



CASE STUDIES

‘Entrepreneurial Behaviours and Organisation Culture – A Case Study’

DUNDALK INSTITUTE OF TECHNOLOGY¹

¹ This case study report was prepared by Richard Thorn for the OECD in collaboration with staff members of Dundalk Institute of Technology.

INTRODUCTION

This case study considers how one of Ireland's 14 Institutes of Technology, the Dundalk Institute of Technology (DkIT), has established itself as a highly performing institution in respect of entrepreneurial behaviours and mindsets amongst staff and students. These are manifest not just in the sphere of knowledge exchange, business supports and programmes with entrepreneurship built in but also in the approach to the development of desirable graduate attributes such as creativity, critical thinking and teamwork.

In 1999 Ireland passed the Qualifications (Education and Training) Act. This legislation established, *inter alia*, a 10 level national framework of qualifications. Higher education operates at Levels 6 through 10. An important feature of the framework in the context of this Case Study is the requirement that all courses of study lay out the learning outcomes to be achieved by students on the programme and modules therein. The learning outcomes cover knowledge (what students should know), skills (what students should be able to do) and competences (how the student can apply knowledge and skills). The specification of learning outcomes in programme and module descriptors has had a cascading effect on teaching, learning and assessment strategies and instruments.

In the mid 2000's the Irish government, through the Higher Education Authority, introduced a multi million euro Strategic Innovation Fund designed to stimulate collaborative innovative thinking across all elements of higher education. DkIT used this fund in a major entrepreneurship project.

Ireland's *National Strategy for Higher Education to 2030* pays particular attention to the development of graduate qualities that provide for effective engagement with society and the workplace.

The implementation of the National Strategy, which started in 2011, has led to the Higher Education Authority using a process of strategic dialogue to agree institutional compacts with institutions within a Higher Education System Performance Framework established by the Department of Education and Skills. The performance framework lays out national priorities and key objectives, including for the development of human capital, and for teaching and learning achievement which are built into each compact. Following evaluation, a portion of institutional funding is tied to achievement of objectives in the compact. The results of the evaluations are published by the higher education authority which also publishes a set of institutional profiles in its Higher Education System Performance document.

It is within the context of the national framework of qualifications, the Strategic Innovation Fund, the development of societally relevant graduate qualities, strategic dialogue, institutional compacts and performance frameworks that DkIT has been developing a culture of entrepreneurial behaviours and mindsets.

The Institute is a public higher education institution that is located on a single campus in north east Ireland. The Institute has four Schools; Business and Humanities, Engineering, Informatics and Creative Arts and Health and Science. In 2012/2013 the Institute had 4,618 students of which 4,479 (97%) were undergraduate and 139 (3%) were postgraduate. The Institute, relatively unusually amongst the Institutes of Technology, covers a wide discipline mix with 13% of its students in humanities and arts, 25% in social sciences, business and law, 17% in science, 11% in manufacturing, engineering and construction, 6% in agriculture and veterinary, 19% in health and welfare and 11% in services.

While no one dimension in the HEInnovate model adequately captures the development of organisational culture it is probable that 'Organisational Capacity: Funding, People and Incentives' comes closest to providing a framework for considering this vital component of an

organisation. The truism that ‘culture beats strategy’ lies at the heart of how a higher educational institution can be developed in both positive and negative ways. In addition to the statements underpinning the organisational capacity dimension a statement from the dimension on Entrepreneurial Teaching and Learning is also relevant. The statements are listed below and discussed in order in the body of the Case Study.

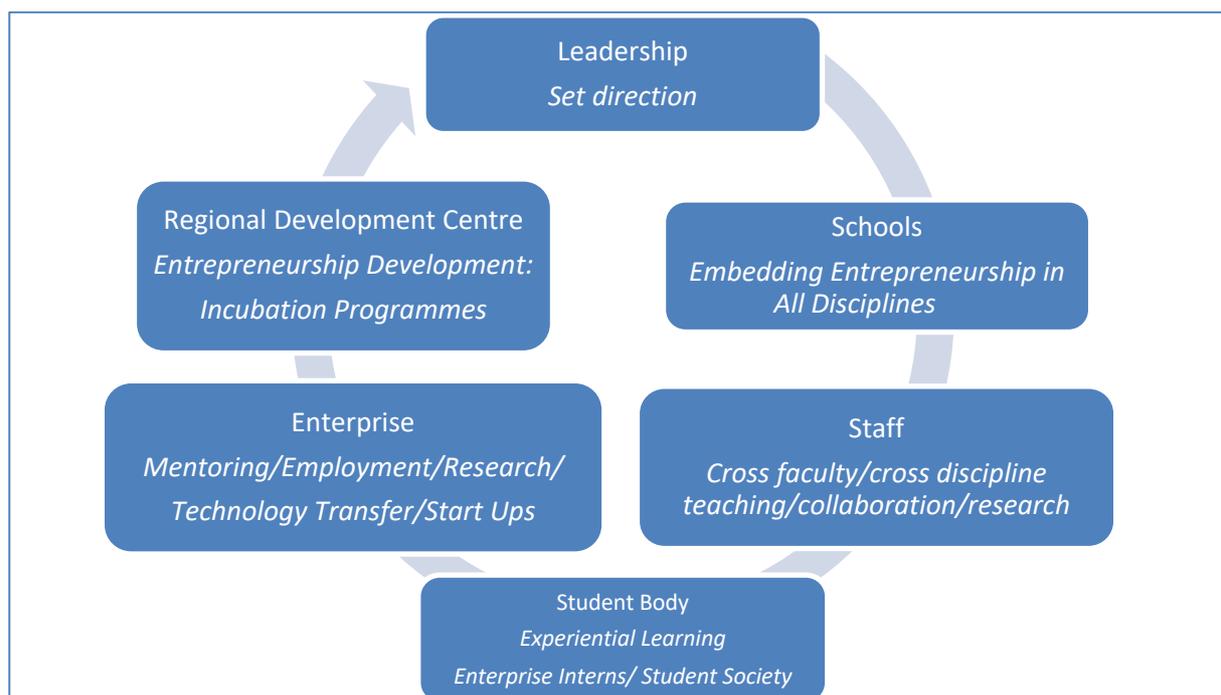
- Entrepreneurial objectives are supported by a wide range of sustainable funding and investment sources.
- The HEI has the capacity and culture to build new relationships and synergies across the institution.
- The HEI is open to engaging and recruiting individuals with entrepreneurial attitudes, behaviour and experience. (In the Entrepreneurial Teaching and Learning dimension the statement ‘the HEI provides diverse formal learning opportunities to develop entrepreneurial mindsets and skill is relevant here).
- The HEI invests in staff development to support its entrepreneurial agenda.
- Incentives and rewards are given to staff who actively support the entrepreneurial agenda.

Entrepreneurial objectives are supported by a wide range of sustainable funding and investment sources.

Dundalk Institute of Technology has embedded entrepreneurship across the full range of college activities. Therefore the Institute does not depend on any one source of funding for its growth and development but instead uses the resources of the whole Institute to contribute to the development of entrepreneurial attitudes and behaviours.

The embedding of entrepreneurship is visually described in Figure 1 which shows the whole of Institute approach.

Figure 1 – Entrepreneurship Ecosystem



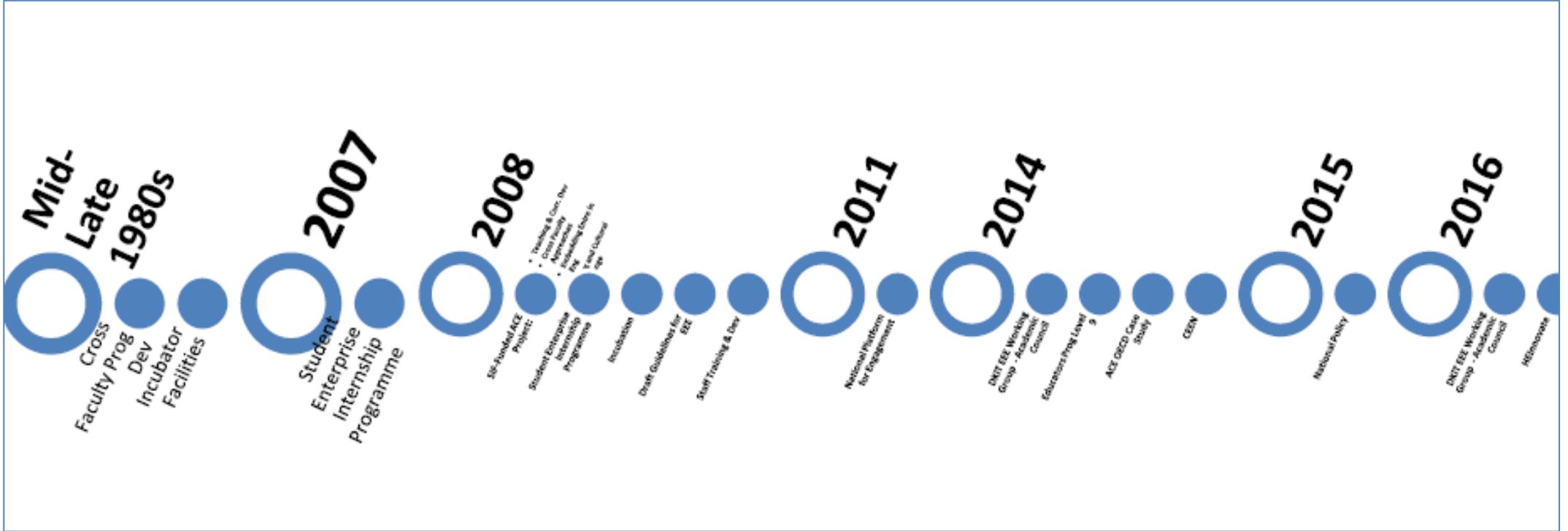
The leadership of the Institution has set the direction and ‘cultural’ expectations in three main ways.

- The Institute’s strategic plan for 2011 to 2016 identifies three core strategic themes that underpin the Institute’s work. One of these is Entrepreneurship which it defines as a capacity to create new responses and innovations in the economic, social and cultural environment interfacing with external stakeholders and fostering the development of the region. Thus, at the highest levels, the institute promulgates entrepreneurship.
- Each year a President’s Award for ‘The Most Enterprising Student of the Year’ is made to the student who has been most involved in enterprise activities across the Institute. This award has given a very high profile to student enterprise in the Institute.
- Regular and varied student enterprise competitions have been developed and promoted and implemented across the Institute. In recent years these have included
 - The APPrentice –A smartphone app competition.
 - Think Outside the Box – A business plan competition for students across the Institute.
 - Paperclip Challenge – A competition where participants begin with a paperclip and continue exchanging goods in return for a higher value good(s). One competition was eventually won by a student who had upgraded to a canoe.
 - The Rookie Challenge - Based on the TV show ‘The Apprentice’, DkIT's Rookie Challenge has been a key competition over the past number of years where staff and students get involved in a week of activities on campus.
 - Idea Generation Workshops - The development of business ideas at numerous idea generation workshops held in the Regional Development Centre. Students gain valuable knowledge on the business aspect of their ideas while staff have also been involved as mentors during the sessions.
 - 60 Second Shorts - Students are tasked with creating a 60 second movie promotion for a social enterprise.
 - The Creative Calling - A specific competition for the School of Informatics and Creative Arts in which students are asked to present the information in anyway digitally possible, be it a video, a piece of music, an animation etc.

The HEI has the capacity and culture to build new relationships and synergies across the institution.

The achievement of cultural and behavioural and cultural change does not happen overnight. It has been possible for Dundalk Institute of Technology to undertake cross institute initiatives because the development of entrepreneurial behaviours has been taking place for a long time and are thus part of the normal business of the Institute. Figure 2 shows a timeline with key developments.

Figure 2 – Timeline of Entrepreneurship Initiatives



- DkIT (then as Dundalk Regional Technical College) was the first Institute of Technology to develop business incubation facilities in the late 1980's. This facility, known as the Regional Development Centre, has become an integral part of the life of the Institute. Currently, about 20% of the academic staff in the Institute are actively involved in the work of the Centre through undertaking RDI activities in conjunction with the centre.
- In the mid 2000's the Institute established its Student Enterprise Internship Programme. This programme, which is still running and which is funded by the Institute, is a cross Institute initiative. The Programme was established to promote and actively support a spirit of enterprise and self-employment and to foster the development of entrepreneurial skillsets amongst the student population. Each student, and there are four, is based in a separate School, undertakes a Masters programme in addition to their enterprise internship work of promoting student engagement in entrepreneurship activities.
- The success of the Regional Development Centre and the establishment of the Student Internship Programme prompted the Institute to develop a major collaborative initiative in 2008 aimed at 'Creating the Entrepreneurial Graduate'. The ACE (Accelerating Campus Entrepreneurship) project was a joint collaboration of Cork Institute of Technology, Institute of Technology Blanchardstown, Institute of Technology Sligo and National University of Ireland Galway and was led by Dundalk Institute of Technology. The initiative was funded by the Strategic Innovation Fund, noted above, and resulted in the development and delivery of entrepreneurship modules and fully-fledged programmes in non-business disciplines at under and post-graduate levels. Additional outputs included a Student Internship Programme, Train the Trainer Programmes for Enterprise Educators, and Leadership Development Programmes.
- Upon the cessation of the ACE initiative the Institute established the Campus Entrepreneurship Enterprise Network (www.ccen.ie) which is the Irish national network for promoting and developing entrepreneurship and enterprise, at third level and aims to create a sustainable national platform for raising the profile, extending engagement and further developing entrepreneurship across the Irish HEI sector.
- Other key developments on the journey include the establishment of the President's Award (noted previously) and the establishment of an Academic Council Working Group with a cross institute remit to embed entrepreneurship education within the academic programmes (this is dealt with further below).

The HEI is open to engaging and recruiting individuals with entrepreneurial attitudes, behaviour and experience.

In the Entrepreneurial Teaching and Learning dimension the statement 'the HEI provides diverse formal learning opportunities to develop entrepreneurial mindsets and skill' is relevant here.

Recognising the need to systematise the desired change in mindsets and entrepreneurial behaviours in 2012/2013 the Institute started a formal programme of embedding the desired

behaviours and approaches within the academic programmes with oversight by the Academic Council.

- In 2012/2013 the Institute started Programmatic Reviews in each of its four schools. Drawing from the Institute's strategic plan which included Entrepreneurship as one of its three strategic themes it required all programmes to be restructured to contain some element of entrepreneurship.
- The Programmatic Review initiative was underpinned in 2014, when the Institute formalised its academic approach to the development of entrepreneurship education and graduate formation, by establishing a Working Group under the authority of the Academic Council. The Entrepreneurship Enterprise Working Group is a cross campus working group. Its activities have moved from general promotion of its objectives of encouraging cross institute academic developments in entrepreneurship education to an audit-type role ensuring course development and review includes entrepreneurship learning opportunities.
- The output of the Programmatic Reviews and the oversight of the Working Group is now bearing fruit with significant academic developments across the Schools in the Institute.
- In the School of Engineering entrepreneurship is embedded in assessment where tasks are enterprise enabling or tasks that require students to exhibit entrepreneurial skills and behaviours. The tools used are case studies, presentations, new business venture development, critical reflection etc. While the theme of entrepreneurship has been embedded across all programmes there have been specific developments including, for example, the development of a BSc in Engineering Entrepreneurship.
- In the School of Business and Humanities, a range of entrepreneurship modules have been embedded across all programmes including, Enterprise Development and Business Projects, Creativity For Innovation, Work Placement, Innovation and Entrepreneurship, Entrepreneurship and Economic Development, Creativity, Innovation and Teamwork, Systematic Innovation and Intrapreneurship, New Venture Finance, Entrepreneurship Theory and Practice and Life Skills for the Enterprising Graduate.
- The Schools of Business and Humanities and Engineering have combined with Bachelor in Engineering students designing a product and BA (Honours) in Accounting and Finance students developing the necessary business aspects.
- In the School of Health and Science Agricultural Entrepreneurship has been included on the BSc (Honours) in Agriculture as part of the School's overall adoption of entrepreneurship learning outcomes into its programmes.
- As with the three other Schools, Informatics and Creative Arts has embedded entrepreneurship into its programmes and developed modules specifically designed to develop entrepreneurial behaviours including Workshop Studies, Advanced Editing (in conjunction with a company as a client) and Entrepreneurship for the Creative Industries.

The HEI invests in staff development to support its entrepreneurial agenda.

Incentives and rewards are given to staff who actively support the entrepreneurial agenda.

Dundalk Institute of Technology has individually and in conjunction with Dublin City University established a robust programme of lecturer learning and teaching development.

- DkIT itself has established a successful MA in Learning and Teaching (MALT). This programme is available to all DkIT staff. The programme, which was established in 2010, has made 47 awards (38 MA's and 9 Certificates in Learning and teaching) and currently has 37 staff enrolled on the programme. The impact of this programme on teaching and learning has been profound with teaching and learning assessment strategies now incorporated in all programmes. The transformative effect has been recognised at a National level by the National Forum for the Enhancement of Teaching and Learning commending the MALT team for 'Facilitating Systemic Cultural Change'.
- One of the outputs of the ACE programme was a Masters level module for Educators in 'Enterprise and Entrepreneurial Learning'. This module is currently offered and validated by Dublin City University and members of staff of DkIT participate in the programme.

Impacts

The impact of Dundalk Institute of Technology's approach to entrepreneurship and its effects on teaching and learning have been examined in a series of evaluations. First, the Institute has undergone independent peer Institutional Review as part of the national academic quality control processes. Second, an independent review of the ACE project was undertaken as part of a national evaluation of the Strategic Innovation Fund. The independent evaluation was also complemented by a later internal evaluation of the ACE project upon its completion. Third, the evaluation of performance against objectives set in the strategic dialogue process has been undertaken twice in the last three years and on both cases the results have been published.

- Within the Institutional Review process noted above, the independent panel can choose to make 'commendation(s)' where particularly good practice(s) is/are observed. The last Institutional Review was in 2009 in which the Institute received two relevant commendations.
 - The panel commends the Institute's excellent relationship with local industry and business.
 - The panel commends the Institute on the comprehensive manner in which it has managed the transition to the definition and use of learning outcomes.
- As was noted above, the ACE project, although only one component of the initiatives DkIT has taken to develop entrepreneurial mindsets and behaviours in the Institute, is, nonetheless, an important component of its activities. The project has been externally and internally evaluated.

- The project was funded in a second cycle (in 2008) of Strategic Innovation Fund funding and therefore had only just begun when an external independent review of the Fund was undertaken in 2010. Nonetheless the reviewer noted that it was ‘An impressive project that appears to be well regarded in the private sector’.
- The ACE project was internally evaluated upon its completion in 2012. The evaluation provided qualitative and quantitative measures of the level of activity and impact generated by the project. The full evaluation can be found at http://www.ceen.ie/DatabaseDocs/lib_2734407_aceevaluationreport1.pdf.

Amongst the main findings of the evaluation were a higher degree of awareness of entrepreneurship and its importance, a high level of cross faculty approaches to teaching entrepreneurship and an acknowledgement that entrepreneurship culture in the partnering institutions had changed.

- The third source of evaluation of Dundalk Institute of Technology’s impact in the area of entrepreneurial behaviours and activities is the output from the performance evaluation in the strategic dialogue process noted previously. To date there have been two rounds of evaluation; 2014 and 2016. While these performance reports are extensive some key achievements stand out.
 - Quantitative targets that were set for the number of representations on business and industry committees, number of publications and promotional events etc. were exceeded and in fact the 2016 targets had already been surpassed by mid 2015.
 - Quantitative targets were set for the number of entrepreneurs/start-ups supported and occupancy in incubator facilities. The target relating to the number of entrepreneurs has been met and in fact, the 2016 target had already been surpassed by mid 2015.
 - A specific objective of ‘encourage an entrepreneurship culture’ had set a number of targets including student enterprise interns, student-led extra-curricular activities and the President’s Awards for enterprising students. The targets were met and in fact, the 2016 targets were surpassed by mid 2015.
 - The performance review notes that ‘Overall, there is extensive evidence of work in this space, with several tangible results so far’.

Lessons Learned

As noted at the beginning of this case study, it is a truism that ‘culture beats strategy’. This implies that if strategies are to be effective they must be supported by appropriate behaviours, attitudes and cultural pre-disposition. This can only take place through a combination of consistent messaging and leadership together with activities appropriate to the support of the messaging and leadership behaviours. In the case of Dundalk Institute of Technology, the following appear to be the lessons learned.

- Change does not happen overnight and in this Institute there has been a long journey during which key developments took place which led to a belief on the part of staff

and students that entrepreneurship was not a short term ‘fad’ but was core to the Institute.

- There have been a range of high level and cross-Institute initiatives that consistently reinforce the message that entrepreneurship is part of the everyday business of the Institute.
- Embedding entrepreneurship in the core business of the Institute has been approached strategically through the establishment of the Academic Council Working Group and its oversight of programme re-development to include entrepreneurship in the teaching, learning and assessment strategies for each programme.
- External recognition of the work of the Institute in entrepreneurship has provided valorisation. This has come in the form of the selection of the Institute for Case Studies such as this as well as validation through review processes.

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