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Oportunidades en EE (espíritu emprendedor en educación): el caso de una innovadora escuela secundaria en Irlanda

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Abstract

The research paper highlights a robust model of a pilot Entrepreneurship Education (EE) programme for the new junior cycle curriculum, capable of extended implementation across all years of second level education. The research focus was on how an EE programme could be credibly devised, given the fragmented history of its emergence over recent years. The study identified the key elements of its conceptualisation and structure, to implement it as an integral and holistic contribution to a sustainable EE input. A pilot programme in a flagship school- Innovation, Creativity and Entrepreneurship (ICE) which received the full endorsement of the National Council for Curriculum and Assessment body (NCCA) was examined. Semi-structured interviews took place with all the key designers and implementers of ICE. The findings suggest a novel and credible way to integrate EE into the full curriculum, something unprecedented in Ireland. Necessary supports to achieve this were acknowledged: the link between school culture and an innovative disposition; national validation through the NCCA; links with a diversity of enabling partners; credible CPD and training opportunities; and finally, an objective assessment method for the programme. The study highlights the crucial importance of a broad yet precise definition of EE in line with Irish and EU parameters that will lead to credible learning outcomes for individual students, the economy and society as a whole.

Resumen

Esta ponencia resalta un modelo piloto de espíritu emprendedor en el campo de la educación para el Nuevo curriculum del junior cycle (programa para alumnos de secundaria del primer ciclo), cuya implementación podría prolongarse hasta el Segundo ciclo de la secundaria. Esta investigación se centra en una concepción creíble, considerando el modo fragmentado de su aparición en años recientes. El estudio identifica los elementos claves de su conceptualización y estructura para su implementación de una manera integral y holística, que conduzca a un aporte sostenible en el espíritu emprendedor (EE). Un modelo piloto para una escuela insignia - Innovación, creatividad y espíritu emprendedor (ICE) - que ha recibido el completo apoyo de National Council for Curriculum and Assessment body (NCCA) fue examinado. Se llevaron a cabo entrevistas parcialmente estructuradas con los principales diseñadores del ICE. Los resultados sugieren un modo novedoso y creíble de integrar EE en el curriculum, algo completamente nuevo y original en Irlanda. La importancia de ciertos lazos/vínculos fue reconocida: el vínculo entre la cultura escolar y la disposición innovadora, autenticación a través del NCCA, contactos con ciertos posibles socios, oportunidades reales de entrenamiento, y finalmente, un método objetivo de evaluación del programa. Este estudio enfatiza la importancia de una amplia pero precisa definición de EE en línea con los parámetros irlandeses y europeos que nos conducirán a obtener resultados creíbles para los estudiantes, la economía y la sociedad en su conjunto

Keywords

Entrepreneurship education; Curriculum change; Innovation; Creativity; Junior Cycle; Enterprise

Palabras clave

Educación de espíritu emprendedor; Cambio curricular; Innovación; Creatividad; Primer ciclo; Empresa

1. Introduction. An innovate school

It is contextually important to make explicit the authors' understanding of entrepreneurship. We use the interpretation generated by the 2011 EU Conference on Enabling Teachers as a Critical Success Factor in EE more commonly referred to as the Budapest Agenda. This defines entrepreneurship as

An individual's ability to turn ideas into action. It includes creativity, innovation, showing initiative and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives.

(EU Budapest Agenda, 2011, p.8).

Such a definition encapsulates a holistic interpretation of entrepreneurship that includes everyone in day-to-day life at home and in society, employees in the context of their work and by enabling them to seize opportunities, and provides a foundation for entrepreneurs establishing a social or commercial activity. Recent thinking has shown that narrow definitions based around preparing learners for the world of business may place limitations on both learners and the teaching community. Instead, a broader definition which sees EE as a process through which learners acquire a broad set of competencies can bring greater individual, social and economic benefits since the competencies acquired lend themselves to application in every aspect of people's lives (EU Budapest Agenda, 2011, p.8).

The deployment of the ICE programme in the school where we conducted our study is consistent with a history of entrepreneurial endeavours undertaken by them. Peter Drucker once wrote that innovation is the driving force of entrepreneurship "*the goal of entrepreneurship being purposeful, focused change, in either a social or economic context*" (1998, p.149). Innovation encompasses something original, something new and important, in whatever environment it is delivered (Frankelius, 2009). The mission statement of the school is; *Innovation through Education*, which reflects a tradition of multiple achievements in diverse areas, borne out of a fundamental drive for students' holistic development.

Today, technology is a significant driver of change, and it plays an important role in educational innovation in terms of both design and delivery (Kuboni et al, 2014). Although other schools are in closer proximity to Dell's European Headquarters, situated in Limerick, this school demonstrated their entrepreneurial prowess by negotiating a sophisticated deal with them. This deal included for the first time in an Irish second level school, the provision of laptops for all students. It also facilitated the implementation of a jointly engineered pioneering educational software platform to enhance student learning. Due to the success of the partnership, founder and global CEO, Michael Dell, has personally visited the school to witness for himself, this innovation in action.

As with all second level schools in Ireland, this school operates in an educational arena undergoing significant reform at both junior and senior cycles. Conceptually, seismic progress has been achieved towards curriculum redesign at a national level, but much ambiguity and uncertainty remains as to how these reforms will manifest themselves in practice. Whilst it appears that most schools are content with awaiting further governmental direction, it has again used this ambiguity to its advantage. It has led the way on a pilot scheme that will ensure, for the first time, the provision of EE in each year of the student's life at second level. Such provision tallies with aspirations set forth in Section 2.1 of the EU Budapest Agenda, where an entrepreneurial school is one that possesses a clear vision and policy for EE, and expresses it as an entitlement for all pupils.

Within the broader context afforded to contemporary interpretations of entrepreneurship, ample validation exists of its innovative disposition, evidenced in recent achievements such as progression to the final stages of Ireland's Junior Dragons' Den competition; the fact it was the first school in Ireland to introduce e-text books back in 2006; and they had no fewer than six projects shortlisted for the Irish 2014 Web design awards. Other national achievements include a recent film-making award where five students won an educational trip to the US following their

graphic portrayal of a significant Irish historical event, at the inaugural Irish Congress of Trade Unions' annual Youth for Decent Work Video Awards. In May 2014, one student won a top international award for mechanical engineering at the Los Angeles International Science Fair.

2. Limitations of EE models in Irish second level schools to date

In Ireland, curriculum provision has had a predominant bias toward a public, final exam-focus, involving the study of many subjects (OECD Talis Report, 2009). At junior cycle level, ages 12-15, students can study up to ten or eleven subjects over a three year period, with only a small number having continuous assessment, e.g. in the languages and technology areas. At senior cycle level, ages 16-18, students can study up to seven or eight subjects or more, with high stakes attached to grade achievement, determining entry to university and further education sectors via a points entry system.

The significant exception to this is Transition Year (TY) which has been in operation since the early 1980s. This is a programme offered over the course of one year in many schools between junior and senior cycle for 15-16 year olds. This is treated like a gap year where there are no public examinations; studies are predominantly designed and assessed locally for the most part. The year is an opportunity to interact with varied teaching and learning stimuli. The preponderance of didactic teaching, so evident at junior and senior cycles (OECD Talis Report, 2009), yields to a wide mix of methods embracing constructivist and social constructivist experiences.

Although schools have discretion in devising a curriculum programme suitable for the aims of TY, in practice however, this has largely meant that core subjects like Mathematics, English and Irish dominate the agenda. In this context, the development of non-core subjects such as EE have habitually lagged, despite sporadic successes in individual schools. Potential exists for innovation around learning in TY, centred around freedom gained through the removal of a preoccupation with grade achievement in public examinations. The primary focus is on the cultivation of student skills, and TY provides teachers with an opportunity to explore their professional capacities, by offering them the opportunity to design and deliver, a diverse range of teaching and learning experiences.

Since TY's inception, a course in EE has been a regular feature of its curriculum, linked with an explicit experience called 'Mini-Company', where students devise their own product or service for profit generation. Almost invariably, it was the Business teacher who was called upon to lead this endeavour. The Home Economics or Technology teachers could also be called upon. (Birdthistle et al, 2007). In the context of a typically simplistic design, it has been a case of selecting teachers who could contribute to the 'production' of some item for manufacture and sale. Consequently, the construction of EE was for the most part based on a distinctly business oriented model, embracing a very narrow definition of EE and ignoring the more holistic elements as identified at the EU Budapest Conference. The traditional deployment of TY EE therefore was guided by expedient, utilitarian considerations. Nor was it supported by any systematic training or CPD for teachers.

Outside of the TY experience, the provision of EE modules called 'Enterprise Education' was only provided to a minority of students participating in Leaving Certificate Applied (LCA) and Leaving Certificate Vocational Programmes (LCVP). These programmes were limited in provision to a minority of students undertaking alternatives to the mainstream academic Leaving Certificate (LC) programme. These modules were marginalised in a culture dominated by a focus on academic grade achievement in order to accumulate the necessary points for entry to the third level education system. The marginalisation of these modules left Enterprise Education isolated amidst the 'important' subject disciplinary studies.

3. New frontiers, curriculum change

In 2012, the Irish Department of Education and Skills (DES) published a new policy called 'A Framework for Junior Cycle', a recalibration of the junior cycle curriculum. This marked a significant change in policy from what had been in place since 1922 when Ireland first became an independent sovereign state. For over 90 years, for those students who went to second level education, the three year junior cycle was a period of intense exam preparation. A high number of subjects were tested in a national public exam called the Intermediate Certificate since renamed the Junior Certificate. The primary emphasis was on an end-of-cycle written examination, and grades achieved in that exam. This system was characterised by high levels of didactic teaching; a focus on accumulation of knowledge; rehearsal through completion of past-paper exam questions and a strong formality in the classroom where questioning was neither emphasised nor encouraged. Didactic teaching and rote learning leant itself towards developing compliant, passive and non-questioning students (Garavan et al, 2010; OECD Talis Report, 2009). Value and attainment in education was measured by the level of grades achieved in public examinations. This originated in a mainly agricultural and rural economy, largely unconnected with the wider world. It was not however, a robust or sufficiently dynamic system of education to foster entrepreneurial adaptation in a fast-changing social and economic world.

Informally, individual schools and teachers may have broadened their pedagogical approaches in line with growing insights from the world of education, psychology and other disciplines, but the system itself, with its end-of-cycle exam preoccupation, has endured to this day. Some progression along the way has taken place. The adoption of new insights into teaching and learning; the presence of more informed younger teachers and greater uptake of postgraduate education by teachers themselves, have all contributed to informal variations and the embrace of a more integrated approach to teaching and learning methodologies. These isolated improvements have been hampered by institutional inertia and engrained teaching practices highlighting the need for system-wide change. The impact of social and economic movements in the world at large, shifting changes in expectations of society, parents, teachers and students themselves, have incrementally brought about the conditions for change that are now evident in the 2012 Framework for Junior Cycle Change. This represents a significant shift in thinking, policy and provision at government level. The status quo of teachers and students being passive agents within a national 'one size fits all' curriculum was no longer tenable. This new approach to second level education offers an unprecedented opportunity for systemic autonomy at national and local levels. Under the new framework, the student is clearly identified as being at the centre of learning. Her/his growth is expressly highlighted as a process of continuous engagement with the teaching and learning environment as part of ongoing life development. The framework document asserts that:

The quality of students' engagement with the school; with teachers and with learning is central to developing the skills and competences that are necessary for students in today's world, and that ongoing assessment of students' progress and achievement over time, rather than the use of a once-off-measure in the form of a final examination, can improve the quality of learning outcomes across the three years of lower secondary education.

(DES: A Framework for Junior Cycle, 2012, p.1)

The new approach adopts eight principles by which the framework is constructed. These are based on a holistic, cross-disciplinary and integrated approach to teaching and learning. Table 1. below outlines these eight principles.

Table 1.
Eight principles of the new junior cycle framework

1	Quality of education – high expectations and pursuit of excellent.
2	Wellbeing – all dimensions of the person in a collective context.
3	Creativity and innovation – open pedagogical approaches to teaching and learning.
4	Choice and flexibility – offering a variety of learning experiences.
5	Inclusive education – openness to a diverse range of people and experiences.
6	Engagement and participation – pedagogy will promote this.
7	Continuity and development – recognition of and structuring of incremental learning.
8	Learning to learn – preparation for self-agency and contingency for the future.

Source: (DES: A Framework for Junior Cycle, p.4)

The new framework cultivates a multi-disciplinary pedagogical approach expressed within twenty four statements of learning for the whole junior cycle programme. It enables a school, through a balanced provision of subject choice and judicious provision of bespoke short courses, tailored to student requirements, to approach the achievement of those statements of learning in a diverse and dynamic way. The national curriculum body (NCCA) provides security through an overall structure within which schools can maximise their creative conceptualisation and delivery of these short courses. In effect, individual schools will now have significant levels of discretion in the design and structuring of their curriculum in contrast to the past.

4. Progression in schools – overview of the ICE programme

The ICE programme was purposefully constructed to consciously embody the school's overall vision of 'Innovation through Education'. The curriculum reform outlined in the previous section heralded an entrepreneurial opportunity that was too appealing for the school to ignore. When we interviewed the school's principal, he advised us that the fundamental question he enquires of all his staff is whether they want to be leaders, or whether they want to be followers? This disposition towards entrepreneurship and innovation feeds through to the fundamental vision of i.e. the empowerment of student growth towards leadership and success, in whatever arena they choose to apply themselves.

In terms of programme design, very careful consideration was given to time and resource allocation. A similar degree of consideration was given to both the overall *raison d'être* and *modus operandi* of the programme. The design committee, made up of teachers and school management, agreed on the following set of criteria as non- negotiable and essential parameters for ICE:

- a) The programme had to have significant relevance to the junior and senior cycle.
- b) It had to be exciting, interesting, and different.
- c) Although not readily available, an objective measurement mechanism for ICE must be employed as quickly as possible to ensure that students are achieving reasonable levels to warrant progression.
- d) It had to be capable of being taken seriously i.e. that it could not be interpreted as a marginalised programme in the same manner that EE had previously been treated in TY.

Regarding the last point above, a suitable litmus test as to a school's commitment to a particular subject can be measured in terms of its pervasiveness in the timetable, and also in general school discourse. The EU Budapest Agenda (2011) postulates that nothing less than a sea change in teaching methods is required in the case of EE, to increase its potency. Section 2.1 of the report states that in order to establish EE as a clear and defined entitlement for all pupils, a range of strategies and procedures can be used, e.g. an agreed list of annual activities, specified timetabling and the use of student diaries etc. EE should also appear through explicit references in the school's curriculum policy. The ICE portfolio of activities includes a large

number of cross-curricular and extra-curricular experiential activities, in the areas listed below. These are aimed at exploiting any opportunity to deploy EE as a suitable subject for enhancing student development.

- Idea Development
- Project Management
- Market Research
- Effective Communication and interpersonal skills
- Personal and team Leadership
- Public Speaking
- Decision Making
- Conflict Management
- Time Management
- Marketing and Selling
- Financial Management
- Community Impact
- Greater understanding of self and enhanced confidence

The EU Budapest (2011) report identifies that the entrepreneurial school should explicitly identify time for EE in the school timetable. This should include time within the 'normal' curriculum across a broad range of subject areas. Also, opportunities should be created through collapsing the timetable, operating 'themed' sessions and, in addition, a commitment to running extra-curricular activities. Table 2 below demonstrates the impact of the implementation of the ICE programme regarding the permeation of the timetable with EE.

Table 2.
Permeation of EE in CC following the Introduction of ICE

Year	Weekly Allocated Periods for EE	Allocated Periods for EE Pre ICE	Variance
1	3	0	+3
2	3	0	+3
3	3	0	+3
TY	9	5	+4
5	5	0	+5
Total	23	5	+18

Budapest also set forth a vision for fostering self-regulation in student learning. Guidelines provided suggest activities requiring decision-making and problem-solving skills, team work, and involvement in 'supported' risk-taking, along with learning activities that incorporate the possibility of failure. Case studies of successful entrepreneurs, intrapreneurs and successful organisations tend to promote the ability to view failure as an expected event and a learning opportunity (Cope, 2011). The ICE programme allocates significant time for student reflection fostering an environment where experiential learning can be assimilated by paying homage to both successes as well as failures.

The report also highlighted that EE activities should be adequately varied to allow for the preferred learning styles of different students to emerge. The subjective interpretation of the teachers directly involved in ICE supports the argument that traditional teaching methods are unsuitable for EE (Kirby, 2004). There a number of reasons for this. For example, entrepreneurs require a wider portfolio of skills and a more significant knowledge base, necessary to support the start-up stage as well as the ongoing leadership of an organisation. In contrast, most employees only need a relatively narrow specialisation in the limited field of knowledge demanded by their particular job (Matlay, 2012).

Experiential learning environments as such as ICE create a holistic and integrative perspective on learning that combines experience, perception, cognition and behaviour (Kolb, 1984). This type of approach is in distinct contrast to a didactic teaching environment, where the communication flow is distinctly one directional. When interviewed, Teacher #1 who been involved in the design and delivery from the outset, said that “*I started off thinking I could teach ICE using my normal approach, but very quickly I realised this would not work*”. He went on to say that “*the ICE programme required me to become a facilitator and not a teacher*”. He also advised that his self-concept in the classroom had changed for the better now as a direct result, as he could see himself as a mentor or a coach, or as Teacher #3 put it, “*I have evolved from being a transmitter to being a transformer*”.

An emphasis on active learning and the provision of new experiences for students outside of the classroom represents a fundamental transition away from traditional pedagogical approaches. Section 1.3 of the EU Budapest Agenda (2011) posits that teachers need to be equipped with the right skills, knowledge and attitudes, to be able to provide their students with the new curriculum, pedagogies and learning environments that they will need if they are to acquire entrepreneurial competencies, in a school environment conducive to entrepreneurship itself. Section 1.4 of the report proceeds with broad guidelines as to the effective criteria of teachers for EE. The researchers found strong concurrence towards alignment with these guidelines in the school.

1. Improving teacher competences, making sure that teachers possess the necessary pedagogical skills to teach their own subjects and the transversal key competences, including in heterogeneous classes and making the best use of ICT.
2. Improving the quality of Initial Teacher Education (ITE) which should provide a Higher Education qualification and should balance research-based studies and teaching practice.
3. Ensuring the quality of teacher educators (teacher trainers) who should have solid practical teaching experience, good teaching competences and be of a high academic standard.
4. Promoting professional values and attitudes in the teaching profession where teachers adopt a culture of reflective practice, undertake autonomous learning, engage with research, and collaborate extensively with colleagues.

If the thrust of ICE is a rebuff of traditional and didactic modes of teaching enterprise for business creation, the interviewees were interested in understanding what the school's ethos for the new programme was. In contrast to historical methods that focused on mainly transactional elements of enterprise creation, ICE instead promotes the creation of an entrepreneurial mindset, where students achieve a range of appropriate behaviours, skills and attributes, individually and collectively to empower them to create, manage and enjoy change and innovation. ICE acts as a key facilitator of the student's cognitive and social development by exposing them to situations that allow for an experiential self-exploration of entrepreneurial interests and talents. The programme provides an appropriate balance of support and challenge, fostering greater self-efficacy through the management of complex situations and problem solving in adversity and uncertainty. These fundamental experiential aspects of the programme are seen as pivotal to character development.

When we interviewed the school's principal, he was adamant that any attempt to limit the scope of the programme to enterprise or business creation would be to effectively “*dumb down*” or diminish the holistic potential for the student's overall development that an entrepreneurial programme can offer. When Teacher #2 who was involved in the design of ICE was interviewed for this study, he advised that a central concern when formulating the programme was not to imprison the scope of it to a constrained concentration on business start-up “*when so many of the skills, particularly soft skills such as communication and interpersonal skills are both transferrable and essential for aspects of life, and not just for business start-up*”. Such openness promotes an egalitarian homogeneity with all other subjects taught in the school. The distinctly humanistic approach to the design and delivery of ICE appears to have had a unifying effect in the school according to Teacher #2 and has created what he described as a “*new atmosphere*”

in the staff room". Subjects are now seen as complementary and mutually agreeable, and the ICE programme itself is therefore becoming a catalyst of greater co-operation and mutual respect amongst teaching staff, as well as students in the school.

The final criteria for the course made reference to the need for objective grading to facilitate decision making regarding progression on the programme. That issue was going to be problematic from the outset. The school however has embarked on being active participants in developing the EU Grading Soft Skills (GRASS) Programme; a 3-year research project financially supported by the EU. It focuses on representing soft skills of learners of various ages and at different levels of education in a measurable way, so that these skills can become the subject of formal validation and recognition. The project is being developed with the support of the Lifelong Learning Programme (LLP) of the EU, the flagship European funding programme in the field of education and training. The key objective of LLP is to enable individuals at all stages of their lives to pursue stimulating learning opportunities across Europe. The project has officially started since Jan 2014, and once again the school in question is at the forefront of such an endeavour.

5. Conclusion

The qualitative nature of this study embodies a three tier examination of EE. Whilst the primary focus is centred on the efficacy of the ICE pilot programme in the setting of a particular school, this study is positioned within a time of macro-environmental reforms within Irish education. This is in turn set against a backdrop of contemporary EU efforts to improve and expand EE across Europe. There are two principal conclusions from our study. Firstly, although the ICE programme is in its infancy, the authors looked at triangulation to validate the efficacy of the programme hitherto. This is a method used by qualitative researchers to establish validity in their studies, by analyzing research questions from multiple perspectives (Cohen et al, 2013). This type of approach "*adds rigour, breadth and depth to any investigation*" (Denzin and Lincoln, 2011, p.188). In judging the effectiveness of ICE, positive validation has been provided of same by way of the subjective interpretation of the success of the programme through an analysis of teacher interviews, and also in the various accolades the school has achieved and continues to receive.

The second conclusion however is that ICE cannot succeed in isolation despite the best efforts of the school that we looked at. The sustainability of the programme and the overall development of EE in Ireland depends on the successful continuation of curriculum reform. The road ahead is anything but assured, as for instance, teaching unions have highlighted areas of significant concern resulting in the manifestation of resistance. These concerns include the efficacy of proposed assessment methods; the impact of subject limitations on smaller schools; and the varying ability of schools to implement the changes resultant from levels of middle management posts that have been lost through a promotions moratorium within the school sector. Funding and resources underpin several of their concerns, including a lack of investment into technology (Irish Examiner Newspaper, 18th December 2013). Regarding the latter point, it is important to reflect that the school's ability to provide technology to its students in this study is a result of a unique and stand-alone partnership with a global technology provider, and this initiative will not be available to all schools in Ireland.

Even if negotiations with teaching unions are ultimately successful, the extrapolation of programmes such as ICE to the masses is not a given. Under the proposed new national structure within which ICE is currently being piloted, individual schools would retain creative licence regarding subject matter choice, as long as the courses adhere to NCCA guidelines around rationale, structure and assessment. There is neither compulsion nor inducement for schools to favour EE. There is also a key dependency on sustained pressure being maintained at an EU level to ensure that aspirations espoused in the EU Budapest Report (2011), translate into Irish educational strategy.

Despite early momentum achieved in response to the Budapest Agenda, a question has been asked if the European agenda is abating, possibly in response to improving socio-economic conditions where complacency may lead to a shift in focus to more traditional subjects to fulfil staffing needs of the business economy. McLaren and Farahmandpur, (2001) speak of the impact of the globalisation of capitalism as an exacerbating factor in the continued compression of education, to primarily serve the needs of industry. They speak of education in terms of being increasingly directed to servicing the requirements of labour demands. In times of depressed economic conditions where existing labour opportunities are lessened, we believe it to be understandable that an entrepreneurship focus is high. When unemployment falls, the focus habitually reverts to supplying industry with skills required for its sustainability.

The above scenario is currently evident in Ireland and the UK, as these economies at the time of writing, continue to recover from economic recession. Taylor, (2011) highlights the impact of shortages amongst skilled and trades-people in the UK as a significant threat to ongoing economic viability. The same author cites an inability to meet customer needs and the excessive impact on existing employees as catalysts for the depletion of morale and staff retention resultant from issues pertaining to skills shortages. The largest employers group in Ireland - The Irish Business and Employers' Confederation (IBEC) published a medium range plan to 2016 in 2011. Their report focused on member expectations for revenue, employment and investment in the period up to 2016. Skills shortages were cited in their report as a significant constraint for many Irish firms, and they called for more government focus on producing expertise in mainly technical areas such as IT and Engineering (IBEC, 2011). This natural tension in the short term may well focus minds away from EE. In the longer term however, this may lead to a circularity of issues. For example, if those very industries that are seeking specific technical skills, locate to a lower labour cost destination in the future, any move away now from EE would create a dearth in the availability of EE savvy graduates, and a surplus of technical savvy graduates who will not necessarily have the business acumen to either transfer their skillsets to a different context, or to indeed commence a business venture on their own. Therefore, any failure to promote a stronger focus on EE now, could well have serious and unintended economic and social consequences into the future.

The relative success of ICE to date demonstrates that Ireland stands at a crossroads. The opportunity to develop EE lies to the fore, and programmes such as ICE prove that the new framework has the ability to shape innovative curriculum reform, which has potential for the extrapolation of EE to all schools nationally. It is fair to say, that Ireland's unique identity traditionally promoted a didactic and rote pedagogical approach to learning. This produced multiple generations of compliant and non-questioning students, graduates and workers alike. Whilst Ireland existed as mainly a rural economy unconnected with the wider world in the past, this was possibly appropriate for those times, but this is not a robust or sufficiently adaptive enough system of education to address a modern globalised world. For the first time in its history, a new second level framework offers unprecedented opportunity for EE to thrive as this study demonstrates. In conclusion, we argue that the success of ICE beckons Ireland once and for all, to turn its back on the didactic past. Based on this study, we propose the willing embrace of the spirit of the entrepreneurial school we investigated, that can foster generations of Irish graduates armed with holistic skills-sets that will in turn enhance both the European economy and society as a whole.

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