

## Entrepreneurship education in Portugal: 2004/2005 national survey

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**Abstract.** Education in entrepreneurship is a relatively new addition to the curriculum of institutions of higher education in Portugal. Forty-one percent of the current courses were first offered in 2003 or 2004. This recent awakening to the importance of entrepreneurship education is both reactive to the needs of the market as well as pro-active through the interests of professors. As the developing phenomenon of entrepreneurship education grows there is an urgent need to better understand and develop this area through academic research. Pedagogy, course content, the use of technology as well as other parallel initiatives related to entrepreneurship education in Portugal are the primary focus of this national survey of academic year 2004/2005. The majority (76.5%) of professors surveyed stated that their university has plans to create an entrepreneurship/innovation center. However, it is believed that roles and activities that a “center” must have to be effective are, as of yet, not well-defined in the Portuguese context. In developing future initiatives, Portugal could benefit by looking at models from other countries that have well-developed entrepreneurship educational offerings and support structures. Findings indicate that current course pedagogy in Portugal relies heavily on business plan creation and theoretical lectures and seldom makes use of computer business simulations, role-playing or internships. In addition, greater use of the Internet as a method for disseminating information to students and entrepreneurs could help “market” entrepreneurship education better and improve the perception of those students not currently taking an entrepreneurship course.

*Key words:* Entrepreneurship education, Portugal, universities, survey.

### Introduction

Entrepreneurship is a mindset and skill-set that individuals use to create value for themselves and for their society. Often the term entrepreneurship is associated exclusively with the practice of

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starting new organizations, particularly new businesses involving the exploitation of opportunities that exist in a given market. However, entrepreneurship also occurs within existing organizations (intrapreneurship) that can even include the civil service. Entrepreneurs commonly use elements of creativity, innovation, risk-taking and pro-activity in the pursuit of their goals.

Entrepreneurship education can play at least three legitimate roles in the development of an entrepreneurial society. First, it can present students with entrepreneurship as a possible career choice in addition to acting as a general advocate for the mindset and type of creativity employed in entrepreneurial endeavors. Second, assist students in developing the technical and business skill-set necessary to have a successful entrepreneurial career. Third, professional educators can assume the responsibility of advancing the body of knowledge associated with the entrepreneurial phenomenon. Their findings should not only be disseminated to students but also to policy-makers and the public at large.

Furthermore, educators must go beyond simply stressing the importance of this subject area to governments and the public. They must aid public and private agencies and institutions to make better use of present and future resources. This can be seen in countries that have had recent histories of authoritarian dictatorships and/or unsustainable welfare models. Educational offerings are generally oriented toward jobseekers rather than job-creators. Entrepreneurship education represents an alternative to the enduring and pervasive reliance on the State to provide economic security.

## **Literature Review**

### *Entrepreneurship Education*

There is general consensus that entrepreneurship education is far from maturity (Robinson & Hayes, 1991). Entrepreneurship and small business management courses have experienced significant growth in the last several decades. During the past 50 years (1955-2005) the field has gone from a single course offering to a wide array of educational offerings available at more than 1,500 colleges and universities around the world (Charney & Libecap, 2000). The most recent estimate in the United States suggests that as many as 1,200 post-secondary institutions have courses dedicated to entrepreneurship and small business education (Solomon, 2005). Of the 17 universities in Portugal that offer courses in entrepreneurship, 41% gave their first course in 2003 or 2004.

The first initiative in entrepreneurship education was made in 1938 by Shigeru Fujiini, Professor Emeritus at Kobe University (McMullan & Long, 1987). In the 1940's small business management courses began to emerge (Sexton & Upton, 1984). The first known course in the United States in entrepreneurship or small business was offered by Harvard Business School in 1947 (Brockhaus, 2001, p. XIV; Cruikshank, 2005). In Portugal, the first known institution of higher education to offer entrepreneurship education was *Universidade Católica* in 1992.

Entrepreneurship courses range from integrative classes that include marketing, finance,

new product development and technology to more traditional course work (Charney & Libecap, 2000) with the most common teaching methods being business plan creation, class discussion and guest speakers (Solomon, 2005). Business plan elaboration was confirmed to be the most popular teaching method in an earlier study as well (Gorman *et al.*, 1997). Honig (2004) found that out of the 100 top US universities 78 offered courses specifically centered on the production of business plans.

These courses play a very important role in giving students technical knowledge about entrepreneurship and they usually include the development of a proposed new product or service through integrating a range of management knowledge and instruction from areas of studies such as business planning, capital development, marketing, and cash flow analysis (Cox, Mueller & Moss, 2002). Students typically have to collect and summarize relevant information that may be very useful if the venture is to become a reality. Educators tend to feel comfortable with business plans, as they provide a structure that helps to focus the student in an area of business practices defined by innovation and creativity, and thought to represent thinking “outside the box” (Honig, 2004). Instruction in the conceptual framework is deemed to be necessary, by many professors, as they teach something not wholly defined by the borders of conventional courses in business management. Many entrepreneurship courses employ a cross-disciplinary approach in teaching specific areas such as how to recognize opportunities that others have overlooked; marshalling resources in the face of risk; and, initiating a business venture.

The process of business entry differs significantly from the activities of managing a business (Gartner & Vesper, 1994). Entrepreneurial education must focus on delivering the skill and knowledge base necessary for business entry (Gartner, Bird & Starr, 1992). Negotiation, leadership, new product development, creative thinking and exposure to technological innovation have all been identified as part of this entry process (McMullan & Long, 1987; Vesper & McMullan, 1988).

Other authors have identified a variety of specific areas of importance that entrepreneurship education must address, including: how to finding venture capital (Vesper & McMullan, 1988; Zeithaml & Rice, 1987); intellectual property and protection of business ideas/concepts (Vesper & McMullan, 1988); tolerance of ambiguity associated with new ventures (Ronstadt, 1987); and the challenges associated with each stage of enterprise development (McMullan & Long, 1987; Plaschka & Welsch, 1990). Yet others have suggested that there is a need to concentrate on the characteristics that define the entrepreneurial personality (Hills, 1988; Scott & Twomey, 1998; Hood & Young, 1993) and to build the awareness of entrepreneurship as a possible career choice (Hills, 1988; Donckels, 1991).

#### *Entrepreneurship Education Pedagogy*

The pedagogy of entrepreneurial education is continuously changing to meet the needs of students and the marketplace-at-large. University programs vary from having one instructor to faculty teams to teach their courses and programs. Courses can target students from the arts, the sciences, engineering and/or business. There is a growing trend of developing specific courses for non-business students in the US (Solomon, 2005). Non-business students who take courses in

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entrepreneurship may require educators to emphasize different skill-sets than the courses more commonly developed for business majors.

Teaching methods utilized in entrepreneurship education vary. Previous research indicates that the most common methodologies used in courses are business plan writing, in-class discussions, guest speakers (such as business owners), readings (such as case studies) and research projects (Vesper, 1985; Klatt, 1988; Kent, 1990; Gartner & Vesper, 1994; Solomon, 2005). Typically, students are evaluated on in-class participation, exams and projects.

Project-based learning is a particularly common aspect across entrepreneurship education which perhaps differentiates its pedagogy from those used in traditional business and/or non-business courses. Research has shown widespread usage of various teaching methods including: Development of business plans (Hills, 1988; Vesper & McMullan, 1988; Gartner & Vesper, 1994; Gorman *et al.*, 1997; Solomon, 2005); Business start-ups projects by students (Hills, 1988); Market feasibility studies (Solomon, 2005); On-site visits to new business ventures and to entrepreneurs (Klatt, 1988; Solomon, 2005); Computer simulations (Brawer, 1997); And role-playing (Stumpf *et al.*, 1991). Student run entrepreneurship clubs are also prevalent (Gartner & Vesper, 1994).

The goal of this study is to learn the courses and programs that were offered during the 2004/2005 academic year in Portugal, the content of these courses, the pedagogies used, the utilization of technology as well as other parallel initiatives related to entrepreneurship education.

## **Methodology**

No government entity or university authority exists that tracks or is aware of all the courses or programs offered in entrepreneurship in Portugal. Although many entrepreneurship courses given in institutions of higher education in Portugal were previously known to the researcher, to make certain that the “total universe” of educational courses was captured, an exhaustive web search was necessary. The decision to use the Internet was made recognizing the evident advantages of: (1) enlarged sample size, (2) improved access to typically hard-to-reach populations, (3) reduction of research costs, and (4) reduced time spent on the data collection process (Rogelberg *et al.*, p. 144).

To gather this “total universe”, two Google.pt searches were conducted on July 1st, 2005 on .pt domain websites using the Portuguese word *empreendedorismo* and the English word entrepreneurship in the page title. The search went to the “third level” in each site and any relevant link was further explored<sup>1</sup>. From the entry page, the researcher went to different parts of the site and, in many instances, to other sites where other organization(s) were encountered and recorded. Because the Google Internet search engine is dynamic, Google.pt search pages were saved and then

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<sup>1</sup> A level is considered a forward “click” on the mouse within the browser which opens a new page. The first level was the first page entered after leaving the Google.pt search engine page.

accessed. The search took 28 research hours to conduct with 213 sites visited and approximately 781 pages viewed. Thus, any mention of an organization associated with entrepreneurship education in Portugal was captured for this research.

A third website search was conducted of all websites that had the word *empreendedorismo* mentioned anywhere on the site. Some duplicate entries were automatically omitted using the Google search engine. This “first level” research took 41 research hours and was conducted from July 12th, 2005 to July 15th, 2005 with 470 sites entered and reviewed. A controlled mechanism was designed to insure that four geographically dispersed public and private institutions of higher education, previously known to the researcher, were found to be included in the web research.

After being identified, all institutions were either e-mailed and/or called to verify the name of the person with operational responsibility for entrepreneurial-related courses. However, as the findings of this research shows, only 40% of Portuguese universities surveyed offer information on the Web about entrepreneurship. In addition, it was found that several Portuguese entrepreneurship-related courses did not include the Portuguese word *Empreendedorismo* in the title of their webpage. These facts made it more difficult to obtain the complete “universe” of courses.

It was only through extensive phone and email contacts that it was possible to identify other courses that did not include the word entrepreneurship in the course title yet have similar syllabi to those analyzed in the content analysis which specifically contained the word entrepreneurship in the title (e.g. *Criação de Empresas* or *Iniciativa Empresarial*). Thus, even though some courses are not called “entrepreneurship” by name they were added to the study and a final list of 22 educational institutions with 27 different courses emerged.

The questionnaire for entrepreneurship professors at Portuguese universities (see Annex 1.1) was developed through a content analysis of entrepreneurship course syllabi and by adapting questions found in two other national studies from the US and UK (Solomon, 2005; Levie, 1999). This questionnaire was first made available online on November 9th, 2005 and was kept open until November 30th, 2005.

To better comprehend the current state of entrepreneurship education in Portugal the researcher conducted exploratory interviews (see Annex 1.2) with three entrepreneurship professors: Two from *Instituto Superior Técnico*; And one from *Universidade Católica*. In addition, interviews were conducted with four PhD Candidates involved in the area of entrepreneurship research to get their perspectives on entrepreneurship education in Portugal.

A content analysis was undertaken of four entrepreneurship courses offered by geographically dispersed Portuguese universities. These included courses at *Universidade do Algarve*, *ISCTE*, *Universidade Nova* and *Universidade do Porto*. The predefined content analysis categories included, pedagogical methods, general course content, evaluation/grading procedures as well as a general summary of the main objectives of the courses. In some areas, the course syllabi did not give sufficient information (i.e. the pedagogical method category). The limitation of these research results confirmed the need for an in-depth survey.

Respondents were allowed to answer more than one questionnaire whenever they taught more than one course. In two cases, respondents taught courses to undergraduate and post-graduate

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students and in one case a professor was responsible for two different courses that approached complementary areas (e.g. *Empreendedorismo* and *Laboratório de Empresas*).

Universities also offer complete educational programs for post-graduates (continuing education/certificate programs) fully dedicated to the subject of entrepreneurship. Research identified a total of 3 programs offered during the academic year 2004/2005. Course coordinators of these programs were contacted. Even though these programs addressed entrepreneurship they all have different titles (i.e. *Empreendedorismo e Criação de Empresas*, *Empreendedorismo de Base Tecnológica*) and represented different approaches to the subject.

A second questionnaire targeting program coordinators of entrepreneurship programs was created through adapting the questions from the entrepreneurship professors' course survey that makes up the primary analysis of this paper. This survey was created to capture the essential information related to post-graduate programs in Portugal that coordinators possess. The data collected from this questionnaire was treated separately because the principal intention of the study was to obtain information from the professors who teach entrepreneurship. The specific information used in this study refers to the number of programs being offered by Portuguese universities during the 2004/2005 academic year.

## **Findings**

A total of 27 entrepreneurship courses were found to have been taught in Portugal during the academic year of 2004/2005. These courses represent the total "universe" of this research paper and the area as far as it is currently known. The study includes data and analysis of 22 courses representing an 81.5% response rate. These 22 courses are categorized in Tables 2 and 3 by "undergraduate" (17) and "graduate" (5) courses. These tables show the diversity of titles used in these courses as referenced in the methodology section.

A total of 19 professors answered the questionnaire. The primary teaching areas of these professors are: General management (29.4%), entrepreneurship (23.5%) and finance/accounting (23.5%) with other areas representing a smaller proportion, such as economics (11.8%) and marketing (5.9%).

Forty-four percent of the professors that teach entrepreneurship related courses at Portuguese

Table 1  
*Respondent Profile*

Total Universe of Courses	27
Total Courses Analyzed (Sample)	22
Total Participating Universities/Institutes	17
Total Participating Professors	19

Table 2  
*Undergraduate Course Titles*

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- *Empreendedorismo* (7)
  - *Criação de Empresas* (4)
  - *Avaliação de Projectos* (1)
  - *Empreendedorismo de Base Tecnológica* (1)
  - *Empreendedorismo e Criação de Novos Negócios* (1)
  - *Empreendedorismo e Organizações* (1)
  - *Iniciativa Empresarial* (1)
  - *Laboratório de Empresas* (1)
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Table 3  
*Graduate Course Titles*

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- *Empreender numa Economia Global, Digital e Super Competitiva* (1)
  - *Empreendedorismo* (1)
  - *Empreendedorismo e Desenvolvimento de Novos Negócios* (1)
  - *Empreendedorismo e Criação de Empresas* (1)
  - *Entrepreneurship e Projecto de Negócios* (1)
- 

universities dedicate their research to the subject of entrepreneurship. Other primary areas in which these professors do research include finance (18.8%) and marketing (12.5%).

From the entrepreneurship courses represented in this study, 77% are taught by one primary faculty member. Sixty-two percent of professors surveyed have had the “real life” experience of founding a company at some point during their careers. No professors of entrepreneurship are either a *Professor Catedrático* or *Professor Associado com Agregação*<sup>2</sup>. Seventy-five percent are *Professor Auxiliar*<sup>3</sup> or below. This further indicates that entrepreneurship education is a developing area with “up-and-coming” and “young” professors.

Since 2003, there has been a sharp increase in the number of new entrepreneurship courses offered at Portuguese universities. Of the 17 universities that have entrepreneurship courses, 41% started offering education in entrepreneurship during 2003 or 2004.

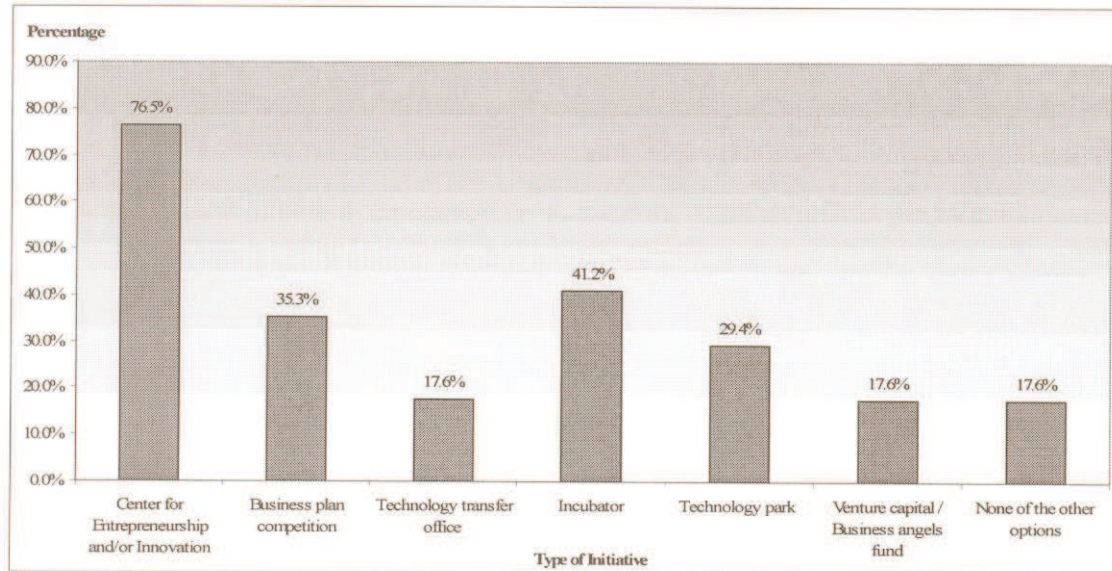
Educational services provided by universities can also be supported by other initiatives such as centers for entrepreneurship and/or innovation, incubators, and business plan competitions. Many universities in Portugal are planning on creating these support structures that represents practical

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<sup>2</sup> *Professor Catedrático* and *Professor Associado com Agregação* represent two of the highest academic titles a professor in Portugal can achieve.

<sup>3</sup> *Professor Auxiliar* represents the first academic title given to a professor after completing their PhD.

Figure 1. Intention to Develop Initiatives that Promote Entrepreneurship & Innovation



opportunities for the development of knowledge and help in creating an entrepreneurial endeavor. Whereas few entrepreneurship centers currently exist in the Portugal, the majority of universities surveyed plan on developing entrepreneurship centers (76.5%) in the future.

When asked what was the primary reason for these courses being created, professors answered: The university was responding to the market (50%); because of the “personal interest of the professor” (45.5%); or, as a “result of a PhD thesis / PhD program” (4.5%).

It is notable that none of the respondents stated that their courses were created to pursue either the Portuguese Government or European Union policies. Despite EU and Portuguese Government support in the area of entrepreneurship & innovation, only 33% of universities stated that they received State funds to develop initiatives in these areas. Moreover, 58% never applied for support. Private investment/support of entrepreneurship education initiatives is also rare at Portuguese universities. Ninety-two percent answered that they never applied for private funding.

Analysis of the research identified differences between the Portuguese regions eligible and those not eligible for the European Structural Funding under Objective 1 (European Commission, 2005). Table 4 exhibits the primary reasons for the courses being created in these developed and developing regions. As shown below, 61.5% of the courses offered in the Lisbon area were created because of the professors’ personal interest. However, in Portuguese regions that still receive Structural Funds the majority of courses being offered resulted from the universities’ efforts to respond to the market (66.7%), whereas the professors’ personal interest was mentioned by far fewer (22.2%).

Figure 2 shows the average class-size of Portuguese entrepreneurship courses. Over 42% of these courses are taught in classes with more than 30 students.

Table 4  
*Primary Reason for Development of Courses*

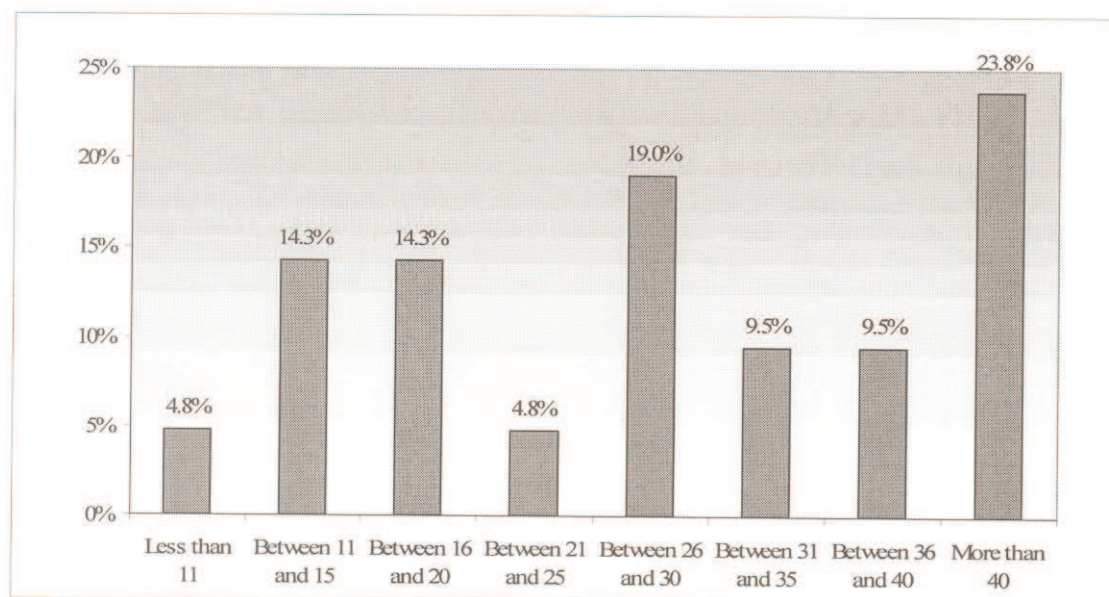
<i>Lisboa e Vale do Tejo, Lezíria do Tejo and Médio Tejo regions (*)</i>	Number of answers	Percentage
Response to the “market” / Request from firms	5	38.5%
Personal interest of the professor	<b>8</b>	<b>61.5%</b>
Result of a PhD thesis / PhD program	0	0.0%
Total	13	100.0%

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Other regions	Number of answers	Percentage
Response to the “market” / Request from firms	<b>6</b>	<b>66.7%</b>
Personal interest of the professor	2	22.2%
Result of a PhD thesis / PhD program	1	11.1%
Total	9	100.0%

(\*) The *Lisboa e Vale do Tejo* region ceased receiving European Structural Funds during 2005. Two other regions (*Lezíria do Tejo* and *Medio Tejo*) will stop receiving the funding during 2006. All the other regions in Portugal are still eligible for Objective 1, however it should be noted that this will dependent on future negotiations between all the 25 Member States of the EU.

Figure 2. Average Class-Size of Entrepreneurship Courses (2004/2005)



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It has been found that as the number of members of a group increases the possibilities of contact between these individuals diminish. Goldstein (1983) suggests that small groups are defined as having 30 individuals or less. If class-size usually influences a students' interest and attentiveness for the subjects discussed, pedagogical methods used must be adapted to the size of the class being taught. Entrepreneurship professors very frequently use "business plan creation" (57%) and "lectures" (48%), which are teaching methods often connected to educating large groups of students (see Literature Review for further discussion on why business plan creation is a commonly used pedagogic method). Activities such as "role-playing", "computer simulations" and "internships", which are often associated with teaching small groups of students, were never or rarely used in the courses (50%). Professors who teach less than 30 students, which represents 57.1% of the sample, use these pedagogical methods even less, 83% report that they rarely or never use "computer simulations", 82% rarely or never use "internships" and 45% rarely or never use "role-playing".

As might be expected, all entrepreneurship courses teach "opportunity identification" and "opportunity assessment". Subjects such as, "bankruptcy control and prevention" (9%) and "competences in intercultural relationships" (5%) are seldom approached during courses. In a country where "failure" is rarely accepted as a positive learning experience, perhaps teaching and discussing of the subject of bankruptcy control and prevention could contribute to changing the societal bias against risk-taking (Hofstede, 1994) and the stigma of failure.

Table 5  
*Areas of Curricular Focus*

	Number of Answers	Percentage
Opportunity identification	22	100%
Opportunity assessment	22	100%
Market analysis	19	86%
Financing	19	86%
Business plan development	19	86%
Competences in entrepreneurial behavior and interpersonal relations	17	77%
Company creation and registry	17	77%
Marketing	15	68%
Management	15	68%
Legal aspects, including patents	15	68%
Financial management	14	64%
Private financing / Venture Capital	13	59%
Public financing in the creation of companies	12	55%
Production processes	9	41%
Evaluation of initiatives/projects of entrepreneurship fostering	9	41%
Processes optimization	7	32%
Competences in knowledge transmission	5	23%
Bankruptcy control and prevention	2	9%
Other	2	9%
Competences in intercultural relationships	1	5%

The researcher used “competences in intercultural relationships” as a pseudo-proxy for internationalization. If a professor is not teaching intercultural communication while educating students in internationalization then, it would appear, their students would be missing a fundamental and necessary skill-set.

According to professors, all students attending their courses have a positive opinion of their course. Generally, respondents feel that other groups also perceive their courses favorably. Nevertheless, professors believe that 50% of students not enrolled in their courses hold a generally neutral opinion. They also feel that 30% of other professors hold this same neutral bias concerning entrepreneurship courses. From the point of view of this researcher, this appears to indicate a need to better “market” entrepreneurship programs to students who are not currently enrolled in these courses in order to positively influence student perceptions of these courses.

Table 6 shows that Anglo-Saxon case studies have a significant influence on Portuguese entrepreneurship education. The content of information delivered to Portuguese students (from a total of 22 entrepreneurship courses) never or only occasionally (84%) came from foreign case studies written in a language other than English.

Entrepreneurship students are required to complete web-based assignments in the majority of courses (86%). Despite this fact most universities (60%) still do not offer information on the Web regarding entrepreneurship, new venture creation, or small business management to either students or entrepreneurs. Portuguese universities also do not offer entrepreneurship courses on the Internet. Nevertheless, professors believe that in the next five years entrepreneurship education in Portugal will come to rely on the use of technology (see Table 8). Access to e-learning services and the use of computer simulations, for example, are expected to complement the development of entrepreneurship education in the country.

Eighty percent of respondent universities stated they did not present online technical and mana-

Table 6  
*Frequency of Use of Reading Materials*

Reading Materials	Frequency				
	Very Frequently	Frequently	Usually	Occasionally	Never
Academic journal articles	7	2	5	5	1
Portuguese case studies (written in Portuguese)	5	3	3	4	5
Foreign case studies (translated into Portuguese)	2	2	4	3	7
Foreign case studies (written in English)	6	3	2	4	5
Foreign case studies (written in another language)	1	1	1	4	12
Textbook	4	9	2	1	2
Other books written by academics	8	5	4	2	1
Books written by entrepreneurs	2	6	0	9	3
Magazines and newspapers	5	6	4	4	1

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gement assistance to entrepreneurs. The possibility of offering this type of information could be part of a greater link that, in the opinion of this researcher, needs to be forged between the theory taught in Portuguese entrepreneurship courses and the actual needs of entrepreneurs in the country.

When asked about the differentiation of their courses, the main reason presented by respondents (see Table 7) concerned the possibility of providing practical knowledge and focused on how to create a business. Some courses concentrated on specific areas by addressing the creation of businesses in industries related to high-technologies. In addition, the researcher found that courses also focused on creating an entrepreneurial mindset in students and teaching the importance that entrepreneurship has on the economic development of a country.

The analysis suggests that professors seemed to compare their courses against other courses offered at their university rather than comparing their programs against other entrepreneurship courses offered in the country. Perhaps this is because very few of them actually know how many universities have offerings in this academic area.

Professors also addressed future trends in the area of entrepreneurship education that they expected to be implemented in Portugal over the next five years (see Table 8). Respondents predict that entrepreneurship education will be offered to a broader target audience. According to them, entrepreneurship courses should not only be taught to all university students (independent of their area of study) but they should also be extended to high school students as well as currently working professionals who may lack an advanced academic degree and not qualify or not be suited for current post-graduate programs.

It is expected that the content of entrepreneurship education is going to go through a substantial

Table 7  
*Open-ended Comments Regarding Course Differentiation*

<b>Categories (times mentioned)</b>	<b>Example of Quotes</b>
<i>Practical Knowledge (5)</i>	“it is absolutely practical” “to seek practical information” “a very practical program” “practical dimension of the course”
<i>Business Creation (5)</i>	“evaluates the business plans” “students develop non simulated companies” “creation of a firm” “business plan that looks at the whole market”
<i>Specialization (2)</i>	“technology-based business ideas” “technology-based entrepreneurship”
<i>Mindset (1)</i>	“development of the entrepreneurial spirit”
<i>Importance to Economy (1)</i>	“importance of entrepreneurship to economic development”

Table 8  
*Open-ended Comments Regarding Future trends in Entrepreneurship Education*

Categories	Analysis (times mentioned)	Example of Quotes
<b>Broader Target Audience</b>	All University Students (5)	“generalized teaching of entrepreneurship” “all universities will have entrepreneurship courses” “will become a required course instead of optional”
	High School Level (4)	“extension of entrepreneurship to the secondary level programs” “introduction of entrepreneurship courses to high school”
	Professionals without a Degree (2)	“entrepreneurship executive programs” “education for businessmen with lower levels of education”
<b>Content</b>	Specialization (6)	“technology based entrepreneurship programs” “the reinforcement of the technology dimension of entrepreneurship” “specialization at the Masters level”
	New Subjects Discussed (4)	“intrapreneurship” “succession of family business” “problem solver methodologies” “innovation, branding and vertical integration”
<b>Use of Support Technologies</b>	Computer Simulations (3)	“use of IT for simulations” “broader use of management simulators”
	E-Learning (2)	“distance learning of entrepreneurship”

transformation during the next five years beyond an expansion of the target audience. Professors anticipate that courses will provide more than just practical knowledge on how to create a business and address other important subject areas such as intrapreneurship and family businesses. They also expect to see educational offerings incorporating a better use of technology with use of computer simulators as part of course pedagogy as well as using e-learning to reaching other potential students.

Complete educational programs such as certificate-granting post-graduate and masters programs are another area where universities are investing. During the 2004/2005 academic year two post-graduate (from *Universidade Autónoma de Lisboa* and *ISCTE*) and one masters (from *Universidade do Porto*) were offered. Other universities (a total of 6) will start offering entrepreneurship programs in the next academic year. It is important to note that three of these six universities had originally scheduled their programs to start during the 2005/2006 academic year but they were forced to postpone because of a lack of enrollment. Further research will be conducted in an attempt to better understand the reason(s) for this by interviewing course coordinators. In a

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separate analysis of these three programs, it was noted that the majority of responses from program coordinators mirrored those given by entrepreneurship professors.

## **Conclusions**

Portuguese university professors need to continue to look towards other countries that have developed entrepreneurship education offerings as they grow this area in Portugal. As early as 2000, Erkkilä observed that, «The US and the UK can be considered the leading countries in the trend. They were the first two countries to have extensively pursued entrepreneurship education» (p. 10). Beyond her observations regarding the Anglo-American examples, there are other countries that have made great strides in the development of entrepreneurship education and curriculums and could also serve as possible models for Portugal.

If Portuguese universities wish to offer entrepreneurship programs that help develop the entrepreneur skill-set and mindset for their students then changes need to be made in the pedagogical methods currently being employed (see Findings).

A substantial number of professors (76.5%) said that their university plans to develop an entrepreneurship/innovation center on their campus. Many American and British universities have entrepreneurship courses that are accompanied by an entrepreneurship center. This researcher believes, however, that this concept still needs to be better understood and defined in the Portuguese educational context.

Few universities (8.3%) seek out private corporations to help fund and promote their entrepreneurship education initiatives. Those who are now starting to offer entrepreneurship courses should have as a priority the goal of establishing close relationships with the private sector. Not only would this strengthen the bonds between the academic and business worlds for their students but, it could also serve to help sustain the continued investment Portugal needs to make in entrepreneurship research and education.

Use of technologies, such as the Internet, need to be further developed in Portuguese entrepreneurship courses. Only 40% of universities in Portugal provide information to students and entrepreneurs on entrepreneurship, new venture capital and small business via the Internet. In contrast, in the United States 79% of universities have these offerings (Solomon, 2005). When it comes to offering online management and technical support for students and entrepreneurs only 20% of Portuguese universities provide this type of assistance in comparison to 80% of universities in the United States.

In recent years there has been considerable investment in the promotion of entrepreneurship by the European Union and the Portuguese government. Getting this investment translated into promoting entrepreneurship at universities has the possibility of making a profound long-term impact at a minimal cost because of the “captive market” students represent and the ability to reach young people who, in many cases, are searching for new ideas and future career possibilities. Moving students from what professors see as a “neutral bias” to one that is positive will take continued commitment on the part of the government as well as the universities themselves.

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**Resumo.** A educação em empreendedorismo constitui uma temática relativamente recente no currículo das instituições de ensino superior em Portugal. Quarenta e um por cento dos cursos que existem presentemente foram leccionados pela primeira vez em 2003 ou 2004. A recente consciencialização para a importância da educação em empreendedorismo revela-se, simultaneamente, reactiva, face às necessidades do mercado, mas também proactiva, atendendo aos interesses dos professores. À medida que o fenómeno da educação em empreendedorismo se tem vindo a desenvolver, tem-se assistido a uma necessidade crescente para uma melhor compreensão desta área de estudo, através da investigação científica. A pedagogia, os conteúdos dos cursos, o uso de tecnologia, entre outras iniciativas relacionadas com a educação em empreendedorismo constituem o foco primordial do questionário nacional relativo ao ano lectivo 2004/2005 que foi aplicado a uma amostra representativa do universo de professores de empreendedorismo. A maioria dos professores (76.5%) revelou que as suas universidades planeavam criar centros de empreendedorismo/ inovação. Contudo, acredita-se que os papéis e as actividades que estão inerentes a um funcionamento eficaz destes centros não se encontram, ainda, bem definidos no contexto Português. Em termos de iniciativas futuras, Portugal pode beneficiar do estudo de modelos internacionais onde as ofertas em educação em empreendedorismo, assim como as estruturas de suporte, se encontram bem desenvolvidas. Os resultados do estudo demonstram, ainda, que os cursos leccionados em Portugal assentam, sobretudo, no ensino teórico e no desenvolvimento de planos de negócios, e não tanto no uso de simulações de negócios em suporte informático, nos *role-playings* ou em estágios. O uso crescente da internet enquanto método para a disseminação de informação pelos estudantes e empreendedores pode contribuir para o desenvolvimento do “mercado” da educação em empreendedorismo, assim como para a melhoria da percepção dos estudantes que ainda não frequentam os cursos de empreendedorismo. *Palavras-chave:* Educação em empreendedorismo, Portugal, universidades, questionário.

## **ANNEX**

### **Annex 1.1 Entrepreneurship Education in Portugal: 2004/2005 National Survey**

1) Nome da Universidade / Instituição:

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2) O seu nome:

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3) Título Académico:

- Assistente \_\_\_\_\_
- Assistente Convidado \_\_\_\_\_
- Professor Auxiliar \_\_\_\_\_
- Professor Auxiliar Convidado \_\_\_\_\_
- Professor Associado com Agregação \_\_\_\_\_
- Professor Catedrático \_\_\_\_\_
- Outro, por favor especifique \_\_\_\_\_

4) Morada de correio:

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5) E-mail:

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6) Nome da disciplina e Página de Internet (se existente):

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7) Se ocupar algum cargo na Universidade para além de professor(a), por favor indique qual: (por exemplo, Director de departamento, etc.)

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8) É o Professor responsável pela disciplina?

- Sim \_\_\_

- Não \_\_\_

9) Se não é o(a) professor(a) responsável pela disciplina, por favor indique o nome do(a) professor(a) responsável:

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10) Qual a sua principal área de ensino?

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11) Qual a sua principal área de investigação?

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12) Tem conhecimento de alguma investigação académica (teses, dissertações, papers, livros, etc.) que tenha sido desenvolvida na área Educação do Empreendedorismo em Portugal? Se souber, por favor identifique o investigador e o nome da sua investigação.

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13) Quais as actividades que já desenvolveu durante a sua carreira?

- Criou um negócio \_\_\_\_\_

- Foi gerente dum empresa em fase de arranque \_\_\_\_\_

- Foi gerente de um pequeno negócio \_\_\_\_\_

- Foi gerente de uma media ou grande empresa \_\_\_\_\_

- Nenhuma das anteriores \_\_\_\_\_

14) A sua Universidade / Instituição pretende desenvolver alguma das seguintes iniciativas para promover o empreendedorismo e a inovação? (Assinale todas as necessárias)

- Centro para o Empreendedorismo e/ou Inovação \_\_\_\_\_

- Competição de planos de negócios \_\_\_\_\_

- Centro de transferência de tecnologia \_\_\_\_\_

- Incubadora \_\_\_\_\_

- Parque tecnológico \_\_\_\_\_

- Fundo de capital de risco / *Business angel* \_\_\_\_\_

- Outro (por favor especifique) \_\_\_\_\_

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15) Por favor nomeie a(s) disciplina(s) existente(s) na sua Universidade / Instituição na área do Empreendedorismo e indique se fazem parte de um Bacharelato, Licenciatura, Pós-Graduação, Mestrado, Doutoramento ou outro programa de formação:

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16) A sua disciplina é leccionada por:

- Um professor \_\_\_\_\_
- Um grupo de professores \_\_\_\_\_

17) Qual a principal razão que ditou a criação da disciplina sobre Empreendedorismo?

- Pedidos dos alunos \_\_\_\_\_
- Resposta ao Mercado / Pedidos de empresas \_\_\_\_\_
- Ir ao encontro das políticas do governo português \_\_\_\_\_
- Ir ao encontro das políticas da União Europeia \_\_\_\_\_
- Interesse pessoal do professor \_\_\_\_\_
- Resultante de uma tese/programa de Doutoramento \_\_\_\_\_
- Estruturado a partir da disciplina de uma outra Universidade \_\_\_\_\_
- Outra (por favor especifique) \_\_\_\_\_

18) Em que ano foi oferecida formação em empreendedorismo pela primeira vez?

1985 _____	1990 _____	1995 _____	2000 _____
1986 _____	1991 _____	1996 _____	2001 _____
1987 _____	1992 _____	1997 _____	2002 _____
1988 _____	1993 _____	1998 _____	2003 _____
1989 _____	1994 _____	1999 _____	2004 _____

19) Qual o departamento responsável pela(s) oferta(s) de formação em empreendedorismo?

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20) Qual a dimensão média dos grupos de estudantes/turmas que frequentaram as disciplinas de Empreendedorismo no ano lectivo de 2004/2005?

- |                       |                       |
|-----------------------|-----------------------|
| - Menos de 11 _____   | - Entre 26 e 30 _____ |
| - Entre 11 e 15 _____ | - Entre 31 e 35 _____ |
| - Entre 16 e 20 _____ | - Entre 36 e 40 _____ |
| - Entre 21 e 25 _____ | - Mais de 40 _____    |

21) Quais são as áreas abordadas pela disciplina de Empreendedorismo?

- Identificação de Oportunidades \_\_\_\_\_
- Avaliação de Oportunidades \_\_\_\_\_

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- Competências em Comportamento Empreendedor e Relações Interpessoais \_\_\_\_\_
- Competências em Difusão de Conhecimento \_\_\_\_\_
- Competências em Relações Inter Culturais \_\_\_\_\_
- Criação e Registo de Empresas \_\_\_\_\_
- Análise de Mercados \_\_\_\_\_
- Marketing \_\_\_\_\_
- Processos Produtivos \_\_\_\_\_
- Optimização de Processos \_\_\_\_\_
- Gestão \_\_\_\_\_
- Gestão Financeira \_\_\_\_\_
- Controlo e Prevenção de Falências \_\_\_\_\_
- Financiamento \_\_\_\_\_
- Aspectos Legais, Incluindo Registo de Patentes \_\_\_\_\_
- Desenvolvimento de Plano de Negócios \_\_\_\_\_
- Financiamento Público Para a Criação de Empresas \_\_\_\_\_
- Financiamento Privado / *Venture Capital* \_\_\_\_\_
- Avaliação de Iniciativas / Projectos de Fomento de Empreendedorismo \_\_\_\_\_
- Outro (por favor especifique) \_\_\_\_\_

22) Qual a frequência com que usou estes tipos de actividade pedagógica durante a última edição da disciplina, considerando o tempo relativo necessário à sua execução? (1=Muito frequentemente; 2=Freqüentemente; 3=Ocasionalmente; 4=Raramente; 5=Nunca)

- Criação de Planos de Negócio	1	2	3	4	5
- Análise de Casos de Estudo	1	2	3	4	5
- Simulações Informáticas de Actividade Empresarial	1	2	3	4	5
- <i>Role-playing</i>	1	2	3	4	5
- Projectos de Investigação	1	2	3	4	5
- Estudos de Viabilidade Económico-Financeira	1	2	3	4	5
- Estágios	1	2	3	4	5
- Visitas a Pequenos Negócios	1	2	3	4	5
- Lições Teóricas	1	2	3	4	5
- Outro (por favor especifique)	1	2	3	4	5

23) Caso tenha seleccionado a opção “Outro” tipo de actividade pedagógica na pergunta anterior, por favor especifique qual:

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24) Qual a frequência com que recorre na sua aula a: (1=Muito frequentemente; 2=Freqüentemente; 3=Ocasionalmente; 4=Raramente; 5=Nunca)

- Oradores Convidados: Empreendedores	1	2	3	4	5
- Oradores Convidados: Outros	1	2	3	4	5
- Debates	1	2	3	4	5

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25) Qual é a percepção da cadeira pelos seguintes grupos?

- Alunos da disciplina	Favorável	Neutral	Desfavorável
- Alunos que não têm a disciplina	Favorável	Neutral	Desfavorável
- Outros professores da instituição	Favorável	Neutral	Desfavorável
- Administração da universidade / instituição	Favorável	Neutral	Desfavorável

26) Qual a frequência com que usa estes tipos de materiais de leitura na sua disciplina? (1=Muito frequentemente; 2=Frequentemente; 3=Ocasionalmente; 4=Raramente; 5=Nunca)

- Artigos de Jornais Académicos	1	2	3	4	5
- Casos de Estudos portugueses (em Português)	1	2	3	4	5
- Casos de estudo estrangeiros (em Português)	1	2	3	4	5
- Casos de estudo estrangeiros (em Inglês)	1	2	3	4	5
- Casos de estudo estrangeiros (noutra língua)	1	2	3	4	5
- Manuais de disciplina	1	2	3	4	5
- Outros livros escritos por professores	1	2	3	4	5
- Livros escritos por empreendedores	1	2	3	4	5
- Revistas e jornais	1	2	3	4	5
- Outros (por favor especifique)	1	2	3	4	5

27) Caso tenha seleccionado a opção “Outro” na pergunta anterior, por favor especifique qual:

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28) A sua Universidade / Instituição candidatou-se e recebeu algum financiamento estatal (do Governo Português e/ou da Comissão Europeia) para desenvolver iniciativas em Empreendedorismo e/ou Inovação?

- Candidatou-se e recebeu o financiamento \_\_\_\_\_
- Candidatou-se mas não recebeu o financiamento \_\_\_\_\_
- Não se candidatou a nenhum financiamento \_\_\_\_\_

29) Se se candidatou por favor indique qual a fonte e o nome desse programa de financiamento:

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30) A sua Universidade / Instituição candidatou-se e recebeu algum financiamento privado para desenvolver iniciativas em Empreendedorismo e/ou Inovação?

- Candidatou-se e recebeu o financiamento \_\_\_\_\_
- Candidatou-se mas não recebeu o financiamento \_\_\_\_\_
- Não se candidatou a nenhum financiamento \_\_\_\_\_

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31) Se se candidatou por favor indique qual a fonte e o nome desse programa de financiamento:

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32) A sua disciplina requer trabalhos com recurso obrigatório à Internet?

- Sim \_\_\_
- Não \_\_\_

33) A sua escola oferece a(s) disciplina(s) de Empreendedorismo pela Internet?

- Sim \_\_\_
- Não \_\_\_

34) A sua Universidade / Instituição disponibiliza informação na Internet sobre Empreendedorismo, *Venture Capital* e pequenos negócios a estudantes e empreendedores?

- Sim \_\_\_
- Não \_\_\_

35) A sua Universidade / Instituição disponibiliza assistência técnica e de gestão para estudantes e empreendedores na Internet?

- Sim \_\_\_
- Não \_\_\_

36) A sua Universidade / Instituição oferece algum dos seguintes? (Assinale todas as necessárias)

- Estágios em pequenas empresas \_\_\_\_\_
- Cursos de Empreendedorismo para executivos \_\_\_\_\_
- Programas contínuos sobre Empreendedorismo \_\_\_\_\_
- Ensino à distância de Empreendedorismo \_\_\_\_\_

37) A sua Universidade / Instituição mantém registo dos ex-alunos que iniciaram a sua própria empresa?

- Sim \_\_\_
- Não \_\_\_

38) O que distingue o seu programa de Empreendedorismo dos outros programas oferecidos por outras Universidades/Instituições?

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39) Liste três tendências em educação do Empreendedorismo que preveja virem a ser implementadas em Portugal nos próximos cinco anos.

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**Annex 1.2**

**Interview Guide for Professors and Entrepreneurship Researchers**

- De que forma é que a sua actividade profissional se encontra relacionada com a temática do empreendedorismo?
- Como caracterizaria o estado actual do empreendedorismo em Portugal? Por favor, explique porquê.
- Como caracterizaria o estado actual do ensino do empreendedorismo em Portugal? Por favor, explique porquê.
- Por favor descreva investigações académicas (teses, dissertações, *papers*, livros, etc.) desenvolvidas em Portugal na área da educação do empreendedorismo de que tenha conhecimento.
- Por favor indique as disciplinas de empreendedorismo oferecidas por instituições de educação portuguesas de que tenha conhecimento.
- Que tipo de sinergias poderão ser criadas entre disciplinas de empreendedorismo e iniciativas de promoção do empreendedorismo de outra natureza?
- Quais são, na sua opinião, as principais diferenças entre o ensino do empreendedorismo em Portugal e noutros países com maior “tradição” neste domínio da educação?
- Indique três tendências em educação do Empreendedorismo que preveja virem a ser implementadas em Portugal nos próximos cinco anos.