Chapter VI
# Creating an Entrepreneurial Mindset:
## Getting the Process Right for Information and Communication Technology Students

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## ABSTRACT

*Change in the structure and profile of the industrial base in Ireland emphasises the importance of the small firm sector in certain growth sectors. One such sector is the information and communication technology (ICT) sector, which now demands a more enterprising graduate. This chapter emphasises the importance of third-level[1] education in preparing students for their career, either as employee or entrepreneur. We discuss how entrepreneurship education, through its broad and integrative philosophy accommodates the changing workplace demands. It links together the synergy of enterprising activity and the small firm ICT sector through education courses, specifically entrepreneurship education. This is achieved through the adoption of the process framework for ICT entrepreneurship education. Describing how they can be modified to facilitate and encourage the more creative and enterprising mindset in the ICT student, we present two courses that have been successfully implemented at the University of Limerick.*

## INTRODUCTION

A challenge facing policy makers in Ireland is how to encourage more individuals to consider self-employment as a career option and as an alternative to the more traditional career patterns of paid employment in the ICT sector. Since career choices are informed and influenced during the educational experience of the individual, we suggest that the education context of the individual should be examined to determine how it could be developed to encourage ICT

individuals to consider self-employment. To do this we argue that there is a need to modify and devise current programme offerings to include increased exposure in a realistic and practical sense as to what self-employment is about and how it can be a career option to consider. To add value to the competency base of the ICT student, entrepreneurship education can facilitate a more informed choice and exposure to the possibility of self-employment.

The question posed is how can the education context and experience of the ICT student contribute to creating this entrepreneurial mindset? To achieve this, it is necessary to examine the broader philosophy of the purpose of education.

Our answer to this question is the linking of entrepreneurship education to the ICT curriculum through the adoption of a more integrated and interdisciplinary approach. This will create a more entrepreneurial mindset in ICT students in third-level educational institutions. This adds value to the educational experience of the ICT student, providing them with the knowledge, skills, and competencies required for self-employment.

Entrepreneurship education is a process, involving a series of stages and a number of stakeholders who need to be an active part of the process. The central stakeholders are the students, teachers (trainers), the educational institution, and employers within the business community. Entrepreneurship education courses should provide students with a very real-life experience and enhance not just knowledge acquisition but also skills development in areas of idea generation; market research; product and process development; communication; negotiation; conflict management; project management; and people management.

Essentially this chapter addresses a number of related topics such as entrepreneurial activity, entrepreneurship education, and the changing knowledge required by ICT graduates. In doing this, we integrate these topics which are frequently researched independently.

Initially the chapter provides a background to ICT and entrepreneurship within Ireland, thus strengthening the rationale for the chapter. We then propose that an effective means of bridging the entrepreneurship knowledge and skills gap for the ICT student is the development of entrepreneurship education initiatives. To achieve this a process framework of ICT entrepreneurship education is presented and described. Following this, two interdisciplinary entrepreneurship courses at undergraduate level are profiled to describe how this need can be addressed. In the discussion of such courses important issues such as programme design, the role of the lecturer to facilitator, resource implications, and delivery and assessment issues are examined. The chapter concludes with a discussion on the benefits of adopting such initiatives and the implications for policy makers and educators.

## THE SMALL FIRM SECTOR: THEIR IMPORTANCE TO THE IRISH ECONOMY

In 2003 it was estimated that the number of small firms in Ireland was approximately 186,114, an increase of 16,114 over a 3-year period since 2000, (The Revenue Commissioners Statistical Unit, 2003). The same report states that the majority of these firms employed less than 50 people (182,916 firms). Overall, these firms accounted for more than 99% of all enterprises in the state and contributed to 68.4% of private sector employment. Furthermore approximately 16,000 new businesses are created each year in Ireland (Small Firms Association [SFA], 2003).

Forfás (2004) indicated that certain sectors were also critical to the continued success of the economy. One such sector is the ICT sector. Current government policy is examining how a greater level of enterprising activity can be developed in the small firms' ICT sector.

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