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Entrepreneurship education in Italian secondary education

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Abstract

The Communication from the European Commission entitled "Entrepreneurship Action Plan 2020" highlights the role of Entrepreneurship Education (EE) as a key strategy for stimulating economic growth in Europe. As stated in the report "Entrepreneurship Education at School in Europe", EE is not yet sufficiently integrated into the school curricula in European countries. In the last few years, the Italian school system has undergone a profound revolution. This paper analyses how European policies on entrepreneurship education have been taken into account in this reform process within the tourism school sector. Moreover, a blended learning model is presented which was developed within the framework of the EU project "I can ... I can not ... I go! "Rev. 2 co-financed by the EU under the LLP programme. The model is based on a serious game and was designed in order to foster the integration of EE into curricular activities.

Keywords: Entrepreneurship Education; Serious Game; Learning Model; Tourism

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1. Entrepreneurship Education and the ministerial reform of technical institutes for tourism in Italy

Over the last few years, technical institutes for tourism in Italy have undergone a profound revolution. The Ministry of Education with the introduction of the ITER project proposed a first reform in 1995. The second reform, named “the Gelmini reform” (academic year 2013/2014), changes completely the training model and the organization of technical institutes. Economics and technological subjects have been identified as the key areas for technical schools in the latest reform and the specialization in tourism has been introduced into the framework of the economics sector.

The main result of these reforms is the shift from the classical education paradigm, based on information transfer (from teacher to pupils), to a teaching approach capable of developing the skills and competences needed by the different and rapidly changing professional figures required by the tourist market.

From a practical point of view, this has resulted in a substantial change in the teaching approach, both from the point of view of the topics taught and the time allotted to them, as well as from the methodological point of view.

The main changes introduced by the reforms are the following:

- the unification of the courses included in the learning path from the professional point of view (Accounting, Transport, Tourism Technique and Public Relations) in a single course named “Disciplines of the Tourist Companies”;
- the attention on the subjects which traditionally aim to develop soft and transversal skills like the Italian language, mathematics and humanities in general in terms of time dedicated to these subjects;
- the introduction of natural sciences in the first two years of secondary school, in order to stimulate a scientific approach in the reasoning processes.

According to the key role that Entrepreneurship Education plays in European policies, the new profile of tourism at technical institutes will be analyzed with reference to the Heinonen and Poikkijoki model (2006). This model proposes a set of skills and abilities that an Entrepreneurship Education program should stimulate.

An in-depth analysis of the subject "Disciplines of the Tourist Companies" show that his main aim is to empower students with methods, languages and tools which allow them to cope with the tourism phenomena as well as providing a general framework of knowledge about tourism and its interrelationship with the environment. The National guidelines for this discipline set out the following goals:

- to provide general knowledge of the tourism phenomena (its premises and trends);
- to enable students to identify links between tourism, social communication, cultural consumption and other productive activities;
- to describe various types of tour operators and identify their location and function;
- to distinguish the organizational models and describe their characteristics and problems;
- to enable students to identify opportunities for the development of new tourist activities;
- to enable students to recognize the interdependencies between national and international tourist markets;
- to set up a program of activities for a small to medium tourism company;
- to enable students to make meaningful choices in complex situations.

The new approach aims to avoid the prevailing mechanistic aspects of the discipline and to promote:

- the direct observation of tourist phenomena through job placements and laboratory activities in order to understand the characteristics of the context in which they will operate;
- the involvement of the students in decision-making scenarios to improve their ability to represent reality as well as in designing and planning strategies;
- a gradual introduction to the complexity of the social-economic tourist system, pointing out the logical relationships, the historical dimension and the relationships with other disciplines.

An analysis of the National guidelines shows that, the new learning path follows the suggestions made by the Entrepreneurship Education European strategies, from the point of view of knowledge transfer to students. Moreover, the proposed approach allows students to improve skills and attitudes suited to the development of an entrepreneurial mindset (e.g. taking the initiative and risk taking, critical thinking, creativity and problem solving, communication and presentation and planning skills).

Therefore, the national guidelines of schools for tourism operators represent an excellent starting point for teachers to integrate the European policies on entrepreneurship education into their curricula. According to the report of the European Commission (European Commission, 2012) , it is necessary to take another step forward and support teachers with tools and teaching methodologies that facilitate the implementation of these educational policies.

To achieve this objective, within the framework of the European project “I can ... I cannot ... I go!” Rev. 2 (PNPV project), a new learning model that aims to introduce and foster an entrepreneurial mindset among tourism schools students has been defined (Gentile, Dal Grande, La Guardia, Ottaviano & Allegra, 2014).

This learning model is based on a new serious game named “PNPVillage” that was designed, implemented and tested within the same project. In the next paragraph, the PNPV training model is described.

2. The PNPV training model

The PNPV training model is based on a serious game, which is used to transmit curricular educational subjects through an innovative tool capable of stimulating transversal skills specific to an entrepreneurial mindset (Allegra, Dal Grande, Gentile, La Guardia & Ottaviano, 2014).

Table 1 shows the educational subjects proposed in the PNPV training model that are coherent with the National guidelines described in the previous paragraph.

According to the assumption that simulated environments make learning experiences more beneficial and effective (McDowell, Darken, Sullivan, & Johnson, 2006), the proposed training model combines:

- classroom activities centered on a serious game
- online learning activities, allowing students to explore the business concepts introduced during the game by means of educational resources accessible through a learning management system

The model aims to encourage competitive and cooperative dynamics among students, developing teamwork and leadership skills, and to create a simulated environment closely resembling the real world.

Moreover, the teacher plays a central role in this model. He/she has to introduce the business concepts that are addressed during the game, and to explain the results of the game during the debriefing activities, highlighting good or bad choices made by the students and their effects on the market.

An initial experimental validation of the model is being conducted in Italy in a technical institute for tourism.

The students are engaged in the educational path, which lasts about 2 months and consists of eight meetings. Each meeting includes a brief introduction, play session, debriefing activities and, finally, the presentation of business concepts to be studied at the next meeting. At the beginning of the meeting, the teacher briefly recalls the entrepreneurial concepts that the students have been studying for a week through the educational cards available in the Moodle platform (Allegra, La Guardia, Ottaviano, Dal Grande & Gentile, 2013).

During the play session, one virtual year partitioned by quarter is simulated. At the end of each simulated quarter, the groups have the opportunity to analyze the results of their decisions and apply the necessary changes to their game strategy.

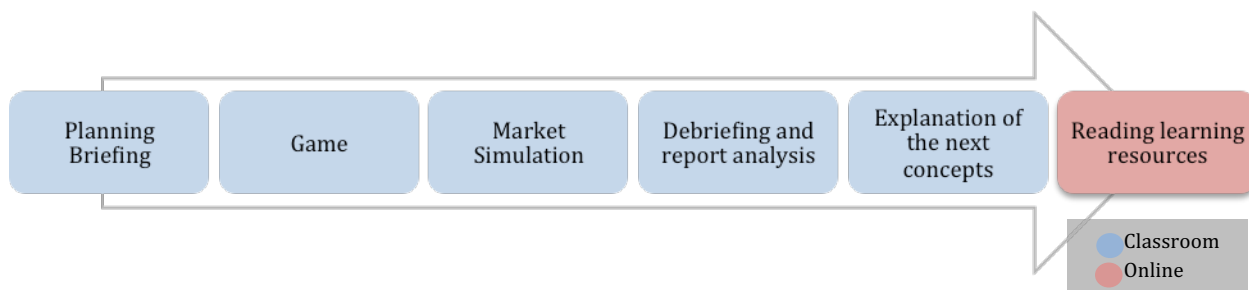


Fig. 1. Meeting activities

Various tools to support the decision-making process are included in the game [6]. In particular, while playing the game, students can access the educational cards, obtain data on their village status, and have access to market research, diagrams and reports on economic performance. Through the market research, players can also get information about competing villages. Using this information, students can analyze the market structure and their customers' preferences in order to make the correct choices.

During the game sessions, students are helped by a NPC (Non-Player Character) whose purpose is to explain the rules of the game, to introduce the different levels and to provide information and suggestions. The NPC is represented graphically as a comic figure and he helps students to focus their attention on certain problems regarding the tourism sector, the reference market and resort management. At the end of the game sessions, students are provided with a summary report of their resort with the main economic indicators elaborated by the system and downloadable from the platform. At this stage, the teacher is actively involved with the class in the analysis of the results obtained by each group of players, using tools for the quality verification of the decisions taken by each group. At the end of the meeting, the teacher briefly presents the contents of the next meeting and enables access to new relevant learning resources. At the next meeting, the students are required to apply their new knowledge, taking appropriate decisions in the serious game using special decision-making levers, which are introduced, at the new level.

The list of entrepreneurial concepts indicated below presents the levels of the game and the corresponding decision-making levers:

Table 1. The game’s entrepreneurial concepts grouped by level with the corresponding decision-making levers.

Step	Entrepreneurship Concept	Decisional Levers
1	Business Strategy Market segmentation	<ul style="list-style-type: none"> • choose the name, slogan and logo of the village • plan the strategy • build the village
2	Communication	<ul style="list-style-type: none"> • define the quarterly investment for each communication channel (Internet, newspaper, TV, leaflets) • elaborate your offer details to be communicated to customers
3	Pricing policies	<ul style="list-style-type: none"> • assign a unit price to each type of accommodation unit
4	Enterprise organization	<ul style="list-style-type: none"> • define the staff (management, reception, cleaning services)
5	Restaurant Services and staff	<ul style="list-style-type: none"> • choose and activate the restaurant facilities • recruit the staff for the restaurant services
6	Corporate Social Responsibility	<ul style="list-style-type: none"> • increase the wooded area • train the staff • remove architectural barriers
7	Fitness and Wellness services	<ul style="list-style-type: none"> • choose and activate the fitness and wellness facilities • recruit the staff for these services

At the first game level, students learn how to interact with the interface of the serious game. Their first task is to describe their village. In particular, for each resort students have to determine the market target and the strategy they intend to pursue. These choices represent the stated goal of a group of students and enable teachers to assess the coherence of subsequent operational decisions. Each group of players can make any necessary changes at the beginning of each game session, bearing in mind that a calendar year is the time limit for these strategic decisions.

Then the students can start building their resorts, choosing the accommodation units and additional services they consider most suitable for the target customers and the available budget (at the beginning of the game, an initial budget is assigned to each group of students). Once the phase of village construction is completed, the system automatically assigns some workers to provide basic services. At the end of each session, the budget may be increased or reduced as a result of the decisions taken; besides, knowledge assessment in the form of a quiz about the educational contents allows students to acquire bonuses and increase the budget available.



Fig. 2. A screenshot of the game user interface

The second step introduces concepts of marketing and communication policies. Students have to define the tourist package to be presented to their customers and the communication policy to be implemented. These policies contribute to defining the visibility of the village in the market and are one of the key elements of the simulation. The third step focuses on pricing policies and on the costs and income management, with particular reference to the concept of budget. At this level, students can define pricing policies, changing the selling price of tourist packages for each type of accommodation unit.

The fourth step aims to customize the offer through the definition of an entrepreneurial organization; at this level, the students' task is to draw up an organizational chart for the village, selecting a suitable number of appropriate staff members in order to optimize results. The fifth step aims to improve the tourist package by allowing players to customize catering services for the selected target customers.

The objective of the sixth step is to highlight the social impact produced by a business enterprise and the system of rules that governs it. The players can make observations and take decisions to improve the relationship between the village and the local community as well as with its customers and employees. Particular attention is paid to the following levers of the company's social responsibility: personnel training, recycling, kitchen renovation, elimination of architectural barriers, and adoption of an ethical code and creation of wooded areas.

The last step of the game introduces the Sports and Wellness Services lever that enables the players to present a complete tourist service package. They are also provided with the tools needed to make an overall assessment of the efficiency of the entire business.

3. Conclusion

Many European countries adopt national strategies and reforms to address the issue of entrepreneurship education and its importance is widely recognized. Besides, in some countries specific guidelines and teaching materials have been defined to support teachers in integrating

entrepreneurship education into curricular activities. In this paper, we have described how the reform of secondary schools in Italy, and in particular of technical schools for tourism, is going to include some important elements of EE in school programs. In this context, we have designed and developed a training model based on a serious game to foster an entrepreneurial mindset in young people; the model has been tested in several schools in Europe, within the framework of a European project. In Italy, we have involved two classes from a technical institute for tourism and the results have been very positive. In fact, students have enjoyed the activities and have been highly motivated, while teachers have been given new tools allowing them to apply theoretical information in a simulated environment. The proposed model integrates online and traditional activities, thus allowing students to practice their skills in different ways and take advantage of the benefits of using an environment where they play and compete with other students, as well as studying in depth to get better results and win the game.

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