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## Article

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Administrative Sciences

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*Suggested Citation:* Xanthopoulou, Panagiota; Sahinidis, Alexandros; Kavoura, Androniki; Antoniadis, Ioannis (2024) : Shifting mindsets: Changes in entrepreneurial intention among University Students, Administrative Sciences, ISSN 2076-3387, MDPI, Basel, Vol. 14, Iss. 11, pp. 1-25, <https://doi.org/10.3390/admsci14110272>

This Version is available at:

<https://hdl.handle.net/10419/321079>

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## Article

# Shifting Mindsets: Changes in Entrepreneurial Intention Among University Students

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**Abstract:** Despite the growing interest in entrepreneurship education and its impact on entrepreneurial intention, there is limited research on why students' entrepreneurial intentions change over time. It has been observed that university students' intentions to pursue entrepreneurship are higher when they enroll in entrepreneurship courses; however, these intentions usually shift both before and after the completion of the entrepreneurship course. This study investigates the shift in entrepreneurial intention among university students. Utilizing a mixed-method approach, this study combines the qualitative research tools of interviews and diaries to explore the evolution of students' entrepreneurial intentions. The research sample consisted of undergraduate university students of a Greek university who had attended an entrepreneurship and innovation course as part of their first-year curriculum in the academic year 2020–2021. The study utilized 163 structured interviews and complementary diary research on 96 students from the same cohort in the academic year 2023–2024. NVivo12 software (32 bits version) was used to analyze the primary data. The findings highlight notable changes in students' entrepreneurial intentions as a result of a variety of factors, including the allure of the entrepreneurial idea, cohesiveness of the teams, teaching strategies employed, support provided by the university and their families, and certain personality traits. These findings provide valuable insights for educators and policymakers to better support and sustain entrepreneurial intentions among students, while also further expanding the understanding of the strategy development needs of entrepreneurship counseling and education, as very limited research has been conducted on this issue.

**Keywords:** entrepreneurial intention; entrepreneurship education; longitudinal study; university students; diary research; qualitative research



**Citation:** Xanthopoulou, Panagiota, Alexandros Sahinidis, Androniki Kavoura, and Ioannis Antoniadis. 2024. Shifting Mindsets: Changes in Entrepreneurial Intention Among University Students. *Administrative Sciences* 14: 272. <https://doi.org/10.3390/admsci14110272>

Received: 24 August 2024

Revised: 30 September 2024

Accepted: 18 October 2024

Published: 22 October 2024



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## 1. Introduction

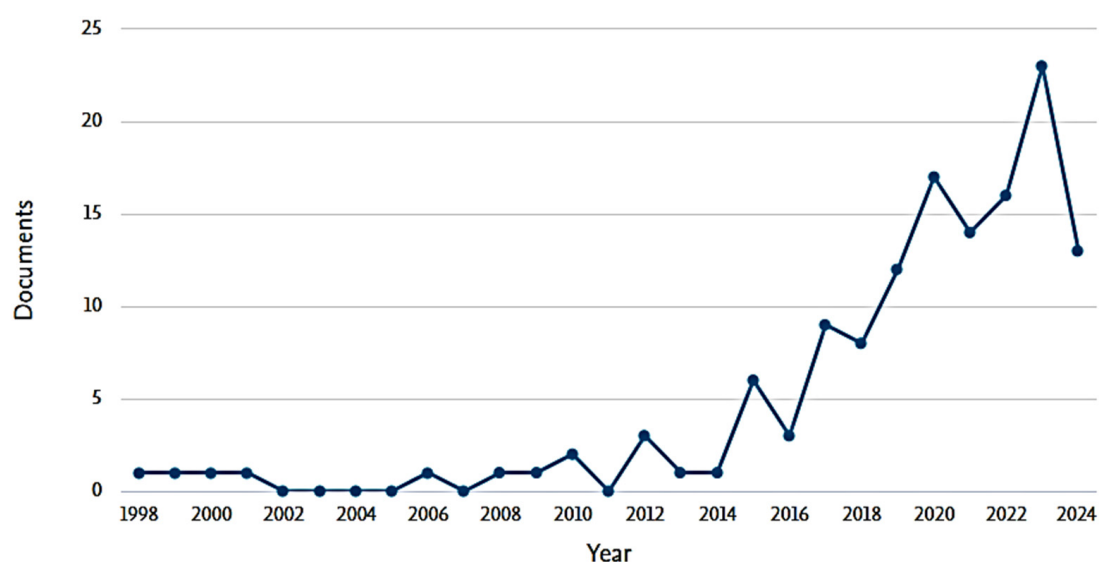
Many researchers agree that entrepreneurship is an important economic factor that promotes social and economic welfare (Xanthopoulou and Sahinidis 2024; Sagar et al. 2023; Rahmanti and Subandi 2024; Neumann 2021). The essential idea in the majority of the definitions of this concept of entrepreneurship is the recognition of opportunities (Ratten 2023). According to Nambisan (2017), more recent definitions of entrepreneurship emphasize the process component, which is a helpful method for comprehending how innovation and creativity in commercial endeavors change over time. Shane and Venkataraman (2000) provide one of the most well-known definitions of entrepreneurship, describing it as the process of identifying, assessing, and capitalizing on opportunities to generate future goods and services, emphasizing the central role of opportunity recognition in defining entrepreneurship. Today, the term has expanded beyond the classical concept of creating a new, innovative business, and includes all types of enterprises and organizations (Turgunpulatovich 2022). Thus, entrepreneurship can occur in both new and old enterprises,

private, non-profit, and even public sector enterprises, in all geographical locations, at all stages of a country's development (Aparicio et al. 2020). This underlines the need to examine factors that may inhibit or promote the success of any entrepreneurial effort.

Research finds that the success or failure of entrepreneurial activity depends primarily on the elements of an individual's personality; the skills and the abilities the individual develops; their perseverance, optimism, and willingness to make a personal commitment and take risks; and the quality of their information and of their knowledge of the subject matter (Aparicio et al. 2020). Therefore, considerable efforts have been made to identify the factors that lead an individual to effectively establish and operate a business (Ramoglou et al. 2020).

It has been noted that, although many people establish entrepreneurial aspirations, these aspirations are rarely followed through with, despite the significance and extensive study of entrepreneurial intention and its drivers. The "entrepreneurial intention-action gap" is a phenomenon that results from the way people's intentions, for a variety of reasons, change. Researchers often use popular theories of intentions to predict entrepreneurial behaviors; however, their intentions are insufficient to predict future entrepreneurial activities, as noted by Shirokova et al. (2016) and Sahinidis et al. (2019). Consequently, after completing an entrepreneurial education program, it is necessary to ascertain the causes of these changes in students' EI. Despite their significance, students' aspirations and growth as entrepreneurs have not received much attention. According to recent research, exploratory studies are necessary to determine why some university students, especially those enrolled in entrepreneurship courses, which are typically conducted during the first and some in the final semesters, do not act on their intentions to become entrepreneurs (Xanthopoulou and Sahinidis 2024; Otache et al. 2021; Maheshwari et al. 2023; Xanthopoulou and Sahinidis 2022). Despite their importance, students' entrepreneurial intentions and the reasons or factors that cause shifts over time have received little attention (Xanthopoulou et al. 2023). Indicatively, Figure 1 shows that only 135 documents published from 1998 to 2024 discuss the factors that cause changes in people's intention to become entrepreneurs, while there has been a notable increase in research interest in this issue over the last six years.

Documents by year



**Figure 1.** Research on the changing determinants of entrepreneurial intentions (Source: Scopus database). Source: Authors' own research.

This study examines how students' ambitions to start their own businesses change in the final years of their education and after finishing an entrepreneurship course. The research question is as follows:

RQ1. What alterations have been noticed in the students' ambitions to start their own businesses over time?

By identifying the elements that impact students' desire to launch an entrepreneurial venture, this study adds to the growing body of the literature on students' entrepreneurial mentality and intention. Furthermore, by emphasizing the difficulties that arise at various points during students' academic careers, the results will enhance the research on the intention–behavior gap among students. The combination of diaries and interviews as qualitative research tools improves the comprehension of the topic as a whole (Creswell 2013; Bolger et al. 2003; Jacelon and Imperio 2005). The deeper understanding of the changes in entrepreneurial intentions and their influencing factors (such as cultural, gender, educational, and external factors), can significantly help policymakers, educators, and future entrepreneurs to create and promote strategies that successfully encourage entrepreneurship. The promotion and economic growth of nations greatly depend on entrepreneurship, and it is the younger generation that has to be equipped with the necessary information to become competent entrepreneurs. Academic entrepreneurship, which shapes future generations and may support innovation and technology transfer, may include the essence of entrepreneurship (Makarona and Kavoura 2019). The expansion of the local economy may benefit from this. Examining the importance of academic entrepreneurship, this study offers a summary of present developments and a prediction for the future.

The remainder of this paper is organized as follows. In the next section, the authors present an extended literature review of entrepreneurial intention and its determinants among university students. Next, the third section explains the two methodologies used to conduct the primary research. The fourth section analyses the results and, based on these, the final two sections discuss the results and draw conclusions based on them. The authors also discuss the limitations of the present study and suggest directions for future research in this field.

## 2. Literature Review

### 2.1. Meaning and Determinants of Entrepreneurial Intention

Thompson (2009) defined entrepreneurial intention (EI) as an individual's self-acknowledged commitment to start a new enterprise. EI is also defined as the process of looking for and analyzing data that may be used to accomplish the goal of starting a new enterprise (Neneh 2014). Additionally, according to Anwar et al. (2022), the term "entrepreneurial intention" (EI) describes a person's inclination to engage in entrepreneurial activities such as founding a new company or working for oneself. Entrepreneurial intention plays a significant role in understanding and predicting entrepreneurial actions because it explains why certain people decide to start a business. One of the subfields of entrepreneurship study that is developing the fastest is entrepreneurial intention (Liñán and Fayolle 2015). The interest that entrepreneurial intention (EI) has received in the global academic community is reflected in the exponential growth of literature on the subject (Soria-Barreto et al. 2017).

Numerous factors, including attitudes, values, and psychological factors, have been mentioned in the literature as motivators for entrepreneurship (Do and Dadvari 2017; Mahfud et al. 2020; Wiklund et al. 2019). Demographic factors such as gender, education, and family background have also been mentioned (Gielnik et al. 2018; Kefis and Xanthopoulou 2015). A notable number of researchers refer to education as one of the most crucial elements that may encourage (or discourage) entrepreneurial intention. According to Mahfud et al. (2020), personality features frequently serve as triggers that alter how entrepreneurs perceive risk in their choice. It is generally acknowledged that certain personality traits—such as "autonomy," "need for achievement," "internal locus of control," "risk-taking tolerance," "self-confidence," and "innovativeness"—are indicators of an individual's propensity to

become an entrepreneur (Do and Dadvari 2017; Ozaralli and Rivenburgh 2016; Barba-Sánchez et al. 2022; Barba-Sánchez and Atienza-Sahuquillo 2017). Risk-taking scores were considerably higher for people with strong entrepreneurial ambitions than for those with low levels. The urge to accomplish this is another important aspect that influences people's inclination to work. Individuals with a strong drive for success behave more entrepreneurially (Verheul et al. 2012). It is clear that certain people desire to live independently of others, and this mindset motivates them to gather resources. According to Maslow's (1943) theory of needs, people do not move from a low-level to a higher-level need unless their low-level needs are satisfied. From this perspective, the greatest happiness that entrepreneurs can achieve while working toward their goals is self-actualization or self-fulfillment (Dong et al. 2019). Individuals with the need for independence exhibit a higher inclination toward entrepreneurship (Omar et al. 2019). Furthermore, an individual's entrepreneurial intention is strongly influenced by age, gender, family entrepreneurial experience, and educational attainment (Xanthopoulou and Sahinidis 2022; Sahinidis et al. 2019). While many researchers have questioned the influence of gender and age on launching a business, others, like Gielnik et al. (2018), have found that successful entrepreneurs tend to be relatively young because older people are discouraged from choosing jobs that involve uncertainty. Women are more risk averse than males, particularly in terms of financial risk (Liñán and Fayolle 2015). The social milieu in which students exist, including their peers and close friends, is another factor influencing entrepreneurial intention (EI). Research indicates that students with friends who have worked for themselves directly contemplate launching their own business (Saptono et al. 2021). Finally, Botezat et al. (2022) have mentioned that, during the COVID-19 pandemic, students' EI during entrepreneurial education (EE) programs rose. There is a gender difference in the beginning level of emotional intelligence and its antecedents, and people with higher starting scores changed less than those with lower initial scores. Notably, enhancing entrepreneurial activity depends on education and training. According to Debarliev et al. (2022) and Sherkat and Chenari (2022), entrepreneurship education is generally positively correlated with entrepreneurial intention and is regarded as one of the most talked-about factors influencing entrepreneurial intention, as well as the most direct moderator that alters people's intentions to work for themselves. Overall, along with cognitive characteristics, education level has also been linked to the intention to launch a new business (Edwards and Muir 2012; Jaén and Liñán 2015). Kavoura and Andersson (2016) contend that young people in particular need to be equipped with the necessary information and abilities to make entrepreneurship a desirable career option; thus, understanding their views on entrepreneurship, as well as their requirements and preferences for entrepreneurial education, is crucial (Zhang et al. 2015).

## 2.2. Shifts in Entrepreneurial Intentions

Entrepreneurial intentions (EI) are important for predicting entrepreneurial activities and creating new businesses. Both internal and external factors influence people's decisions to pursue self-employment. Many studies examine what affects EI, but there is little research on why individuals change their intention to be self-employed (Xanthopoulou and Sahinidis 2022). This change, called the "entrepreneurial intention-action gap," occurs when personal intentions shift due to various reasons. Botezat et al. (2022) did a study over time to see how EI evolves and found that students with high initial EI scores tended to change less than those with low scores. They also noted gender differences. Similarly, Haddad et al. (2022) explored cultural factors affecting EI, such as change tolerance (CT) and group focus (GF), showing that CT affects EI through planned behavior (TPB) factors for all genders. GF affects men's emotional intelligence (EI) and mediates EI indirectly through TPB factors. Individuals open to new opportunities generally show higher EI because they are ready to face uncertainty (Haddad et al. 2022; Liñán and Chen 2009). Cultures that value social support can significantly influence entrepreneurial intentions (Xanthopoulou and Sahinidis 2024). Social support can provide the resources and networks needed by potential entrepreneurs, aiding their resilience and enhancing EI (Solomon



and Schell 2009; Asenkerschbaumer et al. 2024). Studies have consistently indicated that individuals who receive social support from friends, family, and communities have higher EI (Davidsson and Honig 2003; Sotiropoulou et al. 2022; Wang et al. 2020). Social support promotes resilience, encouraging individuals to pursue entrepreneurial goals (Kanwal et al. 2019; Farooq 2018; Nasurdin et al. 2018). Luc (2020) has observed that helpful conditions such as family or government support can transform outcome expectations into motivation. Conversely, Bogatyreva and Shirokova (2017) have found that family business support and university help correlate positively with fewer transitions from EI to startup activities. A lack of social support can increase EI but prevent action (Santos et al. 2016; de Sousa-Filho et al. 2020). Cultural factors, including bureaucracy and high taxes, may negatively impact EI, causing individuals to choose traditional employment over entrepreneurship (Henrekson and Stenkula 2010; Xanthopoulou and Sahinidis 2022). Societies that accept innovation nurture stronger self-efficacy and EI (Ajzen 1991; Liñán and Chen 2009). Cultural norms dictate subjective pressures toward entrepreneurship, with some cultures promoting entrepreneurial activities and others encouraging stable employment (Lortie and Castogiovanni 2015). In cultures that support creativity and risk taking, entrepreneurial intentions tend to be stronger (Haddad et al. 2022; Botezat et al. 2022; Hanage et al. 2024). Individual attitudes and subjective norms are crucial in these contexts, as are perceived behavioral control, which affects confidence in success (Botezat et al. 2022).

Gender significantly impacts EI. Rusu et al. (2022) have found that female students' entrepreneurial intentions are shaped by bank loans and savings, while male students usually depend on financial help from friends and family. Gender differences in entrepreneurial intentions are related to societal expectations, risk tolerance, and self-belief (Haddad et al. 2022). Although women may face more obstacles, their entrepreneurial intentions can match or exceed those of men with strong self-belief. Societal views linking entrepreneurship with men can discourage women from pursuing entrepreneurship (Santos et al. 2016), thus impacting their confidence and self-efficacy (Haddad et al. 2022).

Education is important for addressing the gender gap in entrepreneurial intention (EI). Adetola et al. (2018) found that entrepreneurship education boosts women's self-confidence, which helps overcome barriers and increases their entrepreneurial goals. Education also aids in understanding the difficulties of entrepreneurship and in improving problem-solving skills (Ferreira et al. 2017). Programs that provide real-world experiences can further motivate entrepreneurial ambitions (Adetola et al. 2018; van Ewijk et al. 2023). Kavoura and Andersson (2016) noted that universities play a vital role in supporting entrepreneurial efforts. Le et al. (2023) discovered that entrepreneurship training enhances students' confidence in their business abilities and their EI. As education builds self-assurance, students are likely to see entrepreneurship as a feasible career path (Adetola et al. 2018). Mamun et al. (2017) indicated that education helps create entrepreneurial networks, which are essential for new business success. Botezat et al. (2022) revealed that engagement in entrepreneurship education programs led to increased EI during the pandemic, despite economic challenges. However, the "intention-action gap" remains large.

Roos and Botha (2022) have highlighted the importance of self-identity, family support, and institutional support in closing this gap. Krueger et al. (2024) have pointed out that factors like self-efficacy, previous experience, and access to funds are vital for minimizing this gap. External conditions, such as the economy, also affect EI; good market situations encourage entrepreneurial efforts, while economic trouble decreases EI (Ferreira et al. 2017; Santos et al. 2016; Botezat et al. 2022; Lungu 2022). Access to resources, including money and technology, is critical for EI. Individuals with more resources can pursue entrepreneurship more easily and reduce entry barriers (Ruiz-Rosa et al. 2020). Supportive government policies can promote EI through grants and tax breaks, whereas strict regulations can hinder EI (Dvouletý et al. 2018; Santos et al. 2016).

The COVID-19 pandemic has created hurdles and opportunities for EI innovation (Botezat et al. 2022). In conclusion, EI is shaped by personal drivers, cultural influences,

social backing, education, and other factors. Long-term studies, such as those by [Botezat et al. \(2022\)](#), show how these elements evolve over time, influencing entrepreneurial goals. To enhance entrepreneurship, it is necessary to tackle these complexities through education, policies, and support systems that motivate individuals to transform their entrepreneurial intentions into real actions. Taking the above findings into account, it can be understood that a key aspect is the consistency of entrepreneurship goals over time. Longitudinal studies have attempted to examine the temporal variations in entrepreneurial ambitions and their influencing factors. They found both individual and cross-sectional differences. The findings also reveal that individuals with higher initial entrepreneurial goals exhibited less change over time compared with those with lower initial scores. Additionally, gender disparities were observed in the initial level of entrepreneurial goals and their influencing factors. Educational and environmental variables exhibit a complex interaction that influences entrepreneurial intention changes. Ultimately, individual motivation, perceived opportunities, social and contextual factors, and resource availability, collectively shape the path from entrepreneurial intention to action.

### 3. Research Methods

This study builds upon previous research that was presented at an international conference, where it received the best paper award, and is titled *“How stable are students’ intentions to be self-employed? A Qualitative Study of Students’ Entrepreneurial Intention Change”*. The initial research served as a pilot test, employing a smaller sample size (140 participants) and focusing on the changes in entrepreneurial intentions among university students who had recently completed an entrepreneurship course. The pilot study utilized structured interviews with 140 students who had completed the entrepreneurship and innovation course two years prior. It aimed to explore how students’ entrepreneurial intentions evolved over time, influenced by various factors such as the attractiveness of entrepreneurial ideas, team dynamics, pedagogical approaches, university support, and individual personality traits. This qualitative analysis was supported by NVivo12 coding software, which facilitated the in-depth examination of the collected data.

The current research extends this pilot study by not only increasing the sample size from 140 to 163 but also by integrating a longitudinal perspective and the supplementary use of diary research, which was implemented during the fourth and final year of students’ undergraduate studies. In this extended study, the authors conducted 163 structured interviews and supplemented them with diary research involving 96 students from the same cohort. This approach allows for a more comprehensive analysis of the persistence and evolution of entrepreneurial intentions over a longer period of time and after completing the entrepreneurship course. Similar to the pilot study, the authors employed NVivo12 software to analyze the data. The findings will provide a deeper understanding of the factors that significantly influence shifts in students’ entrepreneurial intentions. In doing so, this study seeks to offer valuable insights for policymakers and educational institutions seeking to foster and maintain an entrepreneurial drive among students. This continuation and expansion of the pilot study not only reaffirms the initial findings but also enriches the academic conversation on entrepreneurial intention among university students. It achieves this by addressing the dynamics observed over an extended period and across a larger sample. More specifically, the timeline of the research is structured as follows:

1. *Academic year 2020–2021*: First year of studies, in which students attended their first entrepreneurship course during the fall semester.
2. *Academic year 2021–2022*: Second year of studies, where students did not attend any entrepreneurship or innovation course.
3. *Academic year 2022–2023*: Third year of study, where the first pilot qualitative research was conducted to evaluate any changes in students’ entrepreneurial intention (from the first two academic years mentioned above) and investigate the reasons for these shifts.

4. *Academic year 2023–2024*: Fourth year of studies, where the present research was implemented through a mixed approach of qualitative research and diary research on the same students to evaluate any changes caused in their entrepreneurial intention and investigate the reasons for these shifts. During this year, students attended a similar entrepreneurship course, titled “Management of small and medium-sized enterprises and family businesses,” and which included common content such as the creation of a business plan and the creation and implementation of an innovative business idea. The diary research began during the concluding year period (2023–2024), running concurrently with a broader phase of qualitative interviews aimed to evaluate the progression of students’ entrepreneurial intentions from the commencement of their studies until the end thereof.

### 3.1. Qualitative Research

A qualitative study was conducted to examine how students’ intentions to start their own businesses changed during their studies and after their attendance in entrepreneurship related courses. Quantitative approaches focus on the researcher’s theory, whereas qualitative methods concentrate on participants’ meanings (Bryman 2017). Therefore, the current study used the latter method. The objectives of this study are to investigate how university students who have taken entrepreneurship courses have changed their desire to become entrepreneurs and ascertain the causes of this transformation. The “structured interview” was used as a research tool. Because the pre-planned questions guaranteed impartiality, validity, and dependability, this particular interview format was chosen (Corrington 2022). Structured interviews, as Kvale (1995) has stated, enhance validity by giving all respondents the same questions in the same order and following a fixed list of questions. This consistency increases reliability because there is less variation in the interview process. In addition, structured interviews provide a clearer method for data collection, making it easier to repeat the results of future studies (Bryman 2017, which further boosts the validity and reliability of the data collected. Google Forms was used to send the interview questions over an internet link. Written responses were required, which was an excellent approach to becoming acquainted with the information. It has been demonstrated that obtaining well-written responses is a quick and effective way to collect rich, descriptive data. Because qualitative research entails several transcriptions of verbal interviews in written texts and the abstraction of significant themes from these texts, written replies offer data that are simpler to comprehend and evaluate (Letherby and Zdrodowski 1995). The primary data were analyzed using QSR NVivo12 software. NVivo addresses the three main facets of the study process—data analysis, theoretical formulation, and finding presentations—and is frequently utilized by researchers (Li and Zhang 2022). The original sample included 163 participants. The final sample used in the thematic analysis consisted of 96 students due to specific criteria (e.g., some students answered one-word answers or skipped questions and did not provide enough answers to perform the subsequent coding). Regarding the demographics of the sample, 53.7% of the students were males and 46.3% were females, with an overall age range of 18–54 years. This sample was segmented to create a  $1 \times 3$  matrix based on student attendance in entrepreneurship courses and on the increase/decrease/steady entrepreneurial goals (see Tables 1 and 2).

**Table 1.** Scenarios and change in entrepreneurial intentions (entrepreneurship course).

	Entrepreneurship Course
Increased intention	Scenario 1 → 42 students
Decreased intention	Scenario 2 → 7 students
No change in intention	Scenario 3 → 13 students

Source: Authors’ own contribution.



**Table 2.** Scenarios and change in entrepreneurial intentions (Attractive Entrepreneurial Idea).

	Attractive Entrepreneurial Idea
Increased intention	Scenario 1 → 28 students
Decreased intention	Scenario 3 → 8 students
No change in intention	Scenario 5 → 11 students

Source: Authors' own contribution.

Another segmentation of the sample led to a  $2 \times 3$  matrix according to the initial entrepreneurial idea and the increase/decrease/steady entrepreneurial intentions.

As it is appropriate for a comprehensive knowledge of the antecedents of entrepreneurial intentions (EIs) among graduates and the ways in which EIs vary over time, the current study employed an explanatory research design (Creswell 2013). This kind of research provides answers to “what” and “why” questions, usually in situations when the body of information on the subject is still somewhat little. The current study complies with the moral and ethical standards of science. Each participant received information regarding the study topic, goal, and rationale. In addition to the knowledge they should choose, they might receive a copy of the findings when the study is completed. They were also informed that they could withdraw at any moment, that their answers to the questionnaires and interviews would be used only for research purposes, and that they would remain completely anonymous during the entire process.

### 3.2. Diary Research

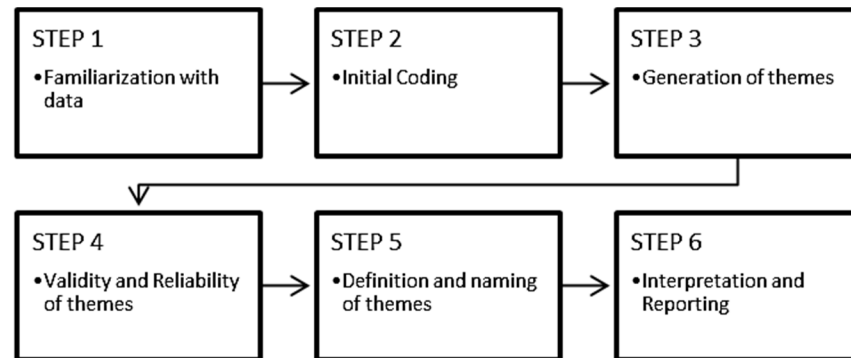
The current study, which was conducted in the academic years 2023–2024, focused on fourth-year undergraduate students who had taken an “Entrepreneurship and Innovation” course during the academic year 2020–2021 as part of their first-year curriculum at the Department of Business Administration of a Greek public university. The same students attended a similar course during the final year of the studies titled “Management of small and medium-sized enterprises and family businesses.” This cohort was selected because, as Nabi et al. (2018) have pointed out, there is a dearth of studies on the development of Entrepreneurial Intention (EI) at this critical schooling stage. This decision was supported by the theory that students’ entrepreneurial goals and mental development are significantly influenced by the entrepreneurship education they receive and the activities they participate in. Through the lens of social constructivism, this study acknowledges emotional intelligence (EI) as a subjective, constantly changing socio-cognitive construct. Leitch and Harrison (2016) argue that EI is intrinsically unstable over time. This viewpoint guided the study’s qualitative methodological strategy, which included the use of reflective diaries to gather various viewpoints on students’ aspirations to pursue entrepreneurship. At the conclusion of the semester, participants were asked the same questions using Google Forms, which enabled data collection. Again, the QSR NVivo12 software was used to examine the primary data as was the Microsoft Excel program. Pupils were assured that their lack of engagement would not result in any negative consequences for their academic performance, and were instructed that participation was entirely voluntary.

There were 96 people that took part in the study. The “What So What Now What” critical reflection paradigm was included into these journals to provide an organized method of self-evaluation and contemplation of their business experience. This model facilitated the exploration of their experiences during the course (‘What’); their feelings, thoughts, and implications after attending each week of the course (‘So What’); and their potential entrepreneurial actions in response to these reflections (‘Now What’), with a primary focus on the development of their intention to be self-employed. This reflection exercise was designed to provide students with a deeper understanding of how their identity formation and business goals relate to academic and personal growth. As a type of support, the research team provided participants with the needed guidance.

## 4. Results

### 4.1. Interview Results

Thematic analysis was based on the six stages suggested by [Braun and Clarke \(2006\)](#) (Figure 2).



**Figure 2.** Thematic analysis stages ([Braun and Clarke 2006](#)).

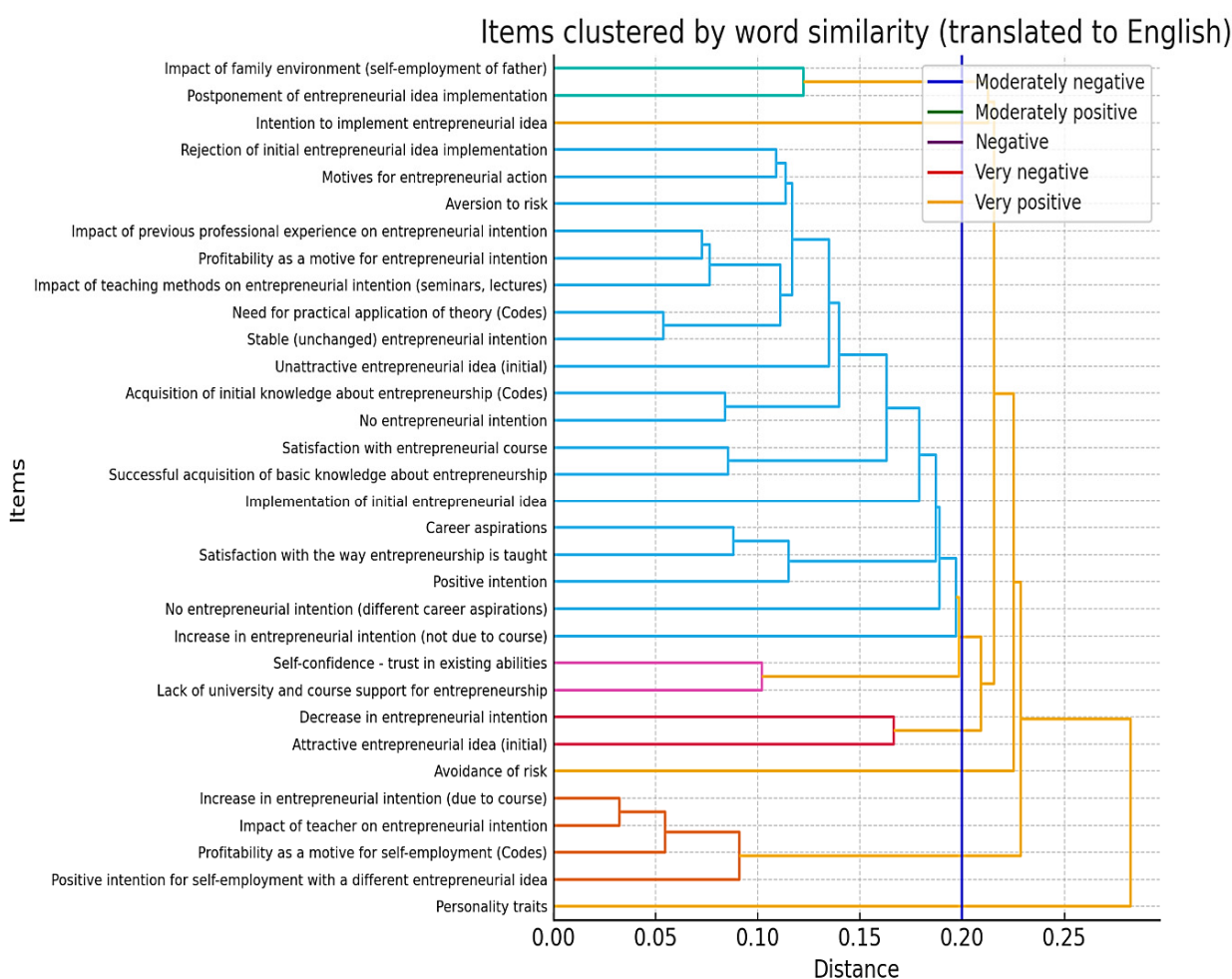
The familiarization with the data happened in the first phase. After that, when the replies were reviewed, patterns emerged, as did first ideas for categorizing them into themes. The data coding using the QSR NVivo12 software constituted the second phase. Next, the researchers categorized the data after making a preliminary selection of significant units that were related to one another. The initial theme units that resulted from the QSR NVivo12 coding are depicted in Figure 3. More coding references are shown in a bigger region. The codes are listed in decreasing sequence, as follows: Personality attributes (180 references), the necessity of putting theory into practice (100 references), an appealing business idea (62 references), a favorable intention to work for oneself (47 references), a greater desire to start a business (as a result of taking the entrepreneurship course) (53 references), and a plan to carry out the original business concept (43 references). The codes assigned to the interview data were compiled into themes and sub-themes in the third step. To do this, several codes were combined, and potential patterns in the data were looked for.

Coding References in Decreasing Sequence (Areas Representation)
Plan to carry out the original business concept (43)
Greater desire to start a business (53)
Favorable intention to work for oneself (47)
Appealing business idea (62)
Necessity of putting theory into practice (100)
Personality attributes (180)

**Figure 3.** Coding references in decreasing sequence using QSR NVivo12 software. Source: Authors' own contribution.

The primary themes were established by some of the original codes, while the sub-themes were formed by others. The primary themes were established by some of the

original codes, while the subthemes were formed by others. A cluster analysis of codes based on verbal relevance is displayed in Figure 4 below. The dendrogram groups items into seven color categories based on their influence on entrepreneurial intention. The Moderately Negative (blue) cluster includes external factors that hinder entrepreneurship, such as “Postponement of entrepreneurial idea implementation” and “Aversion to risk.” These are moderate barriers to taking action. The Moderately Positive (light blue) category, featuring items like “Successful acquisition of basic knowledge” and “Satisfaction with entrepreneurial course,” reflects how education and practical knowledge encourage entrepreneurship to some degree. The Negative (pink) cluster, with items like “No entrepreneurial intention” and “Unattractive entrepreneurial idea,” points to significant deterrents, often due to lack of interest or unappealing ideas. In contrast, the Very Negative (red) group, which includes “Avoidance of risk” and “Decrease in entrepreneurial intention,” shows strong deterrents rooted in personal fears or declining motivation. On the positive side, the Very Positive (orange) cluster highlights factors like “Increase in entrepreneurial intention (due to course)” and “Impact of teacher on entrepreneurial intention,” showing how educational support can strongly encourage entrepreneurship. The Neutral/Mixed (yellow/light orange) category, including “Profitability as a motive” and “Personality traits,” can either positively or negatively influence depending on the context. Finally, the Strongly Positive (purple) category, with examples like “Self-confidence” and “Positive intention for self-employment with a different idea,” represents internal factors that are highly motivating for entrepreneurship. These clusters illustrate the varying impacts of personal, educational, and external influences on entrepreneurial behavior.



**Figure 4.** Items clustered by word similarity (QSR NVivo12 software). Source: Authors' own contribution.

High-order themes are displayed in the node cluster diagram. These themes also distinctly highlight patterns that are present in the proposals. It can be observed that an “innovative and attractive entrepreneurial idea” and “individuals’ intention to implement it in the future”—that is, to work for themselves—have a high association within the cycle. In line with this, people’s inclination to become entrepreneurs is significantly correlated with an unappealing entrepreneurial concept. Additionally, there is a substantial relationship between the “decrease or increase of entrepreneurial intention” and “students’ perception of the support that they receive from their university.” Relationships between certain theme areas surfaced when the interviews were coded. For instance, during their first exposure to entrepreneurship education, students showed a more increased entrepreneurial intention; however, during the next few years, when they were not involved in a course similar to entrepreneurship and no entrepreneurship-related activities were organized by their university, the initial entrepreneurial intention decreased. It was observed that groups that had an interesting and realistic business idea from the start (1st year of studies), rather than just an idea that was used to get through the course, had a greater impact on increasing and maintaining their entrepreneurial intentions during the last three years (Figure A1). This implies that the seriousness and the substantiation with which the teams engaged in the business idea bore a direct affiliation with their proficiency in preserving entrepreneurial aspirations. Conversely, groups adopting a process-centric methodology experienced a decline in their original entrepreneurial intentions. Another observation is that engagement in entrepreneurship courses appears to possess a notable influence on the development of entrepreneurial intention (Figure A2). This implies that involvement and instruction in such programs might strengthen the requisite confidence, knowledge, and skills needed to undertake entrepreneurial activities. In the same way, the next graph confirms that the use of appropriate teaching methods in an entrepreneurship course (such as practical examples, exercises, case studies, external lecturers/existed entrepreneurs, the use of videos and role plays etc.) have a strong positive impact on the development of students’ entrepreneurial intentions. As mentioned in the literature review, support from students’ families also plays a significant role in their entrepreneurial intention. For instance, there were many students, who, during the first few years, were enthusiastic about opening their own businesses. Their families did not report the same enthusiasm, highlighting the difficulties they would face. This trait from students’ families caused a negative reduction in entrepreneurial intentions. In addition, when the initial groups of students stopped associating or cooperating, the initial entrepreneurial intention was also affected, as they no longer shared the same entrepreneurial vision. Students commonly answered that the support they receive from their families (both psychological and practical) helps them to retain their initial intention to launch their own ventures (Figure A3). Finally, students confidence in the skills they obtained as a result of their personal characteristics as well as the previously mentioned support they receive both from their family/social environment and the university they attend, can also increase or diminish their entrepreneurial intentions over time (Figure A4). Students who were insecure regarding their skills and competences answered that they preferred to postpone the implementation of their entrepreneurial idea (left column). These answers correlate with the students who do not trust themselves and who show low confidence.

Next, the themes were re-examined in the fourth stage to make sure there are no overlaps and to determine if they should be combined or kept apart. There was no need to add any additional codes. The themes were renamed and redefined in the sixth stage. The content and dimensions of each topic and sub-theme were identified once the data were thematically mapped, and it was made sure there was no overlap. At this point, the titles of the topics in the final analysis were selected to be comprehensive and provide the reader a basic idea of what each theme comprises. The smaller topic categories were then split into three linked theme axes based on the study objectives (Table 3).

Table 3. Thematic axes.

Thematic Axis	Categories
<b>First thematic axis: Entrepreneurship education.</b>	1.1. Appropriate educational methods 1.2. Personal characteristics of the teacher and students 1.3. Feeling of support from the University 1.4. Practical application of theory 1.5. Attractive entrepreneurial idea
<b>Second thematic axis: Personal characteristics of students</b>	2.1. Risk aversion 2.2. Need for professional autonomy 2.3. Need for profitability 2.4. Self confidence 2.5. Lack of confidence and needed knowledge
<b>Third thematic axis: Family and friends (social environment)</b>	3.1. Father's occupation 3.2. Existence of self-employed persons in the social environment of students

Source: Authors' own contribution.

Finding words that would first help organize the topic groups and then help condense the interview information was the original aim. The units of analysis were also the independent materials that were examined, or the interviews with the students. This led to the development of the aforementioned system of thematic divisions and subcategories, which addresses the goals, questions, and purpose of the study. The responses of the students show that, on the whole, they have become more entrepreneurially inclined. The majority of the students' responses indicated that they were happy with the entrepreneurship course, which in turn had a large impact on their increased intention to start their own business. Others offered feedback on the instructor and the techniques employed in the course, including the utilization of case studies, videos, and invitations to guest speakers from the business world. Groups with relatively close members were able to come to an easy consensus on a final business plan that appealed to everyone. In this instance, the majority of respondents indicated that they planned to carry out and put their original entrepreneurial idea into action, maybe with only minor adjustments in response to outside environment changes. Here are some examples of the responses (R):

R101 stated the following: "I am interested in being entrepreneur, as well as various seminars related to entrepreneurship and marketing had a great impact on me. . . . I am influenced by the various case studies which are the reality and not hypotheses or theories. My entrepreneurial intention has changed dramatically since I have been taking the course of entrepreneurship and innovation. . ." Additionally, R103 stated the following: ". . . my opinion about the University and especially the tutors I met is the best, they do their work with a lot of love, the right atmosphere and most of them have students who are interested in their field and create very meaningful student-mentor relationships. I still believe this course will help me to start a business in the future. My entrepreneurial intention increased after attending the entrepreneurship course while at the same time it gave me a plan to improve my weaknesses." In cases where some of the group members did not find the initial business idea attractive, they either stated that their entrepreneurial intention decreased, or that they maybe think to become entrepreneurs with a different idea. Specifically, R14 stated the following: "No, I do not want to be an entrepreneur, especially with this entrepreneurial idea, because it was a group idea, and I couldn't support it. . . . I am not interested in this idea because it was referring to a map app or library (I don't remember exactly) and I don't think the world doesn't need something like that." In addition, many responses revealed a lack of self-confidence in one's abilities to become an entrepreneur. These individuals showed decreased entrepreneurial intentions. For instance, R4 stated the following: "My entrepreneurial intention has decreased to the present due to lack of work experience and self-confidence to do this, due to the risk that exists and the need for development. I also think that I do not have the needed skills yet. I believe that I should cultivate more of my



personal skills.” Meanwhile, S46 stated the following: “. . . My entrepreneurial intention has decreased as there is insecurity regarding the unpredictable external environment. . . I believe I have enough theoretical knowledge, however, I do not know to what extent it is completely implementable in reality.”

Conversely, self-assured individuals—some of whom feel prepared to take on the entrepreneurial risk as their fathers also works for themselves—feel ready to take on the risk. These students had a greater inclination for entrepreneurship as they saw self-employment as a very creative and lucrative activity. They also frequently mentioned their extroversion, leadership, and organizational abilities. Among the responses is that of R66, as follows: “Personally, being an entrepreneur means realizing your own ideas and expectations and organizing your plans as you prefer. . . In general, I am a person who likes to take on goals and see them through and implement my own ideas, but due to my inexperience there is a fear of failure and this is something that worries me. Failure, on the other hand, is of course a source of knowledge. . .” Similarly, R83, as follows: “During the course I understood the concept of entrepreneurship and what an entrepreneur means. Being an entrepreneur means total freedom and autonomy to create the work and life I want. With this freedom, comes a great responsibility for something that really means a lot to me and is worth it. . . If you want to be your own boss, then you have to be willing to work sometimes late at night or even on weekends. You will definitely have your ups and downs with many emotions. Some are addicted to this “game”. . . I believe all the positive characteristics of my personality will develop and I will really show myself first what I can really achieve! . . .”

#### 4.2. Diary Results

To present the findings, the authors structured the following table, Table 4, which showcases the evolution of students’ entrepreneurial intention (EI) over a 13-week course period which was implemented during the final year of students’ studies. It should be mentioned here that the same students had also attended a similar course on entrepreneurship and innovation three years ago. This approach combines statistical analysis with indicative responses to highlight both the quantitative and qualitative dimensions of the study. Given the answers provided in students’ diaries, the findings are presented below. The final percentages have been calculated by dividing the number of students whose EI increased or decreased by the total number of diary entries analyzed for each week, then multiplying by 100 to obtain a percentage.

**Table 4.** Evolution of entrepreneurial intention over 13 weeks.

Week	Percentage of Students with Increased EI	Percentage of Students with Decreased EI	Notable Student Responses	Average EI Score
Week 1	20%	5%	“I feel more empowered to set up my own business venture with the knowledge I have gained through my degree.”	4.0
Week 2	25%	3%	“The case studies, like that of McDonald’s, have significantly influenced my perception of persistence and adaptability in entrepreneurship.”	4.0
Week 3	30%	10%	“Understanding the dark side of entrepreneurship made me rethink if I’m cut out for this journey.”	4.5
Week 4	35%	8%	“This week’s reflection made me realize the importance of timing in launching a business.”	4.0
Week 5	45%	7%	“Ideas are buzzing; feeling incredibly inspired to innovate.”	4.5
Week 6	40%	15%	“Financial planning week was overwhelming but crucial.”	3.5

Table 4. Cont.

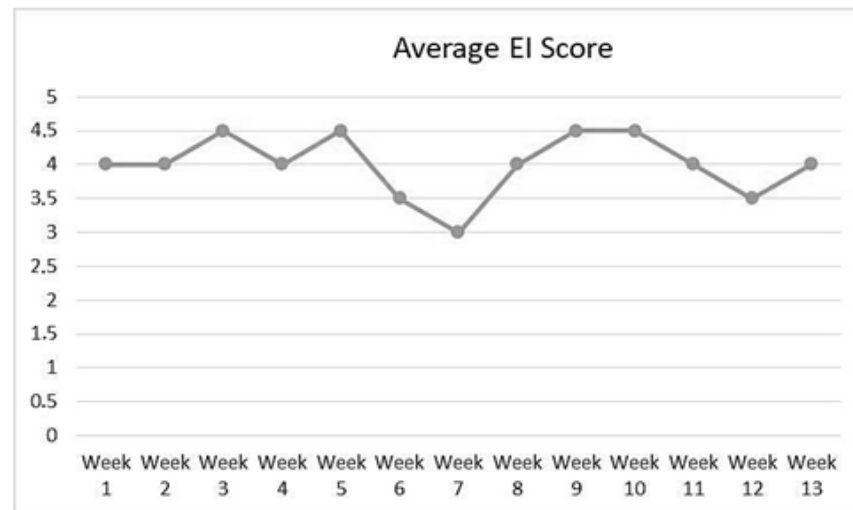
Week	Percentage of Students with Increased EI	Percentage of Students with Decreased EI	Notable Student Responses	Average EI Score
Week 7	35%	20%	"Legalities in business feel daunting but necessary to understand."	3.0
Week 8	60%	4%	"Marketing strategies week reignited my passion."	4.0
Week 9	65%	3%	"Pitching my idea built my confidence substantially."	4.5
Week 10	70%	2%	"Networking and mentorship have opened new doors for me."	4.5
Week 11	75%	1%	"Weighing the risks and rewards more meticulously now."	4.0
Week 12	80%	0.5%	"Stressed but more determined than ever for my final project."	3.5
Week 13	85%	0.25%	"Reflecting on my entrepreneurial journey has solidified my intention to pursue entrepreneurship."	4.0

Source: Authors' own contribution.

Table 4 provides a statistical perspective of the students' changing engagement with the idea of entrepreneurship by tracking the percentage of students whose intention to start their own business either rose or decreased each week. These percentages show how students responded to particular learning objectives or topics that were addressed each week. Furthermore, the table contains student quotes verbatim, which act as qualitative data by which to give the figures context and depth. These answers are crucial because they express the students' individual experiences and show how they are responding both emotionally and mentally to the readings. Overall, the EI of students was increased during the course, except during weeks 6 and 7. For week 6, the percentage of students with increased EI reduces from 50% to 40%, and the percentage with decreased EI raises from 6% to 15%. Similarly, for week 7, the percentage of students with increased EI is further reduced from 55% to 35%, and the percentage with decreased EI increases from 5% to 20%. This can be attributed to the content of these two weeks, as week 6 discussed "financial planning" and week 7 discussed legal issues, in which business management students were not very familiar yet.

Based on the qualitative data, a developed metric, called the "Average EI Score," will show how the course's effect may cause students' entrepreneurial intentions to change over time. Based on the replies, an overall score is calculated, and a higher score indicates a stronger desire to pursue entrepreneurship. On a scale of 1 to 5, "5" represents the strongest intention and "1" the lowest. In order to calculate the average EI score from the student responses, the first step was to assign a numerical value to each student's expression of their entrepreneurial intention using a Likert scale in which 1 represents the lowest level of entrepreneurial intention and 5 represents the highest. This process was repeated for each week. Then, the authors divided the total score by the number of students to obtain the average EI score for that week. The elements that constitute this score system include the students' self-assessed readiness, enthusiasm, commitment, and any other signs that they exhibit an entrepreneurial attitude. Figure 5, below, summarizes how the students' entrepreneurial intentions evolved through the course, highlighting the fluctuating confidence and realization of the complexities involved in entrepreneurship and displaying the average score of students' entrepreneurial intention (EI) throughout a 13-week period. The average EI score for a particular week is shown by each point on the line; scores are likely to range from 1 to 5. It is evident that the EI ratings across the weeks start at about 4, which suggests a rather high level of entrepreneurial ambition at the outset. EI scores fluctuate as the weeks go by, with a decline occurring between weeks

6 and 7, which is then followed by a recovery. The scores exhibit a small declining trend toward the conclusion before stabilizing.



**Figure 5.** Average EI score. Source: Authors' own contribution.

## 5. Discussion

It is well acknowledged that social welfare and economic progress are facilitated by entrepreneurship; thus, determining an individual's inclination to initiate new businesses requires an understanding of the elements that impact their entrepreneurial ambitions. Using structured interviews and additional diary research, this study used a qualitative technique to determine the factors influencing students' ambitions to start their own businesses. This research was conducted during the final semester following the completion of an entrepreneurship course to evaluate and compare students' entrepreneurial intentions across the final three years of their studies.

The results of the interviews show that the students' entrepreneurial intentions were significantly impacted by background factors, such as the impact of entrepreneurship education and teaching methods, and by personality traits, such as self-confidence, risk-taking, need for achievement, and autonomy. These findings confirm the positive relationships between these factors and the formation of entrepreneurial intention (Do and Dadvari 2017; Ozaralli and Rivenburgh 2016; Barba-Sánchez et al. 2022; Barba-Sánchez and Atienza-Sahuquillo 2017; Xanthopoulou and Sahinidis 2024). The appeal of the first entrepreneurial ideas that the students presented during their first year of study was another important factor. Students who were well coordinated, had a similar goal, and thought their ideas were novel were more likely to want to see them through to completion—some had already begun working on the ideas. These results support earlier research (like Do and Dadvari 2017; Ozaralli and Rivenburgh 2016; Barba-Sánchez et al. 2022; Barba-Sánchez and Atienza-Sahuquillo 2017) by emphasizing the influence of individual traits (risk tolerance, openness to experience) as well as entrepreneurial education on the desire to start a business. The study also emphasizes how the appeal of entrepreneurial concepts may influence students' goals, confirming the study of Xanthopoulou and Sahinidis (2022). It also supports other studies that have found that education plays a critical role in encouraging entrepreneurial goals (Inoubli and Gharbi 2024; Xanthopoulou and Sahinidis 2022; Almeida and Garrod 2024; Ferreira et al. 2017; Adetola et al. 2018; van Ewijk et al. 2023; Le et al. 2023; Mamun et al. 2017; Botezat et al. 2022; Roos and Botha 2022).

This study presents the entrepreneurial idea as a factor that affects students' propensity to work for themselves. It appears that students with an entrepreneurial idea that is appealing and novel during their academic career are more likely to follow through on their plans after graduation, especially when this idea is an outcome of a group effort, and among individuals who support each other and build strong teams. This finding indirectly aligns

with the conclusions of a variety of researchers (Xanthopoulou and Sahinidis 2024; Solomon and Schell 2009; Asenkerschbaumer et al. 2024; Wang et al. 2020; Sotiropoulou et al. 2022; Davidsson and Honig 2003; Kanwal et al. 2019; Farooq 2018; Bogatyreva and Shirokova 2017; Santos et al. 2016; de Sousa-Filho et al. 2020) who have underlined the importance of teams and social support in the development of students' entrepreneurial intention.

The overall findings of this study underscore the pivotal role of entrepreneurship education in shaping and sustaining students' entrepreneurial intentions. It was also mentioned that dynamic teaching strategies encourage and retain students' creativity and passion. This finding aligns with Kavoura and Andersson's (2016) application of the Delphi method, which emphasizes the strategic importance of educational frameworks in fostering entrepreneurial activity. The integration of innovative teaching methods, practical exercises, and university support systems is crucial in maintaining and enhancing students' entrepreneurial drive. This highlights the necessity for educational institutions to develop comprehensive entrepreneurship programs that not only impart knowledge but also actively engage students in real-world entrepreneurial experiences, thereby bridging the intention–action gap and promoting long-term entrepreneurial success. Working together with entrepreneurs to explore real-world requirements and generate creative yet realistic concepts may also be advantageous. Universities should create a community of entrepreneurs who are like-minded and supportive of one another. To foster a supportive atmosphere for aspiring entrepreneurs, colleges should have strong relationships with institutions that promote entrepreneurship, such as incubators. Students with strong entrepreneurial intent may be directed by entrepreneurship educators to pertinent university courses that will help them fulfill their goals. It is important, according to participants, to discuss team cohesiveness and its effect on students' aspirations to pursue entrepreneurship. Many studies have found that students who have attended entrepreneurship courses enriched by reflective and interactive exercises and practices are more likely to have higher levels of entrepreneurial intention (Kavoura and Andersson 2016; Sahinidis et al. 2019; Botezat et al. 2022; Debarliev et al. 2022; Sherkat and Chenari 2022; Inoubli and Gharbi 2024; Xanthopoulou et al. 2023; Almeida and Garrod 2024; Le et al. 2023; Adetola et al. 2018; van Ewijk et al. 2023; Roos and Botha 2022).

The core findings of the diary research are that students gradually improved their intention and mentality toward entrepreneurship, especially when they started participating in entrepreneurship activities and more practical exercises. Their EI increased primarily because of their proactive participation in activities such as studying the profiles of entrepreneurs and collaboratively creating a business canvas for their individual entrepreneurial ideas. This highlights the importance of these tasks in fostering entrepreneurial intention, confirming literature findings (Xanthopoulou and Sahinidis 2022; Mamun et al. 2017; Botezat et al. 2022; Ferreira et al. 2017). Students occasionally showed a decline in their desire to work for themselves; this trend can be explained by their theoretical experience with the “dark side” of entrepreneurship and their concerns about taking on more risk. Multiple results were drawn from the empirical analysis of the fluctuations in students' entrepreneurial intention (EI) during the course of the 13-week program. Overall, a growing percentage of the students expressed a greater desire to start their own firms. This encouraging pattern supports the body of research on the positive impact of entrepreneurship education on students' desire to start their businesses. Weekly analysis has identified certain times during the course in which there are more noticeable changes in the intention to pursue entrepreneurship. For instance, ideation and innovation material are consistent with the noteworthy increase in entrepreneurial ambition following week 5. On the other hand, weeks 6 and 7 saw a decline in entrepreneurial intention, which is consistent with the curriculum's emphasis on the financial and legal aspects of the company. Insights from the responses covered the emotional and cognitive spectrum, from excitement to periods of uncertainty to the final confirmation of the choice to pursue entrepreneurship. Documenting learners' experiences with the course material and activities was made easier by the entries they made in their diaries. The study's conclusion is that entrepreneurship education, especially when it includes experiential and reflective elements, is crucial in

influencing students' desire to pursue entrepreneurship (Xanthopoulou and Sahinidis 2022; Mamun et al. 2017; Botezat et al. 2022; Ferreira et al. 2017).

## 6. Conclusions

This study confirms that entrepreneurship education plays a crucial role in shaping and enhancing students' entrepreneurial intentions, especially when paired with experiential and reflective components. Students' entrepreneurial intentions were not only influenced by the educational content but also by their personal traits, the appeal of their entrepreneurial ideas, and the social support they received. The findings align with literature emphasizing the importance of dynamic teaching methods, practical exercises, and supportive university environments.

Despite its contributions, this research does have limitations; most notably, it was limited to a specific group of Greek undergraduate students. This acknowledgment creates avenues for further investigation to confirm the results in many educational and cultural contexts, thus augmenting our understanding of how entrepreneurial goals manifest in various scenarios. The first application of this study to students from a single Greek institution and the distinctions between scientific subjects related to business and non-business are its limitations. In terms of techniques, further studies with larger sample sizes should be conducted. Another methodological issue is that the second part of the interviews was conducted over three years after the entrepreneurship course ended; thus, the results depended on the respondents' memories of the past. Conducting a large number of interviews on a regular basis—for example, by using video diaries throughout and after the entrepreneurship course—may eventually provide more meaningful insights into students' intentions to pursue entrepreneurship. Regularly conducting interviews using techniques such as video diaries, both throughout and after the entrepreneurship course, may offer a more in-depth understanding of how students' aspirations for business change over time. The primary source of data used in this study was self-reported information, which has various biases and limitations. Social desirability bias might cause participants to answer in a way that they believe is more positive or acceptable, which can have an impact on their self-reported metrics. Furthermore, problems with memory recall may have caused participants to provide inaccurate answers.

To increase the relevance of these findings, future research could build on this work by investigating comparable approaches in various cultural and educational contexts. Initiating synergies among educators, diverse actors, stakeholders, and local community groups is vital to economic growth. Universities must adapt to the social changes that occur in order to support the rise of technology-driven businesses that have an impact on regional, national, and global economic expansion. Diverse cultural and educational backgrounds can provide distinctive perspectives on the elements that influence entrepreneurial intentions, enhance the field of entrepreneurship education, and provide a comprehensive understanding of the elements that propel entrepreneurial ambitions. Future studies should consider using mixed-method techniques to validate self-reported data and guarantee accuracy in order to reduce these restrictions. The findings will be broadly applicable if the demographic scope of the participants is expanded to encompass a wider range of backgrounds. Additionally, by separating the particular impacts of the entrepreneurship course from other variables using a control group in the research design, the impact of the course can be examined more thoroughly. Finally, future research could explore the actual entrepreneurial activities initiated by post-graduate students. This would help to understand the intention–action gap more comprehensively. Overall, future research could build on the present findings and advance a more comprehensive understanding of the variables influencing entrepreneurial inclinations across various situations and demographics by addressing these limitations.

**Author Contributions:** Conceptualization, P.X. and A.S.; methodology, P.X.; software, P.X.; validation, P.X. and A.S.; formal analysis, P.X. and A.S.; investigation, P.X.; resources, P.X. and A.S.; data curation, P.X.; writing—original draft preparation, P.X. and A.S.; writing—review and editing, A.S., A.K. and I.A.; visualization, P.X.; supervision, A.S.; project administration, P.X. and I.A. All authors have read and agreed to the published version of the manuscript.



**Funding:** The research has been funded for open access publication by the International Conference on Strategic Innovative Marketing and Tourism (ICSIMAT), University of West Attica, Greece.

**Institutional Review Board Statement:** This research was conducted as part of a postdoctoral study and was approved in accordance with the regulations of the Department of Business Administration at the University of West Attica. Ethical oversight was provided by the department's internal convention, which adheres to the principles of the Declaration of Helsinki. The specific approval details are maintained by the department, as the study did not require formal approval by an external Institutional Review Board.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The data presented in this study are available on request from the corresponding author.

**Conflicts of Interest:** The authors declare no conflicts of interest.

## Appendix A

In the provided images, the numbers shown next to each line represent the codes assigned to individual participants in the study.

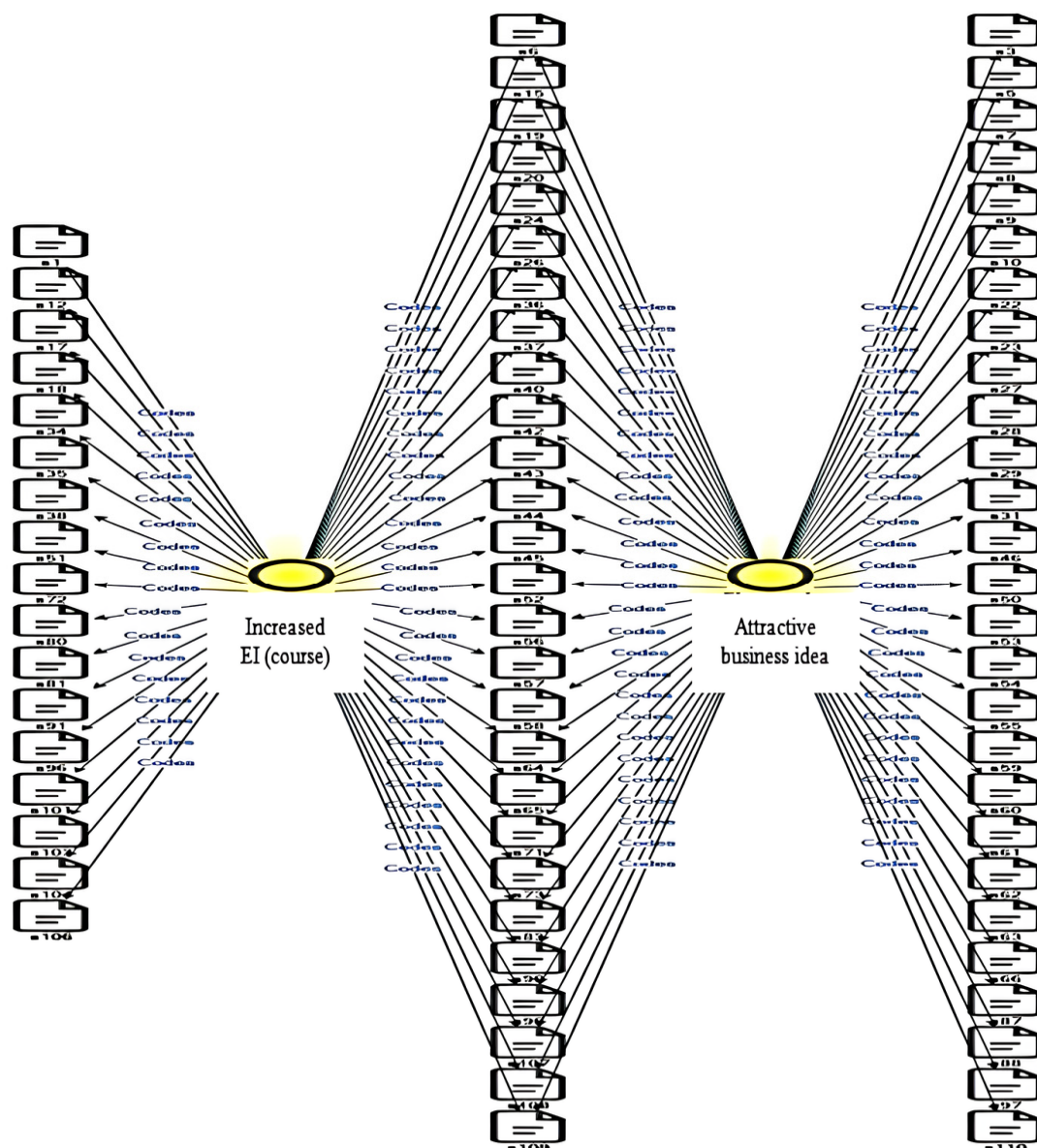


Figure A1. Attractive business idea and entrepreneurial intention.

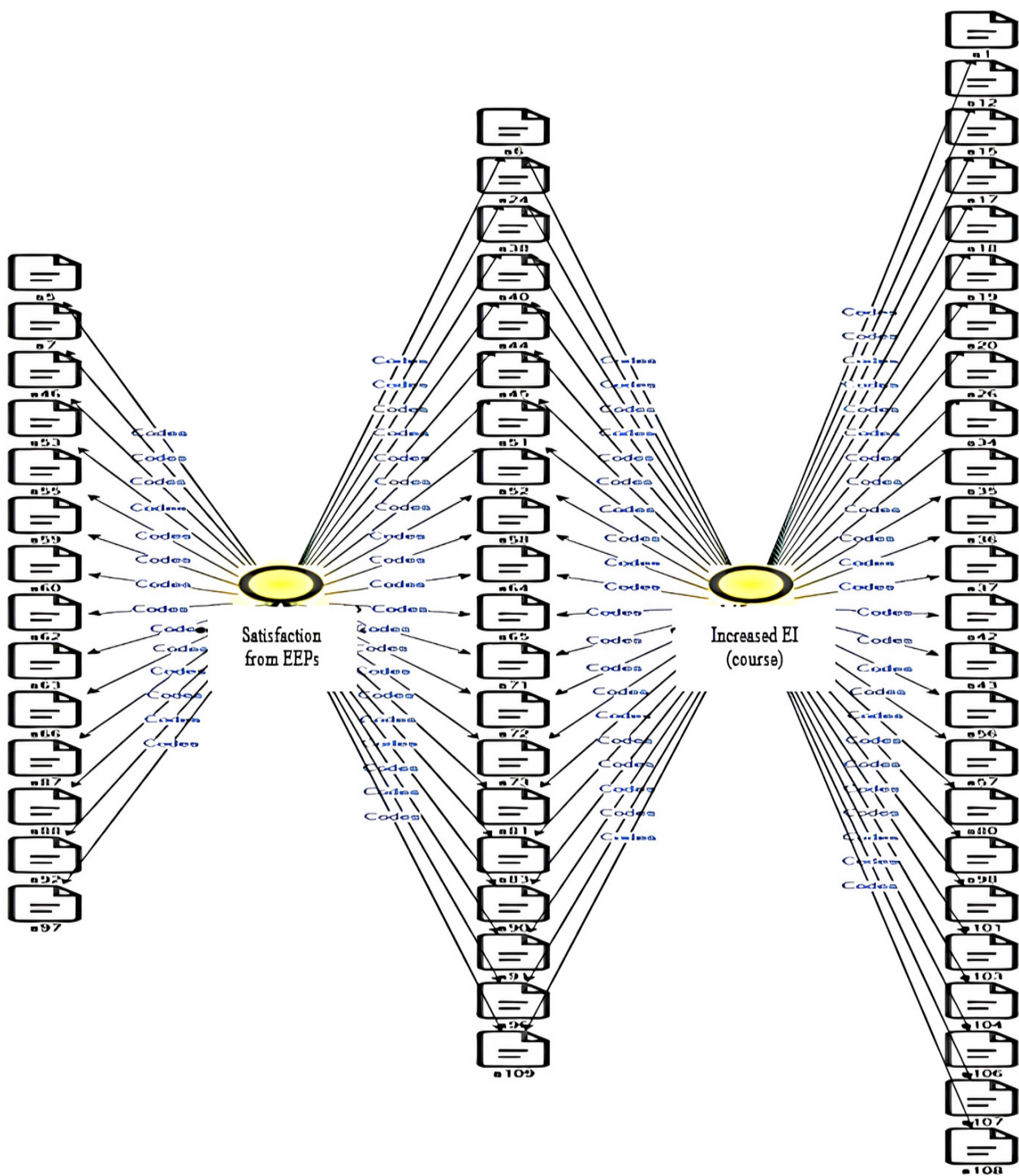


Figure A2. Cont.

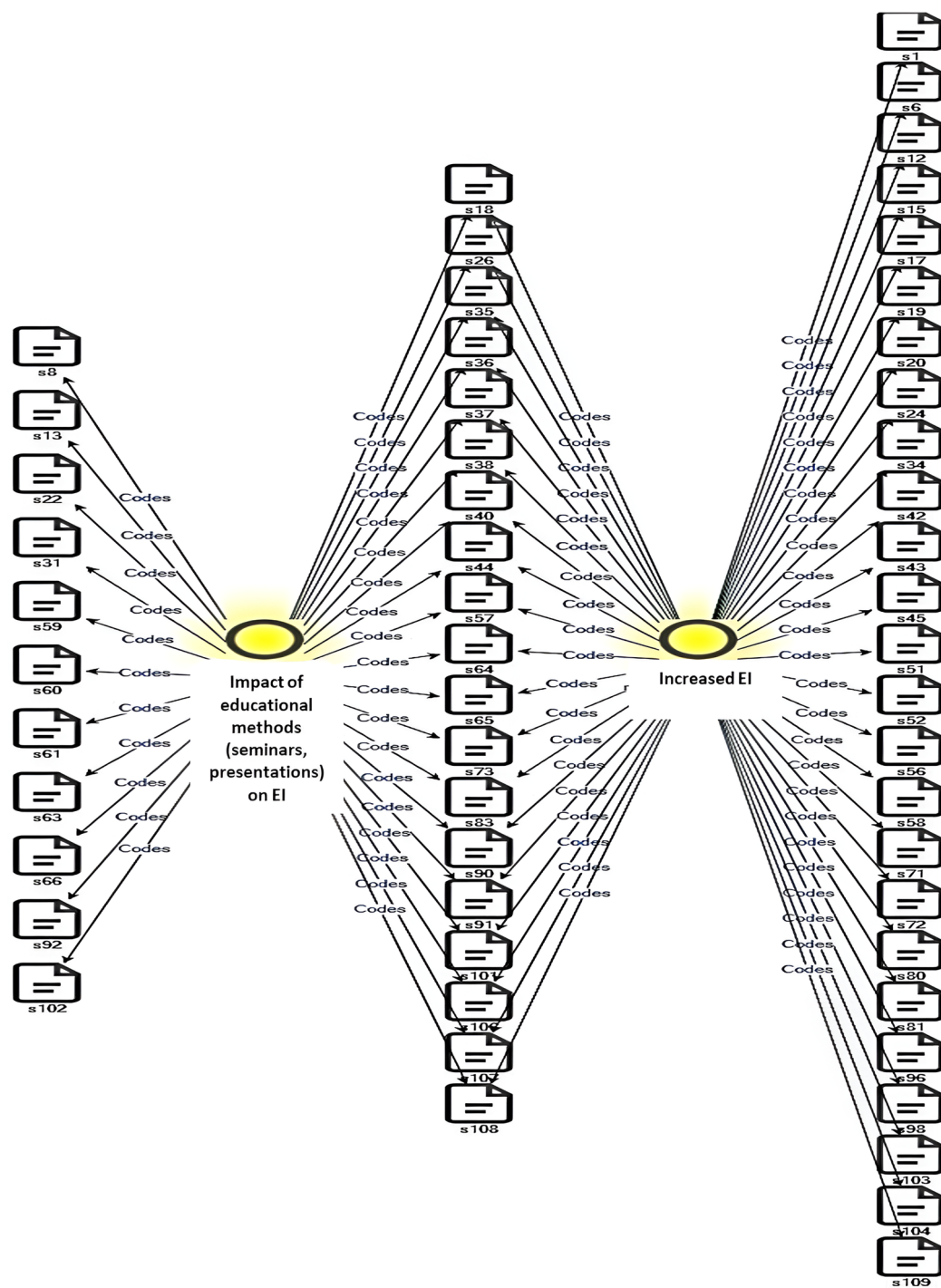


Figure A2. Entrepreneurship education programs (EEPs) and entrepreneurial intention.

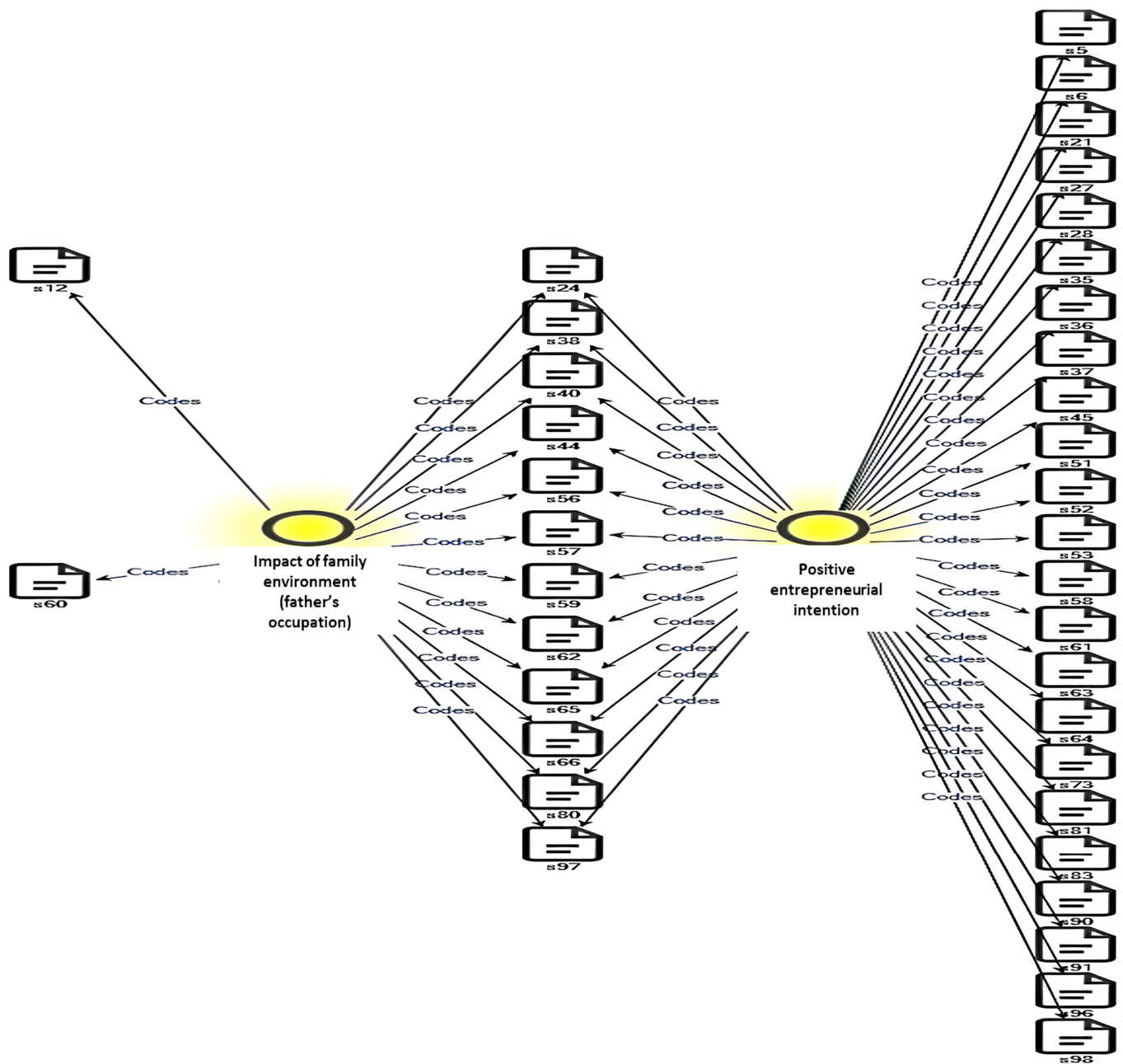


Figure A3. Support from family environment and entrepreneurial intention.



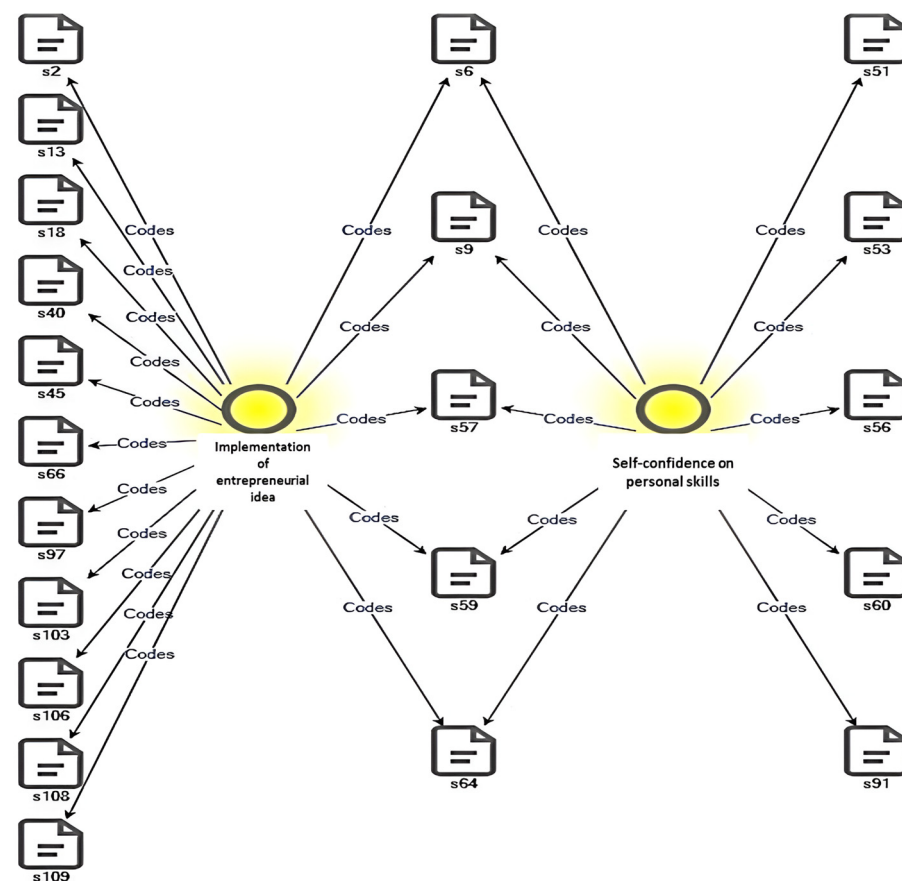


Figure A4. Self-confidence on skills and entrepreneurial intention.

## References

- Adetola, Veronica, Fu Lin, Shui Yuan, and Haydeen Reeve. 2018. Building Flexibility Estimation and Control for Grid Ancillary Services. Paper presented at the International High Performance Buildings Conference, West Lafayette, IN, USA, July 9–12.
- Ajzen, Icek. 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes* 50: 179–211. [\[CrossRef\]](#)
- Almeida, António, and Brian Garrod. 2024. Drivers and inhibitors of entrepreneurship in Europe's Outermost Regions: Implications for entrepreneurship education. *The International Journal of Management Education* 22: 1–13. [\[CrossRef\]](#)
- Anwar, Imran, Wafa Rashid Alalyani, Prabha Thoudam, Rizwan Khan, and Imran Saleem. 2022. The role of entrepreneurship education and inclination on the nexus of entrepreneurial motivation, individual entrepreneurial orientation and entrepreneurial intention: Testing the model using moderated-mediation approach. *Journal of Education for Business* 97: 531–41. [\[CrossRef\]](#)
- Aparicio, Sebastian, Andreu Turro, and Maria Noguera. 2020. Entrepreneurship and intrapreneurship in social, sustainable, and economic development: Opportunities and challenges for future research. *Sustainability* 12: 8958. [\[CrossRef\]](#)
- Asenkerschbaumer, Michael, Andrea Greven, and Malte Brettel. 2024. The role of entrepreneurial imaginativeness for implementation intentions in new venture creation. *International Entrepreneurship and Management Journal* 20: 55–88. [\[CrossRef\]](#)
- Barba-Sánchez, Virginia, and Carlos Atienza-Sahuquillo. 2017. Entrepreneurial motivation and self-employment: Evidence from expectancy theory. *International Entrepreneurship and Management Journal* 13: 1097–115. [\[CrossRef\]](#)
- Barba-Sánchez, Virginia, Maria Mitre-Aranda, and Jesús del Brío-González. 2022. The entrepreneurial intention of university students: An environmental perspective. *European Research on Management and Business Economics* 28: 100184. [\[CrossRef\]](#)
- Bogatyreva, Karina, and Galina Shirokova. 2017. From entrepreneurial aspirations to founding a business: The case of Russian students. *Форсайт* 11: 25–36. [\[CrossRef\]](#)
- Bolger, Niall, Angelina Davis, and Eshkol Rafaeli. 2003. Diary methods: Capturing life as it is lived. *Annual Review of Psychology* 54: 579–616. [\[CrossRef\]](#)
- Botezat, Elena, Alexandru Constăncioară, Anca Otilia Dodescu, and Ioana Crina Pop Cohut. 2022. How stable are students' entrepreneurial intentions in the COVID-19 pandemic context? *Sustainability* 14: 5690. [\[CrossRef\]](#)
- Braun, Virginia, and Victoria Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3: 77–101. [\[CrossRef\]](#)
- Bryman, Alan. 2017. Quantitative and qualitative research: Further reflections on their integration. In *Mixing Methods: Qualitative and Quantitative Research*. London: Routledge, pp. 57–78.
- Corrington, Abby. 2022. Structured interviews. In *Structured Interviews*. London: Routledge.



- Creswell, John. 2013. Steps in conducting a scholarly mixed methods study. DBER Speaker Series. United States. Available online: <https://pedeavalguide.safestates.org/wp-content/uploads/2020/07/Steps-in-Conducting-a-Scholarly-Mixed-Methods-Study.pdf> (accessed on 23 August 2024).
- Davidsson, Per, and Benson Honig. 2003. The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing* 18: 301–31. [\[CrossRef\]](#)
- Debarliev, Stojan, Aleksandra Janeska-Iliev, Osvaldas Stripeikis, and Blaz Zupan. 2022. What can education bring to entrepreneurship? Formal versus non-formal education. *Journal of Small Business Management* 60: 219–52. [\[CrossRef\]](#)
- de Sousa-Filho, José Milton, Stelvia Matos, Samara da Silva Trajano, and Bruno de Souza Lessa. 2020. Determinants of social entrepreneurial intentions in a developing country context. *Journal of Business Venturing Insights* 14: e00207. [\[CrossRef\]](#)
- Do, Ben-Roy, and Alaleh Dadvari. 2017. The influence of the dark triad on the relationship between entrepreneurial attitude orientation and entrepreneurial intention: A study among students in Taiwan University. *Asia Pacific Management Review* 22: 185–91. [\[CrossRef\]](#)
- Dong, Xuefan, Chengxiang Tang, Ying Lian, and Daisheng Tang. 2019. What entrepreneurial followers at the start-Up stage need From entrepreneurship cultivation: Evidence From Western China. *Frontiers in Psychology* 10: 1309. [\[CrossRef\]](#)
- Dvouletý, Ondrej, Monika Mühlböck, Julia Rita Warmuth, and Bernhard Kittel. 2018. ‘Scarred’ young entrepreneurs. Exploring young adults’ transition from former unemployment to self-employment. *Journal of Youth Studies* 21: 1159–81. [\[CrossRef\]](#)
- Edwards, Louise-Jayne, and Elizabeth Muir. 2012. Evaluating enterprise education: Why do it? *Education+ Training* 54: 278–90. [\[CrossRef\]](#)
- Farooq, Muhammad Shoaib. 2018. Modelling the significance of social support and entrepreneurial skills for determining entrepreneurial behaviour of individuals: A structural equation modelling approach. *World Journal of Entrepreneurship, Management and Sustainable Development* 14: 242–66. [\[CrossRef\]](#)
- Ferreira, João, Cristina Fernandes, and Vanessa Ratten. 2017. The influence of entrepreneurship education on entrepreneurial intentions. *Entrepreneurial Universities: Exploring the Academic and Innovative Dimensions of Entrepreneurship in Higher Education* 1: 19–34.
- Gielnik, Michael, Hannes Zacher, and Mo Wang. 2018. Age in the entrepreneurial process: The role of future time perspective and prior entrepreneurial experience. *Journal of Applied Psychology* 103: 1067. [\[CrossRef\]](#) [\[PubMed\]](#)
- Haddad, Gloria, Ghada Haddad, and Gautam Nagpal. 2022. Change tolerance, group focus and students’ entrepreneurial intentions: Does gender matter? *European Journal of Management and Business Economics* 31: 192–209. [\[CrossRef\]](#)
- Hanage, Richard, Mark Alexander Phillip Davies, Pekka Stenholm, and Jonathan Matthew Scott. 2024. Extending the theory of planned behavior—A longitudinal study of entrepreneurial intentions. *Entrepreneurship Research Journal* 14: 1223–58. [\[CrossRef\]](#)
- Henrekson, Magnus, and Mikael Stenkula. 2010. *Entrepreneurship and Public Policy*. New York: Springer.
- Inoubli, Chiheb Eddine, and Lamia Gharbi. 2024. Investigating how social context moderates the relationship between intentions and behaviors in student entrepreneurship: Case of Tunisian students. *The International Journal of Management Education* 22: 100918. [\[CrossRef\]](#)
- Jacelon, Cynthia, and Kristal Imperio. 2005. Participant diaries as a source of data in research with older adults. *Qualitative Health Research* 15: 991–97. [\[CrossRef\]](#)
- Jaén, Inmaculada, and Francisco Liñán. 2015. Cultural values in the study of a society’s entrepreneurial potential. In *Developing, Shaping and Growing Entrepreneurship*. Cheltenham: Edward Elgar Publishing, pp. 154–78.
- Kanwal, Shamsa, Abdul Hameed Pitafi, Adan Pitafi, Muhammad Athar Nadeem, Amna Younis, and Ren Chong. 2019. China–Pakistan Economic Corridor (CPEC) development projects and entrepreneurial potential of locals. *Journal of Public Affairs* 19: e1954. [\[CrossRef\]](#)
- Kavoura, Androniki, and Tuula Andersson. 2016. Applying Delphi method for strategic design of social entrepreneurship. *Library Review* 65: 185–205. [\[CrossRef\]](#)
- Kefis, Vassilis, and Panagiota Xanthopoulou. 2015. Teaching entrepreneurship through E-learning: The implementation in schools of social sciences and humanities in Greece. *International Journal of Sciences* 4: 17–23. [\[CrossRef\]](#)
- Krueger, Norris, Sönke Mestwerdt, and Jill Kickul. 2024. Entrepreneurial thinking: Rational vs intuitive. *Journal of Intellectual Capital, ahead-of-print*.
- Kvale, Steinar. 1995. The social construction of validity. *Qualitative Inquiry* 1: 19–40. [\[CrossRef\]](#)
- Le, Trung Thanh, Thanh Hieu Nguyen, Son Tung Ha, Quang Khai Nguyen, Nhat Minh Tran, and Duong Cong Duong. 2023. The effect of entrepreneurial education on entrepreneurial intention among master students: Prior self-employment experience as a moderator. *Central European Management Journal* 31: 30–47. [\[CrossRef\]](#)
- Leitch, Claire, and Richard Harrison. 2016. Identity, identity formation and identity work in entrepreneurship: Conceptual developments and empirical applications. *Entrepreneurship & Regional Development* 28: 177–90.
- Letherby, Gayle, and Dawn Zdrodowski. 1995. “Dear researcher”: The use of correspondence as a method within feminist qualitative research. *Gender and Society* 9: 576–93. [\[CrossRef\]](#)
- Li, Yanmei, and Sumei Zhang. 2022. Qualitative data analysis. In *Applied Research Methods in Urban and Regional Planning*. Cham: Springer International Publishing, pp. 149–65.
- Liñán, Francisco, and Alain Fayolle. 2015. A systematic literature review on entrepreneurial intentions: Citation, thematic analyses, and research agenda. *International Entrepreneurship and Management Journal* 11: 907–33. [\[CrossRef\]](#)

- Liñán, Francisco, and Yi-Wen Chen. 2009. Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice* 33: 593–617. [\[CrossRef\]](#)
- Lortie, Jason, and Gary Castogiovanni. 2015. The theory of planned behavior in entrepreneurship research: What we know and future directions. *International Entrepreneurship and Management Journal* 11: 935–57. [\[CrossRef\]](#)
- Luc, Phan Tan. 2020. The influence of personality traits on social entrepreneurial intention among owners of civil society organisations in Vietnam. *International Journal of Entrepreneurship and Small Business* 40: 291–308. [\[CrossRef\]](#)
- Lungu, Anca Elena. 2022. Comparative Analysis of Entrepreneurial Innovation Factors in 25 National States. *ANDULI. Revista Andaluza de Ciencias Sociales* 21: 55–73. [\[CrossRef\]](#)
- Maheshwari, Greeni, Kha Linh Kha, and Anantha Raj Arokiasamy. 2023. Factors affecting students' entrepreneurial intentions: A systematic review (2005–2022) for future directions in theory and practice. *Management Review Quarterly* 73: 1903–70. [\[CrossRef\]](#)
- Mahfud, Tuatul, Mochamad Bruri Triyono, Putu Sudira, and Yoghiana Mulyani. 2020. The influence of social capital and entrepreneurial attitude orientation on entrepreneurial intentions: The mediating role of psychological capital. *European Research on Management and Business Economics* 26: 33–39. [\[CrossRef\]](#)
- Makarona, Eleni, and Androniki Kavoura. 2019. Redesigning the Ivory Tower: Academic entrepreneurship as a new calling supporting economic growth. *Zeszyty Naukowe Małopolskiej Wyższej Szkoły Ekonomicznej w Tarnowie* 2: 15–26.
- Mamun, Abdullah, Noorshella Che Nawi, Muhammad Mohiuddin, Siti Farhah Fazira Binti Shamsudin, and Syed Ali Fazal. 2017. Entrepreneurial intention and startup preparation: A study among business students in Malaysia. *Journal of Education for Business* 92: 296–314. [\[CrossRef\]](#)
- Maslow, Abraham H. 1943. Preface to motivation theory. *Psychosomatic Medicine* 5: 85–92. [\[CrossRef\]](#)
- Nabi, Ghulam, Andreas Walmsley, Francisco Liñán, Imran Akhtar, and Charles Neame. 2018. Does entrepreneurship education in the first year of higher education develop entrepreneurial intentions? The role of learning and inspiration. *Studies in Higher Education* 43: 452–67. [\[CrossRef\]](#)
- Nambisan, Satish. 2017. Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship. *Entrepreneurship Theory and Practice* 41: 1029–55. [\[CrossRef\]](#)
- Nasurdin, Aizzat, Tan Cheng Ling, and Sabrina Naseer Khan. 2018. Linking social support, work engagement and job performance in nursing. *International Journal of Business & Society* 19: 363–86.
- Neneh, Brownhilder. 2014. An assessment of entrepreneurial intention among university students in Cameroon. *Mediterranean Journal of Social Sciences* 5: 542–52. [\[CrossRef\]](#)
- Neumann, Thomas. 2021. The impact of entrepreneurship on economic, social and environmental welfare and its determinants: A systematic review. *Management Review Quarterly* 71: 553–84. [\[CrossRef\]](#)
- Omar, Nor Asiah, Najeel Ullah Shah, Norhafizah Abu Hasan, and Mohd Helmi Ali. 2019. The influence of self-efficacy, motivation, and independence on students' entrepreneurial intentions. *Journal of Nusantara Studies (JONUS)* 4: 1–28. [\[CrossRef\]](#)
- Otache, Innocent, Kadiri Umar, Yakubu Philemon Audu, and Ugbede Onalo. 2021. The effects of entrepreneurship education on students' entrepreneurial intentions: A longitudinal approach. *Education+ Training* 63: 967–91. [\[CrossRef\]](#)
- Ozaralli, Nurdan, and Nancy Rivenburgh. 2016. Entrepreneurial intention: Antecedents to entrepreneurial behavior in the USA and Turkey. *Journal of Global Entrepreneurship Research* 6: 3. [\[CrossRef\]](#)
- Rahmanti, Virginia Nur, and Hendi Subandi. 2024. Redefining Social Entrepreneurship as a Strategy to Strengthen the Social Welfare of SDGs. *Migration Letters* 21: 110–32.
- Ramoglou, Stratos, William Gartner, and Eric Tsang. 2020. "Who is an entrepreneur?" is (still) the wrong question. *Journal of Business Venturing Insights* 13: 1–23. [\[CrossRef\]](#)
- Ratten, Vanessa. 2023. Digital platforms and transformational entrepreneurship during the COVID-19 crisis. *International Journal of Information Management* 72: 102534. [\[CrossRef\]](#) [\[PubMed\]](#)
- Roos, Paul, and Melody Botha. 2022. The entrepreneurial intention-action gap and contextual factors: Towards a conceptual model. *South African Journal of Economic and Management Sciences* 25: 4232. [\[CrossRef\]](#)
- Ruiz-Rosa, Inés, Desiderio Gutiérrez-Taño, and Francisco García-Rodríguez. 2020. Social entrepreneurial intention and the impact of COVID-19 pandemic: A structural model. *Sustainability* 12: 6970. [\[CrossRef\]](#)
- Rusu, Valentina Diana, Angela Roman, and Mihaela Brindusa Tudose. 2022. Determinants of entrepreneurial intentions of youth: The role of access to finance. *Engineering Economics* 33: 86–102. [\[CrossRef\]](#)
- Sagar, Gujjunoori, Byram Anand, Perumalla Varalaxmi, and Shilp Raj. 2023. The role of entrepreneurship in economic growth and development. *Journal of Survey in Fisheries Sciences* 10: 5940–55.
- Sahinidis, Alexandros, George Polychronopoulos, and Dimitris Kallivokas. 2019. Entrepreneurship education impact on entrepreneurial intention among tourism students: A longitudinal study. In *Strategic Innovative Marketing and Tourism: 7th ICSIMAT, Athenian Riviera, Greece, 2018*. Berlin/Heidelberg: Springer International Publishing, pp. 1245–50.
- Santos, Susana, Sílvia Costa, Xaver Neumeyer, and António Caetano. 2016. Bridging entrepreneurial cognition research and entrepreneurship education: What and how. In *Annals of Entrepreneurship Education and Pedagogy-2016*. Cheltenham: Edward Elgar Publishing, pp. 83–108.
- Saptono, Ari, Agus Wibowo, Umi Widyastuti, Bagus Shandy Narmaditya, and Heri Yanto. 2021. Entrepreneurial self-efficacy among elementary students: The role of entrepreneurship education. *Heliyon* 7: e07995. [\[CrossRef\]](#)

- Shane, Scott, and Sankaran Venkataraman. 2000. The promise of entrepreneurship as a field of research. *Academy of Management Review* 25: 217–26. [\[CrossRef\]](#)
- Sherkat, Anoosheh, and Alireza Chenari. 2022. Assessing the effectiveness of entrepreneurship education in the universities of Tehran province based on an entrepreneurial intention model. *Studies in Higher Education* 47: 97–115. [\[CrossRef\]](#)
- Shirokova, Galina, Oleksiy Osiyevskyy, and Karina Bogatyreva. 2016. Exploring the intention–behavior link in student entrepreneurship: Moderating effects of individual and environmental characteristics. *European Management Journal* 34: 386–99. [\[CrossRef\]](#)
- Solomon, Charlene, and Michael Schell. 2009. *Managing Across Cultures: The 7 Keys to Doing Business with a Global Mindset*. New York: McGraw-Hill, Inc.
- Soria-Barreto, Karla, Guillermo Honores-Marin, Paulina Gutiérrez-Zepeda, and Julián-Esteban Gutiérrez-Rodríguez. 2017. Prior exposure and educational environment towards entrepreneurial intention. *Journal of Technology Management & Innovation* 12: 45–58.
- Sotiropoulou, Aikaterini, Dimitra Papadimitriou, and Charitomeni Tsordia. 2022. The role of affective commitment and work engagement to the performance of Greek social entrepreneurs and the moderating effect of personal values. *Journal of Social Entrepreneurship* 1: 1–28. [\[CrossRef\]](#)
- Thompson, Edmund. 2009. Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship Theory and Practice* 33: 669–94. [\[CrossRef\]](#)
- Turgunpulatovich, Axmedov Oybek. 2022. The concept of forming the competitiveness of small business entities and its essence. *Asia Pacific Journal of Marketing & Management Review* 11: 46–55.
- van Ewijk, Anne, Junjun Cheng, and Frances Chang. 2023. Why is changing students' entrepreneurial intentions so hard? On dissonance reduction and the self-imposed self-fulfilling prophecy. *The International Journal of Management Education* 21: 100896. [\[CrossRef\]](#)
- Verheul, Ingrid, Roy Thurik, Isabel Grilo, and Peter Van der Zwan. 2012. Explaining preferences and actual involvement in self-employment: Gender and the entrepreneurial personality. *Journal of Economic Psychology* 33: 325–41. [\[CrossRef\]](#)
- Wang, Wei, Qiaozhuan Liang, Raj Mahto, Wei Deng, and Stephen Zhang. 2020. Entrepreneurial entry: The role of social media. *Technological Forecasting and Social Change* 161: 120337. [\[CrossRef\]](#)
- Wiklund, Johan, Boris Nikolaev, Nadav Shir, Maw Der Foo, and Steve Bradley. 2019. Entrepreneurship and well-being: Past, present, and future. *Journal of Business Venturing* 34: 579–88. [\[CrossRef\]](#)
- Xanthopoulou, Panagiota, Alexandros Sahinidis, and Ioannis Antoniadis. 2023. Public Policies, Perceived Corruption and Transparency as Exogenous Antecedents of Entrepreneurship. *IBIMA Publishing Communications of International Proceedings* 4: 1–13. [\[CrossRef\]](#)
- Xanthopoulou, Panagiota, and Alexandros Sahinidis. 2022. Determinants of Entrepreneurial Intention Among University Students. *Balkan and Near Eastern Journal of Social Sciences (BNEJSS)* 8: 58–69.
- Xanthopoulou, Panagiota, and Alexandros Sahinidis. 2024. Students' Entrepreneurial Intention and Its Influencing Factors: A Systematic Literature Review. *Administrative Sciences* 14: 98. [\[CrossRef\]](#)
- Zhang, Pingying, Dongyuan Debbie Wang, and Crystal Owen. 2015. A study of entrepreneurial intention of university students. *Entrepreneurship Research Journal* 5: 61–82. [\[CrossRef\]](#)

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