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Challenges facing international students engaging in venture creation: a case study from Sweden

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Abstract

Entrepreneurship education has evolved to include not only education about entrepreneurship, but educational training for and through entrepreneurial activity, allowing for experiential learning that can be applied in real time. Action-based entrepreneurial education, already challenged by specialized resource needs and infrastructure, faces additional obstacles when attempting to integrate international components into the structural design. At the same time, both the students and the potential entrepreneurial ventures benefit from a shift in focus towards more international perspectives, providing learning towards developing, if not ‘born global’ start-ups, than at least ‘born international’ start-ups. This paper presents a case study of an education in Sweden that integrated entrepreneurial education and venture creation, including both Swedish nationals and international students. The paper explores factors impacting both learning and venture creation stemming from macro-, meso-, and micro-levels, and concludes with some suggestions for how these challenges may be overcome in the future.

Introduction

An increasing amount of entrepreneurship programs recognize a need to establish education that provides learning and training for entrepreneurship, as compared to educational approaches about or in the subject of entrepreneurship (Mwasalwiba, 2010). These programs attempt to immerse the student in the phenomenon of entrepreneurship, often defined as a dynamic interplay of the individual, the environment and the resources available through an on-going process (Bruyat and Julien, 2001). Interaction with ‘real-world’ factors enhance the experiential learning (Gibb, 1993), but introduce challenges to the designed pedagogy. These challenges can be more acute for international students engaging in educational programs abroad, as they face different circumstances in regards to gaining understanding about and access to the surrounding environment and resources.

This paper presents different challenges that emerge from international student engagement in a combined education and venture creation program. Challenges are mainly addressed from the perspective of the international students, building upon a case study of the Chalmers School of Entrepreneurship, in Sweden, but also address how internationalization impacts the education in other ways. Methodology utilized includes participatory observation and documentation. Perceived challenges are presented in relation to context and structure, looking at the macro-level of national cultures, meso-level of pedagogic design, and micro-level of team dynamics. The paper concludes with discussion of challenges experienced and potential areas for improvement.

Background

Chalmers School of Entrepreneurship (CSE) is Master’s Program at Chalmers University of Technology in Gothenburg, Sweden which has, since 1997, successfully graduated more than 200 students, using an action-based venture creation approach (Ollila and Williams-Middleton, In press). CSE and Encubator AB (a specialized incubator working in direct collaboration with the education) have also created 35 startup companies within high-technology based fields, which collectively have a market value of more

than 70 MEUR¹. CSE is presented as a case study of an environment successfully fusing an educational platform and venture creation operations.

CSE has evolved through various phases since its inception in 1997. The school first started as a 1 year educational program, then a 1½ year masters-level program and finally became an official 2 year international Master's program in 2007, with the first class graduating in 2009. In the first year as an international program, two members of a total of 11 (18%) were international students. The following year, the international student population increased to 25% (five in a class of 20). In the most recently accepted class, 24% (four out of 17 students) are international.

The first year of education in the two year program is focused on providing knowledge about business design and idea evaluation/development to the students, mainly through theory lectures, seminars and group exercises. The first year comprises of two half-year terms: the first providing foundation material such as intellectual property strategies, business modeling, legal structures and tools for startup companies, market analysis, etc.; the second a combination of elective courses and required feasibility studies and specialized seminars. The second year of the education is called the "project year". The students start working with an early stage technological idea (called projects within the education), and systematically go through a venture creation process, with the ultimate goal of incorporating the project, should it prove commercially viable. In the "project year", two to three students are formed in entrepreneurial teams and provided a novel idea, most often stemming from university research. The students are supported by a network of stakeholders, including the individual that provided the project idea (usually a university researcher), a representative of the integrated incubator, and other individuals. The idea provider(s) and incubator representative are joined by a chairperson, and sometimes other advisors, to form a board that steers recommendations regarding the project. This board is designed to act just as a steering board would in an incorporated firm. Throughout the project year, the student team meets regularly with the board, discussing their progress and next steps.

Diversity is an important component for CSE, as it is considered to contribute to creativity and learning (Hambrick and Mason, 1984). CSE recruits students from different educational backgrounds as an attempt to increase alternative perspectives upon a business idea, provide complementary competences to support the business ideas, and to encourage peer-to-peer learning. Even so, recruitment and selection is still bounded by certain limitations, due to the needs of technology-based idea development. However, this is not uncommon, as generally the specificity of educations increase as the level of education advances. The mixture of students is still considered relatively broad (in comparison to a masters-level engineering program at Chalmers, for example), with students coming with backgrounds not only from technology and natural sciences, but also business, economics, law, and sometimes even liberal arts. This creates an enriched cognitive environment in which each student can draw benefits, including opportunities for students to learn from each other through exchange of ideas, different ways of analyzing, and different perspectives upon problems and solutions, providing a more comprehensive basis for decision making. The incorporation of international students into the contextual variables has created an even higher variety of perspectives, adding cultural beliefs and norms as well as differentiated pedagogic foundations, thus contributing to a further enriched learning environment.

Factors impacting internationalization of education for entrepreneurship

Including an international perspective by including international students to a learning environment stimulates discussion, which potentially allows for differentiating ideas and opinions, and reflection upon the consequences of these different perspectives. Introducing the 'real-world' components of creating a new venture introduces dynamic factors, some of which operate outside the control of the education.

¹ Encubator Progress Report 2009

Macro-level factors, mainly associated with the national/regional infrastructure of the environment and resources, are most often outside the control of the educational structure and at the same time can also impact many different aspects of the education and its operations, on various levels. Meso-level factors relate more to the specific design of the educational framework, and often require balancing the costs and benefits of inclusion and exclusion of various components. Micro-level factors most often have to do with inter-relational issues associated to the specific context of each student team and project board.

Macro-level Factors

The fundamental challenge, underlying all other challenges facing an international student, is positioning oneself within a new culture. International students do not possess the same contextual knowledge of the Swedish network and market, the structural background of the Swedish general pedagogy, and functionality in the Swedish language, as their local peers.

Language and infrastructure

Sweden is a country with a language of its own and with just over 9 million people it means that only 0.001% of the world population speak the Swedish language. This has forced the country to adapt to a second language that expands their horizons and eliminate any language barrier between other countries. In fact, currently 89% of the Swedish population speaks English as a second language (European Commission, 2006) and this percentage continues to grow. When CSE became an international program, and opened its doors to non-Swedish students, the official language of the education changed from Swedish to English. Adjusting the classroom setting to adhere to this new policy, with minor issues, was relatively easy to implement and administer. However, as CSE, particularly the project year, does not operate solely within the classroom setting, the need for establishing a common language which is other than that of the local environment placed strains on the complex pedagogic and operative structure of the integrated program, as these structures are dependent upon the regional and national infrastructure for venture development, and are generally designed to operate in Swedish. The language differences can present both written and oral communication challenges; experienced directly by the international students, but also introducing additional complexity to the educational program and providers. Providing applicable information about business rules, regulations, legal structures, etc. places demands on educational resources, requiring a balance between utilizing generic information versus specific information, or allocating time to translating or designing specific material.

In general, the business development activities of the “project year” are carried out in Sweden, although increasingly projects/potential ventures build relationships with customers, suppliers and partners abroad. The majority of students, surrounding stakeholders, and supporting mechanisms, including Encubator AB, have a strong local network and market knowledge. The human and social capital and competencies (Baron, 2006) contribute to the development of the project and thus needs to actively expand into more international settings. The modus operandi of CSE in relation to these networks has evolved organically over time, leading to the development of patterns and routines that often aide the advancement of the projects, such as awareness of certain funding potentials and access to advice free of charge. However, as many of these routines build from existing mechanisms designed for Swedish businesses, they are often carried out in the local language, having no need to carry them out in any other language unless there is an international actor involved. These types of scenarios create contextual challenges for the international students, stemming from language.

Information enabling project development can include market reports and analysis data, financing opportunities, regulations and legal requirements, technical information, and competitive analysis. Information for a project being run in Sweden is most often found in the Swedish language, sometimes including short summaries in English. One attempt to counter this is to, through assignments, ask students to look for information outside Sweden. Funding mechanisms, comprised of local and national innovation agencies and research funding agencies as well as business development agencies, are a typical example.

These agencies have policies regarding allocation of funding – often focused towards benefit to Swedish society – as, often, this funding is generated through tax revenue collected from Swedish citizens. Thus, access to local funding mechanisms and other such operations associated to venture creation present challenges not only for the international students, in their more limited ability to access, understand and response to these mechanisms, but also for their Swedish team-mates who must, de facto take on responsibility for these activities. An increasing amount of funding coming from EU projects to some extent balances the dependency upon national structures.

Translating tools, such as Google translate provide some assistance in gaining access to information, lowering the effect of the language difference to a certain extent. Unfortunately, these tools are not compatible and applicable to all types of written documentation, and furthermore are not designed to handle oral communication. In addition, these tools can be time consuming and lead to misunderstandings, when translations are inadequate. Language differences become even more limiting when writing a document or filling in an application that it is required in Swedish by different local entities. This not only limits the ability of the international student to contribute, as he/she can only provide verbal input, but also dictates work distribution in the project team, as completion of such documents falls to Swedish students. When the documentation required operates within the bounded conditions of the education, a common language – English – can be designated and enforced. But, at the interface with the real world, language specifications come under negotiation instead, and often there are strong arguments for why Swedish should be utilized in certain cases.

Language differences of course also impact conversations. Conversational language is much more difficult to enforce beyond the confines of the classroom. Thus, even in the semi-controlled environment of the incubator and the teams, individuals may often revert to their mother language because they this is easiest and less tiring. Controlling conversational language on the peripheral boundaries of the education, such as in board meetings or networking events, become virtually impossible as the school has limited, if any, ability to enforce policy. All students selected into the education must fulfill certain English language requirements, but similar requirements are not made of other stakeholders, such as idea providers, as the priori contribution of these individuals is competency in the idea and interest in finding commercial potential for this idea. Similarly, other key resources, such as potential customers, cannot be dismissed due to lack of fluency in English, because, again, the key contribution they provide outweighs a language requirement. Thus, balancing between priorities of core contribution to the project can then impact the standard communicate practice at various meetings.

Meso-level Factors

During the project year, CSE students start adopting the role of entrepreneur or business developer in addition to (or sometimes instead of) student. In the role of entrepreneur, their activities are directed more towards external actors (e.g. collaborators, financiers, possible customers, suppliers, amongst others) in order to develop a successful path for venture creation. Educational requirements are, as much as possible, complementing or integrated into the practical needs of the project. If this phase leads to incorporation of the project into a company, then the students have both the option of an ownership stake, and the potential to be employed into the newly formed company. The majority of companies created initiate business activity in Sweden, which is also the legal environment in which incorporation is established. Both the integrated design of the project year, and the incorporation should the project be deemed commercially viable illustrate the dependency upon the local, regional and national infrastructure in the local culture. This dependency creates challenges for: the international student, attempting to establish a position in the project and even in the potential company; the surrounding stakeholders, trying to balance the needs of the project with the needs of the students; and the education and incubator as they attempt to facilitate the development of the students individually and the projects as a whole.

Local network and market knowledge

Like any start-up, the projects are faced with development questions regarding choice of initial market, financing and other resources needed, business collaboration and customer development, amongst others. A decade of operation as a Swedish-based education and natural dependency upon the local networks, from which the initial project idea are selected, means that precedence for initiating first customers and markets in Sweden has been established. A minority of projects at CSE, both before and after the internationalization of the program, have either initial ideas from international partners (i.e. non-Swedish idea providers), or have established their initial or beachhead market internationally. However, the majority of the projects initiate first customers in Sweden, often dependent upon either the network of the idea providers or the board members, as well as in relation to funding available. The lack of local network and market knowledge represents a second critical challenge for the international students during the venture creation process, as these factors are deemed essential for success. International students must find new and innovative ways of providing input, obtaining information, defining applications, identifying key stakeholders and other key activities related to the local market that counters their natural lack of local knowledge.

The project board members are, most often, local (Swedish) actors operating within a particular industry or region. The projects selected into the project year are initially screened by Encubator, checking for both business potential and structural fit – including adherence to certain operational requirements such as attending meetings and providing advice. A final group of projects are then presented to the entire student class, who votes and selects the projects into the incubation process. The students, after formed into teams and matched to projects, also play a role in selecting their chairman, together with Encubator. However, all of the students are then faced with a challenging dynamic. Once the board is in place, it is the board's responsibility to ensure the best for the project, which places them in a power position relative to the students. This is often most keenly felt in relation to the decision made at the end of the project year regarding which student(s) should be employed into the project, if the project is to be incorporated.

The process is often stressful for all the students, as there are several factors that influence the decision. Many of the students also have sought employment positions at existing companies, in order to have a back-up, should the project not succeed, or as a first choice of career path after the education. The students have often become accustomed to working in teams, and the prospect of going forward alone (as often there is not sufficient funds to employ all the students in the company) can feel daunting after having established a team function. These factors often have a stronger impact on international students, as they have less opportunity for local employment options, again due to language and infrastructure, but also often have the perception that they have greater challenges to overcome in convincing the board that they would be the best option for project employment, again due to language and network. While this study does not investigate prevalence towards any preference for native students from a board point of view, simply the perception that this exists acts as an additional self-imposed and normative challenge for the international students. This perception potentially leads to limiting the ambition of the international students to plead their case to the board. It is recognized and communicated that the board has the responsibility to prioritize the needs of the project as efficiently and effectively as possible. This certainly could lead to interpretation of limited viability by international students for meeting the needs of the project in the local environment due to the complexities that are introduced through cultural and language challenges.

Local market dependency

The majority of CSE based companies initiate their market in Sweden, with some notable exceptions, posing a potential knowledge disadvantage for the international students, compared to their local peers, as previously discussed. However, dependency on the local market has other consequences as well. Even though that the election of the geographical area of operation might seem logical, choosing Sweden as the initial market for a CSE project may limit the potential growth of the project. Some projects may have

better opportunities in international markets, but are restricted by the existing framework of the education and current reliance on in-kind contributions and funding mechanisms. Encubator and CSE face resource constraints that restrict their access and ability to attract ideas, as well as human resources to support the projects, which in part has led to the majority of ideas coming from and building on region resources. Furthermore, international potential may not always be initially recognized because of bias towards the established methods of development, secured over several years of operation, or tendency of stakeholders to build upon their existing networks. Launching into foreign, (often unknown) markets at least carries the perception of being more difficult, more risky and thus not viable as the first step for a fledgling venture. Thus, CSE and Encubator also face the challenge of becoming more international from a structural and operational capacity. Through policies emphasizing assignments to be international from a start, these challenges can be gradually overcome, potentially also resulting in more “born globals” than today. CSE and Encubator also increasingly work to develop their international relationships, collaborating with other universities in Europe and beyond. Collaborations include both sharing of best practice, allowing for alignment of educational and operational structures, to facilitate ‘soft landings’ in other regions.

Micro-level Factors

The CSE pedagogy is built upon a team-based approach. Following Encubator screening and class selection of projects, CSE and Encubator staff form the teams for the project year. Team formation is based on many factors, but fundamentally balances between the needs of the students and the needs of the projects. Several factors must be considered: student motivation for working with a particular idea and with particular individuals; competency needs for the project idea and general distribution of competencies across a team in order to have the best base knowledge; general equality between the teams, so that no one individual or team is seen as getting more or less than another, while also finding a position for every individual in the class; and other factors. Thus, once the class selects and ranks, as a class, the projects, each student submits individual motivations to the team formation group indicating which project they want to work with, who they want (and more importantly don’t want) to work with, supported by argumentation for their choices. While students are allowed to indicate one individual with whom they do not want to be placed in a group with, there is no guarantee that this will be the case, as this depends upon the entire mix of the class. However, this is avoided as much as possible, as it is seen as a de-motivating factor.

Minority position

One of the key factors for team formation is distributing the different competencies in the class to the projects. Historically, the majority of the students applying to the program have come from Chalmers, with a technical background. This has often been complemented by students coming from other universities with economics, marketing, legal, etc. backgrounds. The international students have been a mixture of engineering and business educated individuals. As discussed earlier, diverse competencies also include the different social and cultural perspectives the students provide. Here the international students provide a unique potential contribution to any given team formation. However, this often means that, from an educational perspective, it is preferable to distribute these diverse perspectives across different teams; a situation that places the international students not only in a minority position in the class, but sometimes in the team as well.

Various minority groupings exist in the class. First is the minority group of students coming from other undergraduate educations than Chalmers. These individuals lack knowledge in the immediate infrastructure of the university and university networks. In most cases, this group also includes all of the international students, but in a few cases, the international students have undergraduate or graduate degrees from Chalmers previous to attending CSE. Another minority group is students coming from outside the Gothenburg region. This group also lacks local network knowledge, this time at the city-wide or regional level. For international students, this is compounded by language and cultural hurdles, not

experienced by non-regional Swedish students. Women also represent a minority (18%, 29%, and 12% for the respective three class years presented in the beginning), in part because of the pre-existing minority of women with undergraduate engineering education. There are many factors related to gender that create challenges for this minority group, but a specific discussion of these is outside the focus of this paper.

Team format

Teams consist of either two or three students, matched to one project idea. Three person teams are the preferred formation, as this brings a broader spectrum of competencies into the team, allows for distribution of the work load, and also prevents decisions from being locked into a tie scenario, as can occur with two person teams. However, alternatively, three person teams can have the propensity of the two against one phenomenon, particularly if one individual is seen as quite different from the other two, and more importantly, is not appreciated for this difference. Balancing the three person team preference with the distribution of differentiating competencies and perspectives often means that minority members are alone in a team of three: for example, one woman, or one international student, or one non-engineering or Chalmers background individual teamed with two Chalmers students in a team of three. Thus, team formation is, for the CSE and Encubator staff, a balance of various pros and cons, with the added complexity of the risks associated to venture formation.

Potential bias

From an educational design standpoint, the unique perspective of a minority member is seen as valuable to the development of the project. The pedagogic design of the education, throughout the first and second years of the education, aims to emphasize the value and contribution of differentiating perspectives. However, coming with a perspective different from the majority often requires building a stronger argumentation for why an alternative viewpoint is viable, compared to majority rules. Throughout the first year, students work in mixed teams towards exercises that are dependent upon using the different competencies of different team-members – for example writing a business plan and collaboration agreement requiring skills in technology assessment, business and marketing analysis and legal construction. This is one effort towards illustrating to the students, through practical application, the value of alternative perspectives and integrating multiple ideas into collective deliverables. However, sometimes depending on the previous pedagogic structure experiences, students are challenged with adapting an integrated approach to the learning processes they have developed during their previous educations.

Thus, individuals may be biased towards a particular way of thinking or working, compared to another. These differences can be magnified by the macro- and meso-factors mentioned earlier. While the education and incubator have certain ability to influence how decisions are taken within the teams, how work and tasks are distributed, and how different views are or can be appreciated, they are not present in every single meeting or discussion taken between the core team of students. Potential for cultural prejudice and stereotyping exists and is communicated as perceived by some international students. Investigation into this particular aspect of internationalization of education would require an independent and extensive discussion. But, regardless if, how and/or why potential prejudice is constructed and/or exists, that prejudice or bias is perceived presents a challenge to overcome. Students in minority positions (international or otherwise) may struggle to determine how best to expend their energy in such a high-paced, delivery-oriented environment. Ultimately each individual is challenged with proving one's 'worth' to teammates and associated stakeholders, and must meet the different expectations, presumptions and judgments of the other individuals.

Discussion and conclusions

As students go through the venture creation process, they face different challenges that require high-level and rate of delivery towards multiple actors as well as responsibility and devotion to their projects, and

potential future ventures. Thus, the students blend the role of being students while also becoming business developers and entrepreneurs. The normal challenge of balancing these two roles and many responsibilities is multiplied for international students due to the combination of factors discussed from the macro- through the micro-levels.

Fundamental changes to native language and infrastructure norms are generally outside the reach of the education and incubation platforms. At the same time, asking international students to learn a new foreign language while engaging in a full master's education is unreasonable. However, there are factors which, in future, may decrease the limitations presented by language and national infrastructure. There is a growing trend towards improved adaptation to English, and language proficiency in Sweden is aided by the increasing access to English language, through television, movies, internet, etc. on a daily basis. Increased proficiency ought to increase the ease of operating in English as a standard, even for native Swedes, and may also be complemented with further translating tools. This could potentially allow for CSE and similar organizations, and their students, to place increased demands on infrastructure. Emphasis on English language standards are also likely to increase due to the increased focus on mobilization across the European Union, as promoted through the Bologna Process. Sweden is one of only a handful of countries that already has a national system already aligned with the transfer credit system (European Commission, 2009) and several universities, including Chalmers work towards increasing their international profile (Chalmers, 2008). Venture Cup, a national business plan competition, has increasingly adjusted their frameworks to allow for English contributions for both written and oral presentations. At the same time, ventures stemming from CSE have taken the opportunity to compete in international business competitions such as the Carbon Trust² and the ACES awards³

Perhaps the largest opportunities related to internationalization are within changing the pedagogic design's dependency upon local and regional networks. CSE has only recently become an international masters program and as such, is still working through integrating the needs and contributions of international students into the existing design and strategy. As stated above, assignments with an international outlook help go beyond the Swedish context potentially enabling the ventures to become more global and international students to feel less insufficient. Each graduating class of students also provides valuable feedback as well as experiential learning for the project facilitation processes of both the education and the incubator. Teams with international students establish a new precedence with surrounding stakeholders regarding the ways in which projects can be run using English standards, as well as illustrating the contributions of international perspectives into the educations. Evaluation of project and team processes also contributes to revision of policy towards academic and incubation activities. Policies adjustment could also be implemented into the board and management components of the ventures. Board members could be required to conduct all meetings and communication in English, and protocols of external meetings with customers or potential partners could be summarized in English. These activities would not only increase the ability of international students to contribute, but could potential increase clarification of issues discussed as these would have to be summarized into documented English. And as Encubator representatives have positions within each project board, additional awareness can be paid to decision making processes regarding future employment.

An increasing number of CSE projects that have become ventures operate in international markets. These ventures not only establish examples of how internationalization can take place, but lay the ground work for a track record in accessing international markets. While in some cases, international markets are not established until after incorporation (and thus graduation from CSE), some projects initial international

² <http://www.minesto.com/news-2/2007-32>

³ <http://www.sciencebusiness.net/aces/>

collaboration even during the incubation period. This also establishes precedence for how these activities can be conducted by future projects.

At the micro-level, each new team process provides experiential knowledge to CSE. Each year, the unique factors leading to the project formation allows for reflection on how different factors may impact team dynamics. Team constructions of two team members with only Swedes or mixed teams can be placed in comparison with one another and in comparison to three person teams with various combinations of minorities and majority groups, both international and other. Combined with experiential knowledge, increased communication of expectations and options allows for better understanding and transparency of processes and increased learning potential, hopefully breaking down potential biases that may exist.

CSE, together with three other schools of entrepreneurship at Chalmers and Gothenburg University were recently recognized as leading programs in entrepreneurship education by the Swedish Ministry of Education⁴. The recognition also propelled a project to increase the international stature of the four schools, including resources to support development. These and other resources will direct towards increased network development, including international relationships, thus building the potential for different network and market entry points, allowing for additional potential value to be provided by international students, along similar lines to the contributions made in existing local networks by local students.

Having explored various issues impacting the situation of international students in a venture creation education, ultimately we aim to understand how any or all of these challenges impact not only the opportunity potential of the international students, but also of the projects, and the program itself. Macro-level factors present fundamental challenges that are not necessarily adjustable by the school, incubator, or the students themselves. Instead, each can work to find new ways to adapt or develop towards the macro-factors. Meso- and micro-factors are easier to adjust, and mainly require increase investigation and adjustment to policy, as well as increased communication regarding set expectations and potential limitations of the environment. Then, ultimately, each actor involved, whether it be student, teacher, or other stakeholder need to work together to recognize and address various issues resulting from internationalization.

⁴ Decision from Ministry presented in PDF document (with summarization in English) available at: <http://www.hsv.se/publikationerarkiv/pressmeddelanden/2009/fyraforeslasfaentreprenorsutbildningar.5.1dbd1f9a120d72e05717ffe1353.html>

References

- BARON, R. 2006. Opportunity recognition as pattern recognition: how entrepreneurs "connect the dots" to identify new business opportunities. *Academy of Management Perspectives*, 104-119.
- BRUYAT, C. & JULIEN, P.-A. 2001. Defining the field of research in entrepreneurship. *Journal of Business Venturing*, 16, 165-180.
- CHALMERS 2008. Chalmers - för en hållbar framtid: vision, mål och strategier 2008-2015 med utblick mot 2020. In: TECHNOLOGY, C. U. O. (ed.). Göteborg: Chalmers.
- EUROPEANCOMMISSION 2009. Higher Education in Europe 2009: Developments in the Bologna Process. Brussels: Education, Audiovisual and Culture Executive Agency.
- EUROPEANCOMMISSION 2006. Europeans and Their Languages. *Special Eurobarometer*. Public Opinion Analysis sector.
- GIBB, A. 1993. The enterprise culture and education: understand enterprise education and its links with small business, entrepreneurship and wider entrepreneurial goals. *International Small Business Journal*, 11, 3-32.
- HAMBRICK, D. C. & MASON, P. A. 1984. Upper Echelons: The Organization as a Reflection of Its Top Managers. *The Academy of Management Review*, 9, 193-206.
- MWASALWIBA, E. S. 2010. Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators. *Education + Training*, 52, 20-47.
- OLLILA, S. & WILLIAMS-MIDDLETON, K. In press. The venture creation approach: integrating entrepreneurial education and incubation at the university. *International Journal of Entrepreneurship and Innovation Management*, Special Issue on Innovative University Programs in Technology Business Incubation.