The 21st Century Graduate: Delivering a Tailored Approach to Social and Emotional Competency Training for Final Year Students to Enhance Graduate Attributes and Increase Employability

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Abstract

The Higher Education Authority recently reported an average drop-out rate of 16% for Irish third level students, which poses significant pedagogical and economic challenges across the educational sector and negatively impacts the Irish economy. With respect to tackling this issue, a considerable body of international research has identified a strong positive correlation between higher levels of emotional intelligence (EI) and increased levels of student engagement and academic attainment. A wealth of previous research has also shown that employers favour graduates who possess higher levels of EI, for example, Job Outlook Survey, 2008, therefore, increasing students’ levels of EI is also a viable means of improving graduate employment rates. Previous attempts to improve students’ emotional competencies have involved ‘whole school’ approaches, whereby generic EI skills development programmes are designed and delivered to all of the students in a given school or third level institute. As of yet, no attempt has been made to develop a range of programmes explicitly aimed at targeting specific populations of students. Therefore, this represents a significant gap in current knowledge. This research aims to conduct a comprehensive survey of employers and based on these findings and follow up qualitative interviews, a suite of educational modules will be developed that will specifically aim to enable students to develop key emotional strengths that are linked with academic and career success in their chosen field of study. It is anticipated that this will lead to reduced attrition rates and higher engagement levels and allow students to develop key abilities that will help them to improve their employment prospects. Employer engagement will be a critical aspect of this project and employers will be involved in student assessment, which will include practical workshop assessments, self-reflection via an e-portfolio and competency based interviews with employers and academic staff.

Keywords
Emotional intelligence, social and emotional competency training, tailored suite of educational modules, graduate attributes, employability, engagement, e-portfolio, self-reflection
Section 1 – Introduction and Motivation

Theorists claim that in the 20th century the “driving force of intelligence” was IQ but for the 21st century it will be emotional intelligence (Zeidner, Matthews and Roberts, 2004 p379). Previous research has confirmed that improving students’ emotional competencies leads to improved retention rates (e.g. Kingston, 2008; Carthy et al, 2013), and improved academic attainment (e.g. Durlak & Weissberg, 2005; Côté & Miners, 2006; Boyatzis & Saatcioglu, 2008). Previous research also confirms that higher levels of EI are positively correlated with increased career success (Cherniss, 2000; Lopes et al, 2006) and that although employers seek graduates with higher levels of emotional intelligence, they frequently believe that students lack such abilities (National Association of Colleges and Employers, 2008). Previous research by Carthy et al 2010 demonstrated that student emotional intelligence profiles vary across subject area i.e. that the emotional strengths and limitations that students possess, tend to differ according to the area of study that they are engaged with. However, previous studies which have involved providing third level students with coaching or classroom based activities aimed at helping them to increase their emotional competencies, have taken a ‘whole school’ approach, whereby all students were given the same form of intervention, regardless of their chosen field of study. No attempt has been made either in an Irish context, or internationally, to develop a tailored approach to the provision of EI coaching, such that individualised programmes are developed for use within specific academic disciplines. Phase 1 of this research involved a comprehensive survey of employers (n = 500) across five sectors of industry: engineering, science, IT/computing, social science and professional services. It sought to determine the key social and emotional competencies that they deemed important for graduates to possess when working in their organisations and the degree to which they believe graduates currently possess such competencies. Phase 2 will involve qualitative interviews with a random sample of employers across the five sectors. Both survey and interview data will be used to design and deliver a tailored suite of modules on emotional intelligence to final year students. These modules will aim to equip the students with key social and emotional skills and abilities that employers deem to be important elements of high performance and career success in their chosen disciplines.

2. Literature Review

2.1 What is emotional intelligence?
Stein and Book 2011 (p14) define emotional intelligence as “a set of skills that enables us to make our way in a complex world - the personal, social and survival aspects of overall intelligence, the elusive common sense and sensitivity that are essential to effective daily functioning”. These emotional and social skills collectively establish how well we perceive and express ourselves, develop and maintain social relationships, cope with challenges, and use emotional information in an effective and meaningful way. In recent decades, interest in examining emotional intelligence in the workplace has become more prominent and research has found EI to be the basis for an extensive range of critical personal and social competencies required in the workplace, for example, self-awareness, self-management, social awareness and relationship management skills, with one study finding that it accounts for 58% of job performance across all sectors of employment (Bradberry and Greaves, 2009).

2.2 Models of Emotional Intelligence

There are three commonly accepted models of emotional intelligence; trait, ability and mixed (Caruso, 2008 in Emmerling, Shanwal and Mandal). Trait emotional intelligence is at the lower end of personality hierarchies and according to Petrides (2010) consists of 15 facets, which are subsumed into four broad areas: well-being, self-control, emotionality and sociability. The Trait Emotional Intelligence Questionnaire (TEIQue) is a self-report measurement of EI which assesses each of these facets and is considered “compatible” with the subjective nature of emotions (Petrides, 2011 in Chamorro-Premuzic, Stumm and Furnham). The Ability model belongs in the domain of emotion related cognitive ability (Petrides, 2011). The Four Branch Model of Emotional Intelligence is an ability model which holds that emotional abilities lie across a “continuum”, some of which are at a lower level in terms of executive basic psychological functions and others which are more complex in terms of setting goals and self-management (Mayer, Salovey and Caruso, 2008). This model focuses on four branches of emotional intelligence: perceiving emotions, using emotions, understanding emotions and managing emotions, which it is assumed form an “emotional blueprint” to better understand and deal with important situations (Caruso, nd). The Bar-On mixed model of emotional intelligence assumes EI to consist of both trait and ability related constructs and presents five broad areas of functioning which are deemed related to life success: intrapersonal skills, interpersonal skills, adaptability scales, stress management scales and general mood. The Emotional Quotient Inventory (EQ-i) has been
instrumental in developing the Bar-On model and the model was originally operationalised by the EQ-i, but was revised in 2011 to the EQ-i 2.0 (Multi-Health Systems Inc), and adopts a self report means of measuring social and emotional behaviour (Bar-On, 2006). Boyatzis and Goleman developed the Emotional and Social Competency Inventory (ESCI) which is a framework of twelve competencies organised into four clusters: self-awareness, self-management, social awareness and relationship management (Boyatzis, 2007). The ESCI examines the relationship between behaviours that are “observable, recognizable and distinct” and measures behaviours that are key to effective performance (Boyatzis, 2007). A 360° instrument is utilised where others assess individuals and provide feedback on how they demonstrate key social and emotional competencies, thus making the ESCI applicable in diverse educational and employment contexts.

2.3 Emotional Intelligence, Graduate Attributes and Employability

It is recognised that the foundation of economic prosperity is based on a highly skilled and socially developed workforce (Organisation for Economic Co-operation and Development (OECD), 2013). It is agreed that there are multiple reasons why individuals decide to go to third level, however, research has demonstrated that for many, third level education is viewed as a pathway to a career. In a Sodexo University Lifestyle Survey, 73% of students stated that their primary motivation for going to university was to “improve” employment opportunities (Lowden, Hall, Elliot and Lewin, 2011). In 25 of the OECD countries, 80% of 15-19 year olds are still in education with the number of 20-29 year olds increasing substantially between 2009/2010 (OECD, 2012). In 2009, there were 42,500 new entrants in higher education in Ireland and it is predicted that this will increase to 65,000 in 2025 (National Strategy for Higher Education to 2030, (2011). Barrie 2008 divided graduate attributes into four distinct characteristics, (i) the important elements that students should learn, (ii) learning outcomes of a university education, (iii) graduates as contributors to society both as citizens and as workers and, (iv) graduates who will act as agents of social change in a dynamic and uncertain world. There is an expectation that students at the end of a degree programme will have developed discipline specific skills, attitudes, beliefs and values, together with generic skills, for example, communication (written and oral) skills (Chan, 2013). Politics and diversity have led to many higher education institutions becoming more corporate resulting in the need for them to develop students’ hard and soft skills, enhance competencies, knowledge, dispositions, attitudes and beliefs in order that graduates
can participate in a “global knowledge-based economy” (Chan, Brown and Ludlow, 2014: 2). Often, the transition phase from higher education to work life does not follow a clear and well-defined path and can be a challenging and problematic time for graduates as they often feel ill-prepared for the challenges and reality of employment (Dahlgren, Solbrekke, Karseth and Nyström 2014 in Billett, Harteis and Gruber).

In the University of Aberdeen, employability is embedded into all academic courses (Perkins, 2015) and four key graduate attribute areas are targeted for student skill development: academic excellence, critical thinking and effective thinking, learning and personal development and active citizenship (Baker, Pryor and Perkins, nd). The University has developed an Attribute based framework (ACHIEVE) which is a centralised website offering online resources to students which facilitates reflection on graduate attribute attainment, with the primary focus being on personal development planning. The STAR (Students Taking Active Roles) award recognises students taking responsibility and developing their graduate attributes and adopts a particular framework with distinctive elements. For example, use of an e-portfolio by students has a dual purpose of being a presentation and a reflective tool. Inclusion and participation of employers on the steering group and in developing the programme aids the development and maintenance of partnerships between the university and external stakeholders (Perkins and Fantom nd). Feedback is ongoing and sought from all stakeholders: students, employers, academics and university staff (Singer nd). A review in March 2015 demonstrated that STAR graduates doubled in 2013-2014 and a new “enhanced transcript” has been introduced to record not solely course modules and final grades, but also approved co-curricular activities such as the STAR Award (University of Aberdeen 2015).

2.4 The changing educational and employment landscape

In Ireland, the educational landscape is poised for significant change with the amalgamation of smaller institutes of technology to form larger technological universities. One such example in the Dublin region, is the amalgamation of ITB, ITT and DIT1 to form the Technological University for Dublin (TU4Dublin) (TU4Dublin Alliance 2012). The implementation plan for this new entity was published in December 2014 and placed specific emphasis on ‘fostering a new style of graduate’ and developing ‘curricula that embed the full

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range of generic attributes linked to employability and citizenship’. There will be a specific focus on the development of students’ emotional and social skills and it is envisaged that graduates will be ‘relationally competent to deal confidently with uncertainty; values driven, active and ethical; and, adaptive in complex and dynamic knowledge environments’. In this regard, the design of specifically tailored modules to enable students to develop key emotional competencies associated with academic and career success in their chosen field will ensure that TU4Dublin students are focused and work ready and will also ensure that attrition rates are minimised. The development of TU4Dublin presents a unique opportunity to embed social and emotional skills development in curricula that all students will follow.

2.5 Current research on EI, education and the workplace

Research is ongoing to develop a suite of educational modules that will specifically aim to enable students to develop key emotional strengths that are linked with career success in their chosen field of study. Previous attempts to improve students’ emotional competencies have involved ‘whole school’ approaches, whereby generic EI skills development programmes were designed and delivered to all of the students in a given school or third level institute (Durlak and Weissberg, 2005). A critical aspect of this course design will be the inclusion of employers from key sectors of industry in the research process and importantly in programme design, implementation, assessment and evaluation. This study will, in fact, constitute the first time that such an approach will have been taken, either in Ireland or elsewhere. The intended student group will be final year students, across multiple disciplines who are preparing to enter the workforce. They will be offered a unique EI training programme, tailored to the needs of employers in their chosen field of work. This research could potentially be of benefit to students across the educational landscape, ensuring that they develop key emotional and social skills that are valued by employers in their chosen field of study which will, in turn, be of benefit to the Irish economy. A key long-term aim of this project is to develop and expand on these domain specific modules to target students, other than final year students and to work with educators to embed the fundamental principles of emotional intelligence into the curriculum and into their teaching.
3. Methodology

3.1 Employer Survey

Phase 1 of this research involved a comprehensive survey of employers in key sectors of industry: engineering, information technology/computing, professional services (including business, finance, accounting, human resources, law and retail), science (including pharmaceutical and life) and social science. The rationale for selecting these five sectors was twofold; firstly undergraduate programmes in all of the five sectors are delivered in the Institute of Technology (IOT) sector in Dublin which will facilitate access to students for participation and, secondly many of the sectors are key growth industries within Ireland (Kilmartin 2010). A total sample of 500 employers (n = 500) was selected across the five sectors accessed from (i) the Irish Times lists of Top 100 companies in each sector within Ireland, (ii) the GradIreland website of graduate employers, (iii) online recruitment sites, (iv) attendance at careers fairs and (v) networks of industry links. Ten competencies were identified which were based on previous research completed in organisations by several theorists in the field. The ten competencies were (i) emotional self-awareness, (ii) emotional self-control, (iii) initiative, (iv) motivation, (v) adaptability, (vi) positive outlook, (vii) empathy, (viii) communication, (ix) conflict management and (x) teamwork. Employers were asked to rate each of the ten competencies in terms of importance within their organisation on a scale of ‘5 = Very Important’ to ‘1 = Not Important at all’. In addition, they were asked to rate the degree to which graduates currently entering their organisations possessed these ten competencies on a scale of ‘5 = Excellent’ to ‘1 = Poor’. An opportunity was given for employers to include additional comments or feedback.

3.2 Findings and Discussion

There were a total of 236 (n = 236) responses to the survey, Engineering 30 (n = 30), Information Technology/Computing 39 (n = 39), Professional Services 45 (n = 45), Science 22 (n = 22), Social Science 97 (n = 97). Two (n = 2) responses were unspecified and one (n = 1) indicated Sports Development. Preliminary findings demonstrated that for each of the ten competencies listed, the majority (over 50%) of employers responded that they were ‘very important’ for graduates to possess when working in their organisations and in excess of 70% of employers deemed competencies of motivation (n = 175) and teamwork (n = 167) as ‘very important’. In addition, over 85% of employers deemed all of the ten competencies as either ‘very important’ or ‘important’. Less than 1% of employers (n = 3) rated three of the ten
competencies, emotional self-awareness (n = 1), emotional self-control (n = 1) and initiative (n = 1) as ‘not important at all’ (see Figure 1). These initial findings would, therefore, concur with previous research discussed in this paper highlighting the need for social and emotional competency training for graduates in order to prepare them for the challenges of the workplace.

**Figure 1 – Employer rating of importance of ten social and emotional competencies**

<table>
<thead>
<tr>
<th>Competency</th>
<th>Total No. of Responses</th>
<th>Very Important (5) (n + %)</th>
<th>Important (4) (n + %)</th>
<th>Neutral (3) (n + %)</th>
<th>Somewhat Important (2) (n + %)</th>
<th>Not Important at all (1) (n + %)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional self-awareness</td>
<td>236</td>
<td>122 (51.69%)</td>
<td>92 (38.98%)</td>
<td>15 (6.36%)</td>
<td>6 (2.54%)</td>
<td>1 (0.42%)</td>
<td>236 (100%)</td>
</tr>
<tr>
<td>Emotional self-control</td>
<td>236</td>
<td>142 (60.17%)</td>
<td>77 (32.63%)</td>
<td>10 (4.24%)</td>
<td>6 (2.54%)</td>
<td>1 (0.42%)</td>
<td>236 (100%)</td>
</tr>
<tr>
<td>Initiative</td>
<td>235</td>
<td>138 (58.72%)</td>
<td>85 (36.17%)</td>
<td>3 (1.27%)</td>
<td>1 (0.43%)</td>
<td>0 (0.00%)</td>
<td>235 (100%)</td>
</tr>
<tr>
<td>Motivation</td>
<td>236</td>
<td>175 (74.15%)</td>
<td>57 (24.15%)</td>
<td>3 (1.27%)</td>
<td>1 (0.42%)</td>
<td>0 (0.00%)</td>
<td>236 (100%)</td>
</tr>
<tr>
<td>Adaptability</td>
<td>235</td>
<td>144 (61.28%)</td>
<td>84 (35.74%)</td>
<td>5 (2.13%)</td>
<td>2 (0.85%)</td>
<td>0 (0.00%)</td>
<td>235 (100%)</td>
</tr>
<tr>
<td>Positive Outlook</td>
<td>235</td>
<td>148 (62.98%)</td>
<td>78 (33.19%)</td>
<td>7 (2.98%)</td>
<td>2 (0.85%)</td>
<td>0 (0.00%)</td>
<td>235 (100%)</td>
</tr>
<tr>
<td>Empathy</td>
<td>235</td>
<td>112 (47.66%)</td>
<td>91 (38.72%)</td>
<td>26 (11.06%)</td>
<td>6 (2.55%)</td>
<td>0 (0.00%)</td>
<td>235 (100%)</td>
</tr>
<tr>
<td>Communication</td>
<td>235</td>
<td>164 (69.79%)</td>
<td>61 (25.96%)</td>
<td>8 (3.40%)</td>
<td>2 (0.85%)</td>
<td>0 (0.00%)</td>
<td>235 (100%)</td>
</tr>
<tr>
<td>Conflict Management</td>
<td>235</td>
<td>108 (45.96%)</td>
<td>97 (41.28%)</td>
<td>22 (9.36%)</td>
<td>8 (3.40%)</td>
<td>0 (0.00%)</td>
<td>235 (100%)</td>
</tr>
<tr>
<td>Teamwork</td>
<td>235</td>
<td>167 (71.06%)</td>
<td>61 (25.96%)</td>
<td>7 (2.98%)</td>
<td>0 (0.00%)</td>
<td>0 (0.00%)</td>
<td>235 (100%)</td>
</tr>
</tbody>
</table>

Employers were then asked to rate, for each of the ten competencies the typical level of competence demonstrated by graduates who are currently entering their organisation. It is interesting to note that less than 14% of employers rated the current level of competence among graduates as being ‘excellent’, with 13.04% (n = 30) stating ‘excellent’ in terms of the competencies ‘motivation’ and 13.85% (n = 32) in terms of ‘teamwork’. The majority of employers rated as ‘good’ the typical level of competence demonstrated by graduates across seven of the competencies and a high percentage 36.36% (n = 84) rated the typical level of competence in ‘conflict management’ as ‘fair’ among graduates. Between 1% and 9% of employers rated current levels of competence across all ten competencies as ‘poor’ among current graduates which potentially highlights a competency deficit among graduates and a clear need for training in these areas (see Figure 2).
### Figure 2 – Employer rating of current level of competencies in graduates

<table>
<thead>
<tr>
<th>Competency</th>
<th>Total No. of Responses</th>
<th>Excellent (n + %)</th>
<th>Very Good (n + %)</th>
<th>Good (n + %)</th>
<th>Fair (n + %)</th>
<th>Poor (n + %)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional self-awareness</td>
<td>233</td>
<td>4</td>
<td>60</td>
<td>102</td>
<td>57</td>
<td>10</td>
<td>233</td>
</tr>
<tr>
<td>Emotional self-control</td>
<td>230</td>
<td>9</td>
<td>76</td>
<td>101</td>
<td>37</td>
<td>7</td>
<td>230</td>
</tr>
<tr>
<td>Initiative</td>
<td>231</td>
<td>19</td>
<td>70</td>
<td>81</td>
<td>49</td>
<td>12</td>
<td>231</td>
</tr>
<tr>
<td>Motivation</td>
<td>230</td>
<td>30</td>
<td>92</td>
<td>77</td>
<td>27</td>
<td>4</td>
<td>230</td>
</tr>
<tr>
<td>Adaptability</td>
<td>230</td>
<td>19</td>
<td>86</td>
<td>81</td>
<td>40</td>
<td>4</td>
<td>230</td>
</tr>
<tr>
<td>Positive Outlook</td>
<td>232</td>
<td>23</td>
<td>77</td>
<td>88</td>
<td>41</td>
<td>3</td>
<td>232</td>
</tr>
<tr>
<td>Empathy</td>
<td>230</td>
<td>18</td>
<td>65</td>
<td>82</td>
<td>51</td>
<td>14</td>
<td>230</td>
</tr>
<tr>
<td>Communication</td>
<td>231</td>
<td>16</td>
<td>77</td>
<td>85</td>
<td>48</td>
<td>5</td>
<td>231</td>
</tr>
<tr>
<td>Conflict Management</td>
<td>231</td>
<td>7</td>
<td>36</td>
<td>84</td>
<td>84</td>
<td>20</td>
<td>231</td>
</tr>
<tr>
<td>Teamwork</td>
<td>231</td>
<td>32</td>
<td>103</td>
<td>77</td>
<td>17</td>
<td>2</td>
<td>231</td>
</tr>
</tbody>
</table>

Figure 3 provides a graph to illustrate the mean employer ratings of all ten competencies with 5 = ‘very important’, 4 = ‘important’, 3 = ‘neutral’, 2 = ‘somewhat important’ and 1 = ‘not important at all’.

### Figure 3 – Mean employer rating of importance of competencies across five sectors

![Graph showing mean employer rating of importance of competencies across five sectors](image)

Figure 4 provides a graph to illustrate the mean employer ratings of current level of competency among graduates entering the workplace with 5 = ‘excellent’, 4 = ‘very good’, 3 = ‘good’, 2 = ‘fair’ and 1 = ‘poor’.
3.3 Phase 2 - Design of tailored social and emotional competency training

Phase 2 of the research will involve qualitative interviews with a random sample of employers from each of the five sectors. In addition, a random sample of students across each of the five disciplines will be selected and emotional intelligence testing completed. Data from the survey and interviews will be used to design domain specific modules in each of the five areas, incorporating methods and activities already being tested and validated for use when delivering emotional intelligence training for the workplace. At implementation stage, involvement of employers will be achieved through inviting them to deliver guest lectures and practical workshops pertaining to various aspects of professional accountability and workplace etiquette. As part of the assessment, students will be required to maintain an e-portfolio which will be utilised as a reflective tool and for charting learning and areas for development. Both academics and employers will also form part of the assessment team to review practical work, examine e-portfolios and conduct competency based interviews which will be an opportunity for students to share their learning and experiences of the EI training. Results from participation in this EI training will be included on student transcripts as evidence of core skill development, providing a more holistic picture of students which has been found to enhance their employability and workplace opportunities.
4. Conclusions and Future Work

In today’s competitive market, graduates who possess a diverse mix of knowledge, skills, ability and competency are deemed to be the most successful. Initial preliminary findings from phase 1 of this research have demonstrated a disparity between the degree of importance employers attribute to social and emotional competencies and the level of competence graduates actually possess when entering the workplace. This research could potentially result in rewards for graduates and employers in terms of employability, career choice, increased job satisfaction, workplace performance, stress management, teamwork and increased productivity. This tailored approach to social and emotional competency training could lead to significant benefits for both employers and students, developing a 21st century graduate who is emotionally and socially skilled and competent to deal with the challenges of a dynamic, demanding and rapidly changing global economy.
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