

UPSKILLING TEACHERS AND TRAINERS IN ENTREPRENEURSHIP EDUCATION AND ENTREPRENEURIAL PEDAGOGY: TRANSFORMING POLICIES AND THEORIES INTO INNOVATIVE PRACTICE

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Abstract

Entrepreneurship education faces several challenges related to pedagogical-didactic principles and methodologies adopted in delivering entrepreneurial learning. More than half of EU member states have limited or no guidelines for entrepreneurship teaching, while the training of teachers and trainers emerges as an imperative need. Hence, the present manuscript attempts to discuss the pedagogical theories and principles based on which the InnoGFEED project was developed. The authors discuss the rationale, objectives and expected impact in relation to policy conclusions and recommendations, contributing to the broader dialogue on pedagogical and methodological considerations that need to be taken into account regarding entrepreneurship education.

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1. Introduction

Entrepreneurs contribute significantly to the economic development of their countries by introducing new products and services that improve people's lives and create jobs (Acs & Szerb, 2007; Ribeiro-Soriano, 2017). The Greek Government, as well as several policy makers and academics, have proposed entrepreneurship as a path leading to the economic revival of the country highlighting that entrepreneurship is also important during periods of crisis (Amorós *et al.*, 2019). Nowadays, the world is facing a new challenge related to the COVID-19 crisis, in which the role of entrepreneurs may be crucial for the remediation of the post-COVID-19 world. According to Haeffele (2020), a wave of innovation has been unleashed; along with the agility and risk-taking of entrepreneurs, this combination creates promising conditions for ending the crisis and contributing towards a quick recovery. This potentiality has, in turn, led many countries to invest in the promotion of entrepreneurship education (Valerio *et al.*, 2014). The European Commission (2016) has already acknowledged that entrepreneurship education plays a central role in developing an entrepreneurial culture that encompasses not only the creation of new businesses, but also the cultivation of entrepreneurial values (UNESCO, 2008) and characteristics, such as risk taking, independence, creativity and innovation.

The impact of entrepreneurship education may be evident across all school levels, as well as at different organizational levels; in other words, entrepreneurship education may have an impact on individuals, institutions, the economy, and the society. For instance, students who attend entrepreneurship education courses in higher education might change their career aspirations and ambitions (Boldureanu *et al.*, 2020), whereas educational institutions that deliver entrepreneurship education have observed higher motivation, engagement, and deep learning among students (Lackéus, 2015). As for the economy, businesses created by further education staff and alumni offer new job positions and may have higher turnovers; it has also been demonstrated that entrepreneurship education may have a positive impact on societies through supporting individuals at risk of social exclusion (Schaper & Volery, 2007; Sarri *et al.*, 2012; European Commission, 2016).

Higher education institutions adopted entrepreneurship education by offering compulsory and elective courses, as well as complete study courses (leading to bachelor and master's degrees) in entrepreneurship (Shane 2004; Wright *et al.*, 2007; Sarri *et al.*, 2018). However, primary and secondary education were less responsive in adopting entrepreneurship education. The majority of EU countries have not (so far) introduced entrepreneurship as a separate subject in primary schools, but, rather, as a transversal topic associated with the development of skills, such as creativity, critical thinking, self-awareness and initiative taking; it also includes content knowledge (e.g., business understanding) based on autonomous and active forms of learning including role-playing games, presentation of simple examples and visits to

local businesses (European Commission, 2016). Trainers in entrepreneurship can be academics, tutors, school teachers and guidance practitioners. However, these professionals are often inexperienced and need training to gain a common view and acquire knowledge, skills and professional competencies on how to provide entrepreneurship education, particularly, in primary and secondary education (Kakouris, 2009).

2. Entrepreneurship education and entrepreneurial pedagogy

Developing entrepreneurial thinking through education was a European Directive (Oslo Agenda, 2006) and since then, entrepreneurship has been acknowledged as one of the eight basic skills that should be cultivated based on the European Policy on Lifelong Learning (European Commission, 2019a). *“Entrepreneurship education is about learners developing the skills and mind-set to be able to turn creative ideas into entrepreneurial action. This is a key competence for all learners, supporting personal development, active citizenship, social inclusion, and employability. It is relevant across the lifelong learning process, in all disciplines of learning and to all forms of education and training (formal, non-formal and informal), which contribute to an entrepreneurial spirit or behaviour, with or without a commercial objective”* (European Commission, 2016: 21). Following this definition, the purpose of entrepreneurship education should be the development of an entrepreneurial culture, early in people’s lives. In this respect, it should be noted that the concept of entrepreneurial culture is not only related to establishing a new business (Davis, 2002), but also involves embracing entrepreneurial values and characteristics including risk- and initiative-taking, creativity, innovation, and opportunity recognition (Deekins & Freel, 2007; Bateman *et al.*, 2018). It also entails cultivating skills that allow learners to manage their careers, as well as identify their strong and less powerful personal characteristics (Cedefop, 2011; OECD, 2016).

Cultivating such traits from a young age can support individuals in the future, not only in terms of creating their own business (Volkman *et al.*, 2009; Martínez *et al.*, 2010), but also in terms of being creative and innovative in the context of an already established business (Hisrich, 1990), in the private or public sector, as well as in other aspects of their daily lives (Petridou & Sarri, 2011). Therefore, entrepreneurship education does not automatically imply the creation of new businesses. According to a Eurobarometer survey in 2012, only 28% of the participants attending entrepreneurship education and training programmes were interested in starting a new business, while 40% stated that they acquired useful skills for the future, such as decision-making, risk-taking and risk assessment (European Commission, 2012; 2013). Besides creating an entrepreneurial culture, which is an additional recommendation regarding the development of a new entrepreneurial ecosystem, refers to the interconnection and cooperation of those involved in en-

trepreneurship within the framework of the quadruple helix innovation model (Carayannis & Campbell, 2009). In other words, there should be interconnection of universities and other educational institutions with companies, the state, and civil society. Interaction of all these bodies and emphasis on collaborative processes and networking among various stakeholders and interest groups may create the necessary conditions for innovation in a country (Council of the European Union, 2004; European Commission, 2019b).

As far as higher education is concerned, entrepreneurship education was offered in the United States in the 1940s at Business Schools and expanded to become international and interdisciplinary (Katz, 2003; Kuratko, 2005; Solomon, 2007); since then, the spread of entrepreneurship courses in tertiary education has been spectacular. However, despite the immediate response of higher education institutions, provision of entrepreneurship education remains rather limited to primary and secondary education, as well as in vocational education and training, despite European guidelines pointing in this direction and bringing out the need of encouraging and supporting teachers accordingly (European Commission, 2016). In particular, the European report that discusses the evolution of entrepreneurship education in the EU (European Commission, 2015a) showcases a discrepancy across countries, since there are no available data for Greece (Kakouris *et al.*, 2016), while in many countries, such as Finland and Lithuania, entrepreneurship education permeates all levels of education. In addition, much of entrepreneurship education 'leaks out' of academic contexts and emerges in non-formal learning settings, in which, sometimes, uncertain teaching models and goals exist. However, even in academic entrepreneurship courses, fragmentation of content and difficulties in evaluation are both evident (Mwasalwiba, 2010; Fayolle, 2013); therefore, the attempt to link entrepreneurship education with clear policy objectives for education (e.g., curricula) is hindered.

Lackéus (2015) suggests that there are three distinct forms of entrepreneurship education. The first one refers to teaching "about" entrepreneurship and it is most compatible with the traditional teaching of Economics and Business Administration in higher education. The second form, teaching "for" entrepreneurship, aims to provide a practical approach to interested prospective entrepreneurs regarding entrepreneurial knowledge and skills, while the third form, teaching "through" entrepreneurship, adopts an experiential approach ensuring participants experience an actual entrepreneurial learning process (Canziani *et al.*, 2015), Kakouris, 2018, Kakouris & Liardogvas, 2019. However, entrepreneurship education refers to both content and pedagogical and didactic methods (Lackéus, 2013). In terms of content, it leads to specific subject knowledge (e.g., evaluation of ideas, marketing strategies, creation of business models), while, in terms of teaching methods, it develops and enhances students' entrepreneurial behaviour with a more practical orientation,

encouraging them to act based on initiative and to feel and do things based on the knowledge and the experience they have gained (Sarri & Zikou, 2014). This dual scope reflects the broader transition from posing content questions to questions related to learning and teaching observed over the last years. As Carrier (2005) highlights “*the most relevant question regarding entrepreneurial education is rather ‘what should be taught and how it should be taught?’...*”. Considering specifically the “*how it should be taught*” part of Carrier’s question, entrepreneurial pedagogy appears to be a rather concrete field that provides a context in which current and future research may be promoted. Namely, entrepreneurial pedagogy refers to educational strategies deployed for teaching and assessing entrepreneurship and entails underpinning educational philosophies support the achievement of the learning outcomes intended. It examines the most appropriate learning strategies, the changing role of the entrepreneurship teacher and entrepreneurship evaluation (Lomine, 2012). Hence, entrepreneurial pedagogy can be regarded as the backbone of entrepreneurship education, in which learning theories are being translated into practice; it is manifested through the approaches, techniques, tools and methods trainers and educators adopt to deliver entrepreneurial learning rather than just entrepreneurship education.

3. Teachers’ training in entrepreneurship education

Some of the “pathologies” of entrepreneurship education are endogenous, due to the nature of the subject (Bygrave & Hofer, 1991; Fiet, 2001), while others are exogenous, deriving from the institutional processes of education and the heterogeneity of teachers expected to deliver relevant content. As for the latter, the need for teachers’ training in entrepreneurship is clearly obvious (Hytti & O’ Gorman, 2004). In more than half of EU countries there are very few or no guidelines for entrepreneurship teaching methods (European Commission, 2010). In addition, entrepreneurship education is rarely part of teachers’ training university courses and is more common in the context of continuing professional development (European Commission, 2016). As a result, teachers, in collaboration with external mentors, or through field visits to companies, are expected to incorporate elements of entrepreneurship in their lessons without any prior training and without implementing methodologies specified for clear educational goals. Considering the heterogeneity of entrepreneurship education, even in higher education, along with the dominant cognitive teaching model, the European Commission underlined quite early on (Oslo Agenda, 2006) the need for innovation in entrepreneurship education and the need for specialised teachers’ training. Such innovation mainly entails experiential ways of learning and learning by doing (Dewey, 1938). Indicatively, according to a report published by the European Centre for the Development of Vocational Training (Cedefop, 2011), entrepreneurship education should be typically characterised by interactive and experiential methods, which require

students to take an active role in the learning process, while teaching should be based on real and authentic situations. Furthermore, simulations and educational games, usually including teamwork, business plan development and educational visits should be utilised.

Especially in secondary education, which addresses an audience with different needs than university students, simply 'copying' practices from higher education is not optimal. Class-based knowledge delivered through traditional didactic pedagogical approaches alone is not sufficient; on the contrary, experiential teaching is viewed as a more appropriate approach (Canziani *et al.*, 2015). Research shows that teachers in secondary education often have received no specific training in entrepreneurship and, therefore, have no knowledge about teaching entrepreneurship (Ierapetritis, 2017). This recognises the need for teachers' training as an important precondition for delivering entrepreneurship education (Korhonen *et al.*, 2012; Carvalho & Franco, 2015), since comprehensive teachers' training can significantly affect the delivery and effectiveness of entrepreneurship education in secondary schools (Blimpo & Pugatch, 2019).

Furthermore, studies of cultural elements and influences (e.g., Dodd *et al.*, 2013) have shown that there are stereotypes regarding the concept of entrepreneurship/ an entrepreneur in various countries, which are proven difficult to address merely through case studies or standard practice in entrepreneurial teaching. Moreover, teachers are invited to facilitate this process with no (or limited) prior experience or knowledge about these issues and without tangible educational tools. The traditional approach of cultivating entrepreneurial "spirit" through lectures is not exactly appropriate for teaching or learning about entrepreneurship (Wahid *et al.*, 2017). On the contrary, there is a need for innovation by combining different learning tools and techniques that will support students to actively participate in understanding and practically applying innovative ideas. Based on relevant literature, learning tools and techniques that can be used include case studies, group discussion, business games, and video-film screenings (Maritz & Brown, 2013).

4. The Greek context

In Greece, the need to create an entrepreneurial culture at an early age is considered significant, mainly for two reasons. The first one relates to the economic downturn the country has been facing in recent years. However, it should be noted that the overall national rate of entrepreneurship remains at high levels, while Greece notches the second highest performance among innovative countries. Nevertheless, the dire economic situation and recession of the country shrank entrepreneurial initiatives considered sustainable (Ioannidis & Giotopoulos, 2014). This new economic and social reality requires from everyone, but mainly from young people, a change in mentality and the development of their skills, such as creative thinking and quick response

to current challenges if sustainable businesses and decent jobs are to be created. Another reason for promoting the establishment of an entrepreneurial culture from a young age is the fact that the attitude of Greek society towards entrepreneurship has not been positive ever since the post-colonial period (Barsakelis *et al.*, 2010). Until recently, entrepreneurs were treated as ‘fraudsters’, and profit from business activity was perceived in a negative light. In addition, barriers to entrepreneurship education arise from the fact that promoting entrepreneurship in schools is often interpreted as an attempt of the entrepreneurial community to infiltrate schools and divert their purpose corrupting their values through entrepreneurial commitment to profit (Sarri & Zikou, 2014; Sarri & Laspita, 2017). Within such a context, young people who want to start a new venture are more likely to avoid doing so. However, during the last few years, such dispositions began to change, allowing entrepreneurs to envision their future without the distortions of the past (Sarri *et al.*, 2012).

Regarding entrepreneurship education in Greece, attempts are being made to educate young people at several educational levels; yet, a great deal of effort is needed to discuss about an entrepreneurial culture given the Greek educational and training policies and systems. In primary education in Greece, but also in other European countries, there are rarely widespread initiatives and programmes managed and operated by national educational authorities (Sarri & Laspita, 2017). In Greek secondary education, entrepreneurial topics are introduced in the course “Basic Principles of Business Management and Administration” that explicitly deals with managerial and administrative operations within companies (Tilavari-dou & Konstantelou, 2016). However, actions completed to date have been highly erratic, with no specific strategic planning. This is also reflected in teachers’ training and in assessing actions’ effectiveness, aspects that were ignored when designing and implementing school programmes that mainly target students in vocational education and training (VET) (Sarri & Laspita, 2017). At this point it should be noted that entrepreneurship education is a particularly attractive topic for VET providers, in almost all EU member states, since self-employment (and, therefore, the establishment of a business) is a realistic plan for most VET students (Cedefop, 2011).

Nevertheless, the most recent policy development related to entrepreneurship education entails the “Skills Workshops” introduced in pre-primary, primary and secondary education as of 2021 by virtue of Law 2539/B/24-06-2020 (Ministry of Education and Religious Affairs, 2020). It is a new initiative that targets students’ 21st century skills including the 4Cs (creativity, collaboration, communication, critical thinking), as well as life skills, citizenship, digital skills, STEAM and entrepreneurship. Entrepreneurship constitutes one of the areas to be covered mainly focusing on entrepreneurship competence areas as defined in the European Entrepreneurship Competence Framework (Bacigalupo *et al.*, 2016). Additionally, workshops

are founded on active, experiential, and student-centred pedagogical approaches, such as inquiry-based learning, project-based learning, problem-based learning, flipped classroom teaching, design thinking and collaborative learning. Moreover, a dedicated platform with educational resources, practical examples and toolkits has been developed, while the Ministry has also created and offered a basic 36-hour professional development programme for all teachers in service.

5. Method

The present manuscript aims to discuss emerging pedagogical principles in entrepreneurship education, as reflected in the case study deployed, namely, the InnoGFEED (Innovation, Games, Films, Entrepreneurship Education) project. A case study is a specific example usually designed to reflect a more general situation (Nisbet and Watt, 1984), a process that helps readers to understand concepts more clearly, rather than present abstract theoretical principles (Cohen, Manion and Morisson, 2007). Based on Yin's (1984) distinction, the present case study is explanatory, as it attempts to pilot test and lead to a research hypothesis that may guide future research.

InnoGFEED is a project designed by the University of Macedonia (Greece) aiming at providing teachers with continuous innovative professional development experience, which considers the pedagogical methodologies related to students' learning. The reasons for selecting InnoGFEED as the case study of the present manuscript are as follows: Firstly, the project is an output of a joint interdisciplinary collaboration of researchers and academics from the fields of Entrepreneurship Education, Adult Education, Pedagogy and Audio-visual Education. Furthermore, the project introduces an experiential approach to entrepreneurship education, which attempts to actively engage participants in their learning process, while, at the same time, highlights the need for training teachers in innovative methodologies. Apart from the audio-visual resources described below (videogames, films, documentaries), the project will utilise and encourage further use of Information Communication Technologies (ICT) to promote entrepreneurial learning, such as digital storytelling, creation of presentations, timelines and conceptual maps, digital reflection diaries and collaborative tools. Hence, this is the first holistic project, designed and expected to be delivered at national level, and proposing a specific educational and methodological framework for teachers' teaching practice and respective preparation and training.

Concurrently, the present project is expected to contribute towards developing a self-assessment tool to be used by students to enable them to reflect on their entrepreneurial learning experiences. This feature attempts to contribute towards bridging the considerable gap in assessing entrepreneurship education (Pittaway & Edwards, 2012), considering the impact that entrepreneurship education has on learners, institutions and the wider economy and society (European Commission,

2015). According to Komarkova, Gagliardi, Conrads and Collado (2015), a variety of assessment methods may be used in entrepreneurship education, including formative and summative methods, as well as self-assessment. In order to further secure the validity and reliability of the self-assessment tool, the Guidelines issued by the National Foundation for Educational Research concerning the assessment of enterprise capability (Spielhofer & Lynch, 2008), as well as the European Entrepreneurship Competence Framework (Bacigalupo *et al.*, 2016) will also be taken into account. However, teachers will also be assessed before and after their participation in the training course, by completing an adaptation of the Sense of Initiative and Entrepreneurship (SIE) questionnaire (Morselli, 2018; Morselli 2019) in order to reflect on whether the training they have received had an impact on their own learning and way(s) of educating students.

6. The InnoGFEED intervention project

6.1 Goals and objectives

The goals of the InnoGFEED project comprise the development of innovative experiential methods regarding entrepreneurship education, the cultivation of students' entrepreneurial culture through attending comprehensive secondary schools and VET, as well as in-service training of secondary teachers in an innovative and experiential methodology. Concurrently, the project seeks to contribute to the broader dialogue concerning the integration of entrepreneurship in school education and the creation of a comprehensive national strategy to help, in the long run, prevent unemployment and social exclusion of young people (Council of the European Union, 2014) in Greece. Specifically, the goals of the project may be translated into the following concrete objectives:

- creating a thematic library related to various topics of entrepreneurship (women, youth, green, social, etc.) that will include national and international films and documentaries, using as leverage two regional festivals, namely, "Thessaloniki International Film Festival" and "Thessaloniki Documentary Festival"
- creating a thematic library with videogames related to the development of entrepreneurial skills; such videogames expect students to manage crises and make decisions based on data and resources available, simulating real life
- developing two toolkits to assist teachers in practically implementing in their teaching practice the methodology proposed:
 - the first toolkit is to comprise proposed teaching plans based on specific films, documentaries and videogames and include specific learning objectives and activities
 - the second toolkit is to focus on describing the methodology teachers will be able to use with any film or video game to achieve the learning goals set

- training teachers in the methodology and toolkits to be developed, as well as forming a community of practice in order to share and exchange best practices, as well as to enhance knowledge transfer
- pilot-testing teaching plans in general secondary education and VET
- creating the virtual InnoGFEED innovation hub, where all outputs described above are to be uploaded using a single point of entry.

Therefore, InnoGFEED seeks to highlight the importance of engaging secondary students in topics related to entrepreneurship and innovation and to “communicate” relevant content in the light of education. Additionally, the project attempts to construct an innovative methodological framework for teachers’ training, based on the use of audio-visual material (films, documentaries, and videogames), that will be contextualised in teaching plans involving learning objectives, as well as experiential, reflective and assessment activities directly applicable in teachers’ daily practices.

6.2 Methodological and pedagogical principles

The overall methodology of the project includes four parts. The first one refers to the development of educational material and the second to the methodology to be followed during teachers’ training. The third part refers to the methodology of the learning process that will involve the ultimate beneficiaries, students attending general secondary education and/or VET; finally, the fourth part concerns students’ learning assessment.

The selection of learning resources (films, documentaries, and videogames) will form two thematic libraries based on the “Re-C-Re” approach (Sarri, Mouratoglou & Laspita, 2020). The authors formulated the “Re-C-Re” approach including three main criteria for selecting these resources:

- *Relevance*: how/to what extent does the content of the resources relate to: a) entrepreneurship and/or innovation; b) learners’ needs, and c) wider societal needs and challenges?
- *Contextualisation*: how/to what extent are the resources associated with a) existing school curricula and b) other non-formal (extracurricular) learning trends?
- *Reflection*: how/to what extent do the resources permit and promote a) individual and b) collective reflection?

Furthermore, based on Instructional Design key features, the educational and methodological toolkits will be student-centred, goal-oriented, focused on meaningful actions, capable of assessing results in a reliable and valid manner, empirical, repetitive, and constituting a team effort (Branch & Merrill, 2012).

Regarding teachers’ training, the basic principles of adult education (Andragogy) will be deployed. The learning process will be directly related to participants’ daily

lives and needs, taking into account their educational experience(s) (Knowles, 1973; Knowles *et al.*, 2005). In this way, learning will become a process of co-formation, promoting communication, learning motivations and active involvement in the team, in a friendly and collaborative climate. However, the project's research working group also considers the relevant critique of this theory and, in particular, the lack of a critical view that does not take into consideration the broader historical and sociocultural context in which the Subject acts (Brookfield, 1986). For this reason, the educational manual to include the teaching plans, will also attempt to develop and strengthen the dialectical relationship of the project with the broader historical, social, political, and economic conditions of the country, in order to address the need Donellon, Ollila and Williams-Middleton (2014) highlighted, namely, that the context is an important contributor to entrepreneurial identity, providing social cues that influence an individual's sense of belonging and/or differing from their social group. Concurrently, the project is to be linked to school subjects and modules included in educational curricula (both in general education and VET), so that not only will an interdisciplinary approach be highlighted, but also students will be immersed in a unified learning process aligned with their school content, which will be further enriched.

Regarding the community of practice to be developed, the theory of situated learning (Lave, 1988) will provide the guiding principles. The theory of situated learning comprises a socio-cultural theory that perceives learning as an activity taking place in a specific social and cultural context, interacting with the social and natural context (Lave, 1991). A prerequisite condition for characterising a community as a "community of practice" is the existence of a non-formal group of individuals, in this case teachers, who show interest in communicating and collaborating with each other on a specific topic, in a specific field (Wenger, McDermott & Snyder, 2002). Therefore, communities of practice are groups of individuals who share a common concern or passion and interact with each other in order to further improve their achievements (Wenger, 1998).

The learning process to engage school students and VET learners will be based on Kolb's (1984) learning cycle, in which learning begins based on some experience and may lead to a more abstract generalisation level in the form of reflective learning. In terms of this experience, the present project will be based on learners' "indirect experience" using films and documentaries. Jarvis (2006), expanding Kolb's theory, distinguished experiences as direct, that is, those the individual perceives through his or her senses, and indirect, that is, those communicated to individuals in some other way. As far as reflective learning is concerned, it should be noted that such learning does not entail a linear approach. On the contrary, the learning process develops in the context of reviewing and analysing experience(s) that can contribute to:

- *reflection*, reflecting on an experience and leading to a conclusion

- *reflective practice*, a process of having thorough knowledge of a skill and, therefore, a more concrete way of applying it in practice
- *experiential learning*, a process in which theory is applied and tested at the level of social reality (Jarvis, 1987).

Finally, the teachers who will participate in the training are to apply in their teaching practice with their students some of the proposed teaching plans. In order to be able to assess the impact of the proposed intervention with their students, a self-assessment tool will be developed, which is to include quantitative and qualitative items based on the 15 entrepreneurial skills and learning outcomes defined by the European Entrepreneurship Framework (EntreComp Framework) organised in three thematic areas (ideas & opportunities, resources & into action (Bacigalupo *et al.*, 2016).

6.3 Expected impact

The research-working group, taking into account contemporary national and international research evidence and recommendations, aimed to further consolidate and promote project effectiveness. Hence, the expected impact of the InnoGFEED project entails an aggregate of responses to several challenges addressed and has been organised at three levels, namely, the expected impact on teachers, students, and society in general. Specifically:

- for teachers, the project aims to contribute to:
 - their professional empowerment in teaching entrepreneurship, through the methodology to be developed and the corresponding training they will receive (European Commission, 2019b)
 - the renewal and enrichment of their teaching methods (European Commission, 2010), through using audio-visual resources in their teaching practices
 - the connection of schools and VET teachers with higher education institutions (Council of the European Union, 2004)
- for students, the project aims to contribute to:
 - the cultivation and development of entrepreneurial skills from an early age (Volkman *et al.*, 2009; Martínez *et al.*, 2010)
 - the promotion of entrepreneurial values and behaviour patterns, such as risk and initiative taking, creativity, innovation and opportunity recognition (Cedefop, 2011)
 - the cultivation of career management skills (European Lifelong Guidance Policy Network, 2015)
 - their active engagement and reflection in changing stereotypical perceptions and the promotion of equal access to entrepreneurship (Cedefop, 2011)
 - the establishment of an entrepreneurial culture that contributes to the formation of an active and responsible state (European Commission, 2015b)

- for society, the project aims to contribute to:
 - the connection of secondary schools (including VET) with local bodies, enterprises and authorities the aim being to promote cooperation with institutions and to diffuse their experience related to entrepreneurship (Council of the European Union, 2004; European Commission, 2019b)
 - the prevention of youth unemployment and social exclusion in Greece (Council of the European Union, 2014)
 - the cultivation of the ability to start new businesses and create new jobs (International Labour Organisation, 2004)
 - the innovation, in both private and public sectors, through shaping an entrepreneurial culture among students from an early age (Petridou & Sarri, 2011; European Commission, 2019b)

Finally, a crucial aspect of the expected impact, which involves teachers, students and society in general, refers to the conceptual and operational restoration of the content of entrepreneurship within secondary education (Varsakelis *et al.*, 2010; Sarri, Laspita & Patzelt, 2012). In other words, entrepreneurship is usually associated with concepts, such as money, profit, human exploitation, corruption, the dark face of globalisation, and so on, rather than with values, such as creativity, innovation, self-realisation, and social wealth creation.

7. Discussion

While there is extensive research on entrepreneurship education offered by universities, there is scarce research related to entrepreneurship education offered at earlier stages of learning (Rosique-Blasco *et al.*, 2016), such as during secondary education. The need for further research into innovative teaching methods and the training of the trainers becomes more imperative as we move towards a more digitalised era. In this respect, the authors highlight the need for adopting an interdisciplinary approach as early as the designing phase of entrepreneurship education programmes/courses. This collaborative interdisciplinary approach provides several insights concerning which pedagogical theories and methodologies may better fit the purpose and learning objectives set in the learning content, in a pragmatic way. In addition, the approach contributes to generating ideas that combine different elements and were not considered at an individual or a single-discipline level. Therefore, addressing interdisciplinarity at the stage of delivering the content is not enough.

Through the innovative approach proposed, the focus is on experiential learning concerning entrepreneurship using students' "indirect experience" (Jarvis, 2006) and, specifically, films, documentaries, and interactive video games. In general, the use of (various forms) art in education is multifaceted, aiming simply at acquiring knowledge, or at cultivation of skills or even at critical thinking (e.g., Kokkos,

2010). Considering that the added value of experiential learning lies in cultivating teamwork skills, promoting self-regulation and managing emotions, as well as assisting individuals maintain their focus on performance (Finch, Peacock, Lazdowski and Hwang, 2015), the project proposed provides some considerations for enriching current pedagogical implications. However, it should be highlighted that the learning theories and pedagogical principles underpinning such interventions should be in line with learners' needs, objectives, tools, and techniques utilised, as well as the assessment methods. This pedagogical continuum may better support the learning process denoting a holistic meaningful experience both for teachers/trainers/educators and students. Consequently, challenges pertaining to teachers' resistance or assessment may be proactively tackled (Lackéus, 2015).

Similar implications in entrepreneurship education are rare (e.g., Fleck and Rousu, 2014; Kakouris, 2014). Remarkable fiction (films) can be used, in addition to realistic recording (documentary), for students and teachers to discuss more complex issues related to entrepreneurship in a pleasant and more understandable way. Furthermore, the use of video games, a rather popular medium among students, is recognised as a tool for developing entrepreneurial skills in relevant research (Achtenhagen & Johannisson, 2013; Bellotti *et al.*, 2012; Romero, 2013). According to Csikszentmihalyi's "flow theory", real-world learning games seem to be gaining ground in entrepreneurship education (Jones, 2007; Neck & Greene, 2011). Therefore, the present project aims to provide pilot training for teachers and educators using a specific thematic collection of films and video games related to entrepreneurship, as well as a pedagogical methodology, the ultimate goal being to design better and more relevant education programmes/courses for early learning stages.

The present case study provides a practical reflection "approach" for selecting such learning resources in entrepreneurship education, based on (and extending) the principles of learning through entrepreneurship. The "Re-C-Re" approach (Sarri, Mouratoglou & Laspita, 2020) reflects the need of taking a "break" and considering three fundamental factors before deciding which learning resources will be used in a learning process. The first factor refers to resources' *relevance* concerning the learning content (in this case entrepreneurship education), learners' needs, as well as wider societal needs and challenges. The second factor is *contextualisation*, i.e., acknowledging the need that resources need to promote connectivity and interdisciplinarity both with curricular subjects (formal learning) and extracurricular (non-formal) learning trends; finally, the third factor refers to whether learning resources permit and promote individual and collective *reflection*.

Finally, the aim of the InnoGFEED is to provide learning through entrepreneurship and not learning about and for entrepreneurship. Even though the project is yet to be implemented, the authors consider that the impact anticipated is rather promising as it adopts an interdisciplinary approach from its design stage, it gathers and

synthesises research evidence and addresses key policy priorities. At the methodological level, the underpinning foundations of learner's centrality, the experiential learning method and the assessment of entrepreneurial learning denote that the project proposed can be considered a meaningful holistic experience both for the teachers/trainers/educators and the students. At the same time, the endeavour illustrates the complexity of designing an educational project and indicates directions for further research in the areas of instructional design, teachers' professional development and pedagogy in entrepreneurship education.

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