

Call for Submissions

Cases on STEM Entrepreneurship

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
- October 31st 2021 – Submission of Case Study and Teaching Note
- November 30th 2021 – Notification of the results of the submission
- January 31st 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.