

Call for Submissions

Cases on STEM Entrepreneurship

Extended Deadline: January 15th 2022 – Submission of Case Study

(Teaching note not required at this stage but can be submitted)

The background to this Call for Submissions lies in the many reports that have emanated from the European Commission over the past decade which have identified entrepreneurship education as a crucial element of achieving economic growth and jobs. Equally, science, technology, engineering and mathematics (STEM) skills have been identified as the gateways to success in 21st century economies. The use of STEM case studies in entrepreneurship has been highlighted as being critically important in entrepreneurship education as they enable STEM students to identify with relevant role models and challenges. The publication 'Entrepreneurship in Higher Education, Especially Within Non-Business Studies' in March 2008 highlighted that the use of case studies was seen as one of the most effective methods of teaching entrepreneurship education to young STEM students. However, there continues to exist a dearth of case studies relating to STEM subjects and an urgent need exists for an international book of such cases.

Third-level educators in the field of entrepreneurship and third-level students across all academic disciplines are the two target groups for this book, while making contemporary, STEM-relevant entrepreneurship case study material available for pedagogical purposes is its primary objective. Existing constraints – availability and accessibility of appropriate case study material, primarily American derived case studies – militate against the widespread and effective use of case studies as a global pedagogical tool for STEM entrepreneurship. Inquiry-based approaches require students to identify and pose solutions for real-world problems. The inquiry process develops a better mastery of STEM course content and strengthens critical thinking skills that can be applied across the curriculum. This Call for Submissions will help to meet the needs of entrepreneurship educators and students by addressing the constraints to STEM case study usage experienced by both groups at present.

It is by undertaking this project that an array of new contemporary STEM case studies will become available for third-level educators and students. For educators, time and resource constraints inevitably mean that many of them are not in a position to develop their own original case study material for instruction purposes. Hence, a more practice-based instruction approach to STEM entrepreneurship suffers as a result, with students not receiving the necessary amount of exposure to real world business problems. By making STEM case studies available to them, entrepreneurship educators will not be constrained by time or resource issues in the use of quality STEM entrepreneurship case study material. For third-level STEM students there is a demand for contemporary case studies that are grounded in a STEM context. In order to best engage students in entrepreneurial thinking and business problem solving it is desirable that the case study material is reflective of the environments in which they live and work.

A 2017 article on the Wall Street Journal highlighted the various problems faced by STEM students when studying entrepreneurship. The article proposed that instead of studying traditional chief

executives, STEM entrepreneurship classes should focus on tech start-ups led by chief executives with a STEM background. This project will address this critical issue of STEM case study availability for entrepreneurship educators and students. The Call for Submissions might include case studies relating to any of the following topics:

- Science-related enterprises
- Biotech enterprises
- Technology-related enterprises
- Civil engineering-related enterprises
- Mechanical engineering related enterprises
- Electrical engineering-related enterprises
- Aeronautical engineering-related enterprises
- Mathematics-related enterprises
- Statistics-related enterprises
- Manufacturing
- App development
- University spin-out enterprises
- Research development

The book will consist of a broad variety of cases to ensure a balance relating to gender, nationality, stage of business development, nature of the problem being addressed and type of business. The ambition of the book is to ensure that educators and students of different backgrounds will have access to case studies that will be of relevance to their program.

The following is the outline schedule for the Call and the subsequent publication of the book:

- June 16th 2021 - Call Opens
- January 15th 2022 – Submission of Case Study (Teaching note NOT required at this stage but can be submitted).
- January 31st 2022 – Notification of the results of the submission
- April 30th 2022 – Submission of revised Case Study and Teaching Note
- March 31st 2022 – Final decision regarding acceptance of case study for the book

The book will be co-edited by Prof Cyrine Ben-Hafaïedh (c.benhafaiedh@ieseg.fr) and Prof Thomas Cooney (thomas.cooney@tudublin.ie). Please feel free to contact either of them should you have any queries relating to the process. Submissions should be done by e-mail to both co-editors.

GUIDELINES

What is a Case Study?

We are looking for case studies that can be used for teaching purposes in a classroom. It is a story that the reader can follow, it is usually based on a real person / organisation, it may be disguised for a variety of reasons (protect the identity of a person, company does not wish to reveal itself, stop students from checking the internet, etc), it is incomplete and decisions have to be made on imperfect

information, and it invites the reader into a specific role (e.g. CEO, Marketing Director, etc) and the reader must act as that person. The reader must then take the organisation forward and it therefore involves analysis and prescription. To understand the style and format that we are seeking, please go to <https://ecsb.org/case-studies/> and download any of the free cases available on that website.

Criteria of Interest

The book will consist of a broad variety of cases to ensure a balance relating to gender, nationality, stage of business development (e.g. pre-startup, startup, growth), nature of the problem being addressed (e.g. marketing, operations, finance, management) and type of business. The ambition of the book is to ensure that educators and students of different backgrounds will have access to case studies that will be of relevance to their program.

We Are NOT Seeking Case Histories

We are NOT seeking cases that tell the story of what an organisation did in the past. A case history is backward focused, it invites judgement and the primary task of the student is to analyse / reflect upon what the person / company has done in the past.

We Are NOT Seeking Consultancy Projects

Educators and students may have been involved in consultancy projects as part of their coursework which has resulted in the production of a report. Such reports are NOT case studies and therefore are not of interest to this initiative.

Structure of the Case Study

The structure can be tailored by the author to suit their needs, but the following template structure might be helpful:

- Introduction / opening paragraph
 - Sets the scene / context
 - What are the problems / issues?
 - When is the deadline for a decision
- Organisation / person background
- Background environment (Industry, Country, etc)
- Origin and evolution of key business issues
- Focus on the key areas of interest
- Examine specific problems / decisions
- Outline possible alternatives
- Close (return to opening scene)

It is important to understand that this structure is a guideline and other formats can be adopted.

Teaching Note

A teaching note is required if the case study is accepted for publication. This document helps potential instructors gain insight into the case and achieve better usage of the case. The following components are needed:

- Synopsis (a brief summary of the case and its conceptual context)

- Teaching objectives (3-5 specific objectives you want to achieve with the case)
- Target audience (the study and the level of students the case is suitable for)
- Assignment Questions
- Teaching Plan
- Analysis of Assignment Questions
- References or recommended readings

Length of the Case Study

Generally, case studies for the book should be more than 5 pages, but should not exceed 20 pages in length (corresponding to approximately 2,000 – 8,000 words), including references, figures and appendices. The length of the teaching note should be approximately 4-6 pages.

Formatting

For formatting, please use Times New Roman, Font Size 11 (for the main body, 14 for headings) and spacing of 1.15.

What Makes a Good Case Study?

The following guidelines regarding the characteristics of a good case study may help in developing your submission:

- It deals with a number of different and substantive issues
- Creates different discussion/decision points
- A good story (but the story is not the objective)
- Students can engage with the case (not the same as 'like')
- It is current in terms of the issues being addressed
- Readable in terms of being able to understand the content
- Functions at different levels
- Is realistic in terms of what is possible
- Is clear about the target audience
- Relates well to the course subject area

It would be helpful to read other STEM case studies to get a good understanding of how you might approach your work.