

A Framework for the Emergence of Entrepreneurship and Innovation in Education

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Abstract

Educational institutions can promote or constrain innovative behavior. Structures and practices exist within the sector which profoundly impact opportunities for the emergence of entrepreneurship. An awareness of those factors that impact upon the potential emergence of entrepreneurship and innovation enables managers to plan to achieve certain outcomes. Despite its historical roots and traditional links with economic management, recent studies reveal that entrepreneurship is not just about money. It is concerned with adding value. Unleashing opportunities for integrating resources in a new and sometimes risky aggregation can enhance the traditional values of educational institutions, like the traditional financial values of the private sector. Entrepreneurship is worthy of study by managers of education institutions not just because of the new focus of requiring the generation of commercial funds. The traditional values of educational institutions, aligned with modern learning demands and technology, can be enhanced by stimulating entrepreneurial processes.

Introduction

A form of normative naivete has pervaded the literature on innovation and entrepreneurship in education – statements that it is needed grounded in an ignorance of what it is or how it is achieved.

The emergence of entrepreneurship as a management tool in education has been often misunderstood. It has been almost singularly associated with operating like a business and efforts to do “more with less”. The import of private sector management principles and economic rationalism into education has been hotly debated (eg. Marginson, 1993, pp. 231 ff; Ferrier & Anderson, 1998) and entrepreneurship viewed with either skepticism or hostility (Grigg, 1996). This article does not address that debate. It maintains that entrepreneurship is something more than being enterprising and business like. It posits that authors such as Kennedy (1996), who regard entrepreneurialism as synonymous with universities raising funds for themselves, portray a dangerously narrow perception of entrepreneurship. Properly understood, entrepreneurialism can provide a tool to align modern and traditional education values.

The concern about importing entrepreneurship into the management of education reflects an appreciation about entrepreneurship based on private sector commercial principles. In recent years, however, an understanding of entrepreneurship within the public sector has emerged that embraces values and outcomes that are not necessarily financial. This article examines this emergence and attempts to transpose the learning on public sector entrepreneurship into an education context. It seeks to resolve the dual conflicts, identified by writers such as Keast (1995), between entrepreneurship and the institutional principles embedded in education and between the values and cultures of education providers and the private sector.

Understanding Entrepreneurship

Entrepreneurship is chameleon-like. It gathers shades of meaning from disciplinary perspectives (Jennings, 1994; Fillion, 1988, 1997; Virtanen, 1997). This has hindered the articulation of a universally accepted analytic framework (Low & MacMillan, 1988, pp. 139 - 161) and has frustrated academic explorations into the attributes of the “average” entrepreneur (Gartner, 1989, pp. 47 - 68). There has been a miscellany of theorizing surrounding the competencies necessary to characterize a person or organization as entrepreneurial. This article accepts that entrepreneurship is the process of *using innovation to create value by bringing together a unique bundle of resources to exploit an opportunity* (cf. Stevenson et. al., 1985). The value sought to be created may be financial or it may be educational, spiritual, communal or some other value depending upon the goals and ambitions of the particular organization.

The word “entrepreneurship” derives from the French verb “entreprendre”, which means “to undertake” (Vérin, 1982; Jennings, 1994, p.42). It is sometimes said that entrepreneurship originated from the discipline of economics. Pioneers of the field - Cantillon in 1755 and Say in 1803 – were, however, interested in more than the economy and investigated the managerial aspects of enterprises, business development and

business management (Filion, 1997). Joseph Schumpeter, a prominent young economist in the 1930's and 1940's, launched the contemporary study of entrepreneurship (Schumpeter, 1934, 1947, 1954). He linked entrepreneurship with innovation and as driving dynamic economic disequilibrium. He saw the entrepreneur as creating new combinations of production, and entrepreneurship as a destabilizing force which started the process of "creative destruction". In Schumpeter's view the impetus for the economic system came from men of courage, men who risked their fortunes to implement new ideas, who dared to innovate, to experiment and to expand (Heilbroner, 1955, pp. 256 - 260).

Baumol (1968, pp. 64-71) distilled the miscellany of theorizing about entrepreneurship into two broad categories: the entrepreneur-business organizer and the entrepreneur-innovator. Filion (1997) reasoned that the former includes the classical entrepreneur described by Say (1803, 1815), Knight (1921) and Kirzner (1983), and the latter the entrepreneur described by Schumpeter (1934) and Drucker (1985). Hébert and Link (1989, pp. 39-49) aggregated the history of observations about entrepreneurship and concluded that "all past theories of entrepreneurship have centred either on uncertainty, innovation or a combination of the two".

A clear quantitative psychological profile of the entrepreneur has yet to emerge (Déry & Toulouse, 1996, pp. 285-305). Whilst many have attempted to do so (eg, Baumol, 1993; Bygrave, 1993, pp. 255-280; Casson, 1982; Covin & Slevin, 1991, pp. 7-25; Cunningham & Lischeron, 1991, pp. 45-67; 1986; 1990, pp. 15-29; Hofer & Bygrave, 1992, pp. 91-100; Jennings, 1994; Stevenson & Jarillo, 1990, pp. 17-27) taxonomical research by Wortman and Birkenholz (1991, pp. 67-77) and Hébert & Link (1989, pp. 39-49) revealed that the discipline remains preparadigmatic. Mulholland (1994, 122-133), nevertheless, contended that the diversity of entrepreneurship conjecturing remains wedded to the nexus established by Schumpeter between the entrepreneur and innovation.

Blawatt (1995, pp. 13-37) observed that the conceptual models of entrepreneurship are generally static. He reasoned that entrepreneurs work in an evolving environment. Entrepreneurs learn from what they do (Collins & Moore, 1970; Filion, 1997), and because the nature of what they do changes, they too must change. Based on these principles, Filion (1997) concluded that entrepreneurs are products of their environment. A number of authors have shown that entrepreneurs reflect the characteristics of the period and the place in which they live (Filion, 1991, p. 272; McGuire, 1976, pp. 115-138). Entrepreneurship can thus be viewed as a regional, temporal and strategic phenomenon which alters according to its operating environment (Knight, 1986; Russel, 1995).

Public Sector Entrepreneurship

Factors that stimulate corporate entrepreneurship in the public sector do not always correspond with those factors that stimulate corporate entrepreneurship in the private sector (Sadler, 1999). Based on this premise the principles underpinning private sector entrepreneurship cannot legitimately be transposed into the education sector without recognition of and adjustments for the peculiarities affecting the education environment.

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Age-old intuition portrays the public sector and educational institutions as bureaucratic, conservative and managerially disingenuous monoliths. This intuition leads to a conclusion that the public sector and educational institutions cannot be entrepreneurial. However, it is not the public sector or educational institutions themselves which are inimical to entrepreneurship but traditional structures, bureaucracy, values and practices. Recent reforms have moulded the bureaucratic structures and practices in such a way as to at least enable, and arguably stimulate, entrepreneurial practices.

Some writers, such as Nutt and Backhoff (1993, p. 303) and Mackrle, Pivoda and Hoy (1996) have assumed that public sector entrepreneurship is singularly concerned with being more “business-like”. They regarded *entrepreneurial* conduct as synonymous with *enterprising* conduct. Other writers, however, have argued that public sector entrepreneurship includes:

- taking decisions on matters which occur without bureaucratic or legal precedent and which are innovative and have the potential to achieve more or improve what exists (Dobell, 1989).
- purposeful activity to initiate, maintain or aggrandise one or more public enterprise (Ramamurti, 1986).
- adopting new forms of business organization, advanced technologies, breaking up large enterprises and establishing new enterprises producing goods not previously available (Prokopenko & Pavlin, 1989; Boyett, 1996),
- leadership, creativity, innovation, opportunism, risk-taking, facilitating and synthesizing (Forster, Graham & Wanna, 1996; Graham & Harker, 1996).

Peter Drucker, in 1985 (p. 241) wrote that part of the entrepreneurial process involved the systematic search for and analysis of opportunities which have the potential to generate innovation. This involved, according to Drucker, the monitoring of seven potential sources for innovative opportunity. These are:

1. the unexpected success, failure or outside event;
2. the incongruity between reality as it actually is and reality as it is perceived to be or ought to be;
3. innovation based on process needs;
4. changes in industry structure or market structure that catch “everyone unawares”;
5. demographic changes;
6. changes in perception, mood and reasoning; and
7. new knowledge.

Those opportunities may not be commercially advantageous but can be transformed into a “new - value” within the dynamic bundle of broad public enterprise, and consequentially educational, objectives. Entrepreneurship is not necessarily wealth seeking and its ends may not always be financial (Boyett, 1996, pp. 36-51; Borins, 1998a, 1998b).

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Efforts to pursue entrepreneurship in the public sector also have to overcome obstacles peculiar to that sector. According to Cornwall and Perlman (1990, pp. 226-227) these barriers include:

- multiplicity and ambiguity of goals which paralyses management;
- limited managerial autonomy with high potential for interference which discourages innovation;
- high visibility which results in overcautious managerial behaviour;
- skewed reward systems which discourage risk-taking;
- short term orientation which discourages larger longer term, high impact entrepreneurial initiatives; and
- restrictive personnel policies which reduce the leader's ability to motivate subordinates.

Recent reforms to the public sector have, however, unleashed a new form of devolution of power, a reallocation of resource control and an uncertain environment which together go some way toward overcoming these barriers (Boyett, 1996; Forster, Wanna and Graham, 1996, pp. 1-12) and which broadly align the general influences on public sector management with those experienced by the education sector.

Sandford Borins (1998a & 1998b), from the University of Toronto, like Kanter (1988) and Bardach (1998), concluded that public sector innovation frequently arose from "holistic" integration of across-agency initiatives. In the context of education, this can be paralleled with contemporary trends to meet student and industrial needs across disciplinary markets. Borins also found that the main initiator of public sector innovations were not organisational leaders or politicians but career public servants below the public sector head, that is, middle level managers and front-line staff. This is complimented by his finding that innovations most often arise from locations either physically or metaphorically "away" from central office.

Borins also examined the views advanced by Behn (1988) that strategic planning did not underpin innovation but that organisations "groped" towards innovations. This can be contrasted with Drucker's (1985, p. 31) view that entrepreneurship involved the purposeful and organised search for value enhancing opportunities. Borins' work demonstrated that both planning and groping have a role to play.

Borins also considered obstacles to innovation in the public sector. His research demonstrated that the majority of obstacles arise from within the public sector rather than from the external environment or political intrusions. The most significant obstacle to innovation was identified as working within the bureaucratic structure of central agencies and reflects the way innovations can change occupational patterns, standard operating procedures and power structures.

Stimulating and Constraining Entrepreneurship

Organisational structures and attributes cannot create entrepreneurship. They can however stimulate or impede the potential for its emergence. If certain factors exist they will promote or inhibit opportunities for entrepreneurship. Sadler (1999) concluded that public sector entrepreneurship is stimulated by:

- clearly understood objectives;
- cohesive work groups;
- decision making which relies upon few integrating devices;
- effective reward/punishment systems;
- larger organizations, with more resources, promote planned entrepreneurship;
- little consultation so as not to impede flexibility;
- little or no political intrusion;
- moderate personnel turnover;
- multiplicity of goals particularly where government policy is inconsistent;
- organizational autonomy;
- output rather than inputs-focussed;
- participative decision-making;
- perceived competition;
- performance objectives developed from a shared participation; and
- turbulent operating environment

These conclusions can be transposed into the education sector. Whilst these factors are substantially similar to those evidenced within the private sector, there are some significant differences. Most importantly entrepreneurship in the private sector is fostered by smaller organizations with clear and consistent goals, control over resources and organic, flexible structures using staff with specialized training (Jennings, 1994; Slevin & Covin, 1990; Cornwall & Perlman, 1990). These features are less significant in entrepreneurship in the public sector where larger, hierarchical and relatively rigid organizations with multiple, conflicting but well-understood objectives and relatively less control over resources have continuously adopted entrepreneurial processes.

The most significant of these factors are examined below:

Macro-External Environment

Hostile external environments typified by precarious industry settings, intense competition, harsh business climates and a relative lack of exploitable opportunities have been regarded as positive incubators for corporate entrepreneurship (Slevin & Covin, 1990, pp. 43-53). These attributes accurately portray the external environment

experienced by contemporary educational institutions. Internet based learning, competition and alliances, a lack of clarity about future policy objectives, globalization and the debate between the role and value of pure and applied education are all volatile components of the environment within which educational institutions operate.

Structure

Slevin and Covin (1990) and Jennings (1994) argued that organic, adaptable, openly communicating, consensual, loosely controlled, decentralised, flexible structures with an absence of rules and regulations stimulated entrepreneurship. Weberian bureaucracy and Tayloristically defined specialised tasks with formal rules inhibit entrepreneurship.

Education providers are usually hierarchically structured with relatively rigid pay scales and limited opportunity to use motivating mechanisms to foster innovation despite the usual emergence of quasi-autonomous clusters based on disciplinary expertise. In the context of the public sector, entrepreneurship is promoted by stimulating flexible and organic clusters within hierarchical structures (Sadler, 1999). The autonomy traditionally enjoyed in educational faculties and schools is a reflection of some of the attributes mentioned by Slevin and Covin, and Jennings. However, the strict accountabilities and traditional committee structures and inflexibility of the education sector paint a contrary picture of the organic features required to foster entrepreneurship.

Within the education sector, opportunities for structural flexibility are limited by accountability and control mechanisms.

Culture

Knight (1986) and Saxena (1991) argued that corporate innovation can be successfully managed and corporate entrepreneurship can be fostered. Knight (1986) and Legge and Hindle (1997) maintained that the effective management of corporate entrepreneurship involved managing a culture which includes all staff as self perceived intrapreneurs, applauding failures as well as successes and screening mechanisms to aid innovative direction and process. Saxena (1991) reasoned that policies and programs must be established to develop an entrepreneurial spirit driven by a managerial vision directed towards opportunities rather than problems.

There is some evidence to suggest that the education sector is developing an entrepreneurial culture with various innovative alliances and attempts to deal with new technology and globalisation. Some institutions have openly embraced an entrepreneurial culture. For instance, in Melbourne, Australia the Chisholm Institute of Technical and Further Education has implemented a system or "risk cards" which requires each unit within the institution to scan for environmental opportunities and, in a planned way, reach an agreement with management whether to pursue the project incorporating the risk. Staff are required to pursue the process as a mandatory component of the organisation's Performance Management System.

Size

Quinn (1985), Prokopenko and Pavlin (1991) and Jennings (1994) suggested that smaller, flexible organisations are better entrepreneurship incubators than larger, bureaucratic organisations. Jennings (1994, pp. 187 - 193) demonstrated that large organisations generally use rigid rules and procedures to administer the routine tasks of the organisation. They asserted that these regulations stifle innovative and entrepreneurial activities. Liebcap (1986) argued that organisational size has an incremental impact upon entrepreneurship. He maintained that larger organisations tend to plan strategy and are not as prepared as smaller organisations to implement spontaneous innovation. Saxena (1991) clarified this thinking by observing that size per se is not an obstacle to entrepreneurship but that bureaucracies and conservatism traditionally associated with larger organisations were the real impediments.

Jennings (1994) maintained that smaller, flexible organisations are more robust entrepreneurship incubators than larger, bureaucratic organisations. This proposition was refuted in the context of the public sector where it has been noted (Sadler, 1999) there is a positive correlation between size and planned entrepreneurship but smaller organisations were more readily able to respond to spontaneous or “groped” innovation.

Rewards and Sanctions

Jennings and Lumpkin (1989) found that entrepreneurial organisations will tend not to penalise managers if risky projects fail. They based this hypothesis upon work by Pascale and Athos (1981) who argued that innovative firms have a management that encourages risk-taking and develops processes that translate ideas into action. This rationale cannot be foisted without reconsideration into the public sector where there is a particularly unforgiving environment which punishes mistakes but does little to reward successes.

Centralisation of Decision-Making

Pearce and David (1983) and Jennings and Lumpkin (1989) found that decision-making in entrepreneurial organisations tends to be participative and that dispersed power fosters many subcoalitions that support innovative activity. Their findings supported Burns and Stalker’s (1961) locus of control theory within an organic organisational structure.

Specialisation

Hage and Aiken (1970) argued that professional employees tend to recognise the need for change and that firms with a high percentage of specialists will tend to be more innovative. Miller and Friesen (1982) also found a positive correlation between specialisation and entrepreneurship. Jennings and Lumpkin (1989) found that decision-making in entrepreneurial organisations tended to rely upon more personnel with specialised training than in conservative organisations. In the public sector a mix of specialists and generalists is more likely to provide an optimal entrepreneurship incubator (Sadler, 1999). Educational institutions are replete with a vast array of highly specialised staff. Managers, however, tend to be disciplinary focussed. Multi-disciplinary decision-

making and the breaking down of traditional faculties to reflect modern market needs may be the greatest stimulant to entrepreneurship facing educational institutions.

Performance Objectives

Hrebiniak and Joyce (1984) reasoned that when objectives are developed unilaterally by top management with an emphasis on formal accountability and strict rules of enforcement, organisations tended to be defensive, conservative and adopt rigid behavioural patterns. Jennings and Lumpkin (1989) found that entrepreneurial organisations develop “bottom up” performance objectives. Both management and staff participate in the development of the objectives.

Ramamurti (1986) observed that opportunities for entrepreneurship are generated from inconsistent performance objectives commonly attributable to the public sector. Organisations see goal ambiguity as an opportunity for the exercise of discretion. Vague and conflicting goals can be used by the organisation to suit its own preferences. It promotes opportunities for flexibility.

Students of public sector management often talk of “unclear and inconsistent goals” (Wanna, O’Faircheallaigh & Weller; 1992). Similarly, universities are commonly portrayed as having goal ambiguity (Grigg, 1996, p. 161; Baldrige et. al, 1977). Based on Ramamurti’s writings inconsistency of objective potentially foster entrepreneurship. Those goals must, even if inconsistent, be clearly understood. Entrepreneurship exists in the pursuit of a valuable objective. Whilst the question of how the value is defined – by financial, social or other measures – remains rhetoric the pursuit of a particular added value is a clear and necessary precondition to justify the pursuit of entrepreneurial conduct.

Sadler’s (1999) research demonstrated the desirability of multiplicitous goals but did not support a lack of clarity and understandability of goals. Cornwall and Perlman (1990) observed that a multiplicity and ambiguity of goals paralyses management and constrains innovative behaviour. Multiple, conflicting and ambiguous goals inspire entrepreneurship. The incongruities and vagaries of objectives, in conjunction with hierarchical structures, facilitate opportunities to achieve entrepreneurship. It creates a degree of flexibility which, if the organisational objectives had been consistent and clear, may not have emerged.

Resources

The literature indicated that availability and control of resources fosters private sector entrepreneurship (Angle and Van de Ven, 1989). Larger organisations, with access to greater resources, are more entrepreneurial than smaller organisations. Behn (1988) maintained that innovation often arises spontaneously by a “groping” process that moves iteratively towards goals that are loosely defined. Graham and Harker (1996), conversely, argued that public sector entrepreneurialism is unlikely to arise spontaneously. Borins (1998b) added to Behn’s perception by arguing that comprehensive planning also generates innovation. He argued that planning and groping both have a place in the management of innovation.

Framework for Fostering Entrepreneurship in Education

The education environment is in a state of rapid evolution. New learning methods, distance learning technologies and changes to student demands based on life long learning precepts are eroding the traditional paradigms of educational management. The traditional and the new resources of education providers need be marshalled in a fresh and unique way to manage these changes and meet the needs and wants of contemporary society. The process of managing these challenges is one form of entrepreneurship, irrespective of whether the institution concerned is driven in whole or in part by business or financial concerns.

A reflection on those factors which stimulate entrepreneurship in the public sector - an environment inclusive of education where goals other than purely financial goals are recognised as legitimate drivers - reveals that education providers can create an environment which fosters entrepreneurship in a way which includes both the traditional values of education and the contemporary demands of providing post-secondary learning opportunities.

The public sector, like education institutions, experience different environmental influences from those experienced by the private sector and, as a result, the factors which facilitate entrepreneurship also differ between the sectors.

Accountability and control mechanisms of the education sector may be maintained in ways that simultaneously enhanced opportunities for entrepreneurship. Having regard to the operational and regulatory requirements of the education sector, corporate entrepreneurship can be fostered by incorporating a mix of both technical and non-technical staff in decision-making, developing opportunities for novel processes within structural interstices, strategically depriving or making available resources to business units, ensuring all staff understand and appreciate the organisation's operating environment and objectives and by maintaining pressures for change.

The public and the private sectors reflect the differing influences of social, business and stakeholder interests. The influences impacting the public sector are reflected in education. How these various influences affect an organisation determines its preparedness to act entrepreneurially.

Education institutions can promote or constrain entrepreneurial behaviour. Structures and practices exist within the sector which profoundly impact opportunities for the emergence of entrepreneurship. An awareness of those factors that impact upon the potential emergence of entrepreneurship enables managers to plan to achieve certain outcomes. Despite its historical roots and traditional links with economic management, recent studies reveal that entrepreneurship is not just about money. It is concerned with adding value. Unleashing opportunities for integrating resources in a new and sometimes risky aggregation can enhance the traditional values of education institutions, like the traditional financial values of the private sector. Entrepreneurship is worthy of study by managers of education institutions not just because of the new focus of requiring the generation of commercial funds. The traditional values of educational institutions, aligned with modern learning demands and technology, can be enhanced by stimulating entrepreneurial processes.

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