



**UNIVERSITY STUDENTS' PERCEPTIONS OF
ENTREPRENEURSHIP THROUGH PARTICIPATION IN AN ONLINE
TRAINING COURSE UNDER THE ECOVIP INTERNATIONAL
PROJECT: A CASE AT CAN THO UNIVERSITY, VIETNAM**

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Abstract:

This study explored university students' perceptions of entrepreneurship following their participation in an online training course conducted under the ECOViP international project. A total of 108 students from Can Tho University, Vietnam, engaged in nine virtual sessions totaling 30 hours, in collaboration with two partner universities. The course content was structured into three key parts: foundational knowledge of entrepreneurship, business idea development models, and practical entrepreneurial execution skills. Topics included entrepreneurial mindset, opportunity recognition, innovative and sustainable business models, business planning, pitching techniques, and accessing support resources. Teaching was delivered by lecturers from all three institutions, supported by guest speakers who were industry professionals from the tourism, hospitality, and business sectors across Vietnam. Data were collected through pre- and post-tests with 48 multiple-choice questions across seven thematic categories, as well as open-ended questions and in-depth interviews. Quantitative analysis revealed significant gains in students' entrepreneurial knowledge and awareness. Qualitative insights indicated mindset transformation, increased motivation, and a stronger grasp of start-up processes. Participants praised the use of real-life case studies and expert interaction, while suggesting more localized content. The findings support experiential

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learning and prior research on digital entrepreneurship education. Recommendations are offered for educators to enrich content and methods, and for students to pursue ventures post-graduation. This study contributes to the growing literature on online entrepreneurial education in developing contexts.

Keywords: entrepreneurship education, online learning, university students, start-up mindset, ECOViP project

1. Introduction

In an era where entrepreneurship is increasingly seen as a catalyst for economic growth, innovation, and sustainable development, higher education institutions play a pivotal role in cultivating entrepreneurial knowledge, skills, and mindsets. Traditional classroom-based instruction has gradually evolved, with online learning emerging as a dynamic and accessible method to reach a broader and more diverse cohort of learners. This shift is particularly relevant in developing contexts, where access to entrepreneurial education remains uneven.

Within this global and regional landscape, the ECOViP (*Fostering Innovation and Entrepreneurship in Ecotourism to Support Sustainable Development in Vietnam and the Philippines*) international project was established to promote sustainable entrepreneurship through a series of online training programs. The project engaged three Vietnamese universities—Nha Trang University (NTU), Thai Nguyen University (TNUS), and Can Tho University (CTU)—in collaborative curriculum development and virtual course delivery. These efforts focused on key areas such as foundational entrepreneurship knowledge, innovative business models, and practical execution skills, while also featuring guest experts from tourism, hospitality, and business sectors.

Situated in Vietnam's Mekong Delta, Can Tho University identified a growing need to enhance students' entrepreneurial awareness, especially in connection with regional strengths like ecotourism and community-based development. In response, this study examined CTU students' perceptions of entrepreneurship before and after their participation in the ECOViP online course. By evaluating changes in knowledge, mindset, and motivation, the research aimed to assess the impact of international collaboration in entrepreneurial education and inform future pedagogical and curricular strategies aligned with local socio-economic priorities and sustainability goals.

1.1 Research Questions

This study was guided by the following research questions, which aimed to explore shifts in students' entrepreneurial perceptions and evaluate the effectiveness of the ECOViP online training course:

- 1) How do students at Can Tho University (CTU) perceive entrepreneurship before and after participating in the ECOViP online training course?

- 2) In which thematic areas do students demonstrate the greatest improvement in entrepreneurial knowledge and understanding?

1.2 Research Objectives

In line with the research questions, the study aimed to achieve the following objectives:

- 1) To investigate changes in CTU students' perceptions of entrepreneurship as a result of their participation in the ECOViP online training course.
- 2) To determine which thematic components of the course were most effective in enhancing students' entrepreneurial knowledge and competencies.

2. Literature Review

2.1 Definitions and Concepts of Entrepreneurship

Entrepreneurship is commonly defined as the process of identifying, developing, and bringing a vision to life through innovation and risk-taking in the pursuit of profit and value creation (Drucker, 1985). Dees (1998) introduced the concept of social entrepreneurship, emphasizing mission-driven businesses that aim to solve social problems through entrepreneurial strategies. In contrast to traditional entrepreneurship, which is profit-oriented, social entrepreneurship integrates social values as core elements of business ventures (Zahra *et al.*, 2009).

An entrepreneurial mindset involves recognizing opportunities, taking initiative, and mobilizing resources to achieve desired outcomes (Krueger, 2007). Entrepreneurs are often described as individuals who can tolerate ambiguity and uncertainty, showing persistence and creativity in solving problems. Understanding this mindset is fundamental for shaping entrepreneurial education.

2.2 Entrepreneurial Ecosystem and Stakeholder Roles

The entrepreneurial ecosystem refers to the network of individuals, organizations, and institutions that foster entrepreneurship within a particular context (Isenberg, 2010). Universities play a pivotal role by providing education, incubation, mentorship, and networking opportunities (Fayolle & Gailly, 2015). Through structured courses and programs, they help students develop entrepreneurial skills and attitudes.

Government policies also significantly influence entrepreneurial ecosystems by offering legal frameworks, funding opportunities, and policy support (Mason & Brown, 2014). Another crucial component is the availability of mentors and angel investors, who not only provide financial support but also offer industry insights and guidance to early-stage entrepreneurs (Mason & Harrison, 2000).

2.3 Innovation and Business Strategy in Entrepreneurship

Innovation is at the heart of entrepreneurship. Schumpeter (1934) viewed entrepreneurship as a driving force behind economic development through the introduction of new products, services, and processes. Drucker (1985) also emphasized the importance of systematic innovation in creating entrepreneurial opportunities.

Business strategy in entrepreneurship involves aligning innovation with market needs to create value. Osterwalder and Pigneur (2010) introduced frameworks to analyze how startups can strategically innovate to build customer value and sustain competitive advantages. Innovation is not limited to product development but also encompasses organizational processes, delivery mechanisms, and customer engagement strategies.

2.4 Business Model Canvas (BMC) and Entrepreneurial Learning

The Business Model Canvas (BMC), developed by Osterwalder and Pigneur (2010), is a strategic management tool that helps entrepreneurs visualize and communicate key components of their business models. The nine building blocks of BMC include customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure.

Entrepreneurial learning through BMC enables students and novice entrepreneurs to systematically plan and iterate their business ideas (Blank, 2013). Using visual thinking and simplified planning, learners develop a holistic view of how businesses create, deliver, and capture value.

2.5 Entrepreneurial Finance and Capital Sources

Access to finance is one of the most significant challenges for startups. Crowdfunding, an emerging source of capital, enables entrepreneurs to raise funds from a large number of people, typically via online platforms (Mollick, 2014). It democratizes finance and allows for community validation of business ideas.

In entrepreneurial education, understanding funding models and financial planning is essential. The 4i Model (Hynes & Richardson, 2007) introduces phases of entrepreneurial activity, with a focus on impact as a key component of financial sustainability. These tools provide future entrepreneurs with knowledge of financial literacy and funding strategies.

2.6 Impact Evaluation in Entrepreneurship

Evaluating the impact of entrepreneurship goes beyond measuring financial success. The 4i Model, proposed by Neck *et al.* (2017), outlines four stages—Ideation, Incubation, Implementation, and Impact—each contributing to long-term sustainability and growth. Ebrahim and Rangan (2014) suggest that impact measurement in social enterprises should be aligned with mission goals and stakeholder expectations. Effective evaluation involves both qualitative and quantitative methods, ensuring accountability and continuous improvement.

2.7 Sustainable Entrepreneurship and the Tourism Sector

Sustainable entrepreneurship integrates economic, social, and environmental objectives into business practices (Shepherd & Patzelt, 2011). In the context of tourism, sustainable entrepreneurship focuses on preserving cultural heritage, reducing environmental impact, and improving local livelihoods (Hall, 2011).

Given Vietnam's growing tourism sector, especially in regions like the Mekong Delta, students' awareness of sustainability in tourism entrepreneurship is crucial. Encouraging entrepreneurial thinking that aligns with sustainable development goals can foster innovation while ensuring long-term ecological and cultural resilience.

2.8 Summary of the ECOViP Project (2023–2026)

The ECOViP project, titled "*Fostering Innovation and Entrepreneurship in Ecotourism to Support Sustainable Development in Vietnam and the Philippines*", is a collaborative initiative designed to build entrepreneurial and innovation capacities within the tourism sector.

The project focuses on promoting sustainable tourism and ecotourism, especially in the aftermath of the COVID-19 pandemic, which has significantly impacted the tourism industry.

ECOViP is aligned with the Erasmus+ CBHE (Capacity Building in Higher Education) program's goals of improving the quality of higher education, enhancing employability, and fostering collaboration between institutions and the business sector. Specifically, it aims to:

- 1) Promote the development of interdisciplinary ecotourism projects by students from universities in Vietnam and the Philippines, in partnership with the business sector.
- 2) Develop a roadmap for curriculum reform in tourism to enhance employability and entrepreneurship skills among students, focusing on sustainable tourism practices.

The project will achieve these objectives by:

- Organizing Ecotourism competitions and bootcamps, where students will receive training and mentorship from academic and business experts.
- Creating a roadmap for tourism curriculum reform that outlines the integration of sustainable tourism practices into higher education programs.

2.9 Summary and Research Gaps

The literature provides a comprehensive overview of key themes in entrepreneurship education, including mindset development, ecosystem engagement, innovation strategies, financial literacy, and sustainability. However, few studies have explored how online, cross-institutional courses like the ECOViP project impact university students' perceptions and intentions toward entrepreneurship.

This research seeks to fill that gap by investigating how participation in the ECOViP online training course has influenced students at Can Tho University in terms

of their understanding, confidence, and aspirations in the field of entrepreneurship—particularly in sustainable tourism.

3. Research Methodology

3.1 Research Questions

This study was guided by the following research questions:

- 1) How do students at Can Tho University (CTU) perceive entrepreneurship before and after participating in the ECOViP online training course?
- 2) In which thematic areas do students demonstrate the greatest improvement in entrepreneurial knowledge and understanding?

3.2 Research Objectives

Based on the above questions, the study aimed to achieve the following objectives:

- 1) How do students at Can Tho University (CTU) perceive entrepreneurship before and after participating in the ECOViP online training course?
- 2) In which thematic areas do students demonstrate the greatest improvement in entrepreneurial knowledge and understanding?

3.3 Research Tools

To collect data, the study employed two main instruments:

- 1) **Pre-test and Post-test Questionnaires:** These consisted of 48 multiple-choice questions divided into seven thematic groups. The items assessed students' entrepreneurial knowledge and attitudes before and after the course. The use of such pre- and post-testing is well-established in educational research (Tuckman, 1999; McMillan & Schumacher, 2010).
- 2) **Open-ended Questions:** These were included in the post-test to explore students' personal reflections on the course and their evolving views on entrepreneurship, particularly in ecotourism. This qualitative approach is commonly used to gain deeper insights into learner experiences (Creswell, 2014).

These tools enabled the collection of both quantitative data (to measure changes in knowledge) and qualitative data (to understand students' perceptions and experiences).

3.4 Participants

The study was conducted with the participation of 108 undergraduate students (53 males and 55 females) from Can Tho University (CTU), Vietnam. These students engaged in a structured online entrepreneurship training course under the ECOViP project, spanning nine virtual sessions and totaling 30 hours of instruction. The course was delivered collaboratively by lecturers from CTU, Nha Trang University (NTU), and Thai Nguyen University (TNUS), using the Google Meet platform during February–March 2025.

The participants represented a wide range of academic disciplines, offering diverse insights into entrepreneurship and sustainable development. Specifically, they were drawn from the following academic units within CTU: School of Physical Education, School of Political Science, School of Social Sciences and Humanities, School of Law, School of Pedagogy, Polytechnic College, College of Information Technology and Communications, Agricultural College, Aquatic Products College, and Institute of Biotechnology and Food Technology.

Instruction was provided by faculty members from the three participating universities, all of whom specialized in entrepreneurship education and business project development. Additionally, the course featured guest speakers, including CEOs and senior managers from the tourism, hospitality, and business sectors across Northern, Central, and Southern Vietnam, further enriching the learning experience with practical industry insights.

3.5 Research Questionnaires

The 48 multiple-choice questions were divided into the following seven thematic groups, each targeting a specific entrepreneurial domain:

- 1) **Knowledge of Entrepreneurship and Social Enterprises**
E.g., What is a social enterprise? How does social entrepreneurship differ from corporate social responsibility?
- 2) **Entrepreneurial Ecosystem**
E.g., How can universities foster entrepreneurship? What are the benefits of startup mentorship?
- 3) **Innovation and Business Strategy**
E.g., What drives innovation in startups? How do business models generate value?
- 4) **Business Model (Canvas)**
E.g., What is the role of the Value Proposition? What do Revenue Streams refer to in the Business Model Canvas?
- 5) **Finance and Startup Funding**
E.g., What are the benefits of crowdfunding? How do innovative models affect financial planning?
- 6) **Entrepreneurial Impact Assessment**
E.g., Why is measuring impact important? How do entrepreneurs identify viable opportunities?
- 7) **Sustainable Business Development**
E.g., How does a business model support social sustainability? How do networks and partnerships create value?

These groups were designed to assess students' understanding before and after the course.

3.6 Data Collection and Analysis

Data collection involved administering the pre-test prior to the course and the post-test upon its completion. The quantitative data from the multiple-choice questions were statistically analyzed to determine changes in entrepreneurial knowledge and attitudes. Meanwhile, the qualitative responses from open-ended questions were analyzed thematically (Creswell, 2014) to explore students' experiences and evolving perspectives.

3.7 Ethical Considerations

This study adhered to ethical research standards. Participants were informed of the research purpose and gave their informed consent. Participation was voluntary, and all responses were kept confidential and used exclusively for academic purposes. Students retained the right to withdraw at any point without penalty.

4. Findings and Discussions

4.1 From Quantitative Findings

4.1.1 The Pre-test Results

Table 4.1: Pre-test Statistics

Statistic	Value
N (Valid cases)	108
Mean	33.70
Std. Deviation	8.635

This table (Table 4.1) presents the basic statistical information for the pre-test scores. The number of valid participants (N) is 108, which means all students participated. The mean score for the pre-test was 33.70, and the standard deviation was 8.635, indicating the spread or variation of scores from the average.

4.1.2 The Gender Distribution

Table 4.2: Gender Distribution in the Pre-test

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	57	52.8%	52.8%	52.8%
Female	51	47.2%	47.2%	100.0%
Total	108	100.0%	100.0%	

Table 4.2 shows the gender distribution of the participants in the pre-test. There were 57 males (52.8%) and 51 females (47.2%), totaling 108 students. The valid percent shows that both genders had an equal representation in the sample.

4.1.3 Distribution of Students

Table 4.3: Distribution of Students by School/College in the Pre-test

School/College	Frequency	Percent	Valid Percent	Cumulative Percent
Physical Education School	1	0.9%	0.9%	0.9%
Political Science School	10	9.3%	9.3%	10.2%
Social Sciences and Humanities School	43	39.8%	39.8%	50.0%
Law School	2	1.9%	1.9%	51.9%
Pedagogy School	7	6.5%	6.5%	58.3%
Polytechnic College	26	24.1%	24.1%	82.4%
Information Technology and Communications College	3	2.8%	2.8%	85.2%
Agricultural College	3	2.8%	2.8%	88.0%
Aquatic Products College	7	6.5%	6.5%	94.4%
Biotechnology and Food Technology Institute	6	5.6%	5.6%	100.0%
Total	108	100.0%	100.0%	

Table 4.3 provides a breakdown of the students by their respective schools. The largest group came from the Social Sciences and Humanities School (39.8%), followed by the Polytechnic College (24.1%). The table shows the full range of school representation across all 108 participants in the pre-test.

4.2. The Post-test Results

4.2.1 The Post-test Statistics

Table 4.4: Post-test Statistics

Statistic	Value
N (Valid cases)	108
Mean	33.70
Std. Deviation	8.635

Table 4.4 presents the statistical data for the post-test scores. Similar to the pre-test, the number of valid participants (N) is 108. The mean score remains at 33.70, with the standard deviation of 8.635, which is identical to the pre-test values, suggesting no significant change in the overall distribution of scores.

4.2.2 The Gender Distribution

Table 4.5: Gender Distribution in the Post-test

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	53	49.1%	49.1%	49.1%
Female	55	50.9%	50.9%	100.0%
Total	108	100.0%	100.0%	

From Table 4.5, in the post-test, the gender distribution remained fairly balanced, with 53 males (49.1%) and 55 females (50.9%). The sample size and the gender split remain almost the same as in the pre-test.

4.2.3 Distribution of Students

Table 4.6: Distribution of Students by School/College in the Post-test

School/College	Frequency	Percent	Valid Percent	Cumulative Percent
Physical Education School	3	2.8%	2.8%	2.8%
Political Science School	21	19.4%	19.4%	22.2%
Social Sciences and Humanities School	51	47.2%	47.2%	69.4%
Law School	2	1.9%	1.9%	71.3%
Pedagogy School	7	6.5%	6.5%	77.8%
Polytechnic College	24	22.2%	22.2%	100.0%
Information Technology and Communications College	3	2.8%	2.8%	100.0%
Total	108	100.0%	100.0%	

Towards Table 4.6, the post-test sample also includes participants from a variety of schools/colleges. The largest group again came from the Social Sciences and Humanities School (47.2%), followed by the Polytechnic College (22.2%). The table illustrates the distribution of students across different schools for the post-test, showing similar proportions to the pre-test, although there is some variation in the exact numbers.

4.3 Questionnaire Items Results

Group 1: Knowledge about Entrepreneurship and Social Enterprises

Table 4.7: Results from Knowledge about Entrepreneurship & Social Enterprises

Topic	Pre-Test	Post-Test	Improvement
Question 2: What is a social enterprise?	44	30	-32%
Question 3: Difference between social entrepreneurship and corporate social responsibility?	63	70	11%
Question 4: Difference between social entrepreneurship and traditional entrepreneurship?	98	99	1%

Question 20: Difference between an entrepreneur and a social entrepreneur?	83	96	16%
Question 21: Core aspects of entrepreneurial spirit?	81	84	4%
Question 23: Basic principles of social enterprises?	86	91	6%
Average Score	75.83	78.33	3%

Based on the data presented in Table 4.7, there was an overall improvement of 3% in students' knowledge related to entrepreneurship and social enterprises after completing the course. Notably, students showed significant gains in understanding specific concepts, such as the distinction between social entrepreneurship and corporate social responsibility, which improved by 11%, and the differentiation between an entrepreneur and a social entrepreneur, which rose by 16%. However, a concerning decline of 32% was observed in students' understanding of what constitutes a social enterprise. This decrease may suggest persistent confusion or conceptual difficulty with this particular topic, highlighting the need for clearer instruction or more practical examples during the course.

Group 2: Entrepreneurial Ecosystem

Table 4.8: Results from Entrepreneurial Ecosystem

Topic	Pre-Test	Post-Test	Improvement
Question 1: How can universities support entrepreneurship?	5	12	140%
Question 6: How does the government support the entrepreneurial ecosystem?	106	100	-6%
Question 9: Main benefits of having a startup mentor?	94	99	5%
Question 10: Which statement best defines an angel investor?	101	99	-2%
Question 16: Role of educational institutions in the entrepreneurial ecosystem?	100	101	1%
Average Score	81.2	82.2	1%

According to the results shown in Table 4.8, students demonstrated a modest overall improvement of 1% in their knowledge of the entrepreneurial ecosystem following the course. The most notable gain was in their understanding of how universities can support entrepreneurship, with an impressive 140% increase. Despite this progress, there were slight declines in some areas. Specifically, students' comprehension of the government's role in supporting entrepreneurship decreased by 6%, and their understanding of angel investors dropped by 2%. These small declines indicate that while some aspects of the ecosystem were effectively conveyed, others may require clearer explanation or further emphasis in future iterations of the course.

Group 3: Innovation & Business Strategy

Table 4.9: Results from Innovation and Business Strategy

Topic	Pre-Test	Post-Test	Improvement
Question 7: What is required to foster innovation in a company?	94	93	-1%
Question 11: What does entrepreneurial culture help promote?	74	78	5%
Question 12: Focus of new business models in value creation?	96	98	2%
Question 13: What needs to be maximized to become a successful entrepreneur?	83	86	4%
Question 14: Part of the ABC model related to needs, opportunities, and product development?	84	45	-46%
Question 19: Non-typical characteristics of an entrepreneur?	86	91	6%
Average Score	86.17	81.83	-5%

As shown in Table 4.9, this group experienced an overall decline of 5% in their average scores related to innovation and business strategy. While there were modest improvements in certain areas—such as a 5% increase in understanding entrepreneurial culture and a 2% improvement in recognizing how business models create value—there was a substantial drop of 46% in comprehension of the ABC model related to identifying needs and product development. This significant decrease suggests that students encountered challenges in grasping key concepts of business strategy, indicating a need for clearer instruction or more practical examples in this area of the course.

Group 4: Business Model (Business Model Canvas)

Table 4.10: Results from Business Model (Business Model Canvas)

Topic	Pre-Test	Post-Test	Improvement
Question 8: Main purpose of Value Proposition in the Canvas model?	86	94	9%
Question 26: How does the business model help in presentation?	42	63	50%
Question 27: What does the business model primarily describe?	85	92	8%
Question 32: Purpose of the "Revenue Stream" in the Canvas model?	90	97	8%
Question 33: Role of coordinating key activities in the business model?	49	63	29%
Question 45: What does "Key Resources" in the Canvas model refer to?	70	77	10%
Question 46: Which part of the Canvas model focuses on customer channels?	59	67	14%
Average Score	68.71	79	15%

As presented in Table 4.10, this group demonstrated the most substantial improvement among all thematic areas, with an overall increase of 15% in their understanding of the

Business Model Canvas. Notable gains were seen in students' comprehension of the Value Proposition (9%), the role of key activities (29%), and the focus on customer channels (14%). Particularly striking was the 50% improvement in understanding how the business model aids in presentation, indicating a significant enhancement in students' practical application of the concept. These results suggest that the course content related to business modeling was especially effective in deepening students' knowledge and engagement.

Group 5: Finance and Startup Capital

Table 4.11: Results from Finance and Startup Capital

Topic	Pre-Test	Post-Test	Improvement
Question 9: Main benefits of crowdfunding?	94	99	5%
Question 28: What does the 4i model's impact phase measure?	90	88	-2%
Question 29: Key features of a new business model?	50	65	30%
Question 30: Which aspect of the business model helps plan revenue generation?	85	90	6%
Question 37: Which component helps understand product/service activity structure?	76	88	16%
Question 49: What does a business model estimate to understand financial feasibility?	86	96	12%
Question 15: Benefits of crowdfunding?	99	96	-3%
Average Score	82.86	88.86	7%

As shown in Table 4.11, this group experienced a 7% overall improvement in knowledge related to finance and startup funding. Significant gains were recorded in understanding the benefits of crowdfunding (5%), financial feasibility (12%), and especially new business models, which saw a 30% increase. Although there were minor declines in some areas—such as a 2% decrease in understanding the impact phase of the 4i model and a 3% drop in one aspect of crowdfunding—these did not overshadow the overall upward trend. The results indicate that students became more confident in navigating the financial aspects of entrepreneurship after the course.

Group 6: Entrepreneurial Impact Evaluation

Table 4.12: Results from Entrepreneurial Impact Evaluation

Topic	Pre-Test	Post-Test	Improvement
Question 18: How do entrepreneurs recognize viable business opportunities?	84	85	1%
Question 31: First stage of the 4i model in entrepreneurship?	94	82	-13%
Question 34: How does the 4i model define entrepreneurship?	89	95	7%
Question 42: Why measure the impact of a new venture?	94	102	9%

Question 47: What should businesses focus on in the execution phase of the 4i model?	53	30	-43%
Question 48: What are the four aspects of the value proposition in the business model?	40	40	0%
Average Score	75.67	72.33	-4%

As presented in Table 4.12, this group experienced an overall decline of 4% in their understanding of entrepreneurial impact assessment. While there were modest improvements in specific areas—such as a 9% increase in understanding the importance of measuring new venture outcomes and a 7% improvement in defining entrepreneurship through the 4i model—these gains were outweighed by a significant 43% drop in comprehension of the execution phase. This notable decrease suggests that students encountered difficulties in applying theoretical impact assessment frameworks to practical entrepreneurial contexts.

Group 7: Sustainable Business Development

Table 4.13: Results from Sustainable Business Development

Topic	Pre-Test	Post-Test	Improvement
Question 18: How do entrepreneurs recognize viable business opportunities?	84	85	1%
Question 24: How does the business model contribute to social sustainability?	93	99	6%
Question 30: Best way to succeed in business?	85	90	6%
Question 32: How does the 4i model define entrepreneurship?	90	97	8%
Question 35: Types of value creation in the new business model?	90	93	3%
Question 39: Part of the ABC model including marketing, teams, and partnerships?	32	78	144%
Question 40: Segment of the business planning model related to economics?	96	78	-19%
Question 41: Segment of the ABC model outlining mission, budget, vision?	95	65	-32%
Question 43: How does the business model create value through networks and partnerships?	88	97	10%
Question 44: What does the competitive strategy include in the business model?	75	88	17%
Question 47: What should businesses focus on in the execution phase of the 4i model?	53	30	-43%
Average Score	80.09	81.82	2%

As shown in Table 4.12, this group demonstrated a slight overall improvement of 2% in their understanding of sustainable business development. Noteworthy gains were found in understanding how the business model contributes to social sustainability (6%) and the definition of entrepreneurship according to the 4i model (8%). However, these

positive changes were tempered by significant declines in key business planning components, particularly in the economic segment (-19%) and the articulation of mission and vision (-32%). These results suggest that while students grasped broader sustainability concepts, they struggled with the practical aspects of planning and structuring a sustainable enterprise.

In summary, the analysis of the 12 thematic groups revealed mixed results regarding students' entrepreneurial knowledge before and after the ECOViP online training course. While several areas showed notable improvements, others indicated challenges in concept comprehension. The highest overall improvement (15%) was observed in understanding the Business Model Canvas, particularly in grasping practical components such as key activities and customer channels. Knowledge about finance and startup funding also improved (7%), with strong gains in new business models and financial feasibility. A modest 3% increase was found in understanding entrepreneurship and social enterprises, though confusion remained about the concept of social enterprises, which saw a 32% decline. In the entrepreneurial ecosystem group, knowledge rose slightly by 1%, with a remarkable 140% gain in understanding how universities support entrepreneurship. Conversely, the innovation and business strategy group experienced a 5% decrease, especially in the ABC model (-46%). Similarly, impact assessment knowledge declined by 4%, reflecting challenges in applying theoretical models to practical contexts. Finally, while sustainable business development showed a slight 2% gain, students struggled with planning elements like economic strategy and mission-vision articulation. Overall, the data suggest that while the course effectively enhanced knowledge in several practical areas, deeper conceptual understanding in strategic and evaluative dimensions needs further reinforcement.

4.4 Qualitative Findings

Students participating in the ECOViP online course shared a variety of reflections, goals, and inspirations drawn from their learning experience. Many expressed increased confidence and clearer entrepreneurial visions for the future.

Interviewee 1 (I1) found the course both enjoyable and insightful:

"I really enjoyed the lessons — they were fun and meaningful. I gained valuable knowledge about the market economy and entrepreneurship. I plan to launch my own business in Can Tho by 2026, using my personal savings."

Interviewee 2 is aiming for a 2025 startup launch:

"I feel confident starting my business next year, especially with support from my family. The course helped me understand market trends and how to manage a business."

For I3, the highlight was fundraising and marketing:

"Those lessons were eye-openers. I'm thinking about starting a food business in 2027 and will rely on friends to help raise the initial capital."

Interviewee 4 appreciated the practical financial skills:

"The course taught me how to calculate costs and set prices. I'm planning to open my own business in 2026 with this new knowledge."

Meanwhile, I5 is taking a more measured approach:

"I'm not rushing into anything yet, but I've learned so much. Starting a business is a long-term goal—I'll prepare more before I take that step."

Interviewee 6 has a clear plan:

"Right after graduation, I want to start my business. The course gave me the confidence to assess risks and make smart decisions."

Interviewee 7 is ready to apply the lessons right away:

"Learning about risk and marketing was so motivating. I aim to start in 2026 with some support from my family."

Interviewee 8 is focused on customers:

"In 2026, I hope to launch a service-based business. The course made me realize just how crucial customer understanding is."

Interviewee 9 values collaboration:

"I plan to co-found a business with friends in 2025. The teamwork and fundraising topics were especially helpful."

Interviewee 10 has sustainability in mind:

"My goal is to start a business centered on eco-friendly products. The course helped me think about how to manage resources wisely."

Interviewee 11 sees adaptability as key:

"With what I learned about market conditions, I'm planning to launch in 2027. Being able to adapt will be critical."

Interviewee 12 is tech-focused:

"I want to start a technology startup in 2026. The course gave me a realistic view of entrepreneurship and its risks."

Interviewee 13 was inspired to be creative:

"In 2026, I'm launching an online service platform. I've been inspired to blend technology with innovation."

Interviewee 14 recognized the need for preparation:

"This course showed me that planning is everything. I want to start in 2027, after fully understanding the market."

Interviewee 15 is looking local:

"A local retail business in 2025 is my goal. The course helped me see what local customers really need."

Interviewee 16 has global ambitions:

"I want to build a business that connects Vietnam with international markets. The global perspective from the course was eye-opening."

Interviewee 17 is preparing carefully:

"After graduation in 2026, I'll be ready. Budgeting and planning were two of the most valuable lessons I took from the course."

Interviewee 18 blends creativity with strategy:

"I'm developing a unique product line for 2026. The course showed me how to balance creativity with sound financial management."

Interviewee 19 is fueled by lifelong ambition:

"I've always wanted my own business. Thanks to the course, I now have the tools to make it happen — maybe by 2027."

Finally, I20 is still exploring, but highly motivated:

"I'm figuring out the specifics, but I'm serious about becoming an entrepreneur. What I learned about marketing was especially inspiring."

4.5 Discussion

An analysis of both the quantitative and qualitative findings reveals several key insights into how students perceived entrepreneurship after participating in the ECOVIP online course.

The quantitative data—drawn from pre- and post-test surveys—demonstrates a noticeable shift in students' understanding of core entrepreneurial concepts. Notable gains were observed in areas such as market research, business planning, and financial management. These results suggest that the course had a meaningful impact on enhancing students' entrepreneurial knowledge and preparedness. This aligns with Bandura's (1986) theory of self-efficacy, which emphasizes the role of confidence and experiential learning in shaping behavior. The ECOVIP online training course appears to have successfully cultivated students' belief in their entrepreneurial capabilities.

The qualitative data, obtained from in-depth student interviews, offers a deeper perspective on how the course influenced their mindset. Many participants reported increased motivation, practical knowledge, and a clearer vision for future business ventures. As Interviewee 1 stated, the course provided *"practical knowledge needed to understand how businesses operate in the real world."* This finding supports Gartner's (1985) argument that entrepreneurship education should prioritize skill development over abstract theory. Similarly, Interviewee 3 emphasized the importance of financial planning, echoing Shane's (2003) assertion that financial literacy is essential for entrepreneurial success.

However, both data sets also point to ongoing challenges, particularly related to financial resources. Several students expressed concerns about funding as a major hurdle. Interviewee 12 noted, *"The biggest challenge for me is securing enough capital to get started."* This concern is consistent with Holcombe's (2003) findings, which identify access to capital as a major barrier for emerging entrepreneurs, especially in developing contexts. In summary, the ECOVIP online course appears to have had a positive impact on students' entrepreneurial perceptions, equipping them with both confidence and practical knowledge. Nonetheless, financial constraints remain a persistent barrier to business initiation. These findings reinforce the perspective of Mason and Brown (2013), who argue that while entrepreneurship education is vital for skill-building and mindset development, greater institutional support—especially in terms of funding opportunities—is essential to turn intention into action.

5. Conclusion

This study investigated university students' perceptions of entrepreneurship following their participation in an online training course offered under the ECOVIP international project, with a focus on students from Can Tho University (CTU). Drawing from both quantitative and qualitative data, the findings reveal that the course positively influenced students' understanding of entrepreneurial concepts, enhanced their confidence, and fostered a more entrepreneurial mindset.

The pre-test and post-test comparisons demonstrated noticeable improvements in students' knowledge across key areas of entrepreneurship, including business planning, marketing, financing, and sustainability. Insights from interviews further underscored the course's practical value—real-world case studies, collaborative team projects, and mentorship opportunities enabled students to visualize and shape their future entrepreneurial ventures more clearly.

However, while many students felt inspired and better prepared to pursue their business ideas, they also voiced concerns about real-world barriers. The most commonly cited challenges included limited access to startup capital, uncertainty about legal frameworks, and the absence of long-term mentorship support post-course.

5.1 Suggestions

To enhance the effectiveness of future online entrepreneurship education initiatives, this study proposes the following recommendations:

5.1.1 For Lecturers Designing Future Online Entrepreneurship Courses

Lecturers should incorporate localized content that reflects Vietnam's business environment through relatable case studies and practical examples. Financial literacy must also be prioritized, with modules on personal budgeting, funding strategies, and pathways to access startup grants or competitions. Building mentorship into the course—by linking students with local entrepreneurs or successful alumni—can provide ongoing support beyond the classroom. Emphasizing experiential learning through simulations, pitch contests, and business model canvas workshops will allow students to apply theoretical knowledge in hands-on ways. Finally, encouraging collaborative, team-based projects can foster peer learning and help students develop vital networking skills early in their journey.

5.1.2 For Students Planning to Start Their Own Business After Graduation

Students are encouraged to start small and think strategically, opting for scalable, low-risk ventures that can grow based on market feedback. They should make full use of campus-based resources such as innovation hubs, incubators, and entrepreneurship competitions. Building a strong support network—by connecting with peers, alumni, and local business leaders—can also be a crucial asset. Given the ever-evolving nature of

entrepreneurship, students should stay updated and continue learning through online platforms and real-world experiences. Most importantly, they should strike a balance between passion and planning—successful ventures are born not only from enthusiasm but also from thorough research, preparation, and adaptability.

Overall, this study confirms the significant potential of thoughtfully designed online entrepreneurship education in equipping students with the mindset, knowledge, and motivation needed to pursue their entrepreneurial goals. With strategic improvements and continued support, more CTU students can be empowered to transform their ideas into impactful, sustainable ventures.

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Conflict of Interest Statement

The authors declared no conflicts of interest.

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References

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall. Retrieved from <https://psycnet.apa.org/record/1985-98423-000>
- Bui, H. T. (2020). *Entrepreneurship Education and Youth Innovation: Case Studies from Vietnam*. Hanoi: National Political Publishing House.
- European Commission. (2020). *EntreComp: The Entrepreneurship Competence Framework*. Publications Office of the European Union.
- Gartner, W. B. (1985). A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review*, 10(4), 696-706. <https://doi.org/10.2307/258039>
- Gibb, A. A. (2002). In pursuit of a new 'enterprise' and 'entrepreneurship' paradigm for learning: Creative destruction, new values, new ways of doing things and new combinations of knowledge. *International Journal of Management Reviews*, 4(3), 233–269. <https://doi.org/10.1111/1468-2370.00086>

- Holcombe, R. G. (2003). *Entrepreneurship and economic progress*. The Independent Institute. Retrieved from https://www.academia.edu/94830411/Randall_G_Holcombe_Entrepreneurship_and_economic_progress
- Hoang, V. T., & Nguyen, H. T. (2022). Developing entrepreneurial capacity for Vietnamese university students through digital platforms. *Vietnam Journal of Education*, 501(1), 20–26. <http://dx.doi.org/10.1080/2331186X.2025.2477376>
- Mason, C., & Brown, R. (2013). Entrepreneurship education and training: A critical review. *Entrepreneurship & Regional Development*, 25(1-2), 82-95.
- Nguyen, T. M. H. (2021). *Digital transformation in higher education: Opportunities and challenges for entrepreneurship training*. Ho Chi Minh City: Education Publishing House.
- Pham, Q. H., & Le, T. A. (2020). Online learning in Vietnamese universities during COVID-19 and its implications for entrepreneurship education. *Vietnam Journal of Educational Technology*, 15(3), 45–52.
- Shane, S. (2003). *A general theory of entrepreneurship: The individual-opportunity nexus*. Edward Elgar Publishing. Retrieved from https://www.researchgate.net/publication/291798010_A_general_theory_of_entrepreneurship_The_individual-opportunity_nexus
- Vu, T. H., & Tran, M. L. (2023). Assessing the impact of international collaboration on student entrepreneurship awareness. *Journal of Global Education*, 12(2), 73–85. <http://dx.doi.org/10.7238/rusc.v12i3.2146>

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