support and sustain economic development.

By way of summary, Stevenson and Lundström (2002) outline the general thrust of the definitions of enterprise and entrepreneurship education:

It is evident that regardless of the label used, [the] definitions refer to the imparting of a set of personal attributes, attitudes and behaviours and a set of knowledge and skills (know-how), which in the broadest sense can be applied to any walk of life, and in the narrowest sense can be applied to the starting and managing of one’s own business (p. 273).

However, linking a broad and generalised enterprise education that imparts attitudinal and behavioural change with the act of starting a business appears to be an unreliable means by which to achieve greater levels of economic development. In essence motivations toward business start-up vary greatly and the influence of education on the decision to start a business is only one factor among an array of others. The offering of enterprise education may also tend toward ideological reasons that can obscure objective reasoning behind why a business should or should not be started. Enterprise education therefore may promote self-employment that is ultimately responsible for marginal businesses that add little to an economy. The expansion of enterprise education into numerous different areas next raises the question about the discipline base and whether it belongs to a particular school or field of study or whether it stands alone and apart from other fields.

5.5 Business and management discipline dominance

Discussion in this section deals with the tertiary education sector as the main sector of the education system that is most influential in supporting career pathways chosen by those leaving the secondary school system and entering the adult workforce.
Galloway and Brown (2002) found that the investment in development of entrepreneurship education within the higher education sector is most likely to deliver long-term returns. They argued that those who are engaged by this form of education start high-quality and high-growth ventures only after spending time gaining industry experience, maturity and developed networks. Similarly, Jones-Evans (1995) had proposed that occupational experience may also play a part in defining the role of those engaged in new venture start-up with his study of technology-based entrepreneurs. These views perhaps respond to the work of Fletcher and Rosa (1998) and Rosa (2003) cited earlier who found that very few graduates provided with entrepreneurship education and support produced ventures that were significantly different to those who did not receive any form of special entrepreneurship education. It is argued that perhaps this is due to the nature of the education being directed toward starting businesses rather than being directed toward enterprise as an economic function.

However, universities may be intent on becoming what Laukkanen (2000) referred to as ‘business generating model[s]’ (p. 25). Education that directly engages with business start-up attracts those with immediate business start-up aspirations. This tends to lock an institution into accepting and, in a way, harvesting a crop of business ideas rather than specifically focussing on education for the creation of broader institutional, social and economic conditions that supports and engages with enterprise that gives rise to disruptive new market entrants.

Keogh and Galloway (2004) take a different view with respect to enterprise education and claim that ‘one of the main purposes of tertiary education is to prepare students for the economy in which they will operate and to which they will contribute, tertiary education institutions therefore, have an obligation to provide appropriate education provision’ (p. 531). Absent is any reference to economic creation in this quote, but instead what appears to be an embedded assumption that the recipients of education will fall into the pre-existing economic order. Their argument continues and is directed toward ‘embedding entrepreneurship education into vocational disciplines’ (p. 532) for which Heriot-Watt University in Scotland is offered as a case study. Through discussion of this sort, enterprise and entrepreneurship education moves outside of the business school and into disciplinary
faculties and in the case of Keogh and Galloway they address the convergence of entrepreneurship on the science, engineering and technology disciplines.

However, it can be seen that enterprise again gives way to business when according to Keogh and Galloway (2004) ‘[e]nterprise education generally promotes awareness of entrepreneurship in the form of business start-up and self-employment, as well as the usefulness of enterprise skills for competitiveness in the small and large organisations contexts’ (p. 536). Interestingly, a shift in language can be observed when enterprise education becomes entrepreneurship education when they claim the following: ‘[e]ntrepreneurship education at Heriot-Watt includes theoretical aspects about what an entrepreneur actually is and explores how entrepreneurs do, what they do and why they do it’ (ibid., p. 537). In this extract it is found that the study of the individual entrepreneur takes precedence and the discussion moves to propose that the engineer needs to be aware of such perils as business failure and success. Through this encounter no reference to the complementary roles that engage in enterprise such as the innovator, producer or organiser is found, nor is there any reference to the roles engaged in enterprise infrastructure and support. Rather, there is a fixation on the single role of the entrepreneur and the activity of starting a business.

Following on from this Keogh and Galloway (2004) continue with the suggestion that engineers should gain ‘[k]nowledge and understanding of concepts such as enterprise, innovation, and business sustainability’ (p. 537). Indeed enterprise, innovation, and business sustainability would seem to be important concepts, except to say that in an economic view these are not a means to an end but rather they are ends to which the entrepreneur and business are a means. Put this way, it would invert the whole model that Keogh and Galloway propose and in affect an economic approach to enterprise would first deal with explicit understanding of the function of enterprise, innovation and business sustainability in a society before considering how best these could be implemented or executed. In order to provide a pathway for enterprise that attends to economic development in a career this inversion would seem a logical step and within this pathway, education for many more infrastructure support sectors should perhaps also be considered. In this model, business and the entrepreneur would be the means by which innovation and
business sustainability are distributed and diffused within a society and the focus would shift away from starting a business and being self-employed and instead to the tasks of developing, sustaining and growing an economy.

It would seem that enterprise education in Keogh and Galloway’s (2004) conception does not appear to be focussed on the enterprise pathway in a career but instead as a way of ‘combining specialisms, (sic.) [whereby] students are given a realistic overview and some hands-on experience of what will be expected of them when they become contributors to their industry and the economy generally’ (ibid., p. 540, emphasis added). This approach seems to return to the ‘enterprising’ or ‘entrepreneurial’ person model although the education offered contains skill development directed toward the activity of starting a business. Again the undistinguished economic activity of enterprise and business is encountered and business tends to be dominant as an activity. Enterprise is portrayed as behavioural education. By portraying students as contributors to an economy the creation of economy would appear not given sufficient emphasis and neither, it would seem, are the complementary roles necessary for economic creation developed beyond that of the entrepreneur.

Edwards and Muir (2005) perhaps best highlight the dominant paradigm of business in enterprise education in their paper that discusses the work conducted at the University of Glamorgan. Edwards and Muir (2005) argue that the ‘focus of enterprise education here is not actually about business but about developing the individual, who will create, own and lead new enterprises’ (p. 617). That which remains un-stated is how enterprise in this context differs to business and whether this enterprise performs a specific economic or social function. Furthermore, in their conclusion they emphasise that entrepreneurial learning is connected to the entrepreneurial career path or ‘wishing to become an entrepreneur’ (p. 624). Although they had earlier in the article claimed that an entrepreneurial career was just as likely to be ‘as an entrepreneur, or in employment, particularly business consulting, business support or economic development’ (p. 619), it seems that they were unable to escape the notion of entrepreneurship as anything beyond start-up business ownership. Articulation into each of the broader entrepreneurship career
options appeared to only be considered through the same education pathway that focused on the entrepreneur and creating, owning and leading a new business.

For another perspective, a summary of types of learners for entrepreneurship education was formulated by Hills and Morris (1998, p. 43). The list included: undergraduate students; MBA students; PhD students; non-business students; pre-start entrepreneurs; existing business owners, and; acquisition and turnaround specialists. Furthermore, they offered the types of benefits that might be sought by these learners as a subset of the heading ‘to start a business’ which included; intellectual enrichment; evaluate career alternative; entrepreneur support interest; corporate intrapreneurship; previous business education/experience; demographic, psychographic and industry and other characteristics. Enterprise learners portrayed in this way might be considered an eclectic mix with a variety of learning interests only loosely connected around the idea of starting a business.

As noted in the previous chapter, teams and social networks appear to play an important part in enterprise and it brings into question the role of education. For instance Foley and Griffith (1998) found that formal business education was only evidenced in a minority of cases in their sample of high growth business entrepreneurs. This they claim is not surprising as business graduates would not have the product and technology background to identify new manufacturing business opportunities—again this supports the findings of Fletcher and Rosa (1998) and Rosa (2003). Furthermore, Foley and Griffith draw attention to the fact that enterprise education modules are most frequently encountered in the business faculty. However, Hindle (2007) claimed that entrepreneurship teaching should find its home wherever the environment is right to teach it and suggested that more frequently it is being coupled with degrees in arts, engineering, design and social science. Overall, the concepts of teams and social networks, the dependence upon multiple disciplines to introduce disruptive ideas to the market and entrepreneurship finding relevance to multiple disciplines, all suggest that the education pathway for an enterprise career can be born in multiple and varied channels and connected to an array of professions.
5.6 Entrepreneurship education spreads to multiple disciplines

The need to shift pathway development for entrepreneurship to address multidisciplinary roles was noted by Sager, Fernandez and Thursby (2006). Mars (2007) takes this further via a specific case study and provides ‘a blueprint for higher education professionals seeking to expand entrepreneurship education beyond management fields’ (p. 60). Mars acknowledged a range of benefits arising from a broad institutional adoption of entrepreneurship education that ‘included the diversification of student learning and faculty scholarship; economic, social, and political gains by individuals and academic departments; and social advancements within disenfranchised communities’ (p. 60). It is notable that the benefits were diverse and that the economic benefit seemed only to be accrued to the levels of individuals and departments.

Johnson, Craig and Hildebrand (2006) responded to what they termed the next challenge for entrepreneurship education to move into the non-business school arenas and investigated whether entrepreneurship in higher education could be differentiated by discipline based needs. Johnson, Craig and Hildebrand noted through the adaptation of Holland’s model of occupational motivations (cited in Johnson, Craig and Hildebrand 2006, p. 44) that technically trained individuals were faced with a unique challenge in pursuing an entrepreneurial path as they needed to contend with a shift from the ‘world of ideas, things and symbols’ to the world of ‘people, management and organisations’; a claim that is perhaps predicated upon the notion that the technically trained (engineers and scientists) need to become the entrepreneur. However, if the enterprise view of roles is considered, the issue is not one of transforming the technically trained into entrepreneurs but rather developing the sense of relationship and association between those that occupy different world-views to transition ideas and new knowledge into market disruptive products and services. Johnson, Craig and Hildebrand only perceived entrepreneurship to be the act of starting a business.

Hills and Morris (1998) also draws attention to pressures mounting on the concept of a ‘business school’ and they emphasise a shift in entrepreneurship education away from a disciplinary focus to an integrated model of education interwoven into other course work (ibid. p. 39). However, it is unclear to what extent they imagined this shift. The examples
they used considered the fusion of entrepreneurship with marketing, a discussion taken further later by Fillis (2002), and they suggested that students should be encouraged to take specific courses in arts, humanities, and engineering to facilitate creative and interdisciplinary problem solving. It appears as if their prime consideration of their entrepreneurship education model was the development of the business student who would benefit from a broader education than just business. Less attention seems to have been paid to the pathway provided by enterprise education from other disciplines or from the multiple learner perspectives.

The challenge to the supremacy of the business school in management and entrepreneurship education suggested by Hills and Morris (1998) also affects the education pathway options available to groups of learners. It has been claimed in this thesis that interest in entrepreneurship is not simply demarcated by the starting of a business. In support of this idea, Block and Stumpf (1992) provided a summary of the ‘audiences’ for entrepreneurship education that provides insight into the range of disciplines that may be associated with enterprise. These included:

In addition to the self-employed, the small business starter, the starter of high-growth potential businesses, business acquirers who use acquisition as a base for high growth, and pure ‘deal makers,’ …[it] would include: those who manage entrepreneurs in organizations; top managers who must provide vision and leadership for corporations which must innovate in order to survive; potential resource people (accountants, lawyers, consultants) used by entrepreneurs; and possibly those who wish to be supportive of people who actually pursue opportunities (p. 19).

Along with this entrepreneurship offerings continue to grow in non-business schools in areas such as agriculture, engineering, the learned professions, arts and science, (Frederick 2005; Katz 2003; Mangan 2004). Klandt (2004) researched entrepreneurship professorships across ten European and neighboring countries and found that the ‘task of entrepreneurship professorships is not limited to educating business founders… Their objective is also to educate practical business formation experts (eg consultants) and the up-
and-coming generation of academic staff…” (p. 299). Therefore, it is apparent that enterprise is associated with many other professions and occupations.

Other authors have highlighted the diversifying demands on management education arising from government and industry. For instance van der Colff (2004) argued that business education is facing a new paradigm and Binks, Starkey and Mahon (2006) suggest that entrepreneurship is the innovative new paradigm for management education. Interestingly, Binks Starkey and Mahon also express the desire to ‘decouple’ the definitional debate about entrepreneurship from entrepreneurship education. They claim:

It is important to avoid the distractions of the definitional debate surrounding ‘entrepreneurship’ when attempting to capture the essential elements of ‘entrepreneurship education’. To identify the skills required for successful entrepreneurship it is necessary to consider the entrepreneurial process as a whole alongside the breadth of applications to which it is relevant (Binks, Starkey and Mahon 2006, p. 12).

This ‘process’ approach seems to disregard the fact that entrepreneurship attends to economic function and instead they suggest that the skills of entrepreneurship are captured within the ‘various thinking styles and behaviours’ (p. 12). Thought of in this way, entrepreneurship education can be said to have a broad audience and indeed Binks, Starkey and Mahon (2006) suggest that:

The demand for [entrepreneurship] capabilities from potential or existing entrepreneurs is, in practice, only a small subset of the total latent demand. The requirements of large organisations, private and public, for attributes in their management staff such as alertness, opportunity recognition, creative problem solving, initiative, handling uncertainty and many others, are considerable and growing (p. 6).

This suggests a form of education that may be best described as an approach for developing ‘entrepreneurial’ people and fits with the findings of Stevenson and Lundström (2002) with respect to the general behavioural and attitudinal objectives commonly found
in enterprise education. However, while this form of education is perhaps useful it does little with respect to career preparation for economic development but rather seems to be focused on those destined for corporate life in larger businesses. It would seem that the pathway to enterprise that is offered by this education then is largely not directed specifically to economic development but again directed back to managerial practices. This approach may possibly lead to economic outcomes, perhaps may give rise to the birth of new businesses but equally, and potentially, may deliver many other social and economic consequences unrelated to national economic perspectives.

Adcroft, Willis and Dhaliwal (2004) questioned the economic value added through management and entrepreneurship education claiming that ‘management education reflects an increasingly accepted assumption of the universality of management; under whatever conditions, global or national, public or private, the key determinant of organizational success is [assumed to be] management’ (p. 528). They continue by questioning whether entrepreneurship is now starting to substitute for management and therefore, they ask whether it will suffer the same fate. The point being made by Adcroft, Willis and Dhaliwal (2004) is that education in entrepreneurship, like management, should not be considered alone and without deference to the contributions of other segments of the community that create industry structures, market conditions, labour cost factors and general resource conditions. They are suggesting that a population that has an over-representation of those educated to be new business owners may confront environmental and market conditions that are unable to accommodate this new breed of educated labour force.

Support for the Adcroft, Willis and Dhaliwal (2004) argument can be found when one considers the works of such authors as Aldrich (1990), Dean, Brown and Bamford (1998), Dolinger and Golden (1992), Gnyawali and Fogel (1994), Shane (1996), and Van de Ven (1993). Each of these authors articulated components of an industrial infrastructure for entrepreneurship that demonstrates the range of environmental influences that potentially affect enterprise activities, especially when economic development is a focus. If economic development is the aim of entrepreneurship education and it is to shift away from the business schools and into diverse sites it also must also be able to re-frame the concept of
entrepreneurship to suit its particular environment. It must configure education around the various enterprise roles that coincide with the site within which it is being offered.

5.7 Implications for education policy

This chapter has explored the relationship between entrepreneurship education and the function of economic development to explicate the educational pathways generally provided for those attracted to this perceptually important social and economic activity. In conclusion, it is found that higher levels of general education attainment appear to be related to more progressive levels of business start-up and to businesses with high potential for economic impact. The idea of an enterprise career has primarily been served by two alternate and contrasting conceptions of education. The first notion is that of a business start-up career and the second is an attitudinal and behavioural education. At the heart of both is the grounded assumption that the outcome of enterprise is the formation of a business.

In this thesis an alternate concept for enterprise is offered that references economic and market level outcomes. These outcomes are two dimensional; development and growth. The interest of this research remains with the first of these. Enterprise careers when considered in this way takes on new meaning and raises the issue of an apparent lack of career education pathway for those who wish to play a role within the enterprise sector of the economy. This includes those who wish to create, develop and introduce market disruptive goods and services but who are not attracted or predisposed to the idea of starting and/or owning a business.

The economic conception of enterprise suggests a much closer alignment with the roles, outlined earlier, and proposed by Block and Stumpf (1992) that encompass a variety of disciplines and professions. For instance this would embrace the idea of the career refreshingly prospected by Politis and Landström (2002). The Politis and Landström notion of an informal investor having an entrepreneurial career also supports enterprise as a team activity and not the sole responsibility of an individual entrepreneur. Although the entrepreneur may play the leadership role, the social dynamics encasing the entrepreneur are also likely to be significant in bringing enterprise to life.
The implication for education policy of this exploration is that there is a need to provide direction to the education sector. Government policy can intervene and provide a platform upon which an educational career development pathway for enterprise can be offered. It would seem that left to its own devices, the education sector will give priority to filling their schools based upon demand dynamics. This circumstance occurs not purely out of self-preservation interests, but equally because the field of entrepreneurship has become diverted away from its economic origins. The potential for government policy therefore, is to restore the balance and influence the education sector toward providing career development pathways for those who are goal oriented toward introducing disruptive ideas into the market economy. This contrasts with the dominant and current entrepreneurship education practices that are either restrictively directed toward those with a business start-up ambition or too broadly directed toward attitudinal and behavioural education.

The review of the literature across economic function, enterprise roles and education pathways leads to the development of three propositions that will be useful in analysing policy communication.

The function of enterprise in the economic development sense is to create market disruption and the expression of this intent should be explicit in a policy framework. Therefore, the first proposition suggests that policy should distinguish education for economic development from other economic activities.

P1: Policy for entrepreneurship education will delineate economic development from other types of economic activity and encourage education pathways for individuals who seek to contribute to economic development.

The historical-conceptual literature review conducted in the previous chapter revealed evidence of multiple interdependent roles in enterprise and importantly it emerged the issue of the roles of those who provide infrastructure support. Through the review it became apparent that a number of disciplines appeared to contribute to enterprise for economic development. These disciplines held distinct knowledge although they were not necessarily held discreetly by individuals. Rather, individuals were likely to acquire or exhibit knowledge of multiple disciplines. The second proposition therefore suggests
entrepreneurship education policy will seek to promote and foster multidisciplinary knowledge for those who engage in and support enterprise roles.

*P2: Policy with an economic enterprise focus will encourage education institutions to provide individuals opportunity through education to develop multidisciplinary knowledge related to enterprise roles.*

The final literature exploration was concerned with the question of education pathways for enterprise and specifically innovation and market disruption. This revealed the dominance of the management field and business school as the prime movers behind enterprise education. However, the proliferation of attitudinal and behavioural education was also observed that tended to disengage with economic purpose. In any case education did not seem to discriminate between those that wanted to be a business owner and those that may have other ambitions and motivations to act in other roles in enterprise. Therefore the third proposition suggests that policy will encourage education pathways for multiple roles within enterprise rather than isolate just business creation and ownership.

*P3: Policy for entrepreneurship education for economic development will seek to support individuals with multiple disciplinary backgrounds and provide learning directed toward developing multiple enterprise roles rather than emphasising developing individuals for business ownership or self-employment.*

The three propositions raised here become the central element of the exploration of the Australian government’s education policy, the findings of which are revealed in the following chapter.
6 Findings 1: the contemporary texts

6.1 Introduction and chapter overview

The exploration thus far suggests a deficiency, generally, in the education system which ignores the full complement of enterprise roles in favour of a business management focus. This occurs for a number of reasons:

- the economic function of enterprise has not generally been distinguished from the economic function of business
- the disciplinary attributes of the roles of those involved in enterprise are difficult to differentiate from the attributes of the roles of those who engage in business
- the confluence of the terms enterprise and business, and similarly entrepreneur and business owner.

In this research these issues have been addressed through a series of literature reviews to explicate the distinctions necessary to maintain a focus on the economic function of economic development for entrepreneurship education. The economic functions associated with entrepreneurship were distinguished in Chapter 3 and the various roles of those who contribute to the function of economic development along with the attributes of these roles were identified in Chapter 4. Chapter 5 presented a literature exploration of education and career pathways to reveal that the adopted approaches were too narrowly focused on the start-up business owner, or too broadly focussed on generic attitudes and behavioural constructs that tended to enhance self-employment desires. In either case the educational pathways for developing skills and knowledge that would contribute to economic development were obscure.

As a consequence of the theoretical exploration, the question is raised of whether the Australian national government would illustrate these distinctions in its quest to gain economic outcomes through the provision of entrepreneurship orientated education. If it were, it would be expected that first, policy would explicitly differentiate between economic functions and focus education on innovation and market disruption. Second, it
would seek to influence the development of a broad range of interdependent and multidisciplinary enterprise roles. Third, it would also be apparent that career pathways would contextually distinguish between business and the productivity functions associated with existing goods and services, and enterprise and innovation functions that engage individuals in creating, developing and introducing new knowledge and ideas that disrupt the stability of existing goods and services. If education policy were not making these distinctions, it would be unlikely that the accumulated benefit would influence economic development in any meaningful way.

As a consequence of the theoretical development, education policy needs to be examined to see what its focus is, in terms of the distinctions being made here. If its focus is not on the career pathways and the multiple roles that contribute to innovation and market disruption, it is not likely to influence economic development in any meaningful way.

The aim of this chapter is to outline the findings from the analysis of the texts (from the DEST website) that represent the Australian national government’s education policy. This chapter deals specifically with the findings of the first stage of analysis that considers entrepreneurship education within an applied context of policy communication through the DEST website. The website represents a set of contemporary documents, co-existing and relevant within roughly the same time and space; a circumstance that Fairclough (1992, p. 103) explained gives documents a vertical intertextuality.

Drawing upon the content analysis technique of conceptual analysis, key terms were located and the presence, significance and relationship between the terms, or, where applicable, the central theme of the document within which the key terms were located, were reported. This chapter details the findings of the analysis by summarising the frequency and conceptual relationships of the concepts symbolised by the key terms.
The findings from the conceptual analysis show that the frequency of appearance of
the term entrepreneurship is far less than enterprise, suggesting a relatively minor
representation in the policy communication. However, when entrepreneurship is
considered, it is far more often associated with the fields of science and technology and to
some extent engineering than to any other concept. Enterprise was represented in the
communication approximately ten fold that of entrepreneurship but most often related to
the attitudes, behaviours, skills and knowledge of individuals. Notably, there was no
reference made to exactly what the skills and knowledge of enterprise were.

The propositions detailed in Chapter 5 were used to check the correspondence
between the theoretical concepts proposed by this research and the key terms. The
propositions guide the conclusion of the analysis by suggesting the theoretical association
between enterprise, roles and career pathways that policy communication might reasonably
be expected to represent if education was intended to address economic development
outcomes. However, the propositions for the most part failed to hold which prompted the
next stage of analysis. Chapter 7 will seek to understand what the embedded concepts
associated with enterprise and entrepreneurship were, and in what other ways this form of
education was being used if it were not specifically for economic development.

6.2 Analysing the DEST website

The aim of the DEST website analysis was to more fully understand how the
education policy communication of the Australian federal government aligned with the
conceptions of entrepreneurship, enterprise and economic development as developed
throughout this research. The materiality of the website offers a fixed point of referential
data. The first step in this analysis was to establish the significance of key terms contained
within the policy communication. In content analysis the frequency of key terms is
considered an indicator of significance, although frequency does not mean much by itself
(Krippendorf 1980, p. 109). To extend the analysis a questioning stance is adopted that
asks: what is the conceptual relationship of the key terms in the context of the
communication and in relation to each other? In this way, the presence and frequency of the
key terms is established along with the contextual relationship.
The DEST website is serviced by a search engine with ‘basic’, ‘publication’, ‘advanced’ and ‘archive’ search capacities. For the interrogation of the site the advanced search tool was employed to identify web pages attached to the site that represented the specific words relevant to the exploration. Figure 6-1 depicts the search tool’s user interface showing levels of search criteria available. The search facility searches for the exact expression of the words as entered in the ‘Search Details’ section of the page. The ‘AND’ function was used to find pages with a combination of words or phrases where all of the words occurred on the same page. All of the searches were conducted on 11 and 12 September 2006, comprising the search settings for words appearing ‘Anywhere in the page’, in ‘All sectors’ of the site, for ‘Any file type’ and in ‘All date ranges’.

![Advanced Search Tool](http://www.dest.gov.au/Search.htm?query=)
The order of the key word searches conducted are listed below and numbered 1 to 10 which act as a search reference in the ensuing discussion:

1. *enterprise*
2. *entrepreneurship*
3. *enterprise AND entrepreneurship*
4. *economic development*
5. *enterprise AND economic development*
6. *pathway*
7. *enterprise AND pathway*
8. *roles*
9. *enterprise AND roles*
10. *enterprise AND pathway AND roles.*

Searches 1 to 3 were conducted as background and, given the potential for confusion between enterprise and entrepreneurship, as a verification of the significant terminology used in Australia’s education policy. With the emphasis falling toward enterprise the remaining searches sought to identify association with enterprise as a key word. Searches 4 and 5 were directed toward resolving proposition P1 regarding the connection of enterprise to economic development. Searches 6 and 7 aimed to explore proposition P2 where it was expected that pages and documents dealing with pathways for enterprise would reveal multidisciplinary course designs. Searches 8 and 9 were designed to explore the ‘roles’ within enterprise and confirm whether multiple roles were advocated to contribute to the complement of skills in enterprise. Search 10 was conducted as a ‘capstone’ check to observe the overlap and interplay between *enterprise, pathway and roles.*

### 6.2.1 Search findings

Figure 6-2 below shows the reference search and the number of pages returned from each search indicated in the square brackets. Appendix A contains a printout of the page search returned results although the full printout is only provided for the searches that could
be usefully analysed (Searches 2, 3, 5, 7, 9 and 10). The searches returning large numbers of pages (for instance the search for ‘roles’ resulted in 161 pages) were refined to avoid the high number of spurious key term occurrences. This was achieved by searching for coinciding terms on the pages (for example the refined search enterprise AND roles returned 35 pages) to target the analysis to the specific relationships that are of interest to the research. The tabulated ‘key term’ conceptual analysis for the conducted searches that could usefully and practically be included (Searches 2, 3, 5, 7, 9 and 10) are given in Appendix B. These each indicate a page identification number, referred title, brief description and the conceptual linkage notes. The page identification code is constructed by search number (referenced above) and the page number relating to the returned order from the site search which can be found in Appendix A.

Figure 6-2 Summary of DEST website search page findings (Source: Author)

The conceptual analysis involved either reporting how the concept represented by the search term was related to the page in the case of the single search term or how the concepts were related to each other in searches of two or more terms. In this way the analysis reveals how concepts were given relevance to the context in which they were used and whether they had relevance to each other.
6.2.1.1 The context of enterprise and entrepreneurship (Searches 1 to 3)

Search 1 returned in excess of 200 pages from the DEST website that contained the word *enterprise*, whereas Search 2 returned only 21 pages that contained the word *entrepreneurship*. The combined search for pages with both the terms *enterprise* and *entrepreneurship* returned only 5 pages. Therefore, *enterprise* would seem to be a far more significant term within the education policy communication, appearing around ten times more often than the term *entrepreneurship*.

A review of the ‘site map’ revealed a section dedicated to ‘Enterprise education’ which was located in the site route given in Box 1. Notably ‘Enterprise education’ was located under the ‘Career development’ path and seemed to suggest that ‘Enterprise education’ was associated with the ‘Key career priorities’ of government policy as a specific funded program. Further, investigation revealed that the federal government provided $10 million over four years scheduled to end in 2007–08 for a program initiative called ‘Enterprise Learning for the 21st Century’. The high number of pages containing the word enterprise then may largely be explained by references to this program. Other causes of high occurrence may be associated with the use of the term *enterprise* in different and, irrelevant contexts for the purposes of this research.


Given the large number of pages containing the term *enterprise*, only the returned pages that contained other relevant terms were explored in each of the subsequent searches. However, to ensure that associations to the term *entrepreneurship* were not overlooked, all the pages containing this term were further explored for context and association to the propositions. Table 6-1 provides a summary of the findings.

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7 The sites search tool limited the number of found pages to a maximum of 200 returned results. Importantly, no refined search exceeded this limit.
Table 6-1 Search 2 ‘entrepreneurship’ term significance findings (Source: Author)

<table>
<thead>
<tr>
<th>Search Term = ‘entrepreneurship’</th>
<th>Total pages found/analysed = 21</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Significance</strong></td>
<td><strong>Conceptual Relationship (to page)</strong></td>
</tr>
<tr>
<td>No. of found pages</td>
<td>Approx. % of total pages*</td>
</tr>
<tr>
<td>18</td>
<td>86%</td>
</tr>
<tr>
<td>3</td>
<td>14%</td>
</tr>
<tr>
<td>12</td>
<td>57%</td>
</tr>
<tr>
<td>15</td>
<td>71%</td>
</tr>
<tr>
<td>3</td>
<td>14%</td>
</tr>
</tbody>
</table>

* Total percentages exceed 100% due to overlapping contexts of search term on some pages

Table 6-1 raises the following points:

♦ 86% of the total returned pages related entrepreneurship to science and technology and to a lesser extent engineering or research. This suggested that entrepreneurship was strongly directed toward the creator / innovator role.

♦ Of the three non-science related sites the contextual relationship was somewhat mixed. For page 2-21, entrepreneurship was associated with culture change, page 2-5 related entrepreneurship to a social re-integration program for at-risk youth, and page 2-7, suggested entrepreneurship as a future subject needed to reflect the changing nature of work.

♦ The programs ran by Questacon (Questacon is the brand used by the National Science and Technology Centre located in Canberra, Australia), appeared to be a major government activity to increase entrepreneurship among the science and technology sector. References or links to the Questacon Smart Moves program appeared in 57% of the returned pages and were solely responsible for the appearance of entrepreneurship in over 90% of these pages.

♦ The Questacon Smart Moves program is a federally funded program aimed to promote entrepreneurship among budding science and technology students, particularly those in secondary school.
There seemed to be a heavy emphasis on promotion of entrepreneurship with words like ‘promoting’, ‘promotion’, ‘fostering’, ‘stimulate’ and ‘encourage’ featuring either directly or indirectly (as may be the case through a page providing a link to Questacon) in approximately 71% of the total returned pages.

On the other hand ‘awareness raising’ only occurred in three pages (14%) and each reference was associated with innovation rather than specifically entrepreneurship.

Table 6-2 exhibits the results from Search 3 locating five pages where enterprise and entrepreneurship intersected. Interestingly, of the five pages found, only two pages associated enterprise explicitly with entrepreneurship. In both these cases the association arose through either the naming of the program in the instance of page 3-1 or the naming of the foundation running the program as found in page 3-5. In the remaining three pages enterprise and entrepreneurship were mentioned independently on the page and no explicit association between the terms was made.

Worthy of note, the context of enterprise found in pages 3-2 and 3-4 tended to make distinctions between enterprise and business. In the case of page 3-2 ‘research management’ is argued to be an enterprise activity and in page 3-4 the activities of innovation within businesses are similarly considered to be enterprise. In both of these cases enterprise is indicated to be an activity outside of the active trade taking place in a market and is resonant with the arguments developed in Chapter 3 of this thesis.

In summary, through Searches 1 to 3, it is found that enterprise appears to be the dominant term used in the Australian education policy communication. Furthermore, the findings suggest that entrepreneurship is a far less frequently used term and is most
strongly promoted to the science and technology community and particularly ‘budding’ scientists. This suggests that government policy is directing entrepreneurship more toward the creator/innovator activity and there appears to be an emphasis on developing entrepreneurship as a secondary discipline in the science and technology sector.

6.2.1.2 Enterprise and economic development (Searches 4 and 5)

The objective with these two searches was to identify pages that contained the coinciding terms enterprise and economic development. As noted previously, the search for the former of these terms resulted in excess of 200 pages. However, the search for the latter (Search 4) yielded a much reduced number of 33 pages and a search for the coinciding terms (Search 5) located only 9 pages. This search combination was conducted in order to assist in determining whether economic development was explicitly delineated as an objective of enterprise education. The search was designed to explicate the relationship between enterprise and economic development in the context of education policy. The proposition was that a clear link between enterprise activities and the stated purpose of economic development would be found within the communication. Table 6-3 summarises the findings.

Table 6-3 Search 5 ‘enterprise’ AND ‘economic development’ term significance findings (Source: Author)

<table>
<thead>
<tr>
<th>No. of found pages</th>
<th>Approx. % of total pages</th>
<th>Conceptual Relationships (to context or between terms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>22%</td>
<td>Economic development was linked to either completion and/or advancement through secondary school education.</td>
</tr>
<tr>
<td>1</td>
<td>11%</td>
<td>Economic development was linked to science and technology.</td>
</tr>
<tr>
<td>3</td>
<td>33%</td>
<td>‘Economic development’ and ‘enterprise’ were linked through associated reference to program, office or department names.</td>
</tr>
<tr>
<td>2</td>
<td>22%</td>
<td>The ‘enterprise’ and ‘economic development’ link was inferred through reference to university engagement activities with community, business and industry.</td>
</tr>
<tr>
<td>1</td>
<td>11%</td>
<td>The linkage between economic development and enterprise was made in the area of indigenous education.</td>
</tr>
</tbody>
</table>

The analysis revealed that economic development was linked to either completion and/or advancement through secondary school education in two pages (5-4 and 5-9) or to science and technology in one page (5-5) without making explicit association with the
concept of enterprise. However, the linkage between economic development and enterprise was found through associated reference to program, office or department names on three pages (5-1, 5-6 and 5-7) which suggested intent for a linkage was at least present.

Furthermore, the linkage between enterprise and economic development was inferred through reference to university engagement activities with community, business and industry in two pages (5-2 and 5-8). The document *Engaging universities and regions: knowledge contributions to regional economic development in Australia* (Garlick 2000), dealing most explicitly with economic development, was identified as a potential key informant document (labelled KD-1) and earmarked for further exploration. A more explicit linkage was also found in the area of indigenous education through improving the employability of indigenous youth in page 5-6.

None of the pages explored revealed an explicit link between economic development as it has been developed in this thesis, and the notion of enterprise; although the most explicit link to economic function—albeit still somewhat imprecise—was made in page 5-5 with enterprise being linked to new enterprise formations and growth. However, in several instances enterprise was not distinguished from business. Interestingly, page 5-5 revealed the most inconsistent use of the term *enterprise*. In this page the predecessor to the current DEST—the Department of Education, Training and Youth Affairs—produced a document titled *Learning for the knowledge society – An education and training action plan for the information economy* (Department of Education, Training and Youth Affairs 2000a). In this document economic development was only linked to science and technology, and enterprise was found to be used in multiple contexts; for instance sometimes referring to business, sometimes to an array of different types of organisations, sometimes to culture or attributes, and sometimes to the education system itself as an enterprise that contained many enterprises.

It has already been noted that enterprise learning was a feature in both the science and technology sector and generally in the secondary school system. In this stage of the DEST website exploration it was found that both science and technology and secondary school education were linked to factors of economic development. Therefore, this suggested a tacit
link was being made between enterprise and economic development although the enterprise skills remained as yet undefined.

Pages 5-2 and 5-8 both highlighted the role of the university and community engagement in economic development. From this perspective, an accord might be considered with a view of enterprise as exogenous to the trading cycle of businesses. Here reference is found to research and development (R&D) which carried with it the inference of innovation. In this context, the university acts in complement to the routine market trading of business and provides a source of newness and novelty. The engagement of a university with community, business and industry therefore would constitute an act of enterprise; although the emphasis was on the university doing the engagement, suggesting that enterprise may be initiated outside of or away from business activity.

It would seem that no explicit demarcation of the activity of enterprise occurs within DEST web pages. However, a key informant document is noted that will be subjected to further analysis. Also noted were isolated instances of tacit distinction between business and enterprise, and tacit linkage between economic development and enterprise learning. Next the concept of pathways for enterprise is considered in the context of education policy portrayed through the DEST website.

### 6.2.1.3 Enterprise and pathway (Searches 6 and 7)

Search 6 for the term *pathway* revealed in excess of 200 pages. The DEST glossary page defines the terms commonly used in relation to Australian vocational education and training (VET) research and policy and states that *pathway* is ‘a path or sequence of learning or experience that can be followed to attain competency’ (Department of Education, Science and Training 2005d). Applying this definition to this research task, it suggests that by locating *pathway* in reference to *enterprise* that it will identify the sequence of learning and experience which is explicit for formal education participants to attain competence in enterprise.

From the DEST website site map, two pages are found that explicitly deal with pathway(s) in education. The first (refer Box 2) is on the ‘Career development’ route of the site, occurring under ‘Key career priorities’ and deals with the issues of youth career
development. The second (refer Box 3) is connected to the ‘Higher education’ route under the ‘Policies and issues’ section and raises the issues of adult re-training and access into higher education. Both these destinations in the website deal generally with pathway issues but neither deal specifically with enterprise nor any other particular career. To pursue the pathway key word search therefore, a more refined search utilising enterprise as a companion term was required.


You are here: Home > Career development > Programmes & funding > Programme categories > Key career priorities > Youth Pathways

Box 3 Route to ‘A New Pathway for Adult Learners’ on the DEST website (Source: Department of Education, Science and Training, available at: http://www.dest.gov.au/sectors/higher_education/policy_issues_reviews/reviews/a_new_pathway_for_a_dult_learners/)

You are here: Home > Higher education > Policy, issues & reviews > Reviews > A New Pathway for Adult Learners > A New Pathway for Adult Learners: Evaluation of a School-University Access Pilot

Search 7 using both the terms pathway AND enterprise returned 34 pages. Before proceeding to investigate each page, Search 10 (discussed later) was conducted to avoid duplication with the analysis and to isolate the pages that would contain the coinciding terms pathway, enterprise and roles. This search returned 13 pages and these were excluded from both Search 7’s and later Search 9’s analysis in preference for a specific investigation of the pages with only the two coinciding terms. Therefore, 21 pages remained for the analysis of Search 7 which revealed the following main points summarised in Table 6-4.

From this analysis, it would appear that the terms enterprise and pathway were not largely considered jointly, suggesting that an educational or career pathway to enterprise is not a specific item for the incumbent government’s agenda. The exception to this occurred...
in page 7-1 which described a specific cluster of secondary schools providing ‘special education’ that were awarded a quality schooling prize. This suggests that the program was specific to the schools and perhaps was not generated by external influence such as government policy but rather as a response to the needs of a particular set of students.

Table 6-4 Search 7 ‘enterprise’ AND ‘pathway’ terms significance findings (Source: Author)

<table>
<thead>
<tr>
<th>Search Terms = ‘enterprise’ AND ‘pathway’</th>
<th>Total pages found/analysed = 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significance</td>
<td>No. of found pages</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Conceptual relationship (to context or between terms)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>6%</td>
</tr>
<tr>
<td>7</td>
<td>33%</td>
</tr>
<tr>
<td>1</td>
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<tr>
<td>8</td>
<td>38%</td>
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<tr>
<td>5</td>
<td>24%</td>
</tr>
<tr>
<td>4</td>
<td>19%</td>
</tr>
<tr>
<td>1</td>
<td>6%</td>
</tr>
<tr>
<td>7</td>
<td>33%</td>
</tr>
<tr>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>4</td>
<td>19%</td>
</tr>
<tr>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>1</td>
<td>6%</td>
</tr>
</tbody>
</table>

* Total percentages exceed 100% due to overlapping contexts/meanings or different situational references of search term on some pages.

The meaning of pathway remained fairly consistent with the definition provided in the glossary discussed earlier, although pathway could be observed as a link to a general route through education, training and experience or a specific route to a particular industry destination. Enterprise on the other hand was found to have several different linkages. First, it was used as a term that described different units of analysis; for instance, attributes of individuals, firms or forms of organisation and industry. Second, on only one occasion did it appear to connect to the starting of a business. Third, the most dominate use of the term was related to the attributes of individuals although there was apparent confusion between what was a skill and what was an attitude. Fourth, there was substantial evidence that enterprise was regularly applied to a non-commercial and, for that matter, a non-business form of organisation. To compound the diversity of use of the term, there was no glossary entry for enterprise.
In summary, the exploration suggested that the federal government has not engaged with prescribing specific enterprise career pathways and channels. However, enterprise was often considered as a personal attribute or trait although the evidence of confusion between skills and attitudes suggested that the elements of enterprise, as a personal attribute, were not clearly determined. It would seem that before it could be considered as a career that warrants a pathway in its own right, enterprise first needs to be clearly distinguished and considered as a differentiated form of work that, with respect to entrepreneurship, has an economic consequence.

6.2.1.4 Roles and enterprise (Searches 8 and 9)

Search 8 explored the term roles which returned 161 pages. However, the term roles could be used in many different contexts to describe the roles of individuals, organisations, governments or communities in a range of activities which may have little or no relevance to enterprise and economic development issues. Therefore, the search was refined to explore only pages with the coinciding terms of roles and enterprise which revealed 35 pages in Search 9. As noted earlier, pages that were found to contain the three terms roles, enterprise and pathway were excluded and analysed separately in Search 10. Table 6-5 summarises the findings of Search 9 and the main points found were:

♦ Roles and enterprise did not explicitly coincide in the same context within the returned pages.

♦ Roles were tacitly linked to enterprise in four of the 22 pages through discussion of roles within society and community or a cultural enterprise.

♦ In the roles and enterprise search combination the roles of teachers, academics and parents found frequent reference with respect to education of students and children on eight of the 22 pages. This perhaps highlights the importance of support roles in achieving specific outcomes.

♦ Roles were also found to be considered at an aggregated organisation unit (for instance private or public sector, committees, schools, etc.) in nine of the 22 pages supporting the case that multiple organisational forms contribute to the growth and development of societies.
Enterprising education and enterprising skills were found in four of the 22 pages although again evidence of skills being portrayed as attitudes was found. One page linked to a document titled *Models of delivery of vocational education and training in schools in rural and remote areas: Northern Territory, Queensland and Western Australia* (Department of Education, Training and Youth Affairs 2000b) that will be further explored under the key informant documents section as it seemed to deal extensively with enterprising education. This document was labelled KD-3.

Enterprising occurred as a description of other forms of organisation (other than a commercial business) in 10 of the 22 pages. This included universities, community enterprise, learning enterprise, collaborative teaching as an enterprise, innovation, research management, cultural enterprise and technology. This provides further support for the broader use of enterprise other than just a commercial business.

On the other hand, enterprise was found to be synonymous with business in five of the 22 pages.

Table 6-5 Search 9 ‘enterprise’ AND ‘roles’ term significance findings (Source: Author)

<table>
<thead>
<tr>
<th>Search Terms = ‘enterprise’ AND ‘roles’</th>
<th>Total pages found/analysed = 22</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of found pages</td>
<td>Approx. % of total pages*</td>
</tr>
<tr>
<td>4</td>
<td>18%</td>
</tr>
<tr>
<td>8</td>
<td>36%</td>
</tr>
<tr>
<td>9</td>
<td>41%</td>
</tr>
<tr>
<td>4</td>
<td>18%</td>
</tr>
<tr>
<td>10</td>
<td>45%</td>
</tr>
<tr>
<td>5</td>
<td>23%</td>
</tr>
</tbody>
</table>

* Total percentages exceed 100% due to overlapping contexts/meanings or different situational references of search term on some pages.

This analysis suggests that roles for enterprise are not dealt with under the federal government’s policy umbrella, at least at this level of analysis. This is despite the fact that enterprise education forms a major policy initiative. However, the discussion of roles within society and community and the expression of ‘cultural’ enterprise found in some pages, suggested that enterprise in the Schumpeterian form may have been a specific focus. Although this researcher concluded it unlikely to be the case, as the expression of roles...
within these contexts remained undefined beyond the level of roles in family and community. The specifics about what roles people could play to contribute to the economic development of a community did not come into question.

Interestingly, enterprise is portrayed in various forms throughout the website pages, ranging from the attitudinal, a project undertaking, through to a commercial business. Enterprise education, however, seems to adopt the attitudinal form as its major thrust with starting a business and self-employment being given relatively minor emphasis. Seemingly missing, is education for the project form of enterprise that deals with the pre-formation of businesses; the discovery, evaluation and development of new market introductions; projects that are bold and daring requiring multiple inputs, market shifts and industry revolution. In these contexts, attitudes would seem not enough and awareness of complementary roles and particular skills and knowledge are also required. However, perhaps this may be found in a more detailed analysis of the key informant documents tagged for further exploration.

6.2.1.5 Enterprise AND pathway AND roles (Search 10)

Search 10 explored the pages that contained all three of the search terms enterprise, pathway and roles. To this point no clear and explicit connections between any two terms had been found and this final search was conducted in the hope of a more promising outcome. A summary of the findings from Search 10 are provided in Table 6-6 and the key points are as follows:

♦ The terms pathway, roles and enterprise did not explicitly coincide and connect within a common context within the returned pages.

♦ The discussion of roles was linked to the relationships between ‘students and teacher’ and ‘student to student’. Page 10-12 made explicit reference to roles of student members in a science project team that were listed as ‘the Designer, the Communications Officer, the Accountant and the Coordinator’ (Goodrum, Hackling & Rennie 2005). The roles outlined for the student team emulated those of enterprise as distinguished by this research in an earlier chapter (Chapter 4).
The term *pathway* generally described the route through education and work. Notably page 10-7 linked this pathway through ‘enterprise education experiences’ which conveyed a meaning of education through work experience in business environments, although the meaning was imprecise and unclear.

The term *enterprise* was most often used to describe human skills and attributes. The web page *Enterprise and Career Education Programme 2000-01 to 2003-04: Programme Guidelines* (Department of Education Science and Training 2005b) was found to have an extensive discussion on enterprise within the context of this research interest and is tagged KD-4 as a key informant document for further review.

Page 10-10 used the term *enterprise* to describe an organisational unit (the school).

Page 10-12 offered an interesting perspective on enterprise in a case study of science teaching where enterprise was considered a curriculum framework within which other skills, such as numeracy and literacy, were embedded. This operated alongside three other curriculum frameworks being ‘culture’, ‘environment’ and ‘community’.

*Table 6-6 Search 10 ‘enterprise’ AND ‘pathway’ AND ‘roles’ term significance findings (Source: Author)*

<table>
<thead>
<tr>
<th>Significance</th>
<th>No. of found pages</th>
<th>Approx. % of total pages*</th>
<th>Conceptual Relationship (to context or between terms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>23%</td>
<td>Roles linked to aggregated organisational units.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>23%</td>
<td>Roles linked to the relationships between ‘students and teacher’ and ‘student to student’.</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8%</td>
<td>Explicit link to roles of student members in a science project team that emulated those of enterprise.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>15%</td>
<td>Roles linked to the context of workers and leadership in schools.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>31%</td>
<td>Pathway linked to the route through education and work.</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8%</td>
<td>Pathway linked to the context of schools working toward best practice.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>38%</td>
<td>Enterprise linked to a skill or human attribute.</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8%</td>
<td>Enterprise linked to an organisational unit (the school).</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8%</td>
<td>Enterprise linked to a curriculum framework.</td>
<td></td>
</tr>
</tbody>
</table>

* Total percentages exceed 100% due to overlapping contexts/meanings or different situational references of search terms on some pages.
These findings seem to reveal a lack of attention given to enterprise as a career activity and, seemingly, little weight is given to the roles within enterprise or the development of an education and experience pathway for enterprise activities. Enterprise instead was often either emphasised as a human attribute or as a substitute term for an organisational form and most particularly a business.

Two interesting findings do arise from this analysis. First is the reference to multiple roles undertaken in a science project that resembled enterprise activities, as this research has developed the concept, and the second was the use of enterprise as a contextual setting for a curriculum framework. Notably, both of these useful findings emanated from school case studies suggesting that at that grass roots level, where teachers interface with students to deliver a curriculum, there may be an underlying appreciation of enterprise as an activity that is modelled on economic development, even if not explicitly stated.

### 6.3 Reviewing the theoretical propositions

In Chapter 5 three propositions were put forward portraying the entrepreneurship education theory in the economic development context which now, given the analysis, can be assessed against the findings from the analysis of policy communication to determine how the policy context converges or diverges with the theory.

The first proposition addressed the need for policy to distinguish between types of economic activity and to encourage the provision of education pathways relevant to specific economic areas. The proposition was stated as:

\[ \text{P1: Policy for entrepreneurship education will delineate economic development from other types of economic activity and encourage education pathways for individuals who seek to contribute to economic development.} \]

It is apparent that no explicit distinction is made between the types of economic activity within the context of the federal government’s education policy communication, although implicit references were encountered that supported the notion that distinctions existed. These were found where enterprise was described as some form of activity other than the conduct of business; more specifically the pre-formation of business (including research and development) and involvement with business innovation. At the same time,
the communication seemed to encourage engagement by the tertiary and university sector with community and industry. This encouragement, while apparently aimed at stimulating economic development, also contextualised enterprise in terms of economic growth predicated upon the formation of new businesses. The assumption seemed to be that the tertiary and higher education science and technology sectors could contribute the most to enterprise through the commercialisation of science and technology.

This position and emphasis on science and technology perhaps assumes that ‘new to the world’ technological innovation is the exclusive domain of economic development. However, this fails to recognise enterprise from the context of business services, regional newness and non-technology based innovation. Further, focussing entrepreneurship on the science and technology education sector ignores the other professions, trades, institutions and other human contributions that are inherently part of enterprise. Interestingly, providing or completing education was clearly associated with the concept of economic development, although, less apparent was clear reference to exactly what type, form or focus education for this purpose should adopt. Overall, distinguished pathways through education to enterprise were not a feature of the Australian government’s education policy communication.

Proposition P2 suggested that multidisciplinary skills are required by those engaged in enterprise and was stated as:

P2: Policy with an economic enterprise focus will encourage education institutions to provide individuals opportunity through education to develop multidisciplinary knowledge related to enterprise roles.

It was anticipated that government policy communication on enterprise education would engage with the notion of developing multidisciplinary capabilities. For instance, those who were undertaking courses in leadership, finance and accounting, science and technology, management and organisational design, production and engineering, or business law would, therefore, not only have available to them the single disciplinary skills and knowledge but also cross and multidisciplinary skills and knowledge drawn from across a range of disciplinary areas that might facilitate the transference of knowledge across social boundaries.
The analysis of the website found that the issue of skills were raised in three contexts. First, there was an emphasis on developing enterprise skills for science and technologists, suggesting awareness for multidisciplinary skills emanating from government circles for this particular disciplinary area. The second context for skills was located in the connection to enterprise attributes, which were frequently referred to as skills. These skills were mostly undefined except when referring to the human attributes of initiative and enterprise. Enterprise skills in this context were not articulated in such a way as to suggest a purposeful engagement with specific roles. Whether enterprise skills are indeed skills or general human attributes or both, will require further clarity as it affects what is taught and how the teaching is conducted. The third contextual area for skills suggested that enterprise education was a means to improve literacy and numeracy. These skills are common to each of the enterprise roles and are fundamental to all or at least most human education.

With respect to proposition P2, the federal department’s website on education policy seems to evidence only a limited attempt to promote and develop multidisciplinary skills in a strategic way for enterprise activities. Indeed, the science and technology sector was the only disciplinary area that was targeted, with education on entrepreneurship suggesting an overall focus on the creator/innovator role. However, if enterprise skills remain ill-defined then the conduct of entrepreneurship education may not necessarily provide the economic benefits of enterprise. Instead, it may change attitudes but not supply adequate or complete skill sets for the enterprise function or conversely it may provide skills that are unmatched by attitudes directed toward enterprise. Either way it would seem that more government guidance may be required in this area if economic outcomes were to be present by design.

Given that the science and technology sector appears exclusively to be the target of entrepreneurship education it also raises a question regarding the complementary roles. As previously discussed, there are many types of entrepreneur and the entrepreneur is more likely to be plural than singular (see for instance Gartner et al. 1994). This suggests that entrepreneurship education should be available to a wide audience to capture those that emerge from any discipline. The Australian education policy tends to encourage a broad enterprise education at the secondary school level but narrows its focus to entrepreneurship education for science and technology students in tertiary and higher education. The analysis
suggests that the Australian government’s communication on entrepreneurship education does not acknowledge the need for multidisciplinary skills for enterprise beyond the creator/innovator role associated with science and technology in higher education.

The third proposition expected the communication to portray acknowledgement of the team-based nature of enterprise and support the development of team skills. P3 claimed that:

*P3: Policy for entrepreneurship education for economic development will seek to support individuals with multiple disciplinary backgrounds and provide learning directed toward developing multiple enterprise roles rather than emphasising developing individuals for business ownership or self-employment.*

Interestingly, the website analysis did not uncover any policy discourse that suggested entrepreneurship education be directed toward development of multiple roles for enterprise. However, the following extract from the *Enterprise Learning for the 21st Century* provided an insight into the general focus and direction:

The Australian Government is committed to building an enterprise culture within Australia and to fostering an entrepreneurial spirit among young Australians. An enterprising young person possesses the skills, behaviours and attributes they need to capture the economic opportunities of the 21st century.

Enterprising young people are enthusiastic, innovative, resilient, creative, motivated, involved and flexible. Utilising all the talents that exist in Australia is the key to our future economic and social well-being. Enterprising young people are optimistic about their future, whether it is in self-employment, employment or further education or training (Department of Education, Science and Training 2005c).

Note that an emphasis is placed on culture and an ‘entrepreneurial spirit’, and a description is given of an ‘enterprising young person’ who possesses particular ‘skills, behaviours and attributes’. However, again the skills remain undefined in preference for attitudinal and behavioural characteristics and, notably, the outcomes of enterprise learning
are directed toward capturing economic opportunities and generating optimism about the future in terms of employment (whether self-employment or other) and education. It would appear that enterprise is connected to economic opportunism rather than the economic work of creating and introducing market disruption. This suggests enterprising individuals seize a broad range of opportunities as they are presented rather than performing any specific work to create and introduce market disruptive new products/services.

6.4 Conclusion

This chapter discussed the analysis of the Australian federal government’s education policy communication sampled through the DEST website. Overall, the term enterprise was used in multiple contexts from a human attribute through to a commercial business. It was found that the communication clearly placed an emphasis on the term enterprise rather than entrepreneurship. However, entrepreneurship was found to be most strongly represented when the texts’ focus shifted specifically toward the science and technology sectors.

This suggests the two concepts have been differentiated although apparently not formally or explicitly. The term enterprise was found to be a vague term, which contributed to its frequent occurrence in the communication. For instance, enterprise was found to refer to business, to different types of non-commercial organisations, and to community culture, although a more dominate use of the term appeared to relate to the attributes of individuals.

This was most clearly evidenced by the provision of a set of personal characteristics of an enterprising learner meant to guide those who were developing enterprise education, (Department of Education, Science and Training 2004). This finding is consistent with that of Stevenson and Lundström (2002) who found that Australia utilised enterprise education to impart ‘a set of personal attributes, attitudes and behaviours and a set of knowledge and skills (know-how), which in the broadest sense can be applied to any walk of life, and in the narrowest sense can be applied to the starting and managing of one’s own business’ (p. 273). However, the communication returned no evidence of explicitness with respect to the skills and knowledge aspect of enterprise education, instead it was found to be non-specific and loosely refer to enterprise skills as a generic term.
With respect to career roles and pathways for enterprise, the communication was sufficiently devoid of any reference to suggest an appreciation of enterprise specifically as a career activity. The federal government communication appeared to be generally non-prescriptive when it came to outlining specific pathways and career roles, suggesting that policy seemingly remained at a distance and perhaps left to the various State governments or even the individual institutions to discuss. However, there was some evidence to the contrary. For instance, federal policy entered into the debate with respect to career pathways for the teaching of history.

In summary, there was no explicit demarcation between the types of enterprise activity with respect to its economic function found within the policy communication. Indeed, there was little that specifically coupled enterprise education to the notion of market disruption and economic development, although there were isolated examples that connected economic development with enterprise learning. However, the coupling of the term entrepreneurship with science and technology suggested that there was at least some resonance with the propositions respecting multidisciplinary and interdependent roles.

While this analysis considered the contemporary documents within the policy communication, this aspect of policy discourse is also affected by informing documents and reports. By way of confirming the findings from the contemporary text analysis, this second set of historically contextualised documents were used as a means to validate the first analysis.

Given that the analysis of the contemporary documents finds that the communication of Australian national education policy did not hold consistently to the distinctions of the key terms developed by this research, and if the documents that informed policy reflected the same level of disparity, it further prompts one to ask about how the terms are used and related in this informing context. The next chapter deals specifically with the historical context of the informant communication to shed some light on this question and explores how the key terms may have come to be represented as they are in the contemporary texts and how else these terms are being used in the context of informing education policy.
7 Findings 2: the informant texts

7.1 Introduction and chapter overview

The second examination, conducted on informant texts, was designed to act as an exploratory analysis and also provided the opportunity to confirm or refute the analysis of the contemporary texts. It was designed as an exploration of the diversity of relationships and associations that existed with respect to the key terms in the texts that informed the contemporary documentation. While the analysis of the contemporary documents expected a specific meaning to be associated with the key terms, the scrutiny of the informant documents set out to explore what other meanings were being associated with these terms. The conceptual analysis in this instance relied heavily upon the interpretive coding methods of discourse analysis, working from data to articulate concept relationships rather than analysing for the theoretically derived relationships that were the focus of the contemporary communication.

Four key documents (highlighted during the first analysis of the DEST website) were located and identified as potentially informative given the occurrence of the key terms in either the title or the description of the subject matter and thus were selected to be subjected to further analysis. Each of these documents were examined to account for their usage of the key terms of enterprise, enterprise education, economic development, roles and pathway, as relevant to the core theme of the document and to explore any connection to an enterprise career activity in terms of an economic function.

In this section, the texts are horizontally intertextual (Fairclough 1992, p. 103), in that the key documents are informing documents preceding much of the contemporary pages exhibited on the internet (with perhaps the exception of KD-4 which is an historical document although also given currency by its web page presence). The informant documents were tagged with an identification code ‘KD’ and given a suffix number corresponding to the order in which they were discovered.

This analysis shows the persistence of enterprise as a vague term. Little association between enterprise, roles and pathway were revealed. Rather than economic conceptions,
enterprise was also associated with regionalism and community, a model for education and with work and employment outcomes. A major concern seemed to be addressing the issues associated with economically challenged communities by offering enterprise education as a contribution toward community renewal and development. There was some linkage though with self-employment, although as previously argued, this is not equivalent to economic development. There was also a lack of clarity with respect to enterprise and its connection to economic outcomes and often expectations were placed upon it for economic development, growth and diversity. This chapter outlines the method of analysis and principle findings emerging from the informant texts.

7.2 The informant document exploration

The four documents located during the contemporary searches were:

1. (KD-1) Engaging universities and regions: knowledge contributions to regional economic development in Australia (Garlick 2000)

2. (KD-2) Enterprise education (Erebus Consulting Partners 2004)

3. (KD-3) Models of delivery of vocational education and training in schools in rural and remote areas: Northern Territory, Queensland and Western Australia (Department of Education Training and Youth Affairs 2000b)


To explore these documents a content analysis method was first adopted aided by computer search tools, either the Adobe Acrobat document search tool for the key documents KD-1, 2 and 3, or the Internet Explorer search tool for the DEST web page tagged as KD-4. These search tools located the search word in part or in whole as they occurred in the document. In this case the singular form of the search word also revealed the plural form, although in the case of the plural search term, roles, the singular form was not located. Only selected key search terms were used depending upon the nature of the document under review. For instance, clearly KD-2 was a document that focussed on
enterprise education and therefore enterprise was not utilised as a search term but instead economic development, pathway and roles were used. Similarly for KD-1, ‘economic development’ was its subject and therefore that search term was omitted and instead the other search terms were used to locate these within the context of the document. In each document the key terms were located and coded in accordance with an exploratory stance, first for any qualification of the term and second for the contextual association with the key document concept. Appendix C contains the coding reports for each document search.

Where applicable, only the report or document bodies including headings and titles were used to search for key terms. That is, found terms in bibliographies or tables of contents for instance were not included in the search count. Appendices and/or Attachments however, were included as they were considered pertinent to the documents and not necessarily producing irrelevant duplication. Where search terms were encountered in headings the context of the subsequent paragraph was used to ascertain qualification and association, although in some instances the search term reappeared in the connecting paragraph and therefore the found term in the heading was suspended from qualification or contextual association if it were not independently assessable. Executive Summaries were also included in the search and any duplication arising from this inclusion was considered with the results. In this circumstance the duplication was an indication of importance or weight placed on the term and therefore was considered important to the count.

7.2.1 KD-1: Engaging universities and regions: knowledge contributions to regional economic development in Australia

As the name of this document suggests, document KD-1 explores the relationship between the university sector and regional economic development in Australia. The report was prepared by Steve Garlick (2000) of Southern Cross University’s Southern Cross Regional Research Institute. While this is not a federal government policy document, it is a piece of the puzzle that relays some insight into how enterprise has become situated in government education policy. In the analysis particular concern was placed with how enterprise was associated with the document theme of economic development and furthermore how pathway and roles were portrayed as contributing to economic
development. These three search terms were used for the 164 pages of relevant text from the Executive Summary through to the end of the Appendices.

The tabular presentation of the content analysis (refer Table 7-1) portrays the usage of the key terms and the way in which the terms were qualified in the document. This level of document analysis intends to report what is in the text with respect to the terms used. It is not meant to interpret meaning extracted by readers or intended by the authors (Neuman 1994). Here, pathway and roles were infrequently encountered and neither of the terms was explicitly linked to enterprise activities, although the term enterprise occurred more often with 23 occurrences in the document.

Table 7-1 Content and qualification analysis findings for KD-1 (Source: Author)

<table>
<thead>
<tr>
<th>Key Document Concept</th>
<th>Search Terms</th>
<th>No. of occurrences</th>
<th>Term qualifications</th>
<th>No. of occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Economic Development</td>
<td>Enterprise</td>
<td>23</td>
<td>Unqualified</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Business</td>
<td>7*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Size (small, medium or large)</td>
<td>5*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Regional</td>
<td>3*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Name of business incubator</td>
<td>2</td>
</tr>
<tr>
<td>Pathway</td>
<td>3</td>
<td>For people and organisations</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Project name</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Roles</td>
<td>2</td>
<td>Of the three tiers of government</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Leadership</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

* indicates combined qualifiers, i.e. ‘small business enterprise’ used in some occurrences.

NB: No common links were found between the search terms.

To elaborate an exploration of the meanings associated with the key terms, it was important that the researcher avoid directly interpreting meaning. Instead, the analysis posed a question on the text to establish any qualification offered to the term. The question asked: what type of [insert the term] is being described? Through qualification of the search terms a test for triangulated meaning was imposed. Rather than interpreting the search term’s meaning directly, the researcher invited the text to place an indirect meaning on the search term via any descriptive qualifier of the term. In this way the research more accurately exposed the assumptions embedded in the document without resorting to a researcher imposed meaning as the reference point.

Notably, nine representations of enterprise arose without a qualification of the term. Furthermore, five qualifications related to size, which suggested spatial or volumetric...
dimensionality. Another three qualifications referred to ‘regionality’ suggesting a physical presence or location. However, neither of these forms of qualification addressed the type of entity an enterprise might represent. In sum, it can be seen that well over half of the occurrences (14 of the 23 excluding the duplications) of enterprise assume a common knowledge between the reader and the author, whereas in a further seven occurrences the author appears to have been compelled to qualify enterprise as a business entity. Fairclough (2004) claims that assumptions in texts tend to declare by the author limited differences between the author and the reader; or put another way it assumes a diminished need for dialogue between the author and the reader. If this is the case it would appear that either the author and the government party commissioning the report had a clear understanding and shared meaning of the term enterprise, reducing the need to further qualify the term, or alternatively that the author’s assumptions about the readers were misplaced.

To demonstrate the procedure of the analysis, an example of an unqualified term is presented from KD-1’s context extract 2/3 (refer Appendix C) that reads:

*The regional milieu represents an area big enough to embrace a wide range of the essential ingredients required to generate competitive economic development, including being a national launch pad for distinctiveness in the global economy for its enterprises and institutions* (Garlick 2000, p. 3, emphasis added).

Here it could be assumed that enterprise is intended to mean ‘commercial businesses’ although the earlier DEST site analysis also suggested that enterprise may also be intended to mean more than just commercial business. Therefore, reporting the assumed meaning of enterprise was avoided to limit researcher bias. Rather, the occurrence and its frequency are reported along with any qualification that describes the term. Interestingly, ‘institutions’ in this instance were apparently not included in the meaning of enterprise, otherwise the terms enterprise and institutions would not have needed to be distinguished. This suggested an implied qualification although by no means one that was specific and therefore enterprise was considered unqualified. In turn this implies that the document’s author either assumed or was aware of a shared meaning with the reader.
This unqualified use of the term *enterprise* can be contrasted with a qualified use of the term exhibited in KD-1 context extract 10/59:

The University also has a number of specific business *enterprise* partnerships to deliver industry oriented teaching programs in engineering (with the Pacific Power energy company) and science (BHP. Co. Ltd. laboratories) (Garlick 2000, p. 59, emphasis added).

In this extract enterprise is qualified by the term ‘business’ as an adjective although this raises a question: if the meaning of enterprise can be equivalent to business then why would the terms business and enterprise need to be coupled as they were unless they could be construed as something different? It would appear that there is something more nebulous about the term enterprise than is immediately apparent in this document which again justifies the avoidance in this work of reporting a researcher assumed meaning.

The next level of analysis focused on the ‘situated meaning’ (Gee 2005) of the key terms. In adopting this analysis the researcher has sought the association or connection of the key terms to the context of the paragraph or section of the document. Gee (2005) referred to this form of analysis as ‘building connections’ and suggested that the researcher would pose the question on the text similar to: what sort of connection – looking backward and forward – is made within and across the utterance of the term and the larger stretches of the interaction?

An example can be found in KD-1, context extract 8/49 (refer Appendix C):

The changes in employer demands for skills is being driven by fundamental changes in the structure and operating practices of both large corporate and small business *enterprises* and institutions as well as changes in the conceptualisation of products and services brought about by globalisation of markets and finance (Garlick 2000, p. 49, emphasis added).

The important association between enterprise and the situated meaning in this instance was concluded to be ‘skills’. That is, enterprises were considered to be an important influence on the skills that were needed when one considered the central concept...
of the document, ‘regional economic development’. It is worth noting in this example however, that skills were also connected to another concept that had emerged through other passages, for example KD-1 context extract 9/58:

On the university side, such initiatives include holding university information sessions throughout the region, the provision of entry scholarships to local students, the lowering of entry level requirements for local students and the tailoring of specific degree courses to meet local regional industry and enterprise needs (Garlick 2000, p. 58, emphasis added).

In this passage it was concluded that enterprise influenced the ‘teaching’ program of universities, and skills might be considered part of what is taught in any teaching program. This example continues to another level whereby, for instance, KD-1 context extract 11/72 associates enterprise with regional engagement of universities. From this, ‘teaching’ might be thought of as one means of engagement between enterprises and universities. The analysis unearthed a series of layered levels of situated meanings; for instance, enterprise was first situated with regional engagement then with teaching and finally with skills. The full analysis of the situated meaning relationships derived for KD-1 are presented in Figure 7-1.

From this map of situated meanings several points can be noted. First, enterprise was situated within five other broader contexts. Notably apart from the central concept of regional economic development (coloured in red), economic growth and economic diversification were also related to enterprise but with a distinct meaning from economic development. Next it can be observed that pathways and roles for regional economic development were situated within passages on engagement activities. Similarly, enterprise evidenced a strong connectedness to ‘engagement’. This suggests a relationship between the pathways, roles and enterprise (colour coding depicts relatedness) in the task of regional economic development, although the meaning of enterprise was not entirely explicit or tightly defined. The third observation relates to the connection of enterprise to both the concepts of ‘embeddedness’ and ‘engagement’. One may argue that embeddedness and engagement are closely related concepts and perhaps should be linked. However, as
regional economic development is the central concept it may be that embeddedness can occur without regional engagement that would lead to economic development. For instance a business may be embedded in the region and be a productive contributor to the region’s economy but not be actively engaged in pathways or playing a role in the economic development activities working with universities to provide new combinations. Hence this mapping of situated meaning draws attention to the different types of activities being associated with enterprise.

Figure 7-1 Situated meanings of search terms for KD-1 (Source: Author)

Colour coding has been used to demonstrate clusters of related terms. For instance, the term ‘providing collaborative infrastructure’ has been aligned with the term ‘regional embeddedness’ suggesting that the collaborative infrastructure associated with pathway is related to achieving regional embeddedness in its association with enterprise. However, in the portrayal of this analysis only an implied level of relatedness is suggested without claiming associations proven from the data. Explicating associations and linkages at this level would extend beyond the scope of the research and require revised search routines and association analysis. This research is only interested in the association of the key terms and
its implications for policy and therefore merely noting other structural relationship is sufficient as it provides clues about further research potential.

In summary, neither pathway nor roles were situated with enterprise although individual leadership roles and institutional roles for creating environments for engagement were connected to regional economic development. Similarly, pathway was connected to regional economic development through elements that contributed to regional engagement and collaboration evidenced at either the institutional or the individual levels. The term *enterprise* occurred relatively frequently although its usage evidenced vagary in its meaning. Further, it was connected not only to economic development issues but also separately to economic growth and diversification. Finally, enterprise was also connected to issues of regional embeddedness, commercialisation and engagement (of various layers and types). ‘Engagement’ was found to be in common between enterprise, roles and pathway although the linkage appeared to be tacit.

### 7.2.2 KD-2: Enterprise education

KD-2, *Enterprise Education*, is a document prepared for DEST by Erebus Consulting Partners that reports on an action research project engaged in identifying innovative approaches and best practice in enterprise education in Australian schools. Published in 2004, this report is not a policy document but acts as a contributor to the federal government’s discourse on enterprise. The analysis of the document covers 175 pages from page one of the Executive Summary through to page 175 which concludes the attachments.

The enterprise education-focused document returned 1200 occurrences of the term *enterprise* largely due to its associated subject matter – education. Therefore enterprise education was allocated as the key document concept and the primary search focused on economic development rather than enterprise. Initially, no result was found, suggesting that economic development was not a concept well grounded in this text. A second search conducted for the term *economic* attempted to reveal any association with matters economic occurring in the document. In this search, 22 occurrences were found and these were selected and subjected to closer scrutiny. The remaining terms *pathway* and *roles* returned
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Enterprise, Education and Economic Development

twenty-two and nine occurrences respectively. Table 7-2 exhibits the findings of the content analysis.

The analysis of qualifications reveals an array of types of economic considerations. Notably, the largest qualification of the term *economic* was by a series of negative terms with nine occurrences portraying a repressed or retarded economic circumstance. Further, in its situated meaning the qualification term *circumstances* also dealt with difficult economic positions in two instances while the portrayal of a future economic position was also found to be situated as a response to challenged economic circumstance in two occurrences (referred to as ‘disadvantaged’ and ‘depressed’ economic associations in Figure 7-2). Therefore, over half (12 of 22) of the occurrences of economics in this document deals with less affluent or challenged economic situations.

**Table 7-2 Content and qualification analysis findings for KD-2 (Source: Author)**

<table>
<thead>
<tr>
<th>Key Document Concept</th>
<th>Search Terms</th>
<th>No. of occurrences</th>
<th>Term qualifications</th>
<th>No. of occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise Education</td>
<td>Economic</td>
<td>22</td>
<td>Trials / Challenges / Imperatives / Difficulty / Decline / Adversity / Restricted (futures) / Hardship</td>
<td>9*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Future</td>
<td>4*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Circumstances</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Activity</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lives</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pathways</td>
<td>2*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Direction</td>
<td>1*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aspirations</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skills</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Caree</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Future</td>
<td>4*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Life</td>
<td>3*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Economic</td>
<td>2*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Unqualified</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Destructive</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Multiple</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Specific job</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Post school</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vocational</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Community</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Parental</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Leadership (parental)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Teacher</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Unqualified (heading)</td>
<td>1</td>
</tr>
</tbody>
</table>

* indicates that the terms were combined as qualifiers, i.e. ‘future life pathways’ in some occurrences.
+ indicates a link to another search term.
Interestingly, the search terms *economic* and *pathway* overlapped twice in this document: once portraying parental concern for children’s future ‘economic pathway’, and the other stressing that economic pathways were not the only focus of enterprise education. In these encounters with the *economic* term it is worthwhile noting that the term is related to the circumstance of an individual.

In all except one instance, the term *economic* has been used to describe either a community’s or an individual’s situation or circumstance. The exception is where it is connected to skills, which does appear to be linked with the ‘dynamic’ state of doing some work. However, even in the skills case, enterprise education is being portrayed as providing not only economic but also social and personal life skills. In this generic context the work attached to enterprise is vague. Furthermore, for the majority of instances enterprise education is being portrayed as a form of education that addresses general work and life skills (see also Figure 7-2) rather than something that may be encountered as a specific activity across a career.

The qualifications for the second search term, *pathway*, were found to be largely generic by nature and none directed attention to an ‘enterprise’ career activity. While *pathway* was unqualified on two occurrences, it was most often qualified by terms such as ‘career’, ‘future’, ‘life’, ‘post school’ and ‘vocational’ and, as discussed earlier, even the connection of *pathway* to the term *economic* does not specifically address enterprise as a career activity but rather the economic circumstance of the individual. Perhaps the most telling qualification is the term ‘multiple’ that suggests that enterprise education is the foundation of many possible pathways. The situated use of the qualification ‘specific job’ (refer KD-2 context extract 37/87 in Appendix C) demonstrates this generic and broad brush intentionality of enterprise education:

Enterprise education is about broadening career possibilities and options, rather than focusing students on a specific job pathway (Erebus Consulting 2004, p. 87).

The qualification of ‘destructive’ with respect to pathway raises the issue of reformist outcomes also found embedded in the notion of enterprise education. In the situated use of
this qualification a reference is made to a wilderness challenge program that developed leadership qualities. Evidently this form of education that deals with issues of self-esteem and character building falls under the scope of enterprise education despite the fact that a wilderness program is not likely to be explicitly related to enterprise matters of an economic nature.

With respect to roles in enterprise education, again there is no specific relationship made to enterprise as an economic career activity. Rather, ‘roles’ is qualified by the terms ‘community’, ‘parental’ and ‘teacher’, which suggests a concern with who is involved in the activity of enterprise education and how it might be delivered. Notably, the qualification of ‘leadership’ is situated within the context of parental involvement in enterprise education, and in the single unqualified occurrence of roles it was related to the responsibilities of those who conduct enterprise education.

Figure 7-2 displays the concept associations extracted from this analysis. As already noted the term ‘economic’ shows evidence of association with the general life and work skills and the economically disadvantaged or depressed communities. The former association shares a second level association with considerations of the ‘future’ which in turn links back to the community through the concept of ‘aspirations and hope’. This loop tends to suggest a linkage between the economic futures of the individual and the community, especially communities that are experiencing depressed or disadvantaged economic circumstances.

The association of pathway with enterprise education reveals four secondary level associations. The first is the influence of an individual’s gained ‘generic characteristics’ on the pathway, the next two involves parents and both their influence and appreciation of a student’s pathway, and the fourth relates to the ‘post school transition’ of a student. The ‘post school transition’ seems to also display two second level associations – ‘career decisions’ and a student’s degree of ‘self-directedness’, which in turn both appear to connect to a third level association of the ‘future’. This third level association is shared with the group of economic associations which suggests that part of the career decision and self-directedness pertains to economic circumstances.
The connection of roles with enterprise education shows one second level association, that of ‘shared responsibilities’, with two third level associations being ‘community engagement’ and ‘parental engagement’. The colour coding shows the areas of relatedness to the ‘economic’ group and the ‘pathway’ group of associations. Through the map given in Figure 7-2 it can be seen how economic outcomes are connected to the community and parental involvement that influence and affect the pathway of individual students.

Notably, a reference back to Schumpeterian economic development can also be found if the economic component of ‘community renewal’ is considered to represent a
requirement for disruptive market interactions. Interestingly, the second level association ‘community building’ might also be aligned with an economic activity, that of growth. This suggests that the economic associations in terms of explicit outcomes are somewhat suppressed and submerged behind the social interests of both the community and individuals. It would appear that the connection to Schumpeterian economic development is tacit and barely attracts acknowledgement throughout this key document.

In summary, the document KD-2 reveals a strong inclination toward a social model of enterprise behaviours, and places an emphasis on the development and building of communities that are economically challenged or depressed without bringing the reader’s attention to the economic models of enterprise. This is particularly observed where the report makes clear reference away from economic outcomes preferring to draw the reader’s attention to the broader social and individual implications of an enterprise education.

Notably, there is little linkage between the search terms of economic, pathway and roles with the exception being where pathway is used to describe a student’s progress to a particular economic circumstance. The skills of enterprise raised in the document are generic, considered beneficial for general work and life, but nowhere are the skills, knowledge and competencies raised for the conduct of enterprise activity that may be encountered throughout a working career. Enterprise education through this report then may be summed up as a ‘form of education’ that is distinct to the traditional classroom style of teaching and is intending to be far more involving of parents and communities.

7.2.3 KD-3: Models of delivery

The full title for the report document KD-3 was Models of Delivery of Vocational Education and Training in Schools in Rural and Remote Areas: Northern Territory, Queensland and Western Australia. While the document may appear to be too specific in its focus for this study (that is, not national in its breadth), the emphasis on enterprise in education was quite clear with the reference to Western Australia having adopted a model of education that was labelled ‘enterprise-based’. Therefore, it warranted a fuller investigation.

Allan O’Connor

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November 2008
The report, published in 2000, was the result of a two year project that was funded by the Commonwealth Department of Education, Training and Youth Affairs under the Strategic Component of the School to Work Programme. The project’s aim was to develop models of vocational education and training in rural and remote locations. Similarly to the previous two Key Documents, this report cannot be considered a federal policy document although it can be considered to be an informant document that has contributed to the policy discourse under investigation. Although not explicit, the report was presumably authored by the project team of Hazel Parkins (Queensland), Helen Hill (Northern Territory), Jim Syrmas (South Australia) and Barrie McMahon (Western Australia), however the project contributor list was far more extensive. The report was also published with the standard disclaimer by the federal government publisher that stated that the views of the report were not necessarily those of the Commonwealth Department of Education, Training and Youth Affairs.

An initial search of the document revealed that the term enterprise occurred 48 times. The search was then extended to use the composite term enterprise education in order to identify whether enterprise education was used as a vocational education model; this returned ten occurrences. It was considered that economic development, roles and pathway may have close association to enterprise education in this context and therefore would give rise to a frame of reference for enterprise education for economic development. However, a search for the term economic development returned no result and, therefore, economic was used as an alternative term which yielded only two found occurrences. The pathway and roles searches returned 29 and six results respectively. The full content search findings are exhibited in Table 7-3.

The majority of the enterprise education occurrences were found to be unqualified indicating an assumption by the authors of a shared meaning with the readers. Of the three other occurrences each referred to either a strategy or a model of education. The ‘strategy’ qualification was also found in near proximity to the pathway term which was qualified as a ‘school to work’ pathway. This suggests an interpretation that enterprise education was considered a strategy that provided a school to work pathway. More particularly, two of the
unqualified occurrences of *enterprise education* were also closely linked to *pathway*, although *pathway* in these instances was more tightly specified as toward self-employment.

Table 7-3 Content and qualification analysis findings for KD-3 (Source: Author)

<table>
<thead>
<tr>
<th>Key Document Concept</th>
<th>Search Terms</th>
<th>No. of occurrences</th>
<th>Term qualifications</th>
<th>No. of occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Models of delivery</td>
<td>Enterprise Education</td>
<td>10</td>
<td>Unqualified</td>
<td>7*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Strategy</td>
<td>2*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Model</td>
<td>1</td>
</tr>
<tr>
<td>Economic</td>
<td></td>
<td>2</td>
<td>Growth</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Constraints</td>
<td>1</td>
</tr>
<tr>
<td>Pathway</td>
<td></td>
<td>29</td>
<td>School to work</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vocational</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Self-employment</td>
<td>2*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Academic</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Unqualified</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Work</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vocational education</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Multiple career</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rural career</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Career</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vocational learning</td>
<td>1</td>
</tr>
<tr>
<td>Roles</td>
<td></td>
<td>6</td>
<td>Schools and community</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>School</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Groups previously outside of the vocational education network</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Individuals</td>
<td>1</td>
</tr>
</tbody>
</table>

* indicates a link to the correspondingly marked search term
*+ indicates a link to the correspondingly marked search term

Neither of the two occurrences of the term *economic* was qualified as a reference to economic development, rather one was qualified as growth and the other made reference to constrained economic circumstances. In the latter case enterprise education was not suggested as a remedy but rather reference was being made to community involvement as a means to strengthen ‘positive attitudes among students to education and training, and the world of work’ (Department of Education, Training and Youth Affairs 2000b, p. 22). In the former case, education in the form of apprenticeships was noted to be fuelled by economic growth. These two references to economic conditions indirectly demonstrate a two-way relationship between education and economic conditions and circumstance. In one, the prosperous economic circumstance provides educational opportunity and in the other it is the adverse economic condition that is reinforcing the education imperative.
The pathway search term occurred most often in this document with ten different forms of qualification and appearing only on two occasions as unqualified. The qualifications can be grouped into categories of pathway, for instance: vocational, including education and learning; career, general, multiple and in the particular rural cases; work, as in school to work and self-employment; and, finally, academic. None of the pathway references suggested a pathway to enterprise in the Schumpeterian economic sense of career activity.

The final search term, roles, occurred relatively infrequently and tended to refer to roles at the organisation or group level such as school and community. The case of roles qualified for the individual was suggestive of individuals from the organisation and group levels and was not directed toward the roles that may be filled in the undertaking of enterprise in its economic sense.

Considering the concept associations derived from the searches of KD-3 (refer Figure 7-3) it was found that enterprise education portrayed clearer connections than evidenced by the content analysis. Here, five first level and two second level associations were indicated. Of the first level association, unsurprisingly, enterprise-based learning emerged, although other references were also found such as ‘work-based’ and ‘community-based learning’. These associations were clustered together and both work-based and community-based learning were relegated to a second level association in consideration that both of these would be a form of an enterprise-based learning agenda. The colour coding indicates the relatedness of the concepts.

Interestingly, ‘self employment’ was identified as associated with enterprise education and this was consistent with the findings of the content and qualification analysis. Similarly, ‘further education and training’ might be considered to represent the cluster of ‘vocational’ also identified through the content and qualification analysis. Both these concept associations were considered to be related to pathway although notably neither appeared as associations with pathway in the situated meaning analysis.
Figure 7-3 Situated meanings of search terms for KD-3 (Source: Author)

*Enterprise education* exhibited two remaining first level associations; one ‘teacher skills’ and the other ‘community development’. The former association reflected an observation about community schools that needed teachers who were trained in enterprise. This was colour coded with what seemed to be a corresponding and similar need in *enterprise education* – that of a ‘staff champion’, who embraces its development. The ‘staff champion’ concept emerged from a *pathway* association which in turn also made a clear association with the theme of the report, ‘rural and remote vocational education’. The
contention is that ‘teacher training’ may also be a factor in creating ‘staff champions’ for enterprise education and especially in rural and remote regions where populations are fewer and the likelihood of schools having enterprise ‘savvy’ teachers is perhaps slimmer.

The final first level association for enterprise education, ‘community development’, was also reflected in the content and qualifications through the search term economic, although in this case a shared association is found, both economic and enterprise education. Furthermore, a common grouping of concepts is found with two that emerged through association with the roles search term – that of ‘community engagement’ and ‘community partnerships’. The latter might be considered a subordinate association with ‘community engagement’ before partnerships may arise.

The association of economic with ‘circumstance’ (be it adverse or prosperous) also seemed to display commonalities with ‘youth at risk’ and ‘geographic and racial inequities’, both found in association with pathway and ‘rural and remote vocational education’. The economic circumstance of communities may reflect the levels of these other factors and, therefore, might be considered to be related. All in all, it seems that the economic circumstance may be responsible for either creating a higher need or providing a wellspring of opportunity for implementing vocational education and training. In either case it would seem that the economic circumstance dictates the type of community engagement that is required in any particular region.

The concept association analysis also turned up the recurrence of a colour coded theme through three of the explored key search terms which is worth highlighting. Earlier it was mentioned that under enterprise education the concept of ‘enterprise-based learning’ was encountered with two further second level ‘learning’ associations also identified. Interestingly, through the pathway and roles associations, types of learning associations were also discovered. Associated with pathway were discussions on providing a number of ‘education alternatives’ for students. This perhaps links to another association regarding ‘learning strategies’. Under the roles association a discussion regarding ‘apprenticeship learning’ seems to be suggestive of an education alternative. This may seem unsurprising given the core document concept of KD-3 was ‘models of delivery’ except to say enterprise education as a model in economic form would require articulation of a particular pathway.
and roles. However, neither of these is encountered, but instead, it is being used as a generic form of education rather than a specific type of work activity.

The document KD-3 overall fails to provide the links to Schumpeterian economic development activities as something that is undertaken within the context of a career. It does provide the clearest association yet to enterprise education as a means toward self-employment. However, as has already been argued, self-employment does not necessarily equate to an economic development function. Stronger evidence is also found of the link between enterprise education and economic circumstance that suggests a two-way relationship dependent on the state or nature of economic conditions in a particular region. Further, the links to community engagement and community development are again encountered, although these are mainly considered as part of the structural or operational model of vocational education and are only peripherally and almost tacitly entertained as the building blocks necessary to embed entrepreneurship into a region’s economic development and growth.

7.2.4 KD-4: Enterprise and career education programme

This final key document, KD-4, is a page from the DEST website that deals with the department’s Enterprise and Career Education Programme that spanned from mid-2000 through to mid 2004. The programme can be considered a forerunner to the Enterprise Learning for the 21st Century initiative (also detailed on the website) and is still an informant document rather than a policy document due to its historical and reporting context. Both enterprise and education are key terms on this page with the former appearing 122 times and the latter 150 times. They occur in a variety of contexts including institutional and report names, combined as a single term and as solitary references. This analysis attempted to locate enterprise education within the specific context of economic development, although a search for the latter returned no occurrences. As with the previous searches, the term economic was substituted to check for the potential of any association between issues of economics and the topic of enterprise education; again no occurrence was found. Table 7-4 summarises the content analysis findings and shows the results for the remaining search terms.
The two search terms remaining that occupied the focus of the analysis were *pathway* and *roles*. In both cases comparatively few occurrences were revealed with *pathway* only occurring six times and *roles* even less at twice. From the perspective of qualification, the term ‘pathway’ was described within the context of a taskforce and programme titles in four of the six cases with ‘youth’ being accounted for by the Prime Minister’s Youth Pathways Action Plan Taskforce 2001 in all three occurrences and ‘jobs’ being attributed to the Jobs Pathway Programme. One occurrence was left unqualified and the only other qualification, ‘transition’, served to sum up the emphasis of *pathway* in this page with all occurrences tending to direct attention toward youth transition pathways from school to work.

Both occurrences of *roles* were qualified by the term ‘complementary’ and used to describe the complementary roles of DEST and the Enterprise and Career Education Foundation in providing support to youth in the transition from school to work. In effect, the *pathway* and *roles* qualifications reveal nothing with respect to the specific tasks of enterprise activities within the Schumpeterian context.

Moving to the broader concept association analysis shown in Figure 7-4, the context of *roles* was set within the development and delivery of the programme and was not in any way connected to the *roles* with an enterprise activity at the student or individual level. Similarly, with *pathway*, the context referred at a first level association to the provision of support in enabling students to transition from school to work which appeared supported by three second level associations. These incorporated the provision of ‘youth support
services’, ‘broad experiences in types of education’ and ‘career education’. In each case the emphasis is on the operational level of providing education rather than dealing specifically with the intent or content of any education intervention.

Figure 7-4 Situated meanings of search terms for KD-4 (Source: Author)

Upon closer inspection a rationale behind the programme can be identified which may explain why the initiative did not embrace economic development issues but rather was concerned with the successful and fruitful transition of students. The following extract highlights a primary concern with developing a workforce capability for business rather than building a human capital base able to create and introduce new economic interventions. Consider the following:

The knowledge economy and the information and communications technologies are just two areas where there is a growing demand for a workforce that is adaptable, innovative, skilled and willing to experiment and take risks. Young people are asking for more information on what it means to work in an enterprise and the knowledge and skills required to follow their career choices.
The increasing demand by business for a highly skilled and innovative Australian workforce means that schools have a vital role to play in developing the skills, creativity and enterprising attributes of Australia’s young people and a positive attitude to life-long learning.

Business, industry and the community also have a key role in supporting schools to develop an enterprise culture in young people. Effective partnerships between schools and their local communities require the active support and engagement of business (Department of Education Science and Training 2005b).

This extract suggests that the primary agenda for enterprise education is driven by the perceived need to prepare students for career employment serving the business sector. This ambition shapes the type of enterprise education agenda required to respond to a specific form of economic activity. In Chapter 3 the case was made that existing businesses engaging in enterprise do so predominantly to address market growth and productivity functions. This, in essence, is not the equivalent of an economic development function although it may be equally a worthwhile pursuit. However, the enterprise education and training agenda also becomes linked to the demands of business which in turn is not necessarily engaging with the emergence of new market disruptive goods and services but the preservation of the existing business and the growth and development of existing markets. While this may not be a universal truth, the policy effort and emphasis may be skewed unwittingly toward a non-market development agenda, leaving the distinct and unique requirements of education for market disruptive enterprise unattended.

7.3 The confirmatory analysis summary

In this chapter the findings of the second form of analysis of the Australian federal government’s education policy DEST website was outlined. Overall, the term enterprise was again found to be used in multiple contexts, from a human attribute through to the description of a commercial business.

The search of the informant documents sought to identify whether these documents held a consistent view with the contemporary policy pages of the DEST website while
exploring other relationships associated with the key terms. The exploratory analysis sought to identify other associations that were being made with enterprise that may depart from the economic grounding of the concept. The analysis reveals some accord with the contemporary policy pages in that there was little explicit association between the key search terms of *enterprise, roles* and *pathways*. This particular set of informant documents, despite holding the potential to position enterprise in the context of contributing to economic development, did not portray enterprise as a connected concept between the work of an individual and the economic function of market disruption. To confirm the correspondence with the contemporary documents the analysis is discussed in light of each of the propositions.

**P1: Policy for entrepreneurship education will delineate economic development from other types of economic activity and encourage education pathways for individuals who seek to contribute to economic development.**

The only document that considered the forms of economic function was KD-1. It is interesting to note from the concept associations that enterprise was also situated within the concepts of economic growth and economic diversification, suggesting a differentiation, although not explicitly distinguishing the association with enterprise. However, with respect to an education pathway, no association was found. Pathway instead was related to community engagement and further, there were clearly roles for those who provided leadership in this activity and created the environment for it. This was considered enabling for enterprise to engage with institutions. While this view does describe an enterprise role with respect to supporting infrastructure, it does not elaborate an education for this role or an education pathway for those who undertake such a task.

This discussion is very similar to that encountered with the contemporary policy texts. Distinctions between economic functions were implicit and engagement appeared as a significant concept. However, the remaining informant documents placed no emphasis on economic distinctions, although economic concerns were present, and nor were education pathways for economic development apparent. Pathways instead were tied to concepts of individual economic circumstance or general education to work. These findings display good correspondence with the contemporary policy documents and exhibit consistencies
that suggest an alignment between the two sets of findings that support the conclusion of only tacit agreement with the proposition on the issues of economic distinctions but none with respect to education pathways for economic development.

**P2: Policy with an economic enterprise focus will encourage education institutions to provide individuals opportunity through education to develop multidisciplinary knowledge related to enterprise roles.**

The concept of roles throughout the informant documents was generally related to either community roles or roles in delivering education. No reference was made to the work roles that might be contained in enterprise for economic development. Again this is consistent with the findings from the contemporary policy documents analysis and supports the conclusion that policy tends not to recognise enterprise roles within the Schumpeterian concept of market disruption.

**P3: Policy for entrepreneurship education for economic development will seek to support individuals with multiple disciplinary backgrounds and provide learning directed toward developing multiple enterprise roles rather than emphasising developing individuals for business ownership or self-employment.**

Following from the findings from proposition P2, the texts relating to roles in the informant documents revealed nothing with respect to the type of roles that enterprise education was to develop with respect to market disruption. However, across other concepts and at deeper layers of analysis it is apparent that enterprise education does engage with vocational education and various work and life roles. Enterprise education, framed in this way, is not aligned with the Schumpeterian notion of enterprise for economic development, although it is aimed at achieving a similar outcome. The difference is that the education is directed toward students identifying employment and career opportunities rather than acquiring skills and knowledge for roles that contribute specifically to creating, developing and introducing disruptive goods and services.

Similarly, in the contemporary policy texts, multidisciplinary backgrounds and learning expected to lead to multiple enterprise roles did not feature within the texts. The finding for this third proposition is again consistent and suggests that the informing
documents and contemporary policy texts are aligned and both avoid or neglect the value of multidisciplinary backgrounds and presence of multiple roles within enterprise activities.

7.4 Conclusion

Given the consistency in the findings between the informant documents and contemporary policy texts, the exploratory research step presented in this chapter sought to identify how the terms differed in their usage from the economic framing developed by phase one of the research. Table 7-5 provides a summary of the enterprise concept and its use within education and learning, and cross-tabulates the particular use with specific conceptual areas.

This analysis reveals that enterprise and enterprise education concepts are related to four distinct conceptual areas; economics, regionalism and community, educational models, and work and employment. Underpinning many of these concepts is a relationship to economics and economic change. This is obvious in the specific area of economics but perhaps less so in the others. With respect to regionalism and community, enterprise is often seen as a means to alter the economic fortunes or misfortunes of the community. The heavy reference to disadvantaged communities found throughout the informant document analysis suggests that enterprise education is considered as a means to alter the status quo for communities and regions facing economic stress.

In the concept area of educational models, enterprise education and learning is connected to the provision of opportunities for students to gain exposure to career and work that in turn lead to economic independence at the individual level. This idea also flows into the work and employment concept area except that the skills and knowledge tend to become more defined. Interestingly, at the level of work, both self-employment and commercialisation appear as concepts. While the work of self-employment is not considered an economic or market disruptive concept, its presence is consistent with other findings and the policy position portrayed through the contemporary policy texts. Commercialisation, on the other hand, is more closely aligned with the work of market disruption and does suggest some accordance with the Schumpeterian view of economic development.
The sum of the analysis suggests that the Australian government’s education policy only tacitly encourages the Schumpeterian derived notion of economic development due to an absence of precise definition of the phenomenon. Overall, there is little explicit cognisance of the roles and pathways that a career activity in enterprise might suggest and therefore the education, skill development, economic reasoning and long-term social benefit that Schumpeterian enterprise quite possibly delivers are also overlooked.
8 Implications and future research

8.1 Introduction and chapter overview

The major aim of this research has been to improve understanding of the ways in which entrepreneurship education policy can explicitly influence economic development. The research has undertaken a series of systematic approaches to selected literatures and utilised a research method that adopted two opposing stances of analysis, one explanatory and the other exploratory, on a sample of policy communication.

This chapter reviews the aims and objectives of the research in light of the findings, explores possible implications and suggests further propositions for policy and opportunities for research. The implications are discussed for four main areas: entrepreneurship theory, education providers and institutions, education consumers, and practitioners and policy.

The first implication discussed is that for entrepreneurship theory. Enterprise, as an economic concept, was generally found to be overlooked by economists and entrepreneurship theorists and its reclamation has significant ramifications for theory. These include the removal of business ownership as a necessary condition for defining the entrepreneur, the acknowledgement of other entrepreneurship actors who complement the entrepreneur and the need for entrepreneurship researchers to establish the form and type of market interactions involved in their studies. The difficulty in practice of identifying enterprise is acknowledged and a major implication for theory is the need to develop the methods and models that clearly distinguishes enterprise from business.

The discussion next highlights the implications for education providers and institutions and suggests a need for these to re-negotiate the concepts of entrepreneurship and enterprise education and appreciate the multiple roles and contributors to market disruptive practices. Entrepreneurship education needs to be differentiated by its attendance to developing skills and knowledge in market disruptive enterprise activities. Moving entrepreneurship away from its preoccupation with business studies would in turn allow it to emerge in multiple sites across many disciplines.
A major implication for education consumers and practitioners is the need for the provision of student choice in an entrepreneurship career. This suggests raising an explicit awareness of the multiple roles and the interdisciplinary nature of these roles among students and in turn making available the opportunity to learn the skills and knowledge to engage in these different roles. For practitioners this brings into focus the different practices of management and implementation routines that are specific to the domain of enterprise but variant to business disciplines.

For policy, the research reveals a need to distinguish between the economic and organisational units of analysis when a government considers the development of entrepreneurship education policy. A further implication is the need for policymakers to remain cognisant of the differences between community and regional level entrepreneurship education, and entrepreneurship education intended to influence a nation’s microeconomic market conditions and macroeconomic environment.

The chapter then proceeds to outline four propositions for policymakers when considering national education policy. These propositions emphasise the need for policymakers to recognise enterprise as an economic concept and appreciate variations between communities and regions when policy maintains an economic objective. They also suggest a responsibility for governments to maintain a counter-cyclical appreciation of the demands for education that may otherwise be heavily influenced by dominant regional or community interests at any one point in time. Lastly, it is suggested that entrepreneurship education needs to be made accessible to individuals at different times within a career and from within different disciplines. It is acknowledged that the propositions arise from this theoretical study and as such each would benefit from further validation and research.

The concluding sections of this chapter critique the methodology to make transparent the limitations of the study, before suggesting a number of propositions for further research for policymakers and entrepreneurship education providers.

8.2 Review of objectives and research aim

Chapter 1 outlined five research objectives and associated sub-research questions that were designed to assist the research toward its ultimate aim. In this section these will be
discussed before reviewing the overall research aim. Each of these objectives related to specific chapters commencing with Chapter 3. Normally, one may expect that the review of associated and relevant literatures is conducted prior to developing a methodology for the research. In this case though, the aim of the research was explicitly an exploration with a view to develop theory. Therefore, the approaches to the literature formed part of the method and the first three objectives and sub-research questions were addressed by approaching the literature in particular ways.

The first objective, addressed through the first of the literature reviews (Chapter 3), was to establish how economic theorists had developed the concept of entrepreneurship and made explicit association to Schumpeterian economic development. The conclusion of this chapter presented the case for theoretical distinctions of economic function at the macro and micro levels. Notably, enterprise was isolated as a specific activity, which was responsible for disrupting markets and leading to economic development.

The second research objective was to determine the types of enterprise roles that were inherent in entrepreneurship that jointly contributed to macro level economic development outcomes. Hence, Chapter 4 dealt with the question about how entrepreneurship theorists distinguished the enterprise roles of those who attend to Schumpeterian economic development. This second approach to the literature sought to understand the correspondence of enterprise and that of the roles that contribute to enterprise between the fields of economics and entrepreneurship. This resulted in identifying multiple enterprise roles that displayed at least six distinct attributes that could generally be described as interdependent and multidisciplinary.

The third research objective focused on entrepreneurship education to establish whether theorists generally made clear a career pathway for those who wish to become involved in enterprise framed specifically for Schumpeterian economic development. Chapter 5 engaged with the entrepreneurship education academic literature and found that generally there was an emphasis on educating for business start-up and management while focusing on the activity of the single role of the entrepreneur. Enterprise education specifically was also identified as an emerging trend with its focus on developing the attitudes and behaviours of individuals. Virtually absent in that literature was any
acknowledgment that entrepreneurship was grounded in economic theory, that it acted as a social instrument of economic development nor that it contained multiple interdependent and multidisciplinary actors in various roles.

Dealing with the first three objectives led to the development of three propositions which were used as a frame of explanatory analysis to take to empirical data. The fourth objective of the research was to establish whether actual policy that contained economic development objectives for entrepreneurship education, via the concept of enterprise, adhered in anyway to the Schumpeterian I framing of enterprise for economic development in its education policy.

The chosen data was sourced from Australian education policy communications on entrepreneurship and enterprise. The policy communications was sampled from the national Australian government’s DEST website. Using content analysis as a principle method, a set of key terms were isolated from the propositions and located from within the texts of the website pages to extract a contemporary set of data for further analysis. Examining the conceptual associations of these terms with each other and, in relation to the isolated pages of the website, provided a means by which to check the correspondence of these terms with the explanatory theoretical position. The findings showed that the Australian education policy communication predominantly used the term enterprise to describe an attitudinal and behavioural education and that entrepreneurship was a far less often used term that tended to be directed toward developing those engaged in science and technology to be an innovative entrepreneur. The broader concept of enterprise as an economic function endowed with interdependent and multidisciplinary roles was not a feature of the Australian government’s education policy communications selected for study.

The fifth objective of the research was to expose other rationalities for entrepreneurship education that may influence education policy and compete with aims to achieve economic outcomes. It explored the question of how the Australian government’s education policy reflected alternate views of enterprise by utilising exploratory analysis research techniques. A second data set was isolated from the same website. This second data set comprised of research and program reports that were deemed to inform the policy process and therefore influence policy communications. These data were approached
through a combination of content and discourse analysis techniques to again identify key terms but extended the research to explore the range of contexts and connections that emerged through the key terms. It was found that the concept of enterprise had at least three other conceptual relationships, aside from economics, and these were regionalism and community, educational models, and work and employment. The exploratory analysis also verified the explanatory findings of the website with similar conclusions about how enterprise and entrepreneurship were positioned in the texts.

The central question of the research inquired into how national government policy portrayed entrepreneurship education to serve the purpose of achieving economic development and Australia was used as a specific case to establish a set of findings. The research suggests that the economic work of entrepreneurship and enterprise are conceptually underdeveloped in the Australian education policy communications examined and more generally in the selected academic literatures. The roles of those who engage in work that contributes to economic development have been undistinguished and enterprise as a unifying organisational form that engages individuals across industry and community sectors is unrecognised. Too heavy an emphasis is placed on one role, that of the entrepreneur, and one unit of analysis, that of business. No recognition was found of the multiple roles in enterprise and therefore career pathways were also inadequately defined. Hence, if these findings are reflected in actual educational practice, then it could be that significant potential for the stimulation of economic development through education is being missed.

The expressed aim for the research was to understand how entrepreneurship education policy could be developed with an explicit intent to influence the economic function of economic development. The following implications stemming from the research attempt to address this aim within the limitations given by the boundaries and perspectives of research driven by a single case.

8.3 Implications

For entrepreneurship theory, this research implies the reclamation of a lost concept. Enterprise, as a concept, has been generally overlooked by economists and
entrepreneurship theorists alike from the perspective of an economic phenomenon and in its place has stood the alternate concept of business. However, with respect to economic concerns these two distinct concepts serve different functions. With the loss of enterprise, confusion with respect to the entrepreneur and business ownership has followed. Reframing entrepreneurship as a concept aligned with market level disruption removes the necessity to identify the entrepreneur as a business owner and instead the priority is placed on the individual who introduces market disruptive ideas into an economy. Often, the entrepreneur may be synonymous with the business owner but business ownership will not be the identifying attribute of an entrepreneur.

The concept of enterprise also broadens interest in the range of actors that contribute to entrepreneurship. Sociological theories, such as Actor Network theory, already acknowledge the value and contribution of other actors. Education however, has not tended to focus on developing the roles of others in entrepreneurship. For entrepreneurship theory the acknowledgement of other actors suggests the need to examine more carefully the theories behind the contributions that complement and provide foundation for the entrepreneur role. A major task for theoretical study is to develop the distinguishing features and attributes between the roles in enterprise and those in business and more completely reveal the specific knowledge and skills base that each enterprise role holds.

The association of enterprise with economic outcomes at the market level suggests that entrepreneurship theory needs to be more focussed on defining boundaries of markets and regions. It would not seem acceptable to study entrepreneurship without defining how entrepreneurship is relevant to a particular market/region dynamic. Studying business formation and the relationships between actors without addressing the market disruptive attributes of the venture would no longer constitute entrepreneurship research, but rather would more neatly align with business or small business research. The priority for entrepreneurship researchers would be to establish the form and type of market interaction that is the interest of their research and then show how the research design and sampling reflects this choice and informs the area of market level changes.

The argument of this thesis suggests that enterprise and business are distinct concepts. However in practice the identification of these distinctions may be difficult to
isolate and a major implication for theory is the need to develop the means, methods and models that articulate more clearly how enterprise and business are distinct and yet, related.

Beyond the level of theory there are more specific implications for different segments of the education sector. In the three following sections the implications for education providers, education consumers and practitioners will be discussed before moving to the area of principle interest to the research, policy.

8.3.1 Education providers and institutions

For education providers the findings of this research imply a need to re-examine the concepts of entrepreneurship and enterprise education. Apparent throughout the literature review was a tendency for providers to use entrepreneurship education as a means to promote being an entrepreneur as a career. Entrepreneurship or enterprise education, while acknowledging the multiple actors in the activity, focussed predominantly on providing skills and knowledge for all actors to play the one role of entrepreneur. Even the more generic attitudinal and behavioural form of enterprise education held the goal of promoting self-employment as an alternative form of career. In each case being an entrepreneur was interpreted as being the one who starts and owns a business. Australian education policy was found to adopt this same approach.

By framing entrepreneurship as an economic phenomenon, the implication for education providers is to shift entrepreneurship education away from a focus on business and the entrepreneur as the business starter. Instead, the entrepreneur should be considered to be the actor that plays the part of introducing a market disruptive good or service into a market driven economy. Other roles in enterprise include those who create or invent the market disruptive idea or innovation; finance the development and/or introduction of the disruptive idea into a market; coordinate and facilitate the infrastructure and environmental conditions for the introduction of market disruptive ideas; conduct or organise the disruptive idea’s development and readiness for market disruption; and, those who provide legal advice and counsel. Notably, the roles within entrepreneurship are not necessarily discreet to individuals and instead individuals may perform as few as one role and as many as all the roles necessary to create, develop and introduce a market disruptive idea.
The formation of a business is but one part of entrepreneurship when conceived in this manner and while it may be necessary it is not sufficient to be defined as entrepreneurship. There are also alternate pathways for an idea to disrupt markets, such as licensing, franchising or selling the idea to an existing business. Education that focuses purely on the business start-up process falls short of being education in entrepreneurship if it neglects its market disruptive function. This has further implications.

Framing entrepreneurship in the manner of this research suggests that the study of business management and growth is not the equivalent to entrepreneurship education. The growth and diffusion of market disruptive innovation becomes the defining and distinguishing parameter. Growing a business is only of interest to entrepreneurship within the context of introducing market disruption and diffusing innovation into a market economy. Other conceptions of business management, such as competitive behaviour and market share acquisition, and business disruptive practices, such as business model innovation, do not serve the interests of entrepreneurship as economic development and instead belong to business studies. While acknowledging an overlap, entrepreneurship can be differentiated from business and therefore the discipline of entrepreneurship can also be distinguished from the disciplines of business management. Entrepreneurship, in this way, can find its home outside of the business school and furthermore can be co-located within a variety of disciplines that contribute to market disruption.

Enterprise education is also brought into question when it is conceived in its attitudinal and behavioural form or model for education. Enterprise, when conceived as an economic activity has specific roles and actors and forms a part of an individual’s career. Enterprise education that acts as a model of education to introduce students to the world of commerce and industry and impart a set of attitudes and behaviours appreciative of a market economy can be confused with the definition of enterprise as an economic activity. Enterprise education, as a model of education, should be appreciated within its specific generalised context of industry and trade, while entrepreneurship education should remain true to an education that develops the career aspects of individuals who wish to be engaged in market disruptive enterprise activities.
8.3.2 Education consumers and practitioners

From the perspective of education consumers (students) this research implies a need for greater career choice and acknowledgement of the multiple roles in enterprise and entrepreneurship beyond that of the single role of the entrepreneur. Entrepreneurship learning in its totality should not be isolated to any one of the ‘for’, ‘through’ or ‘about’ categories referred to in the literature but instead should be appreciative of the value of all three perspectives and how they contribute to the understanding of entrepreneurship. Students could be introduced to these different aspects progressively as part of a general education although an entrepreneurship education career choice should be immersive in each of these areas. In other words a student of entrepreneurship should be skilled in the activity of enterprise by learning through it, be competent and capable in a combination of roles for enterprise and know about the function of enterprise along with its challenges and opportunities. An education in one aspect without the others would be incomplete.

Entrepreneurship learning from the perspective of higher education and careers would be characterised by multidisciplinary and interdependent roles. The development of entrepreneurship as distinct to business implies that it will move away from the business school and business management disciplines. In effect, entrepreneurship education would be taught in an interdisciplinary manner with the delivery of education being tailored to suit, complement and extend other disciplinary areas. Students would expect to become conversant in more than one academic discipline and be introduced to entrepreneurship via other conventional disciplines, extending their interdisciplinary knowledge. Students would encounter other students from a range of other disciplines and education would facilitate appreciation of multiple world-views. In this way students would become more adaptable and receptive to different perspectives and more able to work across and with those from other disciplines.

For practitioners it implies a more formalised recognition of the distinction between enterprise and business. This will bring into focus the different practices of both, in terms of management and implementation routines that are variants of business disciplines. The performance expectations will differ between these forms of organisation along with the measurement and reporting principles. For instance profit and loss statements will have less
meaning in enterprise although cash flow modelling will be a primary concern. The demands of stakeholders will vary with the expectation of returns being more long term and measures of both tangible and intangible contributions will be critical to accounting for variations of contributions between stakeholders and distributing accumulated wealth.

8.3.3 Policy

For policy, this research implies that an ambition for education to produce economic development requires clarity in policy about how education contributes to the economic outcome of development and what education providers can do to facilitate this form of economic activity. Principally, this will require a focus on the building of education pathways that bring together the currently disaggregated roles of enterprise. Policy can assist by providing both clarity with respect to the concepts of enterprise and economic development and incentives for education providers to create learning pathways that acknowledge the careers of those in different disciplinary and industry sectors that contribute to enterprise.

The continued lack of distinction between enterprise and business may lead policymakers to misplace expectations on policies that are directed toward business creation or growth. If it is considered that new businesses and business growth equate to economic development and economic growth then the results of these policies may over time prove disappointing and the policy be considered ineffective and consequently abandoned. If this were the case, there is a risk that some of the activity that could have been genuinely contributing to economic development and subsequent growth may also be left unsupported. It would seem vitally important for this distinction to be apparent and policy be formulated that distinguishes both the activity and the different effects of enterprise and business in an economy.

It is important, for another reason, that this distinction be clearly recognised in Australian policy circles and other nations which tend to adopt an ‘education school’ of thought. The approach adopted by this school of thinking does not make apparent that enterprise can be part of a career and that individuals may have specific roles to play that may be advantaged through education and training pathways. Instead, it creates a void
between enterprising attitudes and recognised education and training avenues which tend to
direct most would-be students toward the entrepreneur or business owner role and business
courses. This focus neglects education for the complementary roles of enterprise that
engages with the supply side dynamics of new ideas requiring market introduction and the
roles of those who support the process of introducing market disruptive goods and services.

It is argued that government policy in this area can have a significant influence in the
way enterprise is conceived and therefore enacted. Although policy is removed from the
direct interaction between students and teachers it has the potential to influence the
direction and focus of enterprise education. Government’s can either positively or
negatively affect the institutional settings that support the development of entrepreneurship
in regional milieus.

A key concept in the economic debate on education is that of consumer choice.
Meredyth (1998) claims that ‘[t]he effectiveness of human capital theory as economic and
educational doctrine lies … in the liberal philosophical foundation of its emphasis on the
choices of the educational consumer’ (p. 31). To avoid a dominance of an ideological
stance and political rhetoric, genuine pathways are required that provide education
consumers a choice regarding the work that they do. At a policy level government’s can
encourage the existence of these pathways and grow the human capital capacity to enter
into enterprise work that responds to the economic demands of a region.

The policy communication of the Australian federal government examined by this
research fails to make this choice clear. Instead, it suggests a generic unfocussed strategy of
enterprise education as a base through the secondary school system and appears to limit
further choice to a narrow band of the community in the higher education sector in the hope
of generating market disruption through new technologies. As noted earlier, it has been
found that entrepreneurship education intended to develop the business start-up skills of
students from the science, technology and creative design fields, is not effective in
establishing innovative and growth oriented businesses (Fletcher & Rosa 1998; Rosa 2003).
It is argued that instead, entrepreneurship education should address both the supply and
demand sides and such programs should aim to equip students with a broader capacity to
create, discover, develop and introduce market disruptive ideas in collaboration with others rather than just focus on business start-up.

Figure 8-1 represents the Australian enterprise education policy communications examined by this research. It shows the general focus of education policy for enterprise in the secondary school system, the limited emphasis that falls on the supply side of opportunities and the higher education system that directs most attention to the demand side. It is contended that this has two effects.

![Figure 8-1 The influence of enterprise education policy on the opportunity environment in Australia](Source: Author)

First, the strategy of broad secondary enterprise education creates a demand for further education and training in enterprise that is unmet by the current higher education system which fails to recognise that enterprise roles fall across many disciplines. Therefore, students may be tending to gravitate toward the nearest equivalent, that of business
(perhaps it is beyond coincidence that enrolments by young people in business and management courses has been steadily increasing in Australia; see Buckley, Lasky & O’Connor 2004) creating a demand side glut of those capable of introducing new opportunities through business start-up.

Second, in Australia, there is a relatively high number of individuals involved in the early-stage business activities of start-up and newly formed businesses (see the Australian Global Entrepreneurship Monitor reports from 2001 onwards – Hindle & Rushworth 2001, 2002 & 2004; Hindle & O’Connor 2005 & 2006 which evidences a healthy number of individuals falling on the demand side) and yet it seems that little attention is paid to the enterprise education and training of those in roles responsible for the creation and development of opportunities on the supply side. Therefore, would-be business owners will more readily find opportunities that contribute to the economic function of equilibrium. Arguably, the occurrence of economic growth therefore relies heavily on expansion of established markets through increased demand for existing products and services fuelling competition and price efficiency. Little growth opportunity stems from new market prospects arising from enterprise activities that generate genuine economic development.

In considering the concerns of regions and communities, policy-makers need to consider the inclusion of market definition when thinking about entrepreneurship. Often studies in entrepreneurship omit this determining level and instead focus on the individual, the business or a physical geographic boundary without accounting for the market implications contextualised within that boundary. Without definition of the market and its relevant boundary, a start-up business or business growth alone may account for efficiencies and equilibrium factors within existing or established markets and fail in any capacity to add to economic development or growth. Put simply, new business development and growth are not necessarily equal to economic development and growth.

In coming to terms with this claim, it must be added that geographic contexts can vastly alter the determination of the impact enterprise may have on economic contribution.

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8 Note that other factors such as low paying rewards for this type of work also influence this scenario but falls beyond the scope of this policy discussion.
By defining the market relative to a region, enterprise may be considered to create a new market or expand an established one and provide benefit to the region. However, when this same enterprise is considered over a wider market boundary this benefit may quickly dissipate and offer nothing to the dynamics of markets well established in more broadly defined boundaries. This circumstance highlights the difficulty and paradox encountered in concepts of national economic development. Investments in local or regional development may have no appreciable national impact on economic development or growth but be critical to the growth and development of local communities and/or regional communities.

### 8.4 Concluding policy propositions

The inquiry conducted by this research suggests four propositions for policy that may prove useful for directing education toward more defined practices that contribute to economic development. The theoretical nature of the research implies the need for further testing of these ideas.

The first proposition stems from the problematic definition of enterprise education in the vein of an ‘education school’ of thought. Throughout the research it was found that ‘enterprise’ was most often linked to a ‘human attribute’ that was commonly defined as a skill. This is consistent with the ‘education school’ of thinking described by Stevenson and Lundström (2002, p. 273) of the Australian government’s education policy. As already noted, this represents divergent thinking from that of other governments who instead favour an ‘economic school’ of thought (Stevenson & Lundström 2002) when conceiving entrepreneurship education policy.

In the Australian policy approach to entrepreneurship education there would seem to be an underlying assumption that individuals will pursue business ventures that advance and benefit the broader community and have an economic effect. This view is under attack and criticised in the academic literature especially where the effect of broad reaching enterprise programs has been analysed (see for instance Bögenhold & Staber 1991; Fletcher & Rosa 1998; Greene 2002; Meager, Bates & Cowling, 2003; Rosa 2003).

The ‘human attribute’ concept of enterprise education in Australian policy reveals a preoccupation with developing the entrepreneurial ‘actor’ which has been targeted in the
secondary school system and more particularly to the science and technology disciplines in higher education. However, the concept of ‘roles’ for enterprise extends beyond that of the creator/inventor of new technologies and therefore education only partially serves to fulfil the human capital needs for enterprise as an economic form of organisation. The narrow conception of ‘roles’ would appear inadequate without attention to the complementary roles that support enterprise activities.

If enterprise education is not considered as an education directed toward specific economic work it instead tends to identify with a general form of education with no defined career roles or pathways. Instead, by recognising that enterprise performs a distinct form of work in an economy it can readily be acknowledged as a legitimate activity involving a social process that advances the economic well-being of a community. Therefore, the first proposition suggests that national policy needs to maintain the notion of enterprise education to describe its economic concerns and consider enterprise as a work construct rather than an attitudinal construct.

**Proposition 1:** Consider ‘enterprise’ as an economic work construct rather than an attitudinal construct.

Proposition 2 concerns the different regional contexts that alter the demand for economic work as the macroeconomic conditions change. The analysis revealed that most often enterprise education was called upon as a way of learning and teaching and engaging community when the community faced adverse economic circumstances. When this situation arises the community is also in the most disadvantaged position to bring forth new market opportunities. On the other hand, when communities are more prosperous the demand for enterprise education changes and links are forged with the business community that tends to focus on the economic work of growth and market equilibrium. The economic work of enterprise that targets the creation and development of new markets is likely to be less prominent on the agenda. Therefore, the second proposition suggests policy-makers consider policy for enterprise education in light of the variation of entrepreneurship education demands across different regions.
Proposition 2: When considering entrepreneurship education policy, policy-makers need to recognise variation in local/regional demand for enterprise work to emphasise the education appropriate for the prevailing economic circumstances of local/regional milieus.

As the local/regional demands for enterprise education are considered, policy-makers also appear to need to remain cognisant of the case that responses to prevailing economic conditions do not anticipate changing economic conditions. For instance, the case was outlined where communities facing adverse economic conditions have limited capacities to generate new market introductions while in the grip of economic disadvantage. National governments can assist by playing a preventative role stimulating and maintaining enterprise education that constantly supports the development of individuals who can attend to the enterprise work of economic development. At the local/regional level it was also noted that in prosperous economic times the enterprise work of economic development is perhaps likely to become a secondary or minor priority under the influence of a more powerful business community influence. Therefore, national governments also may play a role in these times to ensure entrepreneurship education for economic development is maintained.

Proposition 3: Policy-makers need to ensure local/regional milieus are serviced by entrepreneurship education that deals with counter-cyclical circumstances and education for economic development specifically is consistently stimulated and maintained.

The final proposition deals more specifically with enterprise and entrepreneurship as aspects of an individual’s career rather than an attitude and builds upon the notion of enterprise work. Although not explicitly supported by the analysis of the Australian case, tacit support of the theory suggests that enterprise work should have defined education and training pathways. If enterprise is considered as an informal type of organisation that consists of individuals and institutions collaborating to create, develop and introduce new products and services that disrupt markets, then this organisational form must have its own theories. Enterprise therefore would have theories of operation, have functional roles that need to be performed and have social and institutional rules and resources to obtain, sustain and manage. These may be in someway different to these same functions within a business context. It follows then that education and training can serve to develop human capital with
skills and capacities to improve the performance of enterprise and that this career occupation may fall under the label of entrepreneurship. It is also noted that enterprise, for most, would not be a life-long career but would more likely occupy a portion of time within a career. These points suggest the fourth and final proposition that national governments should portray entrepreneurship education to serve the purpose of economic development.

**Proposition 4:** Policy needs to portray enterprise work as central to the entrepreneurship career choice and provide education pathways that intersect at different points over an individuals working lifetime, accessible from different levels and disciplines within the education system.

### 8.5 Critique of the method

The theory building process conducted here was not intended to produce a true or complete portrayal of the real or interpreted world we live in. The propositions concluded by this research are theoretical generalisations informed by an examination of Australian policy communication and may not be readily applicable to other nations without further testing in different political environments. Without doubt an analysis of another nations approach to education policy would reveal further insight, perhaps contradicting some of those presented here. This too may be the case even within Australia if one were to consider the education policies of the different states and territories. Continuing this line of thinking also invites analysis of policies and practices at education institutional levels at particular universities, colleges or schools. However, Yin (1994) makes the point that a single case can represent a significant contribution to knowledge and theory building when it tests what is considered to be well-formulated theory. Others have also suggested that theories can be tested or compared across different contexts in a series of studies (Eisenhardt 1989; Glaser & Strauss 1967; Yin 1994) and this work set out to open the debate on a theory of entrepreneurship education policy for economic development rather than conclude a definitive position.

A major criticism of the method may follow the claim that much of the foundational theory on entrepreneurship was merely the intuitive sense-making of early economists (Grebel, Pyka & Hanusch 2003). At the outset of this research it was assumed that this
accumulation of past work provided a rich tapestry of well considered and reasoned arguments with respect to economics and entrepreneurship. However, a major problem remains when researching a phenomenon that has both micro and macro characteristics that may not be evidential in the same temporal plane. That is, the actions of individuals carrying out entrepreneurship are not immediately observable at the macroeconomic level although it is thought that it is the macro level outcome that ultimately defines entrepreneurship and differentiates it from other forms of market based activity. Simply put, there is a time lag between action and outcome in entrepreneurship. Commonly, entrepreneurship researchers have examined the process of firm creation and growth carried out by individuals and assumed an economic relevance without any explicit association or reference to economic parameters.

The methodological implication of this for entrepreneurship theorists is that there must be explicitness about how the economic associations are being made relative to the research undertaken. Admittedly, the conception of entrepreneurship and economic development considered in this research is not the only way in which entrepreneurship can be conceived in economic terms. It is important though that entrepreneurship research makes explicit the economic contexts relevant to any particular study as it is in this way that assessment and distinction can be made about the relevance of the study to entrepreneurship theory and the ‘intuitive sense-making’ of economists can begin to be rendered against empirical evidence.

The derivation of a theoretical viewpoint to apply within any study also offers some challenge. In this study a systematic approach was used to anchor the correspondence of key terms between the fields of economics and entrepreneurship. The use of a system provides transparency with respect to the theoretical argument, although to some extent it sacrifices comprehensiveness. There is no guarantee that an adopted system comprehensively covers relevant literature. In this case however, comprehensiveness was less important than the general appreciation of what and how terms were migrated from one field to another. The transparency of this approach is important to assess the relevancy of the findings. It remains though that some authors may have managed to better and more consistently deal with the migration of concepts across the two fields of interest but it
seems that generally there is inconsistency about how this was achieved by the sampled authors that might imply a general condition.

Lewis and Grimes (1999) suggested that crossing paradigm boundaries and escaping a theorist’s natural paradigmatic predispositions raises issues and problems at each stage of the theory building process. This raises the question about how well a theorist can ‘bracket’ him or herself within a paradigm and fully appreciate the ramifications of data for theory. In this research, the theorist worked alone, although attempting to remain open to a number of perspectives on the data. This presents a limitation to the theory-building process that may have been improved by involving multiple theorists who identified with and checked different paradigmatic positions.

The method employed by this research was selected to match the form of data. However, data gathered in different ways and subjected to different analytical techniques to inform either the explanatory or exploratory research approaches may also reveal factors and issues not yet discovered. Furthermore, neither research approach was exploited to its fullest potential as they may have been if the study were focussed on only a single agenda to explain or explore. Rather, the research approach was adopted only to confront possible meanings found within a particular frame of reference from a limited data set. No further in depth analysis was conducted to explore issues that might have led to deeper understandings at the micro level nor were further confirmations sought for the explanatory study and in this way the study was limited by its scope and focus.

However, from the perspective of using economic theory to explain why policy was represented as it was, using the principles of a metaparadigmatic study avoided the prospect of an inconclusive position. It would have been necessary to either accept the theory and deny the validity of the policy practice, or accept the policy practice and deny the validity of the theory. In any case, the research conclusion would have been for the most part ‘more research required’ in order to establish the case for either the theory or the practice. Instead, by also using an alternative stance to explore what else was represented by the data it offered a range of findings that could be reconciled with the economic explanation and expose other possible explanations that account for multiple rationalisations of entrepreneurship education policy.
The use of content analysis for this research proved to be both a useful and a difficult tool. Its usefulness stems from its relative objectivity in locating key concepts and accounting for them within a particular data set. With the advent of computer enabled search tools words and phrases can be easily and quickly isolated from digitised texts. The enabling of text based analysis also means texts from different sources, times and contexts can be readily, easily and quickly examined in replicable manners. The difficulty associated with this method occurs when one moves beyond accounting for the presence, frequency and usage of key terms and phrases and into trying to relate and derive meaning from these terms. This difficulty was circumvented to some extent in this research by adopting specific techniques from discourse analysis. The techniques were more explicit in terms of locating and reporting meaning but regardless there remains the limitation of researcher interpretation. This is exposed by making transparent the analysis in the appended tabular representation of the analysis which proved to be a useful way of maintaining consistency over time by enabling the researcher to review and stabilise both approaches and derived meaning.

Another limitation to consider is the point of access to the concepts studied through the window of education policy. If another path were taken, say industry policy or employment or welfare policy, new or different findings may again be confronted. While this suggests a limitation to the findings of this study, different approaches are also a source of future research opportunities.

8.6 Future research opportunities

To extend the ideas and concepts raised by this research, and in the light of the limits of the study, a number of further research opportunities present themselves. For instance research could attempt to assess the economic work concepts against communities confronting different economic circumstances. Questions that explore the relationships between each of the forms of economic work with the economic well-being of a community may provide further insight into how policy might be formulated to best advantage the market-region dynamic. Some research questions might be: how is enterprise work propagated for market-region economic development? To what extent does economic
growth occur due to enterprise activities versus business activities? Who are the principal enterprise actors in different types of community economic situations? How do institutions influence the different forms of enterprise work? What is the relationship between economic circumstance and policies to generate economic work in different communities? Research into such areas would benefit the development of the economic work concepts.

An area untouched by this research is the learning and teaching environment for enterprise education. Research that addresses the pedagogical issues in learning and teaching for the different forms of economic work has not been explored. Clarity about how education and training is affected by acknowledgement of different enterprise performances is still required. Research that helps to define differences in content areas given the distinction between enterprise from business and the different contexts for enterprise remains unresolved. Similarly, different team and organisational dynamics between enterprise and business are likely to exist and research into these differences would be helpful to inform enterprise educators.

It is claimed that enterprise education should be made available at different points of an individual’s career and at different levels of education. This follows the logic that an enterprise career is not a lifelong commitment but an intermittent activity intervening with a career. That which is unknown is how decisions to pursue enterprise education at different points and at different levels will affect the enterprise activity or vice versa. Perhaps there is a relationship between the economic circumstances of a community and the time in an individual’s life when an enterprise career decision is made. On the other hand, perhaps these are unrelated and decisions are more intrinsically motivated rather than extrinsic. Research that seeks to understand career aspirations and goal orientation with respect to enterprise career decisions encompassing the wider set of roles would be helpful to educators and policy-makers.

Throughout the analysis of the DEST website tacit appreciation of relationships and linkages between enterprise and human capital development were encountered that are worthy of further investigation. Research might employ different methods to explicitly establish the nature or extent of the characteristics of these relationships and linkages. The areas of tacit appreciation were identified as: the general awareness of educators of the link
between enterprise activities and economic development; a distinction between enterprise and business and the roles for enterprise activities, and; the recognition of a generally acknowledged link between enterprise and community engagement and embeddedness. Research into areas such as these would assist to confirm the concepts articulated by this research project.

Research also could more fully explore the extent to which the ‘economy school’ of thought in government entrepreneurship education policies aligns with the concepts developed by this study. The ‘economy school’ suggests that ‘enterprise is about what entrepreneurs do – create businesses, jobs, wealth and those things that contribute to and comprise the economy’ (Stevenson & Lundström 2002). It can be noted that many of the indicators of enterprise in this description are based upon macroeconomic principles and this raises the question with respect to how microeconomic market principles factor into the economy school model of entrepreneurship education. Could there be an agreement between the concepts developed in this thesis with the notion of enterprise in the ‘economy school’?

The surfacing of multiple positions and perspectives in the data on education policy invites the question about how these views may come about, be reconciled or manifest different attributes of society. Further research could adopt a more critical stance to examine the emergence of competing perspectives that become entangled within policy discourse. This research would engage with such issues as regulation and change and social class and individualism that impact upon and influence social structures and would draw upon sociological theories such as institutional (Scott 1987; 1995) or structuration (Giddens 1982; 1997; Stones 2005) theory as a frame of reference.

8.7 Conclusion

This research has conducted a theoretical inquiry, and the Australian case was used as an exemplar of entrepreneurship education policy, citing innovation as an objective, to provide a context for a theoretical exploration. The development of the conceptual framework started with Schumpeter’s theory of economic development (that espouses a connection between the entrepreneur, innovation and market disruption), moved through an
analysis of the entrepreneurship theorists’ adoption of economic concepts and on to the contemporary application of these concepts in entrepreneurship education. Through this analysis of literature it can be observed that the clarity of Schumpeter’s original ideas have been obscured by competing concepts and consequently the power of these ideas have been lost and diluted.

The analysis of communicated policy has revealed tacit support for Schumpeterian ideas but the explicit positions are only partially supportive of a theory that connects the specific economic development objectives of innovation and market disruption to a reasoned approach to education. Instead competing perspectives are discovered that reconfigure the meaning and purpose of entrepreneurship education to include concepts of regionalism and community, a model for education, and work and employment.

This raises a number of implications for policy, education providers and institutions, education consumers and practitioners and entrepreneurship theory. The common threads between these are:

- the need for explicitness about the purpose of entrepreneurship
- the need to shift away from identifying the entrepreneur and entrepreneurship through the lens of business and toward recognition of economic impact
- the acknowledgement of the multiple roles that engage in entrepreneurship
- the acknowledgement of the multidisciplinary and interdependent nature of these roles, and
- the appreciation of the variation of entrepreneurship needs between regions and communities.

As a theoretical study this research also raises a number of further research opportunities aimed at testing the propositions offered, analysing different sets of data from various policy perspectives, exploring the implications of the research at more refined levels and developing the means, methods and approaches to distinguish entrepreneurship from business disciplines.
Overall, this research has been an attempt to build a theoretical basis for understanding the connection between entrepreneurship education and the economic policy intent of governments by using the Australian context as a case study. In attempting such a task a novel research approach was taken to try to understand some of the paradox encountered in entrepreneurship theory that influences both the education and policy domains. While it is acknowledged that this method does not provide definitive conclusions it does provide the basis for further research and experimentation in policy practice. It is hoped that others will seek to expand this theoretical approach and in time establish a credible and well grounded theory of entrepreneurship education policy theory.
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Appendix A – Page Search Findings

This Appendix contains the results from the series of searches conducted on the Department of Education, Science and Training’s website for the key search terms.

The Appendix corresponds with Figure 6-2 Summary of DEST website search page findings on page 117 of the thesis indicating the analysed and non analysed pages and labels the specific search page references.
Search 12/09/06 – ‘Entrepreneurship’: 21 found pages

You are here: Home > search

Advanced Search Details: Search Tips
Search:
- Anywhere in the page for entrepreneurship AND

Select search sectors:
- Search all sectors
- Career development
- Higher education
- Indigenous education
- International education
- Research

Select file type:
- Any File Type

Set date range:
- All
- Modified in the last Days

Search

Your search returned 21 results.
Search 12/09/06 – ‘Entrepreneurship’: Continued…
Search 12/09/06 – ‘Entrepreneurship’: Continued…

[Search results page]

- Search Page Ref: 2-9
- Search Page Ref: 2-10
- Search Page Ref: 2-11
- Search Page Ref: 2-12
- Search Page Ref: 2-13
- Search Page Ref: 2-14
- Search Page Ref: 2-15

[Links to various websites and reports related to entrepreneurship and education]
Search 12/09/06 – ‘Entrepreneurship’: Continued…

Your search returned 21 results.
Results ordered by Relevance
Order
Showing results 16-21 of 21

1. Questacon
   Questacon
   Last updated 11 May 2006

2. Funding of Science Lectureships for Universities and Incorporated Bodies
   Funding shown is total funding for the years 2000, 2001 and 2002.
   operating_grants/funding_of_science_lectureships.htm (27.3 KB)
   Last updated 26 April 2005

3. Science Lectureships Guidelines
   Science Lectureships Guidelines
   science_lectureships_guidelines.htm (24.7 KB)
   Last updated 21 June 2005

4. The Prime Minister's Science, Engineering and Innovation Council - Fourth Meeting
   The Council is the Australian Government's principal source of independent advice on issues in science, engineering and innovation and relevant aspects of education and training.
   meetings/fourth_meeting.htm (22.7 KB)
   Last updated 06 December 2005

5. The Prime Minister’s Science, Engineering and Innovation Council - Third Meeting
   The Council is the Australian Government's principal source of independent advice on issues in science, engineering and innovation and relevant aspects of education and training.
   meetings/third_meeting.htm (23.3 KB)
   Last updated 06 December 2005

   The Australian Government recognises the need to assist schools to develop in students effective foundation skills, employment-related competencies and a capacity for ongoing learning which will assist young people make a successful transition through school to further education, training, work and active participation in the community.
   enterprise_and_career_education_programme_guidelines.htm (39.3 KB)
   Last updated 21 June 2005

Search Page Ref: 2-16
Search Page Ref: 2-17
Search Page Ref: 2-18
Search Page Ref: 2-19
Search Page Ref: 2-20
Search Page Ref: 2-21
Search 12/09/06 – ‘Enterprise AND Entrepreneurship’: 5 found pages

Analysed
Search 12/09/06 – ‘Economic Development’: 33 found pages

1. Career development
2. Training & skills
3. Higher education
4. Research
5. International education
6. Indigenous education
7. Science & innovation
8. Policy & issues
9. Programmes & funding
10. Publications & resources
11. For students
12. For international students
13. For apprentices and trainees
14. For school leavers
15. For parents & community
16. For teaching staff
17. For administrators
18. For employers & industry
19. For researchers

Advanced Search Details: Search Tips

Search:
- Anywhere in the page
- For "economic development"
- AND

Select search sectors:
- Search all sectors
- Career development
- School education
- Higher education
- Science & innovation
- Indigenous education
- Training & skills
- International education
- DEST information
- Research
- ANTA

Select file type:
- Any File Type

Set date range:
- All
- Modified in the last

Search

Your search returned 33 results.
Results ordered by: Relevance
Order
Showing results 1-15 of 33
Search 12/09/06 – ‘Enterprise AND “Economic Development”’: 9 found pages
Search 2 12/09/06 – ‘Enterprise AND “Economic Development”’: Continued…
Appendix A

Enterprise, Education and Economic Development

Search 12/09/06 – ‘Enterprise AND “Economic Development”’: Continued…

The Adelaide Declaration on National Goals for Schooling in the Twenty-first Century - Preamble and Goals

This statement of national goals for schooling provides broad directions to guide schools and education authorities in securing high quality schooling outcomes for students to ensure they have the necessary knowledge, understanding, skills and values for a productive and rewarding life.

http://www.dest.gov.au/sectors/school_education/policy_initiatives_reviews/national_goals_for_schooling_in_the_twenty_first_century.htm (18.5 KB)

Learning for the knowledge society - An education and training action plan for the information economy

This Action Plan articulates the education and training industry’s response to the Government’s Strategic Framework for the Information Economy (December 1998), in particular to strategic priority 2: deliver the skills and education Australians need to participate in the information economy.


Indigenous Youth Mobility Programme

The Indigenous Youth Mobility Programme (IYMP) is part of the Australian Government’s Indigenous Australians Opportunity and Responsibility commitment.


Australian Chamber of Commerce & Industry member groups

Australian Chamber of Commerce & Industry member groups

http://www.dest.gov.au/sectors/school_education/programmes_funding/programme_categories/key_priorities/vocational_education_in_schools/australian_chamber_of_commerce_industry_member_groups.htm (34.5 KB)

Previous ‘latest additions’ 2001

Higher education publications 2001


The National Indigenous English Literacy and Numeracy Strategy

NIELNS Final Report

Search 12/09/06 – ‘Enterprise AND Pathway’: 34 found pages

[Image of a web search interface]

Analysed
Search 12/09/06 – ‘Enterprise AND Pathway’: Continued…

Duplicate Refer. Search 10
Duplicate Refer. Search 10
Search Page Ref: 7-1
Duplicate Refer. Search 10
Search Page Ref: 7-2
Duplicate Refer. Search 10
Duplicate Refer. Search 10
Duplicate Refer. Search 10
Search Page Ref: 7-3
Search 12/09/06 – ‘Enterprise AND Pathway’: Continued…

Northern Territory Businesses Reap the Rewards of Enterprise and Career Education

Departmental Media Release - 9 August 2001. Darwin businesses were today told how they could join 50,000 businesses around Australia that are already reaping the rewards of inviting enthusiastic young people to participate in their workplaces.


ACT Student Calls on Canberra Business to Open the Workplace to Schools

Departmental Media Release - Wednesday 8 August 2001. A young year 12 Indigenous student from Canberra’s Erindale College today called on ACT business to welcome school students into their workplaces to train and learn.


Employability Skills

The Department of Education, Science and Training has recently completed a project consultancy, managed by The Allen Consulting Group and the National Centre for Vocational Education Research, to develop a universal recognition and recording strategy for the eight groupings of employability skills. The project website can be found at the Allen Consulting Group website and the final report is now available.

http://www.dest.gov.au/sections/employability_skills/engraining_recognition/strategic_projects/2002/05/employability_skills.htm (11.8 kB)

Local Student Encourages NSW Businesses to Reap the Rewards of Enterprise and Career Education

Departmental Media Release - Tuesday 31 July 2001. A year 12 student from Macarthur Girls’ High School in Parramatta today told Sydney businesses how they could secure confident, experienced and knowledgeable employees by forging closer links with schools and encouraging school students into their workplaces to train and learn.


Represented industries

ACC Represented Industries


Australian Chamber of Commerce & Industry member groups

Australian Chamber of Commerce & Industry member groups

http://www.dest.gov.au/sections/school_education/programmes_funding/programme_categories/key_priorities/vocational_education_in_schools/australian_chamber_of_commerce_industry_member_groups.htm (34.5 kB)
Search 12/09/06 – ‘Enterprise AND Pathway’: Continued…

Search Page Ref: 7-10

Duplicate Refer. Search 10

Search Page Ref: 7-11

Search Page Ref: 7-12

Search Page Ref: 7-13

Search Page Ref: 7-14

Search Page Ref: 7-15

Search Page Ref: 7-16

Search Page Ref: 7-17
Search 12/09/06 – ‘Enterprise AND Pathway’: Continued…

Glossary - M to Q
National Training System Glossary - M to Q
http://www.dest.gov.au/sectors/training_skills/policy_issues_reviews/key_issues/nts/fts/ntsg.htm (96.1 KB)

Training Talk - November 2004 - Issue 14
Issue 14 of the Training Talk newsletter.
issue_14/default.htm (48.8 KB)

National Inquiry into School History - Chapter Eight: Research Findings, Commentary, Suggestions and Recommendations
The National Inquiry into School History was established and funded by the Commonwealth Department of Education Training and Youth Affairs (DETYA) in September 1999 to examine the status and nature of school history in Australia. Chapter 8: Research Findings, Commentary, Suggestions and Recommendations
chapter_8.htm (59.4 KB)

School Innovation: Pathway to the Knowledge Society - Chapter 1 - Innovation and Best Practice
Chapter 1. Introduction: The Innovation and Best Practice Project (IBPP) is one of the first large scale research and development projects that has specifically focused on innovation in schools, and one of the largest educational research projects ever undertaken in Australia
chapter_1.htm (76.9 KB)

School Innovation: Pathway to the Knowledge Society - Chapter 5 - The Middle-Years
SCHOOL INNOVATION: Pathway to the knowledge society Chapter 5 - The Middle-Years
chapter_5.htm (56.9 KB)

School Innovation: Pathway to the Knowledge Society - Chapter 6 - Leadership
SCHOOL INNOVATION: Pathway to the knowledge society. Chapter 6 - Leadership
chapter_6.htm (50.7 KB)
Search 12/09/06 – ‘Enterprise AND Pathway’: Continued…
Search 12/09/06 - ‘Roles’: 161 found pages

Not Analysed
Search 12/09/06 – ‘Enterprise AND Roles’: 35 found pages

Analysed
Appendix A

Enterprise, Education and Economic Development

Search 12/09/06 – ‘Enterprise AND Roles’: Continued…

[Image of a web browser showing a search result page]

Search Page Ref: 9-1

Duplicate Refer. Search 10

Search Page Ref: 9-2

Duplicate Refer. Search 10

Duplicate Refer. Search 10

Duplicate Refer. Search 10

Duplicate Refer. Search 10

Duplicate Refer. Search 10

Duplicate Refer. Search 10
Search 12/09/06 – ‘Enterprise AND Roles’: Continued…

[Web browser screenshot]

Search Page Ref: 9-3

Search Page Ref: 9-4

Search Page Ref: 9-5

Search Page Ref: 9-6

Search Page Ref: 9-7

Search Page Ref: 9-8

Search Page Ref: 9-9
Search 12/09/06 – ‘Enterprise AND Roles’: Continued…

1. SiteMap for the DEST Corporate website.
   Last updated 17 January 2006

2. Training Talk - September 2003 - Issue 8
   Issue 8 of the Training Talk newsletter.
   http://www.dest.gov.au/sectors/higher_education/programmes_funding/programme_categories/professional_skills/hrm/trainingtalk/issue_08/default.htm (20.5 KB)
   Last updated 26 April 2005

3. HEWRR2 - Direct Relationships With Employees
   Frequently asked questions - HEWRR2 – Direct Relationships With Employees
   Last updated 22 August 2006

4. Occasional Papers Series
   Occasional papers
   http://www.dest.gov.au/sectors/higher_education/programmes_funding/programme_categories/professional_skills/hrm/occasional_papers.htm (15.8 KB)
   Last updated 17 May 2005

5. Towards the Connected Learning Society
   An International Overview of Trends in Policy for Information and Communication Technology in Education
   http://www.dest.gov.au/sectors/higher_education/programmes_funding/programme_categories/professional_skills/hrm/towards_the_connected_learning_society.htm (20.2 KB)
   Last updated 26 April 2005

6. Research Quality Framework: Assessing the quality and impact of research in Australia – Final Advice on the Preferred RQF Model
   Final Advice on the preferred RQF model
   http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/research_quality_framework/final_advice_on_preferred_qrf_model.htm (20.9 KB)
   Last updated 22 June 2005

7. Search SiteMap.aspx
   Search Sitemap for the DEST Corporate Sharepoint Search
   Last updated 17 January 2006

8. Teachers for the 21st Century - Making the Difference
   Highly effective schools and improved student outcomes are key objectives of the Commonwealth Government. Education of the highest quality is the foundation for all our futures. It is education which empowers us to rise to the challenges of social, cultural, economic and technological change that we confront daily.
   http://www.dest.gov.au/sectors/school_education/policy_industry_and_partnerships/previous_reviews/teachers_for_the_21st_century.htm (60.5 KB)
   Last updated 26 April 2005

Duplicate Refer. Search 10
Search Page Ref: 9-10
Search Page Ref: 9-11
Search Page Ref: 9-12
Search Page Ref: 9-13
Search Page Ref: 9-14
Duplicate Refer. Search 10
Search Page Ref: 9-15
Search 12/09/06 – ‘Enterprise AND Roles’: Continued…

1. **Status and Quality of Teaching and Learning of Science in Australian Schools: Chapter 5 - Quality in Teaching and Learning of Science**
   The Status and Quality of Teaching and Learning of Science in Australian Schools. Chapter 5 - Quality in Teaching and Learning of Science. In this chapter, we draw together the main themes that represent a consensual picture of an ideal science education in Australian schools.

2. **The Prime Minister’s Science, Engineering and Innovation Council - Fourth Meeting**
   The Council is the Australian Government’s principal source of independent advice on issues in science, engineering and innovation and relevant aspects of education and training.
   [Link](http://www.dest.gov.au/sectors/science_innovation/science_agencies_committees/prime_ministers_science_engineering_innovation_council/meetings/fourth_meeting.htm)

3. **The Prime Minister’s Science, Engineering and Innovation Council - Second Meeting**
   The Council is the Australian Government’s principal source of independent advice on issues in science, engineering and innovation and relevant aspects of education and training.
   [Link](http://www.dest.gov.au/sectors/science_innovation/science_agencies_committees/prime_ministers_science_engineering_innovation_council/meetings/second_meeting.htm)

4. **National Developments in Vocational Training**
   NAC scollay
   [Link](http://www.dest.gov.au/sectors/training_skills/publications_resources/trainingtalk/issue_01/nac_scollay.htm)

5. **Higher Education Workplace Relations Requirements (HEWRRs)**
   Questions and answers relating to the Higher Education Workplace Relations Requirements (HEWRRs).

6. **School Innovation: Pathway to the Knowledge Society - Chapter 1 - Innovation and Best Practice**
   Chapter 1: The Innovation and Best Practice Project (IBPP) is one of the first large scale research and development projects that has specifically focused on innovation in schools, and one of the largest educational research projects ever undertaken in Australia.
   [Link](http://www.dest.gov.au/sectors/school_education/publications_resources/school_innovation/chapter_1.htm)

7. **School Innovation: Pathway to the Knowledge Society - Chapter 5 - The Middle-Years**
   SCHOOL INNOVATION: Pathway to the knowledge society Chapter 5 - The Middle-Years
   [Link](http://www.dest.gov.au/sectors/school_education/publications_resources/school_innovation/chapter_5.htm)
Search 12/09/06 – ‘Enterprise AND Roles’: Continued…
Search 12/09/06 – ‘Enterprise AND Pathway AND Roles’: 13 found pages

Analysed
Search 10/09/06 – ‘Enterprise AND Pathway AND Roles’: Continued…
Search 12/09/06 – ‘Enterprise AND Pathway AND Roles’: Continued…
Appendix B – Tabulated ‘Key Term’ Contextual Analysis

This appendix contains the ‘Key Term’ searches tabulated to correspond with the page search findings in Appendix A and describes the context of each of the terms within the located page. Each Key Term search is summarised in point form highlighting the particular contextual relationships found within the search page.
### Search  ‘Entrepreneurship’

<table>
<thead>
<tr>
<th>Page Ref.</th>
<th>Title</th>
<th>Brief Description</th>
<th>Context of ‘entrepreneurship’</th>
</tr>
</thead>
</table>
| 2-1      | Related websites                           | Websites with information relevant to science and innovation.                     | Link to Questacon Smart Moves Program  
Link to National Innovation Awareness site of the Dept of Industry Tourism and Resources                                                                                                                                             |
| 2-2      | Questacon Smart Moves Program              | Profile of Questacon Smart Moves Program                                           | Describes outreach program promoting entrepreneurship in science, engineering and technology for students, particularly those in years 9–12.                                                                                           |
| 2-3      | Support for school science education       | Lists the Department of Education, Science and Training's support for school science education | Link to Questacon Smart Moves Program                                                                                                                                                                                                                          |
| 2-4      | Funding arrangements                       | The Department of Education, Science and Training funds a range of programs and measures to promote science and innovation in Australia.                          | Link to Questacon Smart Moves Program                                                                                                                                                                                                                          |
| 2-5      | Enterprise Learning for the 21st Century – Case studies | Under the enterprise education section of the website it lists a set of case studies of enterprise learning initiatives | Refers to the Certificate II Entrepreneurship and Enterprise Skills case of trial and evaluation in Queensland and Victoria. This is a program that seeks to reintegrate at-risk young people into the community with an enterprising skill set, stronger resilience and a wider range of engagement. |
| 2-6      | The Prime Minister's Science, Engineering and Innovation Council - Second Meeting | Papers presented at the PMSEIC meeting on Friday, 4 December 1998                  | Refers to a paper The nexus between science and its applications that highlights three areas of deficiency in Australia for success in innovation and entrepreneurship. These are:  
- Education in science and technology, and entrepreneurial skills;  
- Government programs to encourage innovation; and  
- Venture-seed capital for emerging growth businesses.                                                                                           |
| 2-7      | The Future of Work                         | Information about the future of work, working and jobs.                            | Refers to a report that lists ‘entrepreneurship’ as a new subject for the future in the education curriculum                                                                                                           |
| 2-8      | Grants                                     | Information of the National Innovation Awareness Programs grants; recipients and guidelines | Details a grant for projects to be conducted during National Science Week that highlight the roles that science, engineering, innovation, technology and entrepreneurship play in our daily lives                                                                                   |
## Search on ‘Entrepreneurship’

<table>
<thead>
<tr>
<th>Page Ref.</th>
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<th>Brief Description</th>
<th>Context of ‘entrepreneurship’</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-9</td>
<td>For science and maths teachers</td>
<td>Under the science and innovation section this page provides links and information for science and maths teachers</td>
<td>Link to Questacon Smart Moves Program</td>
</tr>
<tr>
<td>2-10</td>
<td>For science and maths teachers</td>
<td>As above – different path</td>
<td>Link to Questacon Smart Moves Program</td>
</tr>
<tr>
<td>2-11</td>
<td>Questacon</td>
<td>Provides information on Questacon – The National Science and Technology Centre</td>
<td>Link to Questacon Smart Moves Program</td>
</tr>
<tr>
<td>2-12</td>
<td>Related websites (research)</td>
<td>Websites with information relevant to research.</td>
<td>Link to Questacon Smart Moves Program</td>
</tr>
<tr>
<td>2-13</td>
<td>Science education</td>
<td>Under the science and innovation section this page provides links and information pertaining to policy and reviews on key issues</td>
<td>Link to Questacon Smart Moves Program</td>
</tr>
<tr>
<td>2-14</td>
<td>Innovation report 2003-04: Backing Australia's Ability - real results real jobs</td>
<td>A report by Department of Education, Science and Training published in 2003 on the outcomes from the Australian government's support for science and innovation; focusing on research and development, developing skills, and commercialisation of research.</td>
<td>Part 2 of the report investigates fostering entrepreneurship and awareness of science and innovation, highlighting the National Innovation Awareness Strategy, the National Innovation Council, the Prime Minister's Science Prizes, the work of Questacon, and the Australian Museum Eureka Prizes.</td>
</tr>
<tr>
<td>2-15</td>
<td>Questacon Outreach Programmes</td>
<td>Travelling exhibitions and programmes that aim to reach communities that have limited exposure to science and technology.</td>
<td>Describes the Questacon Smart Moves Invention Convention Program</td>
</tr>
<tr>
<td>2-16</td>
<td>Questacon</td>
<td>As Above – different path</td>
<td>Link to Questacon Smart Moves Program</td>
</tr>
</tbody>
</table>
### Search 'Enterpreneurship'

<table>
<thead>
<tr>
<th>Page Ref.</th>
<th>Title</th>
<th>Brief Description</th>
<th>Context of 'entrepreneurship'</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-17</td>
<td>Funding of Science Lectureships for Universities and Incorporated Bodies</td>
<td>This page shows the total funding and beneficiaries for the years 2000, 2001 and 2002.</td>
<td>Outlines one grant that deals with New Science, industry and innovation that aimed to establish a team of staff to be the change agents in advancing industry linkages, knowledge transfer and entrepreneurship in the knowledge-based industries.</td>
</tr>
<tr>
<td>2-18</td>
<td>Science Lectureships Guidelines</td>
<td>Provides advice for Institutions Preparing Proposals for the Science Lectureships Initiative</td>
<td>Details how the funding is targeted toward projects that address entrepreneurship (amongst other) related to scientific and technological developments</td>
</tr>
<tr>
<td>2-19</td>
<td>The Prime Minister's Science, Engineering and Innovation Council - Fourth Meeting</td>
<td>Papers presented at the PMSEIC meeting on Friday, 26 November 1999</td>
<td>Paper presented on the nanotech industry and the need to stimulate entrepreneurship for the sector in Australia to take advantage of the good research.</td>
</tr>
<tr>
<td>2-20</td>
<td>The Prime Minister's Science, Engineering and Innovation Council - Third Meeting</td>
<td>Papers presented at the PMSEIC meeting on Friday, 25 June 1999</td>
<td>Paper presented on the biotech industry and the need for improved entrepreneurship in Australia to take advantage of research investments in this sector.</td>
</tr>
<tr>
<td>2-21</td>
<td>Enterprise and Career Education Programme 2000-01 to 2003-04: Programme Guidelines</td>
<td>Under school education this page details program guidelines</td>
<td>Outlines in an Appendix the support aims of the Enterprise and Career Education foundation that lists the promotion of a culture of entrepreneurship in Australia</td>
</tr>
</tbody>
</table>

### Summary

- 18 of the 21 sites relate entrepreneurship with science and technology and to a lesser extent engineering or research. This suggests that entrepreneurship is strongly directed toward the creator / innovator role.
Of the three non-science related sites, entrepreneurship is associated with culture change in site 21, site 5 relates entrepreneurship to a social re-integration program for at-risk youth and the third, site 7, suggests ‘entrepreneurship’ as a subject relating to the changing nature of work. Only site 7 may have strong relevance to our topic of enterprise and economic development and requires further exploration.

The Questacon program appears to be a major activity of the government to increase entrepreneurship among the science and technology sector. Questacon appears in 12 of the 21 pages and is responsible for the appearance of entrepreneurship on 11 of these pages.

Questacon’s aim is to promote entrepreneurship among the budding science and technology sector; particularly those in secondary school.

There seems to be a heavy emphasis on promotion of entrepreneurship with words like ‘promoting’, ‘promotion’, ‘fostering’, ‘stimulate’ and ‘encourage’ featuring either directly or indirectly (through the link to Questacon) in 15 of the 21 sites.

On the other hand ‘awareness’ raising only occurs in three pages and each is associated with innovation rather than entrepreneurship.
<table>
<thead>
<tr>
<th>Page Ref.</th>
<th>Title</th>
<th>Brief Description</th>
<th>Context of ‘enterprise-entrepreneurship’</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-1</td>
<td>Enterprise Learning for the 21st Century – Case studies</td>
<td>Under the enterprise education section of the website it lists a set of case studies of enterprise learning initiatives</td>
<td>Refers to the Certificate II Entrepreneurship and Enterprise Skills case of trial and evaluation in Queensland and Victoria. This is a program that seeks to reintegrate at-risk young people into the community with an enterprising skill set, stronger resilience and a wider range of engagement.</td>
</tr>
<tr>
<td>3-2</td>
<td>The Prime Minister’s Science, Engineering and Innovation Council – Second Meeting</td>
<td>Papers presented at the PMSEIC meeting on Friday, 4 December 1998</td>
<td>No explicit link between enterprise and entrepreneurship. The paper The Wills Health and Medical Research Strategic Review suggests that the management of research is an enterprise implicitly making a distinction between enterprise and business.</td>
</tr>
<tr>
<td>3-3</td>
<td>Funding of Science Lectureships for Universities and Incorporated Bodies</td>
<td>This page shows the total funding and beneficiaries for the years 2000, 2001 and 2002.</td>
<td>No explicit link between enterprise and entrepreneurship. One of the partners for a grant that deals with New Science, industry and innovation that aims to establish a team of staff to be the change agents in advancing industry linkages, knowledge transfer and entrepreneurship in the knowledge-based industries is the South Australian Enterprise Workshop.</td>
</tr>
<tr>
<td>3-4</td>
<td>The Prime Minister’s Science, Engineering and Innovation Council – Fourth Meeting</td>
<td>Papers presented at the PMSEIC meeting on Friday, 26 November 1999</td>
<td>No explicit link between enterprise and entrepreneurship. The paper Innovation in Established Businesses presents the case for enterprise funds be made available to businesses that target innovation. This suggests the distinction between business and enterprise.</td>
</tr>
<tr>
<td>3-5</td>
<td>Enterprise and Career Education Programme 2000-01 to 2003-04: Programme Guidelines</td>
<td>Under school education this page details program guidelines</td>
<td>Outlines in an Appendix the support aims of the Enterprise and Career Education foundation that lists the promotion of a culture of entrepreneurship in Australia.</td>
</tr>
</tbody>
</table>
Summary

♦ Two pages, 3-1 amd 3-5, associate ‘enterprise’ explicitly with ‘entrepreneurship’. In both these cases the association arises through either the naming of the program in the instance of page 3-1 or the naming of the foundation running the program as found in page 3-5.

♦ In pages 3-2, 3-3 and 3-4 ‘enterprise’ and ‘entrepreneurship’ were mentioned independently on the page.

♦ The context of ‘enterprise’ found in pages 3-2 and 3-4 tended to make distinctions between ‘enterprise’ and ‘business’. In the case of 3-2 ‘research management’ is argued to be an enterprise activity and in page 3-4 the activities of innovation within businesses is similarly considered to be ‘enterprise’.
## Search ‘Enterprise AND Economic Development’

<table>
<thead>
<tr>
<th>Page Ref.</th>
<th>Title</th>
<th>Brief Description</th>
<th>Context of ‘enterprise and economic development’</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-1</td>
<td><strong>Enterprise Learning for the 21st Century – Case studies</strong></td>
<td>Under the enterprise education section of the website it lists a set of case studies of enterprise learning initiatives</td>
<td>A Queensland case study involving the Logan Office of Economic Development. The case showcases the ‘Forging Links’ program that endeavours to create links between students, educators and industry. The student outcome appears to be centred around career awareness in business and industry and the relationship between entrepreneurial attributes and business success. It doesn’t appear to make an explicit link between enterprise and economic development but rather the promotion of business as a career pathway.</td>
</tr>
<tr>
<td>5-2</td>
<td><strong>Publications by Author</strong></td>
<td>Higher education publications</td>
<td>The list of publications reveals no documents with the coinciding terms in the title. Economic development however turns up one document that centres on university engagement with community for regional economic development. Enterprise within this document largely equates with business and industry although on occasions one gains a sense of tacit distinction when the university and R&amp;D are discussed. Publications that contain enterprise refer to the term in the context of ‘enterprise bargaining’ although another document (in addition to the one above) is also found to address universities and their engagement with community, business and industry.</td>
</tr>
<tr>
<td>5-3</td>
<td><strong>Publications ... Title</strong></td>
<td>Higher education publications</td>
<td>As for 5-2 listed in different order</td>
</tr>
<tr>
<td>Page Ref.</td>
<td>Title</td>
<td>Brief Description</td>
<td>Context of ‘enterprise and economic development’</td>
</tr>
<tr>
<td>----------</td>
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<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>5-4</td>
<td><em>The Adelaide Declaration on National Goals for Schooling in the Twenty-first Century - Preamble and Goals</em></td>
<td>This page is a statement of the national goals for schooling that provides broad directions to guide schools and education authorities in securing high quality schooling outcomes for students to ensure they have the necessary knowledge, understanding, skills and values for a productive and rewarding life.</td>
<td>No coincidence of the terms in the same context.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Economic development is referred as an outcome of achieving the goals set by this declaration for the students. It suggests broadly that satisfactory completion of schooling will contribute to ED.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Enterprise is referred as a set of skills which includes skills that maximise a student's flexibility and adaptability. Enterprise skills were not further defined on this page.</td>
</tr>
<tr>
<td>5-5</td>
<td><em>Learning for the knowledge society - An education and training action plan for the information economy</em></td>
<td>This Action Plan articulates the education and training industry's response to the Government's Strategic Framework for the Information Economy (December 1998), in particular to strategic priority 2: deliver the skills and education Australians need to participate in the information economy.</td>
<td>No coincidence of the terms in the same context.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Economic Development is found in one instance and is linked to the role of science and technology to produce economic development.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Enterprise is used in multiple contexts; sometimes referring to business, sometimes to an array of different types of organisations, sometimes to culture or attributes and sometimes to the education system itself as an enterprise that contains many enterprises. There is reference to the formation and growth of new enterprise (suggesting business) based on new technologies, which perhaps is a link to economic growth and potentially a factor in economic development – but this is not explicit.</td>
</tr>
<tr>
<td>5-6</td>
<td><em>Indigenous Youth Mobility Programme</em></td>
<td>The Indigenous Youth Mobility Programme (IYMP) is part of the Australian Government’s Indigenous Australians Opportunity and Responsibility commitment.</td>
<td>Economic development is referred to as an objective to be gained by developing the capacity of indigenous youth to take up skilled jobs. No mention is made of enterprise in the terms disruptive economics.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Enterprise occurs only in the context of the name of an indigenous regional employment unit.</td>
</tr>
</tbody>
</table>
Appendix B

Enterprise, Education and Economic Development

<table>
<thead>
<tr>
<th>Page Ref.</th>
<th>Title</th>
<th>Brief Description</th>
<th>Context of ‘enterprise and economic development’</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-7</td>
<td><strong>Australian Chamber of Commerce &amp; Industry member groups</strong></td>
<td>Australian Chamber of Commerce &amp; Industry (ACCI) member groups</td>
<td>The term ‘economic development’ occurs in the context of the name of regional offices responsible for economic development and the partnership of the ACCI that advises on education and training needs. ‘Enterprise’ is referred in the context of a teacher placement program that enables teachers to experience ‘enterprise’ on a short term (40 week) contracted placement.</td>
</tr>
<tr>
<td>5-8</td>
<td><strong>Previous ‘latest additions’ 2001</strong></td>
<td>Higher education publications 2001</td>
<td>Refers the same documents as located under 5-2</td>
</tr>
<tr>
<td>5-9</td>
<td><strong>The National Indigenous English Literacy and Numeracy Strategy</strong></td>
<td>NIELNS Final Report</td>
<td>Reports the same points of reference as found in 5-4 for ‘economic development’ and ‘enterprise’. In addition ‘enterprise’ is used in the context of describing businesses</td>
</tr>
</tbody>
</table>

Summary

- Generally it would seem that no explicit link between Schumpeterian economic development and enterprise is made.
- Economic development however is linked more clearly to either completion and/or advancement through secondary school education and science and technology and there is evidence of enterprise learning being featured in both these areas of education. However ‘enterprise skills’ remained undefined at this level of analysis.
- There is linkage by names of programs, offices or departments in four occurrences.
- Linkage between enterprise and economic development made through reference to university activity in community, business and industry engagement and this perspective might be considered in accord with a view of enterprise exogenous to the trading cycle.
The linkage to economic development and enterprise in indigenous issues suggests improving the employability of indigenous youth.
<table>
<thead>
<tr>
<th>Page Ref.</th>
<th>Title</th>
<th>Brief Description</th>
<th>Context of ‘enterprise and pathway’</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-1</td>
<td><strong>Miami Cluster Of Schools, QLD</strong></td>
<td>Quality schooling award announcement for Miami Cluster of schools</td>
<td>Describes special education educational pathways to enterprise but ‘enterprise’ appears treated as another term for industry or work.</td>
</tr>
<tr>
<td>7-2</td>
<td><strong>Career Information Centres</strong></td>
<td>Describes Centrelink's Career Information Centres</td>
<td>This Centrelink service provides advice on pathways broadly for career change and development or employment. Enterprise is found in the context of services that assist people to start a business.</td>
</tr>
<tr>
<td>7-3</td>
<td><strong>Breaks in the road: evaluation of the Indigenous Youth Partnership Initiative (IYPI): final report</strong></td>
<td>Provides an abstract for the final report on the evaluation of the Indigenous Youth Partnership initiative</td>
<td>Pathway is used to describe the transition of indigenous youth from schooling to training, employment and independence. Enterprise is used as an adjective to skills to describe a particular set of skills undisclosed on the page. Further investigation into the full report finds that enterprise skills refers to the 'skills required not only to gain employment, but also to progress within an enterprise so as to achieve one’s potential and contribute successfully to enterprise strategic directions’ DEST, Employability Skills for the Future, March 2002, p.3 Enterprise is furthermore used to describe attitudes (i.e. initiative and enterprise – although these seem to be considered as skills in the report) and a firm or business.</td>
</tr>
<tr>
<td>7-4</td>
<td><strong>Northern Territory Businesses Reap the Rewards of Enterprise and Career Education</strong></td>
<td>Press release of a minister’s address</td>
<td>Enterprise is contained in the name of the program that received $100m funding. Enterprise in this program related to a set of attributes and described innovative individuals. Pathway is cited as part of a different program name.</td>
</tr>
<tr>
<td>7-5</td>
<td><strong>ACT Student Calls on Canberra Business to Open the Workplace to Schools</strong></td>
<td></td>
<td>As for 7-4</td>
</tr>
</tbody>
</table>
### Search 7 ‘Enterprise AND Pathway’

<table>
<thead>
<tr>
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<th>Brief Description</th>
<th>Context of ‘enterprise and pathway’</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-6</td>
<td>Employability Skills</td>
<td>From 2006 employability skills will replace the current Key Competency Framework. This page describes the development and projects associated with a framework of employability skills</td>
<td>Pathway occurs in the context of a new Certificate I program designed to provide participants with a specific set of employability skills. Enterprise is referred to as a skill and yet again it more resembles an attitude as in the reference to initiative and enterprise. As the site suggests the emphasis is on employment.</td>
</tr>
<tr>
<td>7-7</td>
<td>Local Student Encourages NSW Businesses to Reap the Rewards of Enterprise and Career Education</td>
<td></td>
<td>As for 7-4</td>
</tr>
<tr>
<td>7-8</td>
<td>Represented industries</td>
<td>Australian Chamber of Commerce and Industry representatives linked to the vocational education in schools program</td>
<td>Pathways are referred mainly in the context of pathways into each of the industry sectors. One industry (HIA) highlights a pathway to self-employment. Enterprise is mentioned in the context of industry relaying to teachers industry views on enterprise education. Notably these industries would mainly represent a ‘market efficiency’ type of enterprise.</td>
</tr>
<tr>
<td>7-9</td>
<td>Australian Chamber of Commerce &amp; Industry member groups</td>
<td>Australian Chamber of Commerce and Industry member groups linked to the vocational education in schools program</td>
<td>Pathways are referred mainly in the context of pathways into each of the industry sectors. One industry (HIA) highlights a pathway to self-employment. Enterprise is used to describe one of the state based Chambers of Commerce.</td>
</tr>
</tbody>
</table>
### Search **‘Enterprise AND Pathway’**

<table>
<thead>
<tr>
<th>Page Ref.</th>
<th>Title</th>
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<th>Context of 'enterprise and pathway'</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-10</td>
<td><strong>Australian Vocational Student Prize</strong></td>
<td>Describes the prize and competition</td>
<td>Vocational Education and Training is described as offering a pathway to achieving potential. Enterprise is used in the context of the application whereby applicants must demonstrate initiative and enterprise.</td>
</tr>
<tr>
<td>7-11</td>
<td><strong>School Education Publications, 2004</strong></td>
<td>List of publications for school education</td>
<td>Enterprise occurs as a reference to a publication on the enterprise education action research project. This document is tagged as a key document for further exploration. Pathway is connected to different publications on the page and points to two programs, Career and Transition (CAT) and Partnership Outreach Education Models (POEM). Both programs emphasise diverse pathways to 'work'.</td>
</tr>
<tr>
<td>7-12</td>
<td><strong>Career and Transition Pilot Projects</strong></td>
<td>Profiles a number of CAT pilot projects</td>
<td>Multiple references to pathway are found on this page with all being to general pathways and transitions through education, career and work. Only one reference to enterprise occurs however in one program out of the 20 profiled. This reference is to a skills and enterprise passport which is an evidenced based document. No specific reference is made to enterprise as an economic work.</td>
</tr>
<tr>
<td>7-13</td>
<td><strong>Glossary - F to L</strong></td>
<td>This glossary contains terms (including abbreviations) likely to be found in recent literature of Australian vocational education and training (VET) research and policy. F to L Page only</td>
<td>Enterprise and pathway do not occur in the same term definition. Pathway is found associated with career, learning and training. No specificity in pathways to particular careers is found. Enterprise is found to be describing generally business and industry although specific inference is lacking which obscures a specific meaning.</td>
</tr>
<tr>
<td>Page Ref.</td>
<td>Title</td>
<td>Brief Description</td>
<td>Context of ‘enterprise and pathway’</td>
</tr>
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</tr>
<tr>
<td>7-14</td>
<td>Training Talk Newsletter - April 2006</td>
<td><em>Training Talk</em> is a web-based newsletter produced by the Vocational Education and Training Group of DEST. It aims to communicate up-to-date information on the Australian Government’s Training initiatives. April 2006 edition Iss 21</td>
<td>The newsletter introduces a New Apprenticeships Job Pathways website. Within this story pathway(s) is used repeatedly but in the context of the website but naturally the emphasis is on a job (or employment) pathway. Enterprise occurs as an inclusion among vocational, technical, enterprise and career education issues for a conference agenda. The inference is that enterprise (presumably industry and business but again imprecise) is concerned with education and is required to input into the debate about education.</td>
</tr>
<tr>
<td>7-15</td>
<td>The future of Australian science - A Chief Scientist perspective</td>
<td>The Chief Scientist engages with the research and industry communities, learned societies, and other portfolios and governments, to enable his comprehensive and timely advice to Government on a wide range of scientific and technological issues of importance to Australia. This page is one such perspective.</td>
<td>Enterprise is referred to under a section on Sustainability and is grouped with reference to ‘company’ i.e. enterprise and company in the context of understanding their interests. It is not clear exactly how enterprise is distinguished from a company and what is meant by enterprise if it isn’t a company. Pathway is used in the same section but in the context of finding solutions to sustainability problems. It is not considered in the career or work context. Notably career path is considered on the page but only in the context of science and technology.</td>
</tr>
<tr>
<td>7-16</td>
<td>Australian Vocational Student Prize</td>
<td>Same as 7-10 (different path)</td>
<td></td>
</tr>
<tr>
<td>7-17</td>
<td>The Future of the Past: Executive Summary of the Report of the National Inquiry into School History</td>
<td>A report of an investigation of the status and quality of the teaching and learning of history of Australia.</td>
<td>Pathway refers to teacher education at the post-graduate level in history education Enterprise is used to describe the activities of a joint project between Arts/Education faculties to establish a new National Centre for History Education.</td>
</tr>
</tbody>
</table>
### Search 7  ‘Enterprise AND Pathway’

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>7-18</td>
<td><strong>Glossary - M to Q</strong></td>
<td>This glossary contains terms (including abbreviations) likely to be found in recent literature of Australian vocational education and training (VET) research and policy. M to Q Page only</td>
<td>The definition of pathway is found on this page. Interestingly the glossary however (on the ‘E’ page) does not provide a definition for ‘enterprise’ but does define ‘enterprise agreement’ and ‘enterprise bargaining’. Enterprise is used to describe training organisations that deliver training internally to their own company or other organisation and also is used to describe an organisation active in any particular industry.</td>
</tr>
<tr>
<td>7-19</td>
<td><strong>Training Talk - November 2004 - Issue 14</strong></td>
<td><em>Training Talk</em> is a web-based newsletter produced by the Vocational Education and Training Group of DEST. It aims to communicate up-to-date information on the Australian Government’s Training initiatives. Nov 2004 edition</td>
<td>Pathway is found as a link to Youth Pathways – a guideline document for the service contract with providers of transitional education and training services for at-risk-youth. Enterprise is cited in two places and in both cases it is loosely coupled with descriptions of business, organisations and/or industry.</td>
</tr>
<tr>
<td>7-20</td>
<td><strong>National Inquiry into School History - Chapter Eight: Research Findings, Commentary, Suggestions and Recommendations</strong></td>
<td>The National Inquiry into School History was established and funded by the Commonwealth Department of Education Training and Youth Affairs (DETYA) in September 1999 to examine the status and nature of school history in Australia. Report is dated 2000</td>
<td>As for 7-17</td>
</tr>
</tbody>
</table>
### Search 'Enterprise AND Pathway'

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</thead>
<tbody>
<tr>
<td>7-21</td>
<td>School Innovation: Pathway to the Knowledge Society - Chapter 6 - Leadership</td>
<td>This page addresses school leadership in the innovation reform process for the education sector Pathway only occurs on this page due to the title of the report no other reference is made to pathway in this chapter. Enterprise is used to describe the contribution of professional development of teachers to the creation of an “organised, collective enterprise arising from a strong, school-wide professional community”. Enterprise here then describes an organisational form of a collective of people presumably engaged in the task of education.</td>
<td></td>
</tr>
</tbody>
</table>

### Summary

- Page 7-16 was a duplicated page and excluded from the analysis
- Page 7-1 is the only page with a reference to a pathway to enterprise but it is directed toward learners with special needs
- 7 of 20 pages (7-1, 7-3, 7-8, 7-13, 7-14, 7-15 and 7-19) each offer an imprecise meaning of enterprise with it loosely referring to business and industry.
- Page 7-2 was the only page that connected enterprise with starting a business
- 7 of 20 pages (7-3, 7-4, 7-5, 7-6, 7-7, 7-10 and 7-12) all refer to enterprise as a skill or human attribute
- 5 of 20 pages (7-9, 7-17, 7-18, 7-20 and 7-21) each describe enterprise as some form of specific organisation
- 4 of 20 pages (7-2, 7-4, 7-5 and 7-7) each refer to enterprise as part of a name of a scheme or program – these may also be considered however as a form of organisation
- Page 7-11 refers to enterprise as part of a publication. The publication is tagged as a key reference document for later exploration.
6 of 20 pages (7-2, 7-3, 7-10, 7-12, 7-13 and 7-14) use pathway to describe a general pathway through education and training for careers and employment

2 pages (7-17 and 7-20) refer to a specific education pathway to history teaching

4 of 20 pages (7-4, 7-5, 7-6 and 7-7) each refer to pathway as part of a program name.

Pages 7-8 and 7-9 describe pathway in terms of a specific industry destination.

Pages 7-11 and 7-14 refer to pathway is part of a program activity to develop, advise and support individuals in planning a pathway

Pages 7-19 and 7-21, pathway is found as part of a document or report name

Page 7-18 provides a definition of pathway from the glossary page

In page 7-15 the reference to pathway is unrelated to education or careers.
## Search 9 ‘Enterprise AND Roles’

<table>
<thead>
<tr>
<th>Page Ref.</th>
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<th>Brief Description</th>
<th>Context of ‘roles and enterprise’</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-1</td>
<td>Publications by Author</td>
<td>Higher education publications list</td>
<td>‘Roles’ occurs in six places and each is concerned with the changing roles of academics – none deals with enterprise roles in our context. Enterprise occurs seven times and six are related to enterprise bargaining. Interestingly one reference is to a discussion paper from a conference on ‘the university as an enterprise or an academy’.</td>
</tr>
<tr>
<td>9-2</td>
<td>Australia’s Teachers: Australia’s Future - Advancing Innovation, Science, Technology and Mathematics</td>
<td>An Executive summary page of a review of teaching and teacher education.</td>
<td>Roles in this page deal with the roles of teachers within their school environment. Roles in the enterprise context are not considered. Enterprise is used in the context of a valuable human attribute and a culture within a university that contributes to a teacher’s professional development. Enterprise is also mentioned as a collaborative teaching activity.</td>
</tr>
<tr>
<td>9-3</td>
<td>Partners in training</td>
<td>This page describes a new style of partnership for industry and registered training organisations that helps both sets of partners become more competitive in their field.</td>
<td>Roles are only used to describe the agreed ‘roles’ between two partners. Enterprise is used as a loose and generic term for businesses.</td>
</tr>
<tr>
<td>9-4</td>
<td>Models of delivery of vocational education and training in schools in rural and remote areas: Northern Territory, Queensland and Western Australia</td>
<td>This page is an abstract of a report which includes case studies, along with recommendations for expanding vocational learning opportunities for young people in remote and rural schools across Australia.</td>
<td>‘Roles’ is used in the context of schools and communities understanding their roles in ‘successful’ vocational education. Enterprise is used in the context of enterprise education and a description of community enterprises. The linked report contains substantial information on enterprise education and may reveal further insight about roles. This document is tagged for further exploration.</td>
</tr>
<tr>
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</tr>
<tr>
<td>9-5</td>
<td>ReCaP: Resource for Career Practitioners - Introduction</td>
<td>This Resource for Career Practitioners is a national career resource that supports the demanding role of the career practitioner by providing access to a consolidated set of important materials that can be used and organised in a flexible way.</td>
<td>Roles are considered in the context of career development support practitioners. Enterprise is used in the context of enterprise skills and refers to a further section of activities for the career development practitioner to exercise with a class. There is an entrepreneur activity sheet however it focuses on skills and personal attributes and not the roles of those who support the entrepreneur in enterprise.</td>
</tr>
<tr>
<td>9-6</td>
<td>Publications ... Title</td>
<td>Higher education publications list by title</td>
<td>Reveals same as 9-1</td>
</tr>
<tr>
<td>9-7</td>
<td>Terms of Reference</td>
<td>This page presents the terms of reference for a study that takes stock of the state of Australian science, technology and innovation by developing a comprehensive overview in terms of resources, players, linkages and performance.</td>
<td>‘Roles’ is considered at the macro levels with respect to the roles of the private and public sector in the innovation system. Enterprise is mentioned in the context of private enterprise and internationally competitive enterprise, although the latter is not clear whether it means ‘business’ or something other given that it is grouped with science and innovation skills.</td>
</tr>
<tr>
<td>9-8</td>
<td>The Adelaide Declaration on National Goals for Schooling in the Twenty-first Century - Preamble and Goals</td>
<td>This statement of national goals for schooling provides broad directions to guide schools and education authorities in securing high quality schooling outcomes for students to ensure they have the necessary knowledge, understanding, skills and values for a productive and rewarding life.</td>
<td>‘Roles’ is expressed within the context of the goals whereby students should acquire a set of attributes (qualities of self-confidence, optimism, high self-esteem, and a commitment to personal excellence) that will allow them to fulfil roles in community, work and family life. Enterprise on the other hand is listed as a set of skills which will allow them maximum flexibility and adaptability in the future.</td>
</tr>
<tr>
<td>9-9</td>
<td>Expert Advisory Group</td>
<td>Details the Expert Advisory Group members who support the development of the Research Quality Framework.</td>
<td>The terms ‘Roles’ and ‘Enterprise’ both occur in the mini bio of one of the group members but in the context of our interest.</td>
</tr>
</tbody>
</table>
### Search 9 ‘Enterprise AND Roles’

<table>
<thead>
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</table>
| 9-10      | Training Talk - September 2003 - Issue 8 | Issue 8 of the Training Talk newsletter. | ‘Roles’ is raised in the context of the Australian National Training Organisation and their new ‘roles’

‘Enterprise’ is found in several places. In one instance the terms business and enterprise are combined where business describes enterprise (i.e. business enterprise). In another place it tends to associate enterprise as a business and yet in two other places it refers to either a foundation or a working group within another organisation. |
| 9-11      | HEWRR 2 – Direct Relationships With Employees | Higher Education Workplace Relations Requirements (HEWRR) | The terms ‘Roles’ and ‘Enterprise’ occur within the context of enterprise agreements and committee roles. No association is found with the context of our interest. |
| 9-12      | Occasional Papers Series | Higher education occasional papers series of publications | ‘Roles’ is considered in the context of the changing work of academics.

Enterprise is used in the title of a 1994 evaluation paper on cooperative education and enterprise development program. |
| 9-13      | Towards the Connected Learning Society | An International Overview of Trends in Policy for Information and Communication Technology in Education | ‘Roles’ are discussed in terms of organisational level partnerships.

‘Enterprise’ is used in two contexts, first again describing a type of business and the other in conjunction with learning describing learning as an enterprise (i.e. learning enterprise). |
| 9-14      | Research Quality Framework: Assessing the quality and impact of research in Australia – Final Advice on the Preferred RQF Model | Pages lists advisory group members and links to final advice document | As for 9-9 |
### Search for ‘Enterprise AND Roles’

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<tr>
<td>9-15</td>
<td>Teachers for the 21st Century - Making the Difference</td>
<td>This page contains a policy on Teachers for the 21st Century that aims to improve teacher quality and increase the number of highly effective Australian schools in order to maximise student learning outcomes.</td>
<td>‘Roles’ is found in the context of teacher’s complex and demanding ‘roles’. Enterprise is used in the context of enterprise education and is linked to both vocational and career educations. No elaboration of enterprise education is found here but links and references to supporting pages and teacher support materials are made.</td>
</tr>
<tr>
<td>9-16</td>
<td>Status and Quality of Teaching and Learning of Science in Australian Schools: Chapter 5 - Quality in Teaching and Learning of Science</td>
<td>In this chapter, we draw together the main themes that represent a consensual picture of an ideal science education in Australian schools.</td>
<td>‘Roles’ are mentioned in the context of assessment. ‘Enterprise’ is mentioned in the context of science being an enterprise (i.e. scientific enterprise).</td>
</tr>
<tr>
<td>9-17</td>
<td>The Prime Minister’s Science, Engineering and Innovation Council - Fourth Meeting</td>
<td>Papers presented at the PMSEIC meeting on Friday, 26 November 1999</td>
<td>‘Roles’ is considered from the context of the role of science and technology in society and the ‘roles’ that leaders and science ambassadors can play in promoting and encouraging science awareness. The paper Innovation in Established Businesses presents the case for enterprise funds be made available to businesses that target innovation. This suggests the distinction between business and enterprise.</td>
</tr>
<tr>
<td>9-18</td>
<td>The Prime Minister’s Science, Engineering and Innovation Council - Second Meeting</td>
<td>Papers presented at the PMSEIC meeting on Friday, 4 December 1998</td>
<td>‘Roles’ are considered from the macro-position of industry and government but not from within the context of our interest. The paper The Wills Health and Medical Research Strategic Review suggests that the management of research is an enterprise implicitly making a distinction between enterprise and business.</td>
</tr>
<tr>
<td>9-19</td>
<td>National Developments in Vocational Training</td>
<td>Training Talk newsletter May 2002 Issue1.</td>
<td>‘Roles’ is used in the context of intermediaries in the education system. ‘Enterprise’ is used in the context of representing businesses.</td>
</tr>
</tbody>
</table>
Search 9 ‘Enterprise AND Roles’

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<tr>
<td>9-20</td>
<td>Higher Education, Workplace Relations Requirements (HEWRRs)</td>
<td>This page contains Questions and Answers that have been created to assist the higher education sector in understanding the Higher Education Workplace Relations Requirements (HEWRRs).</td>
<td>As for 9-11</td>
</tr>
<tr>
<td>9-21</td>
<td>Status and Quality of Teaching and Learning of Science in Australian Schools: Chapter 2 - Review of Science Education Literature and Reports</td>
<td>Chapter 2 This chapter presents a summary of national and international research literature, curriculum documents and reports that concern science education in schools.</td>
<td>‘Roles’ is referred in the relationship between learners and teachers. Enterprise occurs within this context: “science, technology and mathematics are inter-dependent human enterprises” and further science and technology is described as an enterprise and even more specifically a cultural enterprise.</td>
</tr>
<tr>
<td>9-22</td>
<td>Reporting on Student and School Achievement</td>
<td>This research project provides further understanding of how schools and education systems can best meet the expectations of parents and the wider community for information about student and school achievement.</td>
<td>‘Roles’ is used heavily on this page referring mainly to the roles that parents and teachers play in the school learning environment and child education. One interesting use of the term emerges however in the discussion of children learning about social roles and interaction. Implicitly enterprise could fall into this category of learning. ‘Enterprise’ is found coupled with technology in the WA curriculum as part of the key learning areas. No reference to roles and enterprise coincide.</td>
</tr>
</tbody>
</table>

Summary

♦ Roles and enterprise do not explicitly coincide in the same context within the found pages.

♦ Roles however are tacitly linked to enterprise in pages 9-8, 9-17, 9-21 and 9-22 through discussion of roles within society and community or a ‘cultural’ enterprise. Undertaking Schumpeterian enterprise could be considered to be contained within these contexts.
In this search combination the roles of teachers, academics and parents find frequent reference with respect to education of students and children on pages 9-1, 9-2, 9-5, 9-6, 9-12, 9-15, 9-21 and 9-22.

Roles are also found to be considered at an aggregated organisation unit (for instance private or public sector, committees, schools etc) in pages 9-3, 9-4, 9-7, 9-10, 9-11, 9-13, 9-18, 9-19 and 9-20

Interestingly tasks were considered as playing a ‘role’ in education in the context of assessment but this has no relevance to this discussion.

Two pages were found to contain a short biography of an advisory group committee member that used the terms ‘roles’ and ‘enterprise’ but these were not considered as relevant to our discussion.

‘Enterprise’ was found to connected to the topic of enterprise bargaining and agreements on four pages, 9-1, 9-6, 9-11 and 9-20

‘Enterprise’ education and enterprise skills were found on four pages 9-4, 9-5, 9-8 and 9-15 although again we find evidence of skills being portrayed as attitudes within this form of education.

‘Enterprise’ occurred as a description of other forms of organisation (other than a commercial business) in 10 of the 22 pages: 9-1, 9-2, 9-4, 9-10, 9-13, 9-16, 9-17, 9-18, 9-21 and 9-22. This included universities, community, learning, collaborative teaching, innovation, research management, cultural and technology.

‘Enterprise’ was synonymous with business in 5 pages; 9-3, 9-7, 9-10, 9-13 and 9-19.

In one page, 9-12, the context of enterprise was unclear but connected to a 1994 paper that had no link.
### Search ‘Enterprise AND Pathway AND Roles’

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<tbody>
<tr>
<td>10-1</td>
<td>sectoratoz.htm</td>
<td>This A-Z index is a simple alphabetical listing of document and page titles appearing on this website. If you have trouble locating material on a particular topic, please use our Search engine and its ‘Advanced Search' options.</td>
<td>The coincidence of any two of the three terms in any one document description is not found.</td>
</tr>
<tr>
<td>10-2</td>
<td>training_skills_publications_atoz.htm</td>
<td>Training &amp; Skills publications A to Z</td>
<td>The coincidence of any two of the three terms in any one document description is not found.</td>
</tr>
<tr>
<td>10-3</td>
<td>all_publications_atoz.htm</td>
<td>All DEST Publications A - Z</td>
<td>The coincidence of any two of the three terms in any one document description is not found.</td>
</tr>
<tr>
<td>10-4</td>
<td>atoz.htm</td>
<td></td>
<td>The coincidence of any two of the three terms in any one document description is not found.</td>
</tr>
<tr>
<td>10-5</td>
<td>sitemap.htm</td>
<td></td>
<td>The coincidence of any two of the three terms in any one page title is not found.</td>
</tr>
<tr>
<td>10-6</td>
<td>SearchSiteMap.aspx</td>
<td></td>
<td>The coincidence of any two of the three terms in any one page title is not found.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>However many pathway documents were found to industry sectors i.e. transportation and logistics, hairdressing, funeral services, early childhood education etc.</td>
</tr>
</tbody>
</table>
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<td>10-7</td>
<td>Enterprise and Career Education Programme 2000-01 to 2003-04: Programme Guidelines</td>
<td>Under school education this page outlines the guidelines for a programme that extended across 2000 to 2004 attracting $25m in funding of which $10m went to the Enterprise and Career Education Foundation.</td>
<td>The term 'roles' describes only the roles of the Department (DEST) and the Enterprise and Career Education Foundation. Roles within enterprise is not discussed. The term pathway is connected to a former Prime Ministerial activity the Prime Minister’s Youth Pathways Action Plan Taskforce 2001, <em>Footprints to the Future</em> which recommended that “all Australians have access to a range of vocational learning and enterprise education experiences while at school.” Interestingly pathway again occurs under a section describing the National goals for schooling in the 21st Century with respect to careers and vocations. 'Enterprise' is mentioned under this section also but in the context of skills. It seems 'enterprise' as a form of education is considered distinctly to 'pathway'. This page will be tagged as a key document for further analysis.</td>
</tr>
<tr>
<td>10-8</td>
<td>School Innovation: Pathway to the Knowledge Society - Chapter 1 - Innovation and Best Practice</td>
<td>This page is Chapter 1 of a 2001 report on School Innovation</td>
<td>Roles are discussed in the contexts of student-teacher relationships and leadership within schools. Enterprise is only mentioned within the context of skills. Pathway is discussing the pathway for the schools to best practice activities.</td>
</tr>
</tbody>
</table>
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<tr>
<td>10-9</td>
<td>School Innovation: Pathway to the Knowledge Society - Chapter 5 - The Middle-Years</td>
<td>This page is Chapter 5 of a 2001 report on School Innovation</td>
<td>Pathway only occurs in the title</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Enterprise is mentioned as a human attribute within the context of one case.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Roles is mentioned in the same context of enterprise but not as a role in enterprise but rather as roles within group activities through which the participants display enterprising qualities. ‘Roles’ is further mentioned in relation to school leadership.</td>
</tr>
<tr>
<td>10-10</td>
<td>School Innovation: Pathway to the Knowledge Society - Chapter 10 - Lessons for Policy</td>
<td>This page is Chapter 10 of a 2001 report on School Innovation</td>
<td>Pathway only occurs in the title</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Enterprise is used to describe the ‘new school model’ that will have increased responsibilities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>‘Roles’ is referred to at the school level.</td>
</tr>
<tr>
<td>10-11</td>
<td>The National Indigenous English Literacy and Numeracy Strategy</td>
<td>This page describes the National Indigenous Literacy and Numeracy Strategy that holds an objective to achieve English literacy and numeracy for Indigenous students at levels comparable to those achieved by other young Australians.</td>
<td>‘Roles’ mainly addresses the indigenous education workers roles in schools and one reference goes to life roles as family, community and work-force members.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Enterprise is referred as a set of skills which includes skills that maximise a student’s flexibility and adaptability. Enterprise skills were not further defined on this page. In addition ‘enterprise’ is used in the context of describing businesses.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pathway is mentioned in the context of progressing in education and work but not specifically relating to enterprise except where enterprise is considered as a business and business is either a destination or workplace training in a business is part of the pathway.</td>
</tr>
</tbody>
</table>
### Search 'Enterprise AND Pathway AND Roles'

<table>
<thead>
<tr>
<th>Page Ref.</th>
<th>Title</th>
<th>Brief Description</th>
<th>Context of ‘enterprise’, ‘pathway’ and ‘roles’</th>
</tr>
</thead>
</table>
| 10-12     | **Status and Quality of Teaching and Learning of Science in Australian Schools - Appendices** | This page is the appendix to the Research Report prepared for the Department of Education, Training and Youth Affairs on ‘The Status and Quality of Teaching and Learning of Science in Australian Schools’ (undated)                                                                                                                                                                                                                                                                                                                                                         | Pathway is mentioned in the context of progressing in education in indigenous cultures. Enterprise is encountered as a learning curriculum framework in two case studies (others in one of these are ‘culture’ ‘community’ and ‘environment’) although it is unclear what the framework actually considers enterprise to be.

‘Roles’ is encountered in the description of a case study where students who are studying science are working as a team with specific roles. These roles simulate the roles of an enterprise team and are described as “the Designer, the Communications Officer, the Accountant and the Coordinator. The Coordinator has to look after the group and make sure everyone does everything. The Accountant has to find out how much everything costs and make sure we are under the budget. The Communications Officer has to write a report and justify why we designed the room the way we did. The Designer had to figure out what type of paint can be used and designs everything. It’s good but, it gives us an insight into the real world”. While the emphasis is on science it could equally be an enterprise team.
### Search

<table>
<thead>
<tr>
<th>Page Ref.</th>
<th>Title</th>
<th>Brief Description</th>
<th>Context of 'enterprise', 'pathway' and 'roles'</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-13</td>
<td><strong>Learning for the knowledge society - An education and training action plan for the information economy</strong></td>
<td>A report from 2000. This Action Plan articulates the education and training industry's response to the Government's Strategic Framework for the Information Economy (December 1998), in particular to strategic priority 2: deliver the skills and education Australians need to participate in the information economy.</td>
<td>Pathway is mentioned in the context of progressing in education and work but not specifically relating to enterprise. Enterprise is used in multiple contexts; sometimes referring to business, sometimes to an array of different types of organisations, sometimes to culture or attributes and sometimes to the education system itself as an enterprise that contains many enterprises. There is reference to the formation and growth of new enterprise (suggesting business) based on new technologies, which perhaps is a link to economic growth and potentially a factor in economic development – but this is not explicit. Roles are considered at government and organisational levels but not at the individual within enterprise.</td>
</tr>
</tbody>
</table>

### Summary

- The terms ‘pathway’ ‘roles’ and ‘enterprise’ do not explicitly coincide in the same context within the found pages.
- The first six pages revealed by the search are all publication or site page indexes and no publication or page reference listed combines all three terms of the search.
- Roles are found to be considered at an aggregated organisation unit (in this case departments, foundations, schools, government or organisational etc) in pages 10-7, 10-10 and 10-13.
- Roles are also linked into discussion of relationships between student-teacher (page 10-8) and student-student (page 10-9). Page 10-12 makes explicit reference to roles of members in a science project team that are listed as the Designer, the Communications
Officer, the Accountant and the Coordinator. The roles of this student team emulate those of enterprise as we distinguished in Chapter 3.

- Roles were also discussed within the context of indigenous workers in schools (page 10-11) and leadership in schools (page 10-8 and 10-9).

- Pathway is mentioned only in the title in two pages and does not inform our inquiry further (pages 10-9 and 10-10).

- Pathway describes the route through education and work in pages 10-7, 10-11, 10-12 and 10-13. Notably page 10-7 links this pathway through ‘enterprise education experiences’ which perhaps conveys a meaning of education through work experience in business although it is imprecise and unclear.

- Pathway is also found in the context of schools working toward best practice (page 10-8).

- Enterprise is described in terms of human skills and attributes on pages 10-7, 10-8, 10-9, 10-11 and 10-13.

- Page 10-10 uses the term ‘enterprise’ to describe an organisational unit (the school).

- Page 10-12 offers an interesting perspective on enterprise where it is considered a curriculum framework within which other skills such as numeracy and literacy development are embedded. This operates alongside three other curriculum frameworks being ‘culture’, ‘environment’ and ‘community’.
Appendix C – Key Document Analysis

This appendix contains the analysis of the key documents, KD-1 to KD-4. The tables list the extracts from the key documents showing the key terms and exhibiting the qualification and situation meaning concluded from the use of the key term within the context of the extract. The key term is highlighted (shaded grey) in the extract passage.

Each extract has been given a unique identification number by a two part formation where the first part is the indexed number of the extract in accordance with its order in the findings and the second part is the page number of the document from which the extract is drawn.
At the middle level of engagement, regional economic development priority achievement engagement is more ad-hoc in focus, project-specific in implementation, staff member-specific and enterprise-specific in targeting.

The regional milieu represents an area big enough to embrace a wide range of the essential ingredients required to generate competitive economic development, including being a national launch pad for distinctiveness in the global economy for its enterprises and institutions.

...because ‘space’, ‘place’ and spatiality are individually and socially constructed, their essence and core characteristic is conflict: the confusing, confounding and contradictory conflict between the multiple spatialities of individuals, families, enterprises, organisations and institutions...Space, place and the spatialities of agents, redolent with confusion, contradiction and conflict, are intrinsic to the relationships which drive the economics of societies of places in particular directions and link them uniquely into the global economy. (Taylor, et al 1997, pp. 59–61).

### Appendix C

<table>
<thead>
<tr>
<th>Page</th>
<th>Text</th>
<th>Enterprise, Education and Economic Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/17</td>
<td>As Storper (1997) has identified, firms and institutions in regions can get away with being <strong>lean learners</strong>, despite being regionally embedded, just in the same way that many regional enterprises and institutions are already based around ‘...lean management and easy entry and exit territories’ (Storper 1997: 298).</td>
<td>Regional – geographic connection Note: Quote from a supporting document.</td>
</tr>
<tr>
<td>5/22</td>
<td>Factors identified in the regional community as explaining the nature and extent of university/region engagement included the extent of regional stakeholder organisation, the extent of regional institutional collaboration and competition, the ability of regional enterprises to articulate their R&amp;D needs, the success of regional leaders to drive the regional agenda, the speed of problem solving, and the availability of financial resources to stimulate regional cooperation.</td>
<td>Regional – geographic connection Regional engagement through R&amp;D needs</td>
</tr>
<tr>
<td>6/25</td>
<td>Dimensions of the learning region were disaggregated into five main attributes (knowledge, learning-based infrastructure, the global/local interface, factor conditions and regional development outcomes) and economic impact is defined in terms of six qualitative measurable indicators (enterprise development, skills transfer, supply chains, R&amp;D, partnerships and community involvement).</td>
<td>Regional economic development Unqualified use could mean business or some other form of organisation</td>
</tr>
<tr>
<td>7/26</td>
<td><strong>Institutions will need to be more assertive in the way they involve themselves with the economics of the region in which they are located, and contribute more to their own and to national objectives through their teaching, research, leadership, information and networking.</strong> They can create and foster an entrepreneurial culture within their regions, and act as powerhouses for further enterprise development in those regions. This will provide the right environment for institutions to commercialise their research activities and foster spin-off companies, further supporting their region (sec. 7.32).</td>
<td>Regional development Unqualified use could mean business. Note: Quote from a supporting document.</td>
</tr>
<tr>
<td>8/49</td>
<td>The changes in employer demands for skills is being driven by fundamental changes in the structure and operating practices of both large corporate and small business enterprises and institutions as well as changes in the conceptualisation of products and services brought about by globalisation of markets and finance.</td>
<td>Size qualified suggesting spatial or volumetric dimensions but unqualified in terms of meaning; could mean business. Skills</td>
</tr>
<tr>
<td>Page</td>
<td>Text</td>
<td>Unqualified use could mean business.</td>
</tr>
<tr>
<td>------</td>
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<td>-------------------------------------</td>
</tr>
<tr>
<td>9/58</td>
<td>On the university side, such initiatives include holding university information sessions throughout the region, the provision of entry scholarships to local students, the lowering of entry level requirements for local students and the tailoring of specific degree courses to meet local regional industry and <strong>enterprise</strong> needs.</td>
<td></td>
</tr>
<tr>
<td>10/59</td>
<td>The University also has a number of specific business <strong>enterprise</strong> partnerships to deliver industry oriented teaching programs in engineering (with the Pacific Power energy company) and science (BHP. Co. Ltd. laboratories).</td>
<td>Qualified by the term ‘business’ Teaching ‘engineering and science’ functions</td>
</tr>
<tr>
<td>11/72</td>
<td>The University of Newcastle is a key player in the Hunter Region community venture Hunter@Work. The project is an alliance of the Hunter Region’s business community, unions, local councils and the university. The project focuses on key regional business initiatives (such as small <strong>enterprise</strong> facilitation initiatives, industry clusters across six of the 18 industry clusters in the region, and key transport infrastructure development) and seeks to maximise the jobs, including those for university graduates, which flow from these initiatives.</td>
<td>Size qualified suggesting spatial or volumetric dimensions but unqualified in terms of meaning; could mean business.</td>
</tr>
<tr>
<td>12/77</td>
<td>At the next level, they can adopt an ad-hoc project-specific approach to articulated regional priorities that are staff member-specific rather than team-based, discipline-specific rather than multi-disciplinary and <strong>enterprise</strong>-specific rather than region-wide.</td>
<td>Unqualified use could mean business or some other form of organisation</td>
</tr>
<tr>
<td>13/80</td>
<td>The IDC also provides business support for small and medium <strong>enterprises</strong>.</td>
<td>Size qualified but unqualified in terms of meaning; normally this use refers to business.</td>
</tr>
<tr>
<td>14/86</td>
<td>project-related partnerships with regional business <strong>enterprises</strong> and institutions;</td>
<td>Qualified by the term ‘business’</td>
</tr>
<tr>
<td>15/94</td>
<td>For the most part, campus-industry partnering in regionally focussed teaching programs was constrained to the larger regional centres where larger business <strong>enterprises</strong> could be found.</td>
<td>Qualified by the term ‘business’</td>
</tr>
<tr>
<td>Date</td>
<td>Description</td>
<td>Recommendations</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 16/97 | A good example of an approach to partnering research on a whole-of-region basis is the University of Newcastle's Industry Development Centre. The Centre assists industry development and employment opportunities in the region in partnership with Hunter business interests through strategies that include business enterprise clustering in agribusiness, building and construction, Hunter Ednet, information technology (Huntertech), mining and sustainable industries, networking and business support. | Qualified by the term ‘business’  
Regional engagement – research to provide employment – potentially provides pathway |
| 17/97 | *Campus partnerships with business enterprises in the region.*                                                                                                                                               | Qualified by the term ‘business’  
Knowledge-based research partnerships and campus engagement with the region’s economic development objectives - potentially provides pathway |
| 18/97 | Also at the University of Newcastle, the Department of Chemical Engineering has developed a number of large enterprise research partnerships with companies like BHP, MIM, Boral, Incitec.                                              | Size qualified but unqualified in terms of meaning.  
Knowledge-based research partnerships and campus engagement with the region’s economic development objectives - potentially provides pathway |
| 19/97 | The Department of Electrical and Computer Engineering and the Department of Chemistry also have a range of business enterprise research partnerings in the Hunter Region in both large and small companies.                                                                 | Qualified by the term ‘business’  
Knowledge-based research partnerships and campus engagement with the region’s economic development objectives - potentially provides pathway |
| 20/98 | The Greenhill Enterprise Centre, located within the Ballarat Technology Park, is intended to provide a nurturing environment for small IT businesses involved primarily in information technology research and development.                                                                 | Name associated  
Economic growth (business growth) - potentially provides pathway |
<table>
<thead>
<tr>
<th>21/98</th>
<th>There are around 12 such tenants in the enterprise centre at present.</th>
<th>Name associated (Greenhill)</th>
<th>Economic growth (business growth) - potentially provides pathway</th>
</tr>
</thead>
<tbody>
<tr>
<td>22/99</td>
<td>These attributes have as much an impact on the location decisions of enterprises as the more traditional hard infrastructure.</td>
<td>Unqualified likely to mean business but could mean some other form of organisation</td>
<td>Attractiveness of regions for business</td>
</tr>
<tr>
<td>23/111</td>
<td>incorporating greater consideration of the knowledge, leadership and infrastructure contribution universities can make to the design and delivery arrangements for services provided in their local areas by government and non-government institutions and enterprises on a purchaser/provider basis;</td>
<td>Unqualified use could mean business however it appears to be something other than an institution</td>
<td>Policy for university – regional engagement</td>
</tr>
</tbody>
</table>
### Key Document Analysis Template

<table>
<thead>
<tr>
<th>Context extract No. (ID/Pg)</th>
<th>Context extract</th>
<th>Qualifications</th>
<th>Situated meaning connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>24/11</td>
<td>The infrastructure for collaboration consists of the pathways by which people and organisations come together to exchange ideas, solve problems or form partnerships— to recognise, value, and lever their area’s assets for mutual gain.</td>
<td>For people and organisations</td>
<td>Regional infrastructure for collaboration. – Potentially related to enterprise</td>
</tr>
<tr>
<td>25/83</td>
<td>The infrastructure for collaboration consists of the pathways by which people and organisations come together to exchange ideas, solve problems or form partnerships to recognise, value and lever their area’s assets for mutual gain.</td>
<td>For people and organisations</td>
<td>Regional infrastructure for collaboration. – Potentially related to enterprise</td>
</tr>
<tr>
<td>26/138</td>
<td>Comments have included that involvement is ad hoc and dependent on individuals interest and commitment rather than institutional direction. The latest regional strategy has had input from Prof Jenny Graham-PVC, Roy Green, Dr Phillip O’Neil- lecturer in geography. Individuals have sat on a number of HROC projects on a case by case basis eg were involved in the Sustainable Pathways project.</td>
<td>Regional engagement activities – potentially related to enterprise</td>
<td>Project name association. Example of individual involvement.</td>
</tr>
</tbody>
</table>

### Key Document Analysis Template

<table>
<thead>
<tr>
<th>Context extract No. (ID/Pg).</th>
<th>Context extract</th>
<th>Qualifications</th>
<th>Situated meaning connection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27/10</td>
<td>Such social capital initiatives in Australian regions have only had dilettante support by governments—a victim of federalism and the confusion and debate about the respective roles and responsibilities of the three spheres of government (Garlick 1998). There is a need for governments, institutions and the corporate sector to value social capital in the same way that they have historically put a value on physical, financial and human capital objectives.</td>
<td>Refers to roles of three tiers of government but also introduces the key stakeholders as institutions, government and the corporate sector. The collaboration of these three sectors could foreshadow enterprise in an economic development sense.</td>
<td>Environment for regional engagement</td>
</tr>
<tr>
<td>28/28</td>
<td>Key university staff to take on leadership roles in the regional community.</td>
<td>Leadership roles in regional communities for university staff could be considered an enterprise role</td>
<td>University leadership in engagement with regions - potentially related to enterprise</td>
</tr>
</tbody>
</table>
Document: KD-2 Enterprise Education

<table>
<thead>
<tr>
<th>Context extract No. (ID/Pg)</th>
<th>Context extract</th>
<th>Qualification</th>
<th>Situated meaning connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/5</td>
<td>The most dramatic evidence in the Project for this finding can be seen in approaches to enterprise education in a number of rural, remote and regional communities. Where these communities are confronted by substantial issues that affect the economic and social lives of community members and students’ transition prospects, they embrace enterprise education because it has very real potential to positively affect community life and set directions for a more optimistic future.</td>
<td>Economic status of the community</td>
<td>Enterprise education is noted as a community building tool that buoys a community in economically depressed communities.</td>
</tr>
<tr>
<td>2/25</td>
<td>Context proved an important issue in the initiation of enterprise education. In many cases, adversity had placed demands on the schools in their context and generated the need for lateral approaches. The adversity ranged from local economic trials through to issues of student disconnection from their school. Responses appeared to be flexible in such adverse situations, desperation freeing schools of the apparent constraints and requirements of organisation that had previously proved inadequate.</td>
<td>Economic status of the community</td>
<td>Enterprise education was considered to provide a sense of liberation from the traditional system in areas that struggled with adverse conditions either economic or human.</td>
</tr>
</tbody>
</table>

At the leading edge of practice, enterprise education helps students to develop and apply, in authentic situations, knowledge, skills and dispositions that underpin successful transition to the world of economic, civic and social participation.

In secondary schools, parents tend to focus on the relationship between school learning and their children's future economic pathways. In addressing this issue, some Project schools have discussed with parents the linkages between enterprise education, general education, vocational education, career competencies and employability skills. Being able to see these linkages is reassuring for parents.

Enterprise education is often seen as a means of adapting the curriculum, in both academic and vocational education courses, to underpin students' life pathways. In linking school learning to students' economic futures, parents understand that 'authentic' application of learning can make school more relevant and meaningful.

However, economic pathways are not the only focus in enterprise education. In addition, some schools have been able to demonstrate to parents the personal and social growth achieved through enterprise education by their children.

The evidence from the Project suggests that, in communities confronted by especially difficult economic challenges, the support for enterprise education is usually at a high level. Parents in these communities often take the view that their children need to have enterprising capacities if they are to have positive individual futures.

<p>| 3/53 | At the leading edge of practice, enterprise education helps students to develop and apply, in authentic situations, knowledge, skills and dispositions that underpin successful transition to the world of economic, civic and social participation. | Student economic participation in the world of work beyond school life | Enterprise here is found not to be a particular line of work but more about general life and work skills (economic, civic and social). |
| 4/54 | In secondary schools, parents tend to focus on the relationship between school learning and their children's future economic pathways. In addressing this issue, some Project schools have discussed with parents the linkages between enterprise education, general education, vocational education, career competencies and employability skills. Being able to see these linkages is reassuring for parents. | Student economic and pathway link. The association is made to a broad education and training agenda that ensures a viable economic future for students through being able to secure some form of work | Enterprise education is seen as a form of education linking to students' economic future. |
| 5/54 | Enterprise education is often seen as a means of adapting the curriculum, in both academic and vocational education courses, to underpin students' life pathways. In linking school learning to students' economic futures, parents understand that 'authentic' application of learning can make school more relevant and meaningful. | Economic and pathway link. The association is made to a broad education and training agenda that ensures a viable economic future for students through being able to secure some form of work | Enterprise education is seen as a form of education linking to students' economic future. |
| 6/54 | However, economic pathways are not the only focus in enterprise education. In addition, some schools have been able to demonstrate to parents the personal and social growth achieved through enterprise education by their children. | Pathway link. The association is made to a broad education and training agenda that ensures a viable economic future for students through being able to secure some form of work | Enterprise education is seen as a form of education with more than 'economic future' outcomes. |
| 7/55 | The evidence from the Project suggests that, in communities confronted by especially difficult economic challenges, the support for enterprise education is usually at a high level. Parents in these communities often take the view that their children need to have enterprising capacities if they are to have positive individual futures. | Economic status of the community | Enterprise education is seen to offer hope for students in less economically advantaged communities. |</p>
<table>
<thead>
<tr>
<th>8/55</th>
<th>In difficult local economic circumstances, the school is working with the students to organise often commercially successful and community shared initiatives. … The community development aspects of these activities serve to reinforce parental views of the importance of enterprise education as a successful approach to learning.</th>
<th>Economic status of the community</th>
<th>Enterprise education is noted as a community building tool in economically depressed communities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/62</td>
<td>This sense of ‘oneness’ of school and community is often apparent in approaches to enterprise education in rural and regional communities. These include those communities confronted by substantial issues that affect the economic and social lives of community members and students’ transition prospects.</td>
<td>Economic status of the community</td>
<td>Enterprise education is noted as a community building tool in economically depressed communities.</td>
</tr>
<tr>
<td>10/62</td>
<td>Community members in one Project school explored the importance that they attach to enterprise education in the face of local economic imperatives.</td>
<td>Economic status of the community</td>
<td>Parents express a more specific outcome for enterprise education involving the development of new opportunities and industry for a region. Community renewal.</td>
</tr>
<tr>
<td>11/102</td>
<td>…remoteness is perceived as an imperative to provide opportunities for students to acquire and apply the qualities and characteristics of enterprising learners. In some instances this imperative can arise from the economic and social circumstances of the community.</td>
<td>Economic status of the community</td>
<td>Enterprise education is noted as a community building tool in economically depressed communities.</td>
</tr>
<tr>
<td>12/102</td>
<td>Enterprise education may be seen as an important contribution to a community’s sense of optimism for its long term future in the face of economic difficulty or decline.</td>
<td>Economic status of the community</td>
<td>Enterprise education is noted as a community building tool in economically depressed communities.</td>
</tr>
<tr>
<td>13/110</td>
<td>…many community members canvassed the importance of enterprise education not only in the context of schooling, but also in terms of the contribution it can make to community revitalisation and renewal. Hence, in communities faced by economic and social adversity, observations were made about the importance of building greater levels of resourcefulness and personal initiative amongst young people.</td>
<td>Economic status of the community</td>
<td>Enterprise education is noted as a community renewal tool in economically depressed communities. Note: importance is placed on attributes of resourcefulness and personal initiative. No skills, knowledge or competency for enterprise as a particular activity.</td>
</tr>
<tr>
<td>14/110</td>
<td>In these instances, local economic trials and their associated social challenges were leading schools to respond in innovative ways to these wider issues. Importantly, enterprise education was perceived by all as a vital piece in a larger jigsaw that contributes to an optimistic sense of the future, no matter present difficulties.</td>
<td>Economic status of the community</td>
<td>Enterprise education is noted as a community building tool in economically depressed communities.</td>
</tr>
<tr>
<td>15/123</td>
<td>Identifying a tendency of the students to focus on somewhat geographically, economically and socially restricted futures, the school strives to promote a broader outlook of confidence and growth. Enterprise education has long formed the backbone of this approach, but the Project provided a fillip to reinvigorate and refocus the operation, from early years to the senior school.</td>
<td>Economic status of the community</td>
<td>Enterprise education is noted as a community building tool in economically depressed communities.</td>
</tr>
<tr>
<td>16/131</td>
<td>Northlakes High School is a government school on the Central Coast of New South Wales. It serves a population faced with some economic and social hardship in a rapidly growing area. The school has a special education unit for students who have emotional and intellectual disabilities, often manifested as multiple issues for the one student. The school clearly recognised the need to provide an active and participatory form of education for these students and turned to enterprise education for that approach.</td>
<td>Economic status of the community</td>
<td>Enterprise education is seen as a form of education relevant to the economically and socially disadvantaged.</td>
</tr>
</tbody>
</table>
Orbost is a major regional centre, with the area’s economic activity including dairy farming, vegetable growing, timber and tourism.

Students come from a great variety of backgrounds, either rural or urban, and there is a high level of transience depending on economic circumstances.

Through enterprise education, the school sought to more fully connect students to school and to strengthen community linkages. Tourism, with recreational fishing as an important component part, was identified as a future economic direction arising from the difficult circumstances of the sugar industry.

Through school-community partnerships, enterprise education strengthens community identity, values and responsibilities and often links into economic activity.

By focusing on local challenges and opportunities, enterprise education can contribute to the realisation of economic and social aspirations that many Indigenous and remote communities hold.

Enterprise education enables students to acquire and develop qualities and characteristics that underpin their social, economic and personal life skills.

<table>
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<th>Context extract</th>
<th>Qualification</th>
<th>Situated meaning connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>17/132</td>
<td>economic activity including dairy farming, vegetable growing, timber and tourism.</td>
<td>Economic status of the community</td>
<td>Enterprise education is connected to economic circumstance.</td>
</tr>
<tr>
<td>18/134</td>
<td>Students come from a great variety of backgrounds, either rural or urban, and there is a high level of transience depending on economic circumstances.</td>
<td>Economic status of the community</td>
<td>Enterprise education is connected to economic circumstance.</td>
</tr>
<tr>
<td>19/134</td>
<td>Through enterprise education, the school sought to more fully connect students to school and to strengthen community linkages. Tourism, with recreational fishing as an important component part, was identified as a future economic direction arising from the difficult circumstances of the sugar industry.</td>
<td>Economic status of the community</td>
<td>Enterprise education is noted as a community building renewal tool in economically depressed communities.</td>
</tr>
<tr>
<td>20/141</td>
<td>Through school-community partnerships, enterprise education strengthens community identity, values and responsibilities and often links into economic activity.</td>
<td>Links to economic community activity</td>
<td>This is an explicit link to economic activity although the type of activity is unspecified. Enterprise education is noted as a community building tool.</td>
</tr>
<tr>
<td>21/142</td>
<td>By focusing on local challenges and opportunities, enterprise education can contribute to the realisation of economic and social aspirations that many Indigenous and remote communities hold.</td>
<td>Inexplicit economic and pathway link. Suggests ensuring a viable economic future for students through being able to secure some form of work.</td>
<td>Enterprise education is connected explicitly to community economic aspirations.</td>
</tr>
<tr>
<td>22/142</td>
<td>Enterprise education enables students to acquire and develop qualities and characteristics that underpin their social, economic and personal life skills.</td>
<td>Focuses on economic participation in the world of work beyond school life</td>
<td>Enterprise education is seen as a form of education that delivers general life and work skills (social, economic, and personal).</td>
</tr>
</tbody>
</table>

Key Document Analysis Template

Search Term = ‘pathway’
### Appendix C

#### Enterprise, Education and Economic Development

<table>
<thead>
<tr>
<th>Page</th>
<th>Text</th>
<th>Career Decisions</th>
<th>Enterprise Career but Careers More Generally</th>
</tr>
</thead>
<tbody>
<tr>
<td>23/5</td>
<td>At the level of best practice, the Project found that enterprise education plays a role in making students’ career pathways increasingly explicit.</td>
<td>Career decisions</td>
<td>Nothing explicit on an enterprise career but careers more generally</td>
</tr>
<tr>
<td>24/53</td>
<td>It is important for schools to build parents’ understanding of the potential impact of enterprise education on their children’s future pathways.</td>
<td>Parental appreciation of the connection between enterprise education and career pathways</td>
<td>Nothing explicit on an enterprise career but careers more generally</td>
</tr>
<tr>
<td>25/54</td>
<td>Articulating the Links between Enterprise Education and Future Pathways</td>
<td>Makes economic link refer 4-6/54 also</td>
<td>Heading only - Nothing explicit on an enterprise career but careers more generally</td>
</tr>
<tr>
<td>26/54</td>
<td>In secondary schools, parents tend to focus on the relationship between school learning and their children’s future economic pathways.</td>
<td>Makes economic link refer 4-6/54 also</td>
<td>Nothing explicit on an enterprise career but careers more generally</td>
</tr>
<tr>
<td>27/54</td>
<td><strong>PARENTS VALUE HOW ENTERPRISE EDUCATION BUILDS LINKS BETWEEN SCHOOL LEARNING AND LIFE PATHWAYS</strong></td>
<td>Makes economic link refer 4-6/54 also</td>
<td>Side Bar comment - Nothing explicit on an enterprise career but career and life pathways more generally</td>
</tr>
<tr>
<td>28/54</td>
<td>Enterprise education is often seen as a means of adapting the curriculum, in both academic and vocational education courses, to underpin students’ life pathways. In linking school learning to students’ economic futures, parents understand that ‘authentic’ application of learning can make school more relevant and meaningful.</td>
<td>Makes economic link refer 4-6/54 also</td>
<td>Enterprise education is seen as a form of education rather than an education for a particular activity.</td>
</tr>
<tr>
<td>29/54</td>
<td>However, economic pathways are not the only focus in enterprise education. In addition, some schools have been able to demonstrate to parents the personal and social growth achieved through enterprise education by their children.</td>
<td>Makes economic link refer 4-6/54 also</td>
<td>Enterprise education is seen as a form of education rather than an education for a particular activity.</td>
</tr>
<tr>
<td>30/55</td>
<td>…there are many examples of students ‘turning around’ from potentially destructive pathways and of parents expressing appreciation for the school’s efforts.</td>
<td>Pathways to constructive behaviours</td>
<td>Not connected to enterprise in an economic sense. Associates enterprise education with a wilderness program that developed leadership.</td>
</tr>
</tbody>
</table>
The evidence from the Project indicates that, at best practice level, enterprise education creates linkages between school learning and post-school life. The Project, therefore, considered the relationship between enterprise education outcomes and: …

- planning and support for a career path

Enterprise education strengthens student transition through approaches to learning that enable students to acquire and develop qualities and characteristics for successful participation in their current and future multiple pathways.

Compared to approaches generally in vocational education, the focus of enterprise education is on higher-order qualities and characteristics rather than job specific, technical competencies and attributes tied to a particular vocation. Such generic characteristics are transportable across pathways, capable of application in the diverse work contexts in which students engage as they make the transition through and from school.

Planning and Support for a Career Pathway

Over time, enterprise education enables students to focus more specifically on a career path that matches the attributes and skills they are acquiring and applying in authentic contexts.

Enterprise education is about broadening career possibilities and options, rather than focusing students on a specific job path.

<table>
<thead>
<tr>
<th>Page</th>
<th>Text</th>
<th>Enterprise, Education and Economic Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>31/85</td>
<td>The evidence from the Project indicates that, at best practice level, enterprise education creates linkages between school learning and post-school life. The Project, therefore, considered the relationship between enterprise education outcomes and: … planning and support for a career path.</td>
<td>General career association Not explicit about an enterprise career but careers more generally</td>
</tr>
<tr>
<td>32/85</td>
<td>Enterprise education strengthens student transition through approaches to learning that enable students to acquire and develop qualities and characteristics for successful participation in their current and future multiple pathways.</td>
<td>Focuses on enterprise education as an enhanced learning method Not explicit about an enterprise career but careers more generally</td>
</tr>
<tr>
<td>33/85</td>
<td>Compared to approaches generally in vocational education, the focus of enterprise education is on higher-order qualities and characteristics rather than job specific, technical competencies and attributes tied to a particular vocation. Such generic characteristics are transportable across pathways, capable of application in the diverse work contexts in which students engage as they make the transition through and from school.</td>
<td>Employment and work although the document suggests not just an employee/employer relationship but the broader social contributions of work stemming from a sense of personal self-direction and productivity. This extract is explicit in the generic nature of enterprise education and its lack of a link to any specific career.</td>
</tr>
<tr>
<td>34/86</td>
<td>Planning and Support for a Career Pathway</td>
<td>Refer 35/86 below Heading only</td>
</tr>
<tr>
<td>35/86</td>
<td>Enterprise education relates to students’ career pathways to the extent that it strengthens their capacities for high levels of self-management and self-direction. Enterprise education challenges traditional information and support career education models.</td>
<td>Career decisions and self-directedness Not explicit about an enterprise career but careers more generally</td>
</tr>
<tr>
<td>36/87</td>
<td>Over time, enterprise education enables students to focus more specifically on a career path that matches the attributes and skills they are acquiring and applying in authentic contexts.</td>
<td>Career decisions and self-directedness Not explicit about an enterprise career but careers more generally.</td>
</tr>
<tr>
<td>37/87</td>
<td>Enterprise education is about broadening career possibilities and options, rather than focusing students on a specific job path.</td>
<td>Career decisions and self-directedness Emphasises the non-specificity of enterprise education</td>
</tr>
<tr>
<td>Page</td>
<td>Text</td>
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<tr>
<td>------</td>
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</tr>
<tr>
<td>38/87</td>
<td>High levels of understanding about their potential careers and how they might access them. Several students were able to demonstrate sophisticated levels of usage of technology to access and consider career pathways and the skills and attributes they required.</td>
<td></td>
</tr>
<tr>
<td>39/89</td>
<td>They are more likely to have a positive view of the qualities and characteristics that are essential for successful transition from school into the diversity of post school pathways. By enabling students to apply and test these qualities and characteristics in an adult world, enterprise education represents an unparalleled approach to meeting the challenges involved in student transition.</td>
<td></td>
</tr>
<tr>
<td>40/118</td>
<td>In the recent realignment of the curriculum and credentialing frameworks across the nation there is ample opportunity for students to springboard off their enterprising learning outcomes into future life pathways, including vocational directions, personal leisure and cultural pursuits, and further learning.</td>
<td></td>
</tr>
<tr>
<td>41/127</td>
<td>Enterprise education at Barunga was focused on a Career Pathways programme. This involved students in planning and implementing their pathway towards a chosen career or further study by providing structured, purposeful learning opportunities while they are at school.</td>
<td></td>
</tr>
<tr>
<td>42/127</td>
<td>In terms of the school context the notion of best practice relates to providing opportunities that enable students to identify and work towards pathways and exit points that will engage them in work and/or future study.</td>
<td></td>
</tr>
</tbody>
</table>
There has been a plethora of curriculum-based and extracurricula enterprise projects implemented over a number of years. These include: an oil industry venture; a food catering enterprise; a programme to develop skills in the building and construction industry; a student developed CD-ROM providing information on vocational pathways at the local oil refinery; and a student developed CD-ROM detailing the school’s enterprise education programme.

Many parents and community members endorsed the way in which enterprise education promotes student self-management, self responsibility and decision making. Enterprise education also broadens and makes more immediate student understanding of career choices and pathways.

<table>
<thead>
<tr>
<th>Context extract No. (ID/Pg)</th>
<th>Context extract</th>
<th>Qualification</th>
<th>Situated meaning connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>45/16</td>
<td>… only a relatively small number of schools have moved beyond building parent understanding to having them actively engaged as partners in their children’s learning. Where this has occurred, parents have taken key leadership roles, perhaps working with small teams of students as they undertake their enterprising learning.</td>
<td>Parent engagement</td>
<td>Not associated with economic function but community engagement and support</td>
</tr>
<tr>
<td>46/23</td>
<td>There was little in the applications to indicate strong involvement of parents in enterprise education, other than in their roles as community members.</td>
<td>Parent engagement</td>
<td>Not associated with economic function but community engagement and support</td>
</tr>
<tr>
<td>47/54</td>
<td><strong>Roles and Responsibilities</strong></td>
<td>Parent engagement</td>
<td>Heading only</td>
</tr>
<tr>
<td>48/54</td>
<td>The articulation of possible roles and responsibilities that parents can take is another step to enhance parents’ contribution to students’ learning in enterprise education.</td>
<td>Parent engagement</td>
<td>Not associated with economic function but community engagement and support</td>
</tr>
</tbody>
</table>
These roles and responsibilities could include parents:
• providing support for enterprise education by acting as mentors
• leading, participating in, and supervising activities
• facilitating contacts with businesses and community organisations
• providing resources, including time and technical expertise
• discussing enterprising learning at home with their children
• contributing to the evidence that the school gathers about their children’s enterprising qualities and characteristics.

Parent engagement
Shows how indirectly parent engagement could affect economic activity i.e. facilitating partnerships and providing mentorship. Does not evidence roles of an economic development enterprise team however.

If the role of the community was negligible or poorly defined in many schools at the commencement of the Project, the evidence indicates that by its end communities across the country were playing quite critical roles in enterprise education.

Community engagement
Suggests the close link between community required and, as a result of enterprise education. Does not evidence roles of an economic development enterprise team however.

Evidence gathered in the Action Research Project points to the important role that can be played by community members, where their participation in enterprise education enables students to learn from them as role models and mentors. In these roles, it would appear that community members are able to positively guide students’ enterprising learning and reinforce the relevance of the capacities they are developing.

Community engagement
Suggests a learning benefit of community engagement but not an economic development benefit.

…the important role that can be played by community members, where their participation in enterprise education enables students to learn from them as role models and mentors. In these roles, it would appear that community members are able to positively guide students’ enterprising learning and reinforce the relevance of the capacities they are developing. Where students perceive that the support and guidance provided by community members actually ‘works’ in the real world, they accord them increased credibility.

Community engagement
Suggests a learning benefit of community engagement but not an economic development benefit.
Teaching, best practice involves innovative whole school approaches that enable teachers, students, parents and community members to exercise shared and appropriate responsibilities for ensuring that students develop enterprising qualities and characteristics. This requires partnerships between students, teachers, parents and community members that enable the learning environment to extend across school and community. It also requires a shift in the roles and responsibilities of teachers, with emphasis on facilitation, support, mentoring, challenging and assessing progress.

<table>
<thead>
<tr>
<th>Teaching</th>
<th>Shared responsibilities in teaching and learning</th>
<th>Stimulates stronger partnerships at many levels that potentially have a spin-off economic benefit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching involves innovative whole school approaches that enable teachers, students, parents and community members to exercise shared and appropriate responsibilities for ensuring that students develop enterprising qualities and characteristics. This requires partnerships between students, teachers, parents and community members that enable the learning environment to extend across school and community. It also requires a shift in the roles and responsibilities of teachers, with emphasis on facilitation, support, mentoring, challenging and assessing progress.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Document: KD-3 Models of delivery of vocational education and training in schools in rural and remote areas: Northern Territory, Queensland and Western Australia

<table>
<thead>
<tr>
<th>Key Document Coding Report</th>
<th>Search Term = ‘enterprise education’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: This document deals with forms of vocational education and training in rural and remote regions in Australia. The term ‘enterprise’ occurs 48 times however given our particular interest, the term ‘enterprise education’ was utilised in the search to find reference to models incorporating enterprise education as a vocational education model. It was anticipated that ‘economic development’, ‘roles’ and ‘pathway’ may have close association in these areas of the document. The term ‘economic development’ however returned no result and therefore ‘economic’ was used as an alternative term.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Context extract No. (ID/Pg)</th>
<th>Context extract</th>
<th>Qualification</th>
<th>Situated meaning connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8</td>
<td>In these communities the success of strategies such as enterprise education prove the value of pursuing pathways that can result in self-employment and allow Indigenous students to remain in their communities and contribute to community development.</td>
<td>Pathways to self-employment and community development</td>
<td>Seen as a form of education – an 'educational strategy'</td>
</tr>
<tr>
<td>2/8</td>
<td>Enterprise education has emerged as a most appropriate model for the delivery of vocational education in communities where employment opportunities are extremely limited. At Jameson Remote Community School, for example, the establishment of a profitable enterprise, the ‘travelling disco’ has provided sound preparation for the students’ advance to accredited training.</td>
<td>Pathway to further training</td>
<td>Seen as a form of education – an 'educational strategy'</td>
</tr>
</tbody>
</table>

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3 Full reference: Department of Education, Training, and Youth Affairs 2000, Models of delivery of vocational education and training in schools in rural and remote areas: Northern Territory, Queensland and Western Australia, Commonwealth of Australia, Canberra, Australia.
<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Curriculum, learning and teaching</th>
<th>Vocational education</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/16</td>
<td>Model 2 (NT) has no unique requirements for trainers or delivery and can be integrated easily into the curriculum. Students receive career and enterprise education and participate in community- and work-based learning.</td>
<td>Learning and teaching</td>
<td>The context of this extract portrays enterprise education as a remedial form of learning to teach those that otherwise are not learning through traditional methods</td>
</tr>
<tr>
<td>4/18</td>
<td>Enterprise education</td>
<td>Heading Only</td>
<td></td>
</tr>
<tr>
<td>5/18</td>
<td>Some schools using Model 1 (Qld) have embedded enterprise education into the years 8, 9 and 10 curricula.</td>
<td>Curricula, learning and teaching</td>
<td>Example of enterprise education curricula embeddedness: …students have planned and managed (with teacher support) the implementation of a range of enterprise-based vocational opportunities including horticulture, building and food preparation and sale. Teachers have programmed timetables cooperatively to incorporate these activities into the curriculum.</td>
</tr>
<tr>
<td>6/23</td>
<td>Enterprise education, including projects such as Jameson Remote Community School’s travelling disco (see below and Handbook, Case Study 10: Travelling Disco: a school enterprise)</td>
<td>Vocational education</td>
<td>Seen as a form of education – an ‘educational strategy’</td>
</tr>
<tr>
<td>7/24</td>
<td>Enterprise education: the ‘travelling disco’ Jameson Remote Community School identified vocational education programs as a potential method of encouraging students to remain at school beyond years 9 and 10. Because of the absence of industry or business in the community, the school initiated an enterprise-based program. This has resulted in the establishment of a successful and popular community business.</td>
<td>Vocational education</td>
<td>Seen as a form of education – an ‘educational strategy’</td>
</tr>
</tbody>
</table>
In these communities the success of strategies such as enterprise education prove the value of pursuing pathways that can result in self-employment and allow Indigenous students to remain in their communities and contribute to their development. In the case of Jameson Remote Community School, for example, an enterprise approach has also demonstrated that valuable learning can occur in the absence of accredited training. Further, this learning is itself sound preparation for the next stage of accredited training. Jameson students established and now manage their own ‘travelling disco’. The program has resulted in increased retention rates and a profitable enterprise.

Community schools need teachers who are: … trained in vocational education, vocational learning and enterprise education.

Teachers have received professional development throughout the year in categories such as Structured Workplace Learning and National Training Packages. An enterprise education workshop is planned for staff in Ngaanyatjarra, Pilbara and Kimberley schools.

There are a number of factors influencing this model’s successful implementation and its capacity to support part time new apprenticeships: a stable school staff; a history of vocational education; and economic growth in and around the school community.

<table>
<thead>
<tr>
<th>Context extract No. (ID/Pg)</th>
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<th>Situated meaning connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/41</td>
<td>In these communities the success of strategies such as <strong>enterprise education</strong> prove the value of pursuing pathways that can result in self-employment and allow Indigenous students to remain in their communities and contribute to their development. In the case of Jameson Remote Community School, for example, an enterprise approach has also demonstrated that valuable learning can occur in the absence of accredited training. Further, this learning is itself sound preparation for the next stage of accredited training. Jameson students established and now manage their own ‘travelling disco’. The program has resulted in increased retention rates and a profitable enterprise.</td>
<td>Student engagement, pathways to self-employment, community development and further education and training</td>
<td>Seen as a form of education – an ‘educational strategy’</td>
</tr>
<tr>
<td>9/57</td>
<td>Community schools need teachers who are: … trained in vocational education, vocational learning and <strong>enterprise education</strong>.</td>
<td>Teacher skills</td>
<td>Seen as a form of education – an ‘educational strategy’. Highlights particular skills needed for those in remote locations.</td>
</tr>
<tr>
<td>10/58</td>
<td>Teachers have received professional development throughout the year in categories such as Structured Workplace Learning and National Training Packages. An <strong>enterprise education</strong> workshop is planned for staff in Ngaanyatjarra, Pilbara and Kimberley schools.</td>
<td>Teacher skills</td>
<td>Suggests community collaborative effort requirements within the broader context</td>
</tr>
<tr>
<td>11/19</td>
<td>There are a number of factors influencing this model’s successful implementation and its capacity to support part time new apprenticeships: a stable school staff; a history of vocational education; and <strong>economic</strong> growth in and around the school community.</td>
<td>Relates regional economic circumstance to the capacity of schools to deliver a variety of different educational approaches</td>
<td>Raises the issue of education dependence upon the economy rather than the economies dependence upon the education. Perhaps interdependence is a more appropriate conceptualisation.</td>
</tr>
</tbody>
</table>
… this model does not measure success solely by part-time New Apprenticeship or traineeship figures. It also incorporates a community development strategy that relies on partnerships between parents, schools, business and community organisations. Community employers, for example, may not offer traineeships because of economic constraints, but they can assist schools to build more positive attitudes among students to education and training, and the world of work.

<table>
<thead>
<tr>
<th>Key Document Analysis Template</th>
<th>Search Term = ‘pathway’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Context extract No. (ID/Pg)</strong></td>
<td>Context extract</td>
</tr>
<tr>
<td>13/1</td>
<td>The project’s chief objective has been to identify the most appropriate forms of vocational education and training delivery in rural and remote locations. Three other objectives aimed to identify methods of enhancing links between schools, business, industry and the vocational education and training sector in these areas; customising information for rural and remote students about school to work pathways and; identifying best practice in the facilitation of structured workplace learning in rural and remote locations.</td>
</tr>
<tr>
<td>14/1</td>
<td>How school to work pathways could be promoted in rural and remote communities;</td>
</tr>
<tr>
<td>15/5</td>
<td>The School to Work project is the result of two years’ research to identify and develop the most effective models of delivery of vocational education and training in schools in rural and remote Australia. These models, and the new practices that result from them, reflect the requirements and experiences of teachers, community members and practitioners who have developed school to work pathways for students in remote and regional Northern Territory, Queensland and Western Australian locations.</td>
</tr>
<tr>
<td>Date</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>16/8</td>
<td>Many schools have now created solid networks of community support for vocational education; these schools have allocated significant resources to the implementation of vocational education and training and to developing an understanding within the community of the method and advantages of providing students with vocational pathways.</td>
</tr>
<tr>
<td>17/8</td>
<td>In these communities the success of strategies such as enterprise education prove the value of pursuing pathways that can result in self-employment and allow Indigenous students to remain in their communities and contribute to community development.</td>
</tr>
<tr>
<td>18/14</td>
<td>This model developed to address the needs of the large percentage of students in Indigenous communities who leave school before commencing year 8 and for whom an academic pathway is not applicable because of age and lack of literacy and numeracy skills.</td>
</tr>
<tr>
<td>19/16</td>
<td>Model 2 (NT) is being implemented at different levels in all targeted schools (see Handbook, Case Study 7: School-industry links: informing students about school to work pathways).</td>
</tr>
<tr>
<td>20/19</td>
<td>Goondiwindi State High School has implemented Model 3 (Qld) to achieve the school’s stated goals of: • Educating students about multiple career pathways. Structured workplace learning and apprenticeships</td>
</tr>
<tr>
<td>21/20</td>
<td>Previously local school leavers had limited awareness of rural career pathways; those who pursued local employment received limited and often inconsistent training. Specific to rural career pathway and employment</td>
</tr>
<tr>
<td>22/31</td>
<td>Many of these partnerships have grown out of the resourcefulness of school staff and community members and their commitment to initiating sustainable school to work pathways for community youth.</td>
</tr>
<tr>
<td>23/32</td>
<td>Schools that have community support in the Ngaanyatjarra Lands have allocated significant resources to developing an understanding within the community of the method and advantages of providing students with vocational pathways.</td>
</tr>
<tr>
<td>24/34</td>
<td>Maningrida Community Education Centre offers a vocational education program for students aged 16 and over who do not intend to follow an academic pathway.</td>
</tr>
<tr>
<td>25/34</td>
<td>As a result of the program, there is greater awareness among students of school to work pathways in their communities and they are able to make more informed choices about their work placement.</td>
</tr>
<tr>
<td>26/34</td>
<td>Many schools are focussing on preparing students for pathways that they can access within their own communities, such as the establishment of community-based enterprises in art and craft or music.</td>
</tr>
<tr>
<td>27/37</td>
<td>The principal enrolled those students aged 15 and over who were interested in vocational pathways through the Open Learning Institute of TAFE.</td>
</tr>
<tr>
<td>28/37</td>
<td>The principal transferred from the Quilpie community. As a direct result of his relocation, his innovations have not continued. The groundwork laid in the development of new pathways is on hold while new staff become familiar with the concept of vocational education and its methods of delivery in a small, isolated community.</td>
</tr>
<tr>
<td>29/38</td>
<td>Four schools in the Charleville area are working to establish school to work pathways for at risk Indigenous students aged 14 or over. The project is also targeting youth who have already fallen out of the school system.</td>
</tr>
</tbody>
</table>
By addressing the fundamental issues faced by at risk students, the school hopes to improve their access to work pathways and to Structured Workplace Learning.

In these communities the success of strategies such as enterprise education prove the value of pursuing pathways that can result in self-employment and allow Indigenous students to remain in their communities and contribute to their development.

The following have been successful in promoting school to work in remote communities:
- student visits to places of training and employment (see Handbook, Case Study 7: School-industry links: informing students about school to work pathways);

Schools and community members have also identified the following career resources they believe should be distributed in schools:
PAMPHLETS outlining career pathways for Indigenous workers in Remote Area Local Government, Community Services and Health and Aboriginal Community Policing. (Many community members are not aware these have been developed).

Schools are aware of the need to develop school to work pathways and many are able to do so because of the close relationships that form in small communities.

In the Ngaanyatjarra Lands community schools the provision of information about school to work pathways is largely the responsibility of the vocational education teacher.
<table>
<thead>
<tr>
<th>36/46</th>
<th>As awareness of school to work pathways has grown, more schools have initiated activities that inform students and communities about vocational education and training.</th>
<th>Community and student engagement and awareness</th>
<th>Enterprise not specifically referred</th>
</tr>
</thead>
<tbody>
<tr>
<td>37/48</td>
<td>There are serious inequalities in access to vocational education for remote Indigenous communities in the Northern Territory. Inequality in education has been documented by the Collins review into Indigenous education (Learning Lessons – an Independent Review of Indigenous Education in the Northern Territory) and the Indigenous Education Strategic Initiatives Program review. The same obstacles exist for schools moving into vocational education and training or vocational learning pathways.</td>
<td>Inequities in the provision of vocational education</td>
<td>Enterprise not specifically referred</td>
</tr>
</tbody>
</table>
| 38/49 | Adult learning principles used by remote schools offering vocational education pathways include:  
• The location of the class in its own place in the school or community; students are treated as adults;  
• The integration of skills such as literacy and numeracy and problem solving in a holistic strategy, rather than as separate skills;  
• A student contract requiring demonstrated responsibility and adult behaviour to be included in class;  
• The inclusion of personal development in the curriculum. | Transference to adult learning | Enterprise not specifically referred |
| 39/53 | School staff and community members have limited knowledge of vocational education and the work pathways that are relevant to their communities. | School staff professional development and community awareness | Enterprise not specifically referred |
| 40/54 | Funding is also required for professional development to:  
• Inform school and community members of the vocational learning framework and options for school to work pathways;  
... | Staff training and professional development | Enterprise not specifically referred |
Inform school and community members of pathways in vocational education that are relevant to their communities;

<table>
<thead>
<tr>
<th>41/54</th>
<th>...</th>
<th>Community engagement and relevance</th>
<th>Enterprise not specifically referred</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>-------------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>42/2</td>
<td>Awareness in schools and their communities of their roles in successful vocational education initiatives; a community’s relationship with its schools and cooperation between community representatives; the commitment of some individuals;</td>
<td>Community engagement and organisational roles</td>
<td>Enterprise not specifically referred</td>
</tr>
<tr>
<td>43/7</td>
<td>School and community awareness of their roles in successful vocational education initiatives and a community’s relationship with its schools;</td>
<td>Community engagement and organisational roles</td>
<td>Enterprise not specifically referred</td>
</tr>
<tr>
<td>44/31</td>
<td>Government service providers have worked together to communicate information and support to other providers. And groups previously outside the vocational education network have worked to identify new roles in the provision of training, information and support.</td>
<td>Community engagement and organisational roles</td>
<td>Enterprise not specifically referred</td>
</tr>
<tr>
<td>45/31</td>
<td>Methods of developing school roles in the committee will also be trialed in 2000.</td>
<td>Organisational level roles</td>
<td>Enterprise not specifically referred</td>
</tr>
</tbody>
</table>
| 46/35                     | A range of models of Structured Workplace Learning have been developed by schools and their communities to meet the needs of their client groups, some of whom no longer attend school. Four common elements have been identified that increase the chances of successful outcomes:  

  4. Clearly defined roles and responsibilities for appropriate individuals to be involved in the program, and the commitment of those individuals.  

  | Apprenticeship model of learning | Enterprise not specifically referred                                           |
| 47/39 | In an effort to develop closer cooperation and better outcomes for Indigenous learners, schools have worked to build stronger relationships with those employed in other school roles, outside agencies and service providers to improve liaison with Indigenous communities. | Indigenous community engagement | Enterprise not specifically referred |
Appendix C

Enterprise, Education and Economic Development


Note: Both ‘enterprise’ and ‘education’ are key terms on this web page with the former appearing 122 times and the latter 150 times. They occur in a variety of contexts including institutional and report names, combined as a single term and as solitary references. This analysis attempts to locate ‘enterprise’ within the specific context of ‘economic development’ although the latter search term was not found on the page. Regional development was also attempted but with no result. The term ‘economic’ was then used to check for any association between issues of economics and the topic of ‘enterprise’ again no result was found.

The association between education, career and enterprise in this page is one that says that both enterprise and career can be the subjects of education. Although not stated, this page seems to treat enterprise as a generic term describing the business community performing economic activity and that education is key to preparing individuals to work in business.

<table>
<thead>
<tr>
<th>Key Document Analysis Template</th>
<th>Search Term = ‘economic’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context extract No. (ID)</td>
<td>Context extract</td>
</tr>
<tr>
<td>NONE FOUND</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key Document Analysis Template</th>
<th>Search Term = ‘pathway’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context extract No. (ID)</td>
<td>Context extract</td>
</tr>
<tr>
<td>1</td>
<td>The Report from the Prime Minister’s Youth Pathways Action Plan Taskforce 2001, Footprints to the Future, highlighted the need for improving support for young people and their families in the transitions through school and beyond. The Enterprise and Career Education Programme forms part of the Australian Government’s response to some of the recommendations of the Footprints to the Future report.</td>
</tr>
</tbody>
</table>

In April 1999, all Education Ministers agreed to an historic commitment to improving Australian schooling within a framework of national collaboration. The statement of national goals, *The Adelaide Declaration on National Goals for Schooling in the Twenty-First Century* addresses areas of common concern and, in terms of vocational, enterprise and career education, emphasises that students should have:

- participated in programmes of vocational learning during the compulsory years and have had access to vocational education and training programmes as part of their senior secondary studies;
- participated in programmes and activities which foster and develop enterprise skills, including those skills which will allow them maximum flexibility and adaptability in the future; and
- developed employment related skills and an understanding of the work environment, career options and pathways as a foundation for, and positive attitudes towards, vocational education and training, further education, employment, and life-long learning.

| 2 | In April 1999, all Education Ministers agreed to an historic commitment to improving Australian schooling within a framework of national collaboration. The statement of national goals, *The Adelaide Declaration on National Goals for Schooling in the Twenty-First Century* addresses areas of common concern and, in terms of vocational, enterprise and career education, emphasises that students should have:
- participated in programmes of vocational learning during the compulsory years and have had access to vocational education and training programmes as part of their senior secondary studies;
- participated in programmes and activities which foster and develop enterprise skills, including those skills which will allow them maximum flexibility and adaptability in the future; and
- developed employment related skills and an understanding of the work environment, career options and pathways as a foundation for, and positive attitudes towards, vocational education and training, further education, employment, and life-long learning. |

| Transitions through school and beyond | Pathway description does not include an ‘enterprise’ activity but rather refers to further education, employment and life-long learning. |

| 3 | **2.3 Prime Minister’s Youth Pathways Action Plan** Taskforce 2001 | Section deals with the implications of the referred report |

| Section heading only | }
|   | The Report from the Prime Minister’s Youth *Pathways* Action Plan Taskforce 2001, *Footprints to the Future*, recommended that “all Australians have access to a range of vocational learning and enterprise education experiences while at school.” | Part of developing a career pathway seems to include broad experiences in types of education. | The definition of enterprise education under consideration (at the time) by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) was as follows:

Enterprise education is learning directed towards developing in young people those skills, competencies, understandings, and attributes which equip them to be innovative, and to identify, create, initiate, and successfully manage personal, community, business, and work opportunities, including working for themselves. |
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>School systems and related organisations will provide access to a comprehensive system of career education, information, guidance and counselling services to assist young people to develop a capacity to analyse, choose, plan and manage individual transition pathways through and from school to further education, training, work and independent living.</td>
<td>Potential pathways are considered part of career education.</td>
<td>Pathway described here portrays a multitude of possibilities with the more open terms of ‘work’ and ‘independent living’</td>
</tr>
<tr>
<td>5</td>
<td>The Enterprise and Career Education Programme is related to a range of Australian Government initiatives under the Framework for vocational education in schools to support the transition of young people from school to further education, training, employment and participation in the community. These initiatives include vocational education and training in schools funding, school-based New Apprenticeships, career information and guidance, and youth support services including the Jobs <em>Pathway</em> Programme.</td>
<td>Part of a programme name</td>
<td>Notably the programme association refers to pathways to jobs suggesting employment</td>
</tr>
<tr>
<td>Context extract No. (ID)</td>
<td>Context extract</td>
<td>Qualification</td>
<td>Situated meaning connection</td>
</tr>
<tr>
<td>------------------------</td>
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</tr>
<tr>
<td>7</td>
<td>The Department and the Enterprise and Career Education Foundation have complementary roles in the development and delivery of the Enterprise and Career Education Programme to facilitate strategic use of the funds to support the programme objective.</td>
<td>Roles at the institutional level</td>
<td>Not related to roles for individuals in enterprise activities</td>
</tr>
<tr>
<td>8</td>
<td>The complementary roles of the Department and the Enterprise and Career Education Foundation are as follows:</td>
<td>Roles at the institutional level</td>
<td>Not related to roles for individuals in enterprise activities</td>
</tr>
</tbody>
</table>
Appendix D - Related Publications

The following list of articles and reports have been published during the progress of this thesis. While no article is specifically drawn from the thesis each one has served to inform and influence the final product.

Refereed Journal Articles


Refereed Conference Papers

World Conference, Unique Solutions for Unique Environments, Jun 2006, Melbourne, Australia.


Non-Refereed Conference Papers


Research Reports


Appendix D

Enterprise, Education and Economic Development


