Clarifying the Domain of Educational Entrepreneurship: Implications for Studying Leadership, Innovation and Change

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INTRODUCTION

The scope of entrepreneurship has been extended beyond its original domain of starting new ventures in the business sector. While there are various definitions of entrepreneurship, it is generally agreed that it includes behaviors of 1) initiative taking, 2) the organizing and reorganizing of social and economic mechanisms to turn resources and situations to practical account, and 3) the acceptance of risk or failure (Hisrich, Peters and Shepherd, 2007). There has been a rising interest in the phenomenon of entrepreneurship in the context of education as well. It is drawing the attention of various practitioners in education at different levels – including those from public, private and not-for-profit backgrounds. Also, an increasingly number of practices, activities, or even the whole institutions in the education sector are now being described as "entrepreneurial" (Hess, 2007; Shane, 2004). This is accompanied with a growing number of research outputs related to this topic in both education journals and entrepreneurship journals.

What actually is educational entrepreneurship? On one hand, it is certainly related to certain individual roles and behaviors in the education sector. For example, Teske and Willianson, (2006) defined education entrepreneurs are individuals seeking to instigate changes in the public education system that will disrupt, transform, or radically alter the way education is provided. They include business people who seize a market opportunity in the education

sector, public leaders who seek to change in the education system, and non-profit leaders who provide initiatives and create organizations outside the main education system. On the other hand, educational entrepreneurship is also related to the institution-level activities which lead to innovation and change (Hess, 2007). However, with its diverse purposes, forms and activities which are related to "educational entrepreneurship", its exact meaning is not very clear. Moreover, while the existing literature has been focused on explaining what educational entrepreneurship is, there is still a lack of a clear conceptual differentiation about the domain of educational entrepreneurship from other domains. As a result, a more systematic approach for examining the domain of educational entrepreneurship is needed.

Therefore, one of the purposes of this paper is to clarify the concept of educational entrepreneurship by defining its own domain and its relationship with other domains, so that appropriate research paradigms can be applied. A particular focus is on the educational entrepreneurship within institutions because, as explained later, other forms of educational entrepreneurship can be addressed through some existing paradigms whereas those for the institutional-based educational entrepreneurship are not yet clear. Therefore, another purpose of this paper is to develop a framework of institution-based educational entrepreneurship. Also, its relationship with the field of educational leadership, innovation and change will be explained with a number of possible research questions proposed.

THE RISE OF EDUCATIONAL ENTREPRENEURSHIP

The reasons why entrepreneurship exists in the education sector can be explained by a number of perspectives. From a conventional entrepreneurship perspective, the rise of educational entrepreneurship can be attributed to the existence of market opportunities in the education sector. This is consistent is the Austrian tradition in economics as exemplified in the work of Hayek (1949) and Kirzner (1976), who emphasized on market disequilibrium and the alertness to such disequilibrium as market opportunities. Therefore, the role of educational entrepreneurs is to provide timely services or products to the education market in order to grasp these opportunities. Nevertheless, such opportunities in the education context are not necessarily profit-oriented.

On the other hand, as an alternative explanation, Schumpeter (1934) emphasized that the key role of the entrepreneur is to innovate or to carry out new combinations, including the introduction of new goods or new methods of production, the opening of new markets, and the creation of new types of industrialization. According to him, entrepreneurs are motivated by their dream of founding a new private kingdom, will to conquer, and joy of creating. Therefore, entrepreneurship is initiated by some talented and highly motivated individuals. In the context of education, those individuals who bring about new educational changes, initiatives and institutions can be considered as educational entrepreneurs.

Apart from the above perspectives, a more direct driven force for educational entrepreneurship has been brought about by a number of changes in the education sector in recent decades. According to Smith and Petersen (2006), these changes includes: 1) change in expectations to educational systems for more innovations and higher quality, 2) change in market structure with an emphasis on standards and accountability, 3) change in the availability of resources because of more market-oriented policy and the availability of private funding on education; and 4) emergence of new knowledge and technology that create opportunities for changes in various aspects of education. Chan and Lo (2997) also commented that the global trend of university entrepreneurialism is related to the emphasis of quality, accountability, and marketization. In other words, the whole education sector has

become more dynamic so that the opportunities for entrepreneurial actions have increased significantly.

Within this increasingly dynamic context of education, the scope of educational entrepreneurship in higher education is even more substantial and is readily received because of the fewer regulations in this and the more direct relevance of this sector to economic development (Shane, 2004). On the other hand, in the school sector, such trend is also emerging and is often associated with the introduction of competition through offering market system of school choice through education voucher in some countries. However, according to Hess (2007), choices alone do not necessarily foster entrepreneurship as there must be opportunities for the educational entrepreneurs to "enter the field, obtain resources, recruit talent, compete fairly, and benefit from their success" (P.26).

Based on the above, it is shown that while the education leaders initiate innovations and changes, they also respond to the changes and opportunities generated externally. Therefore, educational entrepreneurship is highly relevant to the phenomena of leadership, innovation and change which are important themes in studying the dynamism in education.

DIFFERENT FORMS OF EDUCATIONAL ENTREPRENEURSHIP

Among different forms of educational entrepreneurship, perhaps the most business-oriented one is the related to establishing business ventures in the education sector. They include private for-profit educational providers at different levels of schooling from child care to professional and continuing education. Other businesses associated with the education sector can also be entrepreneurial in nature, including the providers of school transportation, school supplies, school facility construction and maintenance, school food services, and supplemental education services (Teske and Willamson, 2006). Because of the relatively less regulated environment and higher level of market orientation, those in the early childhood education, post-secondary education, and supplemental education services are among the most promising segments for the for-profit entrepreneurial activities in education (Molnar, 2006).

Moreover, in higher education, educational entrepreneurship is often referred to academic entrepreneurship (Shane, 2004), which involves a wide range of innovative and developmental activities internal and external to the institutions, including research centers, science parks, joint ventures, spin-out firms, e-teaching, patents, design rights, copyrights, licensing, industry liaison, consultancy, teaching company schemes, technology and knowledge transfers (Brennan and McGown 2006). Academic entrepreneurship is often associated with nurturing an enterprise culture in a university, with the support of entrepreneurship education and development activities for staff and students (Rae, Gee and Moon, 2009). More significantly, there is even a trend for developing a form of "entrepreneurial university" which requires fundamentals shifts in a university's mission, management and funding modes, with an emphasis of the "third mission" of improving the economic benefits and social impacts of the results in addition to teaching and research (Brennan and McGowan, 2005).

In the school sector, institution-based educational entrepreneurship is often associated with the management styles of the school leaders and the innovative activities pursued by the schools (Finlay, 1996; Kerchner, 1988). This entrepreneurial tendency is found not only in private schools but also in public schools. In fact, the need for being entrepreneurial has drawn more attention within the public school system because their public school leaders have to tackle with the challenges of the pressure arising from waves of school reform, the resistant culture for changes, as well as the demands from the customers (Eyal and Inbar, 2003; Hess, 2007; Wilson, 2006). Also, the activities involved can be rather diverse, including introducing new technologies for learning, developing new school culture and structure, finding new resources for schools, marketing and image networking, and even turning around of troubled schools. These activities are mainly concerned about improving the conditions for learning in their own schools and even transforming the entire system around them (Williams, 2006). Also, it is found that the extent of entrepreneurial strategies pursued by different school leaders differs because of their leadership styles (Eyal and Kark, 2004).

Apart from the above, educational entrepreneurship can also be educational initiatives on the fringe of the mainstream education system or on areas in which the main system cannot serve effectively (Teske and Williamson, 2006). Eyal (2008), for example, have studied a case in which parents started up schools for their children through their own network without government's support. Sperandio (2006) also examined a number of innovative projects to meet the educational needs of the disadvantaged individuals in Bangladesh. Chand and Amin-Choudhury (2006) further consolidated various socio-educational initiatives into different categories, including 1) drawing on local cultural experience, introducing new cultural elements and new roles for people; 2) resource mobilization; 3) identifying community needs; and 4) institution building efforts. In this perspective, educational entrepreneurship intersects with social entrepreneurship, which is another emerging extension for the phenomenon of entrepreneurship.

The above different forms of educational entrepreneurship can be represented by the following diagram:

Insert Figure 1 about here

Figure 1 shows how the domain of educational entrepreneurship is differentiated from and intersects with other domains of entrepreneurship. Accordingly, there are four types of activities which are related to the domain of educational entrepreneurship. Type 1 represents those entrepreneurial activities which fall under the unique domain of educational entrepreneurship. They are internally generated and institution-based, including many of the phenomena as described above in academic and school entrepreneurship. Type 2 refers to the profit-oriented ventures and supplemental businesses in the education sector. They belong to both the domain of educational entrepreneurship and the domain of business entrepreneurship, and they can be initiated within educational institutions or provided by outsiders on a straightly commercial approach. On the other hand, those socio-educational initiatives (Type 3) in educational entrepreneurship may also be part of the emerging field of social entrepreneurship. They are differentiated from the for-profit aspect of educational entrepreneurship with an emphasis of creating social values, stimulating social changes, or addressing social needs (see, for example, Alvord, Brown and Letts, 2004; Dees and Elias, 1998). Again, they can be initiated internally within existing educational institutions or externally by some social entrepreneurs. Furthermore, there may but some less common cases which belong to educational, business and social domains of entrepreneurship simultaneously, for example, launching a profitable business in support of an educational initiative for a disadvantaged group. This is represented by Type 4 in Figure 1.

Based on this clarification, it is possible to propose the corresponding paradigms for researching into educational entrepreneurship. For instance, for externally-generated educational entrepreneurship with a strong business orientation, many of the existing paradigms in mainstream entrepreneurship literature can be readily applied to study this aspect through different behavioral, managerial, economic and developmental perspectives (Acs and Audretsch, 2005). However, even though these education-related businesses may be primarily driven by profit, there may be some differences from other commercial activities because of the relatively heavy influences of the regulatory environment and social expectation of certain qualities such as commitment, particularly in the formal education sector. On the other hand, Mair and Marti (2005) suggested that research on social entrepreneurship can be centered up the concept of embeddedness with the use of structuration theory, institutional entrepreneurship, social capital, and social movements. Therefore, it is reasonable to believe that these theories and concepts are also useful for studying externally-generated educational entrepreneurship with a strong social orientation.

The remaining question is: do we have a specific framework to address the institution-based education entrepreneurship which mainly involves Type 1 as described but is also tied to the internal initiatives in Types 2 and 3 and even Type 4 to a certain extent? At present, there are a few attempts of empirical studies in this field using quantitative approaches (for example, Brennan and McGown 2006; Eyal and Inbar 2003; Eyal and Kark, 2004; Eyal, 2007a; Eyal 2008), as well as some case studies (for example, Bernascini, 2007; Finlay, 1996; Rae et al. 2009). However, there is still a lack of clear conceptual frameworks for this institution-based

educational entrepreneurship with a cross-domain nature (i.e, Type 1 plus the internal initiatives of other Types). A possible way forward for developing such framework is to make reference to the field of corporate entrepreneurship, which is a relatively better developed construct for studying the entrepreneurial tendency in existing organizations.

CORPORATE ENTREPRENEURSHIP

It is not the intention of this paper for providing an extensive review about corporate entrepreneurship (CE) or for developing another new generic framework for it. Rather, the key elements of CE are highlighted as follows in form of some guidelines for the subsequent development of a framework for institutional-based educational entrepreneurship:

First, CE encompasses a number of activities or phenomena related to innovation and change in an organization. For example, Vesper (1984) defined corporate entrepreneurship as any one of or any possible combination of (1) new strategic direction; (2) initiative from below; and (3) autonomous business creation. Guth and Ginsberg (1990) also identified new venture creation within existing organization and the transformation or organizations through strategic renewal as the two major types of phenomena of CE. A similar classification was proposed by Zahra (1993) but the innovation dimension was emphasized. Therefore, as Sharma and Chrisman (1999) suggested, there are three main types of CE activities, including 1) corporate venturing, 2) innovation and 3) strategic renewal. According to Narayanan, Yang and Zahra (2009), corporate venturing is the set of organizational systems, processes and practices that focus on creating businesses in existing or new fields, markets or industries using internal and external means. Innovation refers to an organization's commitment to introducing new products, production process, and organizational systems (Yiu and Lau, 2008). Strategic renewal is related to the transformation of organizations through the renewal

of the key ideas on which they are built (Antoncic and Hisrcih 2001). This includes a range of activities such as sustained regeneration, domain redefinition, organizational rejuvenation, business model reconstruction, and organizational learning (Covin and Miles, 1999; Dess, et al. 2003).

Second, at the corporate level, CE is revealed as an organisation's behavioural orientation or strategy. As an organization's behavioural orientation, earlier studies in CE has identified three different dimensions, including proactiveness, innovation and risk-taking (Covin and Slevin, 1991). This was supplemented by Lumpkin and Dess (1996) who added autonomy and competitive aggressiveness to the set of behaviour reflecting CE. Another perspective is to consider CE as a strategy or strategic model. For example, Wolcott and Lipptiz (2007) differentiated four CE models, including opportunist, enabler, advocate and producer, based on the consideration of ownership and resource allocation. Ireland, Covin and Kuratko (2009) have made a deliberated effort to conceptualize a specific, identifiable construct of CE strategy, which is defined as "a vision-directed, organization-wide reliance on entrepreneurial behaviour that purposefully and continuously rejuvenates the organisation and shapes the scope of its operations through the recognition and exploitation of entrepreneurial activities" (P.21). No matter how we conceptualise this organisation-wide phenomenon of CE, it is important to note that effective CE should be embedded within an organisation at different aspects, including process, practices, decision-making activities, culture, and different levels of organisational members (Holt, Rutherford and Clohessy, 2007; Hornsby et al., 2009; Ireland et al., 2009; Lumpkin and Dess, 1996).

Third, the presence of a strategic leader is an important factor in promoting CE. Corporate entrepreneurs are needed in CE as they pursue entrepreneurial opportunities to innovate

within existing organiszation without regard to the level and nature of currently available resources (Ireland, Kuratko and Morris, 2006). In fact, a firm's entrepreneurial orientation depends on the entrepreneurial behaviours that these corporate entrepreneurs exhibit in an organizational context (Pearce, Kramer and Robbins, 1997). While corporate entrepreneurs can be managers or employees who demonstrate key entrepreneurial attributes or behaviors at all levels, it is the owner/manager or the chief executive of an organisation that accounts for its strategic success (Slevin and Colvin, 1995). Ireland et al. (2009) also proposed that the top-level managers' entrepreneurial strategic vision is central to the formulation of a corporate entrepreneurial strategy. Specifically, Ling et al. (2008) identified that the transformative leadership of CEOs helps to promote corporate entrepreneurship.

Fourth, CE is facilitated by the influences of environmental, organizational, and individual factors. The environmental factors include macro-environmental and market variables such as dynamism, technology opportunities, industry growth, demand for new products, and favourability of change (Antoncic and Hisrich, 2001; Ireland et al., 2009). Organizational factors include rewards, top management support, resources/time availability, organizational boundaries, work discretion/autonomy, organisational structure, culture, perceptions of co-workers, communication climate, and non-market forms of resource capital (Kuratko, Hornsby and Goldsby, 2004; Narayanan et al., 2009; Rutherford and Holt, 2007; Slevin and Covin, 2005; Yiu and Lau, 2008). Also, the individual factors including beliefs, attitudes and values are also considered to be influential (MaFadzean, O'Loughlin and Shaw, 2005; Ireland et al., 2009). In particular, some factors may be the "transformational triggers" (Kuratko et al., 2004) which produce impetus to behave entrepreneurially when other conditions are conducive to such behaviour. Such triggers can be internally or externally sourced,

opportunity driven or threat driven, technology push or pull, top-down or bottom up, and identified through deliberate search or by chance (Schindehutte, Morris, and Kuratko, 2000).

Finally, CE leads to a range of performance and organizational outcomes. CE is considered as a crucial means of sustaining and enhancing organisational performance and profitability (Covin and Slevin, 1991; Zahra, 1991). Empirical evidence about the CE-performance relationship is generally positive (for example, Antoncic and Hisrich, 2001; Lumpkin and Dess, 2001). Moreover, Lumpkin and Dess (1996) suggested that a wider range of non-financial factors should be considered, including reputation, public image, goodwill, as well as the commitment and satisfaction of employees. Evidence is also provided by Mullins, Linehan, and Walsh (2001) who found that an entrepreneurial environment leads to greater organisational commitments among employees. Holt et al. (2007) also found supportive evidence for the positive relationship between CE and employees' job satisfaction, affective commitment and their job performance. Moreover, it is important to note that these outcomes will help to reinforce and sustain future entrepreneurial activities (Kuratko et al., 2004).

A PRELIMINARY FRAMEWORK OF EDUCATIONAL ENTREPRENEURSHIP

With reference to the above key elements about CE, a preliminary framework of institution-based educational entrepreneurship is proposed as follows:

Insert Figure 2 about here

The above framework consists of three major components. First, the antecedents of educational entrepreneurship include different environmental, organisational and individual factors. While most of the environmental factors in CE is applicable to educational entrepreneurship, regulatory environment or government policy are of particular relevance as formal education where many of the educational institutions operate is a heavily regulated sector and they depends significantly on governmental sponsorship (Eyal, 2007b). Players in this sector tend to be reactive to the policy changes in different extents. Organisational factors which are commonly identified in CE should also be relevant to the education context. Individual characteristics may be examined through some of the existing approaches for studying entrepreneurial characteristics such as entrepreneurial attitude orientation (Robinson et al., 1991) and entrepreneurial self-efficacy (Boyd and Vozikis, 1994).

Second, the focus of the framework is the process of institution-based educational entrepreneurship as an interaction of entrepreneurial activities, entrepreneurial orientation, and strategic leader. In line with the common CE frameworks, different forms innovation and change related activities exist, including corporate venturing (e.g. creating an extension arm of a university), organisational and educational innovations (e.g. implementing e-learning for students), and strategic renewal (e.g. turnaround of a troubled school). Another element is the presence of the strategic leader as the change agent, who can be the principal, the senior management or the governance body of an educational institution. They are responsible for leading, implementing and sustaining the strategies for educational entrepreneurship by grasping the educational opportunities. For example, Eyal and Kark (2004) found that transformative leadership in school is related to educational entrepreneurship. The strategic leader may not necessarily be the corporate entrepreneur but he or she has to be supportive towards the corporate entrepreneur with appropriate organizational policy, structure and

culture. Also, the implemented strategy is revealed through the entrepreneurial orientation of the educational institution. This can be in form of the dimensions such as innovation, proactiveness, risk-taking, competitive aggressiveness, and autonomy as in other CE literature.

Third, the outcomes vary with the forms of educational entrepreneurship involved. In particular, the effective provision of education for learners should be a key concern (e.g. Hess, 2007). Also, similar to CE, organizational outcomes, including the satisfaction and commitment of the teachers, as well as the formation of an entrepreneurial culture, should be important organizational outcomes for educational entrepreneurship. However, while financial outcomes may only be relevant to the for-profit type of educational entrepreneurship, economic benefits are often highlighted as an important outcome particularly in academic entrepreneurship (Shane, 2004; Williams and Kitaev, 2005).

Moreover, for sustained educational entrepreneurship, it is necessary that the outcomes generated from educational entrepreneurship will help to reinforce future entrepreneurial activities as in CE (Kuratko et al., 2004). For example, the economic benefits from educational entrepreneurship shall induce a more favourable policy or organisational environment for entrepreneurial activities in future.

While the above conceptual framework is still preliminary, it offers a systematic approach for researching educational management, particularly for studying leadership, innovation and change. For example, some are the possible research areas in form of research questions are proposed as follows:

• What are the exact roles of leaders in educational entrepreneurship?

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- How is the strategic leader affected by the antecedents of educational entrepreneurship?
- How can the theories of leadership be applied to study the strategic leader in educational entrepreneurship?
- How important is leadership in different forms of educational entrepreneurship and will different forms of leadership be required for different forms of educational entrepreneurship?
- How does an institute's entrepreneurial orientation, particularly the innovativeness and change orientation, affect its educational, organisational and performance outcomes, as well as create the economic benefits to a wider context?

CONCLUSION

In this conceptual paper, the nature for educational entrepreneurship is examined. Its domain and relationships with other domains of entrepreneurship are clarified. Moreover, a preliminary framework for studying the institution-based educational entrepreneurship is proposed by making use of the concept of corporate entrepreneurship.

There are two key implications from this conceptual development. First, with a clarified domain of educational entrepreneurship, differentiating the purposes of the different educational entrepreneurship activities is a fundamental issue for researching into this field. Also, it is important to identify whether such activities are internally initiated or externally driven. This will allow effective research into educational entrepreneurship by making use of appropriate paradigms. For example, researching the relationship between the leadership styles of school principals and the innovative marketing campaigns of their schools is clearly with the domain of institution-based educational entrepreneurship using a CE framework. On the other hand, for some activities, investigation using different domains is possible. For

example, it may be more appropriate to examine a laptop ownership project by an NGO to a disadvantaged student group from the perspective of social entrepreneurship. However, if such project is internally initiated with a school, it can also be studied from the perspective of institution-based educational entrepreneurship as an educational innovation.

On the other hand, the application of CE to study educational entrepreneurship helps to conceptualize the phenomena of leadership, innovation and change within educational institutions under a systemic approach. With a systematic organization of the antecedents, elements, forms, orientation, and consequences of educational entrepreneurship, it forms a useful construct for studying various organizational and educational innovations, as well as the changes in form of strategic renewal, and the corporate venturing activities internal and external to an educational institution. It also provides a framework for examining different forms of leadership which is highlighted as an important element in institution-based educational entrepreneurship.

However, this institution-based framework of educational entrepreneurship may not be appropriate for examining the externally generated entrepreneurial activities related to education. In these circumstances, using the perspectives from other domains of entrepreneurship may be more appropriate. Moreover, as it is still a preliminary framework, further theoretical refinement is necessary in order to develop it into an operationalized form so that empirical studies can be conducted in further studies.

REFERENCES

- Acs, Z.J. and Audretsch, D.B (2005). Handbook of Entrepreneurship Research: An Interdisciplinary Survey and Introduction (International Handbook Series on Entrepreneurship). Boston, MA : Springer.
- Alvord, S.H., Brown, L.D. and Letts, C.W. (2004). Social entrepreneurship and societal transformation. *Journal of Applied Behavioral Science*, 40(3), 260-282.
- Antoncic, B. and Hisrich, R.D. (2001). Intrapreneurship construct: refinement and cross-cultural validation. *Journal of Business Venturing*, *16*(5), 495-527.
- Bernasconi, A. (2005). University entrepreneurship in a developing country: the case of the P. Universidad Católica de Chile, 1985–2000 *Higher Education Management and Policy*, 50(2), 247-274.
- Boyd, N.G., Vozikis, G.S. (1994), "The influence of self-efficacy on the development of entrepreneurial intentions and actions", *Entrepreneurship Theory and Practice*, Baylor University, 18(4), 63–77.
- Brennan, M.C. and McGowan, P. (2006). Academic entrepreneurship: an exploratory case study. International Journal of Entrepreneurial Behaviour and Research, 12(3), 144-164.
- Chan, D. and Lo, W. (2007). Running universities as enterprises: university governance changes in Hong Kong. *Asia Pacific Journal of Education*, 27(3), 305-322.
- Chand, V.S. and Amin-Choudhury, G. (2006). Teachers and socio-educational entrepreneurship: competence as a consequence *Journal of Entrepreneurship*, 15(2), 97-114
- Covin, J.C. and Miles, M.P. (1999). Corporate entrepreneurship and the pursuit of competitive advantage. Entrepreneurship Theory and Practice, 23(3), 47-63
- Covin, J.G. and Slevin, D.P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship: Theory and Practice*, 16 (1), 7–24.

- Dees, J.G. and Elias, J. (1998). The challenges of combining social and commercial enterprise. *Business Ethics Quarterly*, 8(1), 165-178.
- Dess, G.G., Ireland, R.D., Zahra, S.A., Floyd, S.W. Janney, J.J. and Lane, P.J. (2003). Emerging issues in corporate entrepreneurship. Journal of Management, 27(3), 351-78.
- Eyal, O. (2007a). Caught in the net: the network-entrepreneurship connection in public schools. *International Journal of Educational Management*, 22(5), 386-398.
- Eyal, O. (2007b). Governmental sponsorship as a mechanism restricting school entrepreneurship. *Educational Planning 16*(1), 1-11.
- Eyal, O. (2008). When parents choose to start up a school: a social-capital perspective on educational entrepreneurship *Journal of Educational Administration*, *46*(1), 99-118.
- Eyal, O. and Inbar, D. E. (2003). Developing a public school entrepreneurship inventory: theoretical conceptualization and empirical examination. *International Journal of Entrepreneurial Behaviour and Research*, 9(6), 1355-2554.
- Eyal, O. and Kark, R. (2004). How do transformational leaders transform organizations? a study of the relationship between leadership and entrepreneurship *Leadership and Policy in Schools*, *3*(3), 211-235.
- Finlay, D. (1996). Educational entrepreneurship within UK schools. *Economics Issues*, 1(2), 45-61.
- Guth, W.D. and Ginsberg, A. (1990). Corporate entrepreneurship. Strategic Management Journal, 11 (5), 5-15.
- Hayek, F.A. (1949). The meaning of competition. In F.A. Hayek. *Individualism and Economic Order*. London: Routledge and kegan Pual (1959), 92-106.
- Hess, F.M. (2007). The case for educational entrepreneurship: hard truths about risk, reform, and reinvention. *The Phi Delta Kappan*, 89(1), 21-30.

- Hisrich, R.D, Peters, M.P. and Shepherd, D.A. (2008). *Entrepreneurship* (7th Ed.) Boston, Mass.: McGraw-Hill/Irwin.
- Holt, D.T., Rutherford, M.W. and Clohessy, G.R. (2007). Corporate entrepreneurship: an empirical look at individual characteristics, context, and process. *Journal of Leadership and Organizational Studies*, 13(4), 40-54.
- Hornsby, J.S., Kuratko, D.F., Shepherd, D.A. and Bottc, J.P. (2009). Managers' corporate entrepreneurial actions: examining perception and position. *Journal of Business Venturing*, 24(3), 236-247.
- Ireland, R.D., Covin, J.G. and Kuratko, D.F. (2009). Conceptualizing corporate entrepreneurship strategy. *Entrepreneurship Theory and Practice*, *33*(1), 19-46.
- Ireland, R.D., Kuratko, D.F., Morris, M.H. (2006). A health audit for corporate entrepreneurship: innovation at all levels – part 1. *Journal of Business Strategy*, 27(1), 10-17.
- Kerchner, C.T. (1988). Bureaucratic entrepreneurship: the implications of choice for school administration. *Educational Administration Quarterly*, 24(4), 381-392.
- Kirzner, I.M. (1976). Equilibrium versus market process. In E.G. Dolan, (Ed.). *The Foundations of Modern Austrian Economics*. Kansas City: Sheed and Ward, 115-125.
- Kuratko, D.F., Hornsby, J.S. and Goldsby, M.G. (2004). Sustaining corporate entrepreneurship: modelling perceived implementation and outcome comparisons at organizational and individual levels *Journal of Entrepreneurship* 5(2), 77-89.
- Ling, Y., Simsek, Z., Lubatkin, M.H. and Veiga, J.F. (2008). Transformational leadership's role in promoting corporate entrepreneurship: examining the CEO-TMT Interface. *The Academy of Management Journal 51*(3), 557-576.

- Lumpkin, G.T. and Dess, G.G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: the moderating role of environmental industry life cycle. *Journal of Business Venturing* 16(5), 429-451.
- Lumpkin, G.T., and Dess, G.G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *The Academy of Management Review*, *21*(1), 135-172
- Mair, J. and Martí, I. (2006). Social entrepreneurship research: a source of explanation, prediction, and delight. *Journal of World Business*, *41*(1), 36-44
- McFadzean, E., O'Loughlin, A. and Shaw, E. (2005). Corporate entrepreneurship and innovation part 1: the missing link *European Journal of Innovation Management*, 8(3), 350-372.
- Molnar, A. (2006). For-profit-K12 educationL through the class karkly. In F.M. Hess (Ed.).
 (2006). *Educational Entrepreneurship: Realities, Challenges, Possibilities*.
 Cambridge, Mass.: Harvard Education Press, 103-124.
- Mullins, J., Linehan, M. and Walsh, J.S. (2001), People-centered management policies: a new approach in the Irish public service. Journal of European Industrial Training, 25(2), 116-125.
- Narayanana, V.K., Yang, Y. and Zahrac, S.A. (2009). Corporate venturing and value creation: a review and proposed framework. *Research Policy*, *38*(1), 58-76.
- Pearce, J. A., Kramer, T. R. and Robbins, D. K. (1997). Effects of managers' entrepreneurial behavior on subordinates. *Journal of Business Venturing*, 12(2), 147-60.
- Rae, D., Gee, S. and Moon, R. (2009). Creating an enterprise culture in a university: the role of an entrepreneurial learning team. *Industry and Higher Education*, *23*(3), 183-197.

- Robinson, R.B., Stimpson, D.V., Huefner, J.C. and Hunt, H.K. (1991). An attitude approach to the prediction of entrepreneurship, *Entrepreneurship Theory and Practice*, 15(4), 13-31.
- Rutherford, M.W. and Holt, D.T. (2007). Corporate entrepreneurship: an empirical look at the innovativeness dimension and its antecedents. *Journal of Organizational Change Management* 20(3), 429-446.
- Schindehutte, M., Morris, M. and Kuratko, D. (2000). Triggering events, corporate entrepreneurship and the marketing function. *Journal of Marketing Theory*, 8(2), 18-30.
- Shane, S.C. (2004). Academic Entrepreneurship: University Spinoffs and Wealth Creation. Cheltenham, UK: Edward Egar.
- Sharma, P. and Chrisman, S. J. J. (1990). Toward a reconciliation of the definitional issues in the field of corporate entrepreneurship In A. Cuervo, D. Ribeiro and S. Roig (Eds.), *Entrepreneurship: concepts, theory and perspective* (pp. 83-103). Berlin, Heidelberg :: Springer-Verlag.
- Shumpeter, J.A (1934). *The Theory of Economic Development*. Cambridge, Mass: Harvard University Press.
- Slevin, D.P. and Covin, J.G. (1995). Entrepreneurship as firm behavior: a research model. In J.A. Katz and R.H. Brockhaus Sr (Eds.), Advances in Entrepreneurship, Firm Emergence, and Growth (pp. 175-224). Greenwich, CT: JAI Press.
- Smith, K. and Peterson, J.L. (2006). What is educational entrepreneurship? In F.M. Hess
 (Ed.). (2006). *Educational Entrepreneurship: Realities, Challenges, Possibilities*.
 Cambridge, Mass.: Harvard Education Press, 21-44.
- Sperandio, J. (2005). Social entrepreneurs and educational leadership in Bangladesh. *Current Issues in Comparative Education*, 8(1), 18-30.

- Teske, P. and Williamson, A. (2006). Entrepreneurs at work. In F.M. Hess (Ed.). (2006). *Educational Entrepreneurship: Realities, Challenges, Possibilities*. Cambridge, Mass.: Harvard Education Press, 45-62.
- Vesper, K.H. (1984). Three faces of corporate entrepreneurship: a pilot study. In Hornaday J.A., Tarpley, Jr. F., Timmons, J. A. and Vesper, K. H. (Eds.), *Frontiers of Entrepreneurship Research*. Wellesley, M.A.: Babson College, 294-320.
- Williams, G. and Kitaev, I. (2005). Overview of national policy contexts for entrepreneurialism in higher education. *Higher Education Management and Policy*, 17(3), 125-141.
- Williams, J. (2006). Entrepreneurs within school districts. In F.M. Hess (Ed.). (2006).
 Educational Entrepreneurship: Realities, Challenges, Possibilities. Cambridge, Mass.:
 Harvard Education Press, 125-144.
- Wilson, S.F. (2006). Opportunities, but a resistant culture. In F.M. Hess (Ed.). (2006).
 Educational Entrepreneurship: Realities, Challenges, Possibilities. Cambridge, Mass.:
 Harvard Education Press, 183-202.
- Wolcott, R.C. and Lippitz, M.J. (2007). The four models of corporate entrepreneurship. *MIT Sloan Management Review*, *49*(1), 74-82.
- Yiu, D.W. and Lau, C.M. (2008). Corporate entrepreneurship as resource capital configuration in emerging market firm. *Entrepreneurship Theory and Practice*, 32(1), 37-57.
- Zahra, S.A. (1993). Environment, corporate entrepreneurship, and financial performance: a taxonomic approach. *Journal of Business Venturing*, 8(4), 319-340.

Figures

Figure 1 Domain of Educational Entrepreneurship in Relation to Other Domains





