

## 'TALENT EVOLUTION - WHO HAS CONTROL?'

A conceptual framework: A qualitative investigation into the concepts of employability within third level undergraduate and post-graduate engineering students in Dublin, Ireland.

> A Dissertation for the award of: Masters in Human Resource Management

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## Abstract

**Purpose (Hypothesis)** – Framed by graduate talent management, the purpose of this paper was to construct a conceptual model and framework '*Talent Evolution - Who has Control?*', figure 1. This paper initials a rationale research question worthy of further study, recognising the current trends and the complexity of the employer-graduate exchange regarding graduate management. The stock market crash of 2008 (recent recession) has radically shifted the concepts of McKinsey's *War for Talent* to a new vantage point, with scarring implications such as unemployment, underemployment, and aggressive upskilling, leading graduates to practice career resilience- an individualist and consumerist approach to gain employment. Rather than simply classifying employability and accessing graduate talent as a stationary and ridged procedure, theory of talent evolution argues that employability is an indefinite and heuristic process of obtaining meaningful and challenging work. Ultimately embodying career resilience practices, a constant shift between career-efficiency and self-efficiency, superior to institutional and entry-level employability. But the underlying principle of this evolutionary process is- 'who has control?'. in other words, 'who has control over managing talent? Who defines and controls employability? Is it the employer or the graduate?'

**Design/methodology/approach** – Talent evolution, as a conceptual model, was comprised of a theory building process, using three sets of semi-structured focus groups within a collective engineering student body, against contextual data and conventional employability theories. By applying a thematic analysis of some core themes that have emerged from academic literature such as but not limited to; Makki, Salleh, Memon, and Harum (2015), Shaw and Fairhurst (2008), Garavan (2007) and Bedingfield (2005), Knight and Yorke (2003), and Chambers, Foulon Handfield-Jones, Hankin, and Michaels III, E (1998) War for Talent report 'talent evolution', figure 1. Emerging themes from contextual data was inspected to demonstrate talent evolution as a testable hypothesis within an inductive philosophical framework. These emerging themes, such as employability, work readiness, talent management and career-self-efficiency, were implemented within the data collection process and analysis, table 1, Braun and Clarke (2006). The primary data consisted of three sets of in-depth focus group interviews of third-level undergraduate and post-graduate engineering students located in Dublin, Ireland. In addition, the collection of data was examined qualitatively, and Saldaña, J. (2015), Matusovich, Streveler and Miller (2010), and Eisenhardt and Graebner (2007) research was used as a template to design the conceptual model of 'Talent Evolution - Who has Control?' as illustrated in figure 1. Incorporating a qualitative investigation and inductive reasoning, the engineering students, as the population sample, procured an enlightened enquiry into the concepts of talent management and employability, from a post-structuralist, interpretivism perspective.

**Findings** – This paper illustrates an in-depth profile of millennial third level engineering students, signifying the complexity of a student's employability and position within the Science, Technology, Engineering, and Mathematic (STEM) labour markets, and the organisational graduate management systems. Advancing from Makki et al., (2015) and Dacre-Pool, Sewell, and Sewell (2007) and Knight and Yorke (2003) theoretical frameworks, this qualitative investigation reviewed, from the perspectives of third-level students, has positioned the capability of a graduate's employability within the highly volatile and complex knowledge economy and workplace environment. Specific characteristics such as millennial individual's identity, learning styles, employability engagement, previous experiences, and expectations within the employer-graduate exchange was critically analysed and charted within existing theoretical and contextual data. Thus, illustrating the ambiguity of current management schemes, Human Resource Management strategies (HRM) and Strategic Human Resource Management (SHRM) towards graduate talent development. Therefore, adapting to employability, within the employer-graduate exchange is not a statement, but an organic and indefinite process, that is dependent upon an individual's career exploration practices, such as 'future vision' or 'career tasters' and perspectives of the labour market and the employer-graduate exchange, demonstrating the importance of 'corporate fit' or 'personal fit'. An individual's experiences form the conceptual framework of talent evolution, a constant pursuit of obtaining challenging and meaningful work, engaging in career resilience, work readiness, boundary-less careers, life-long learning, and career-self efficiency. While at the same time, acknowledging that the individual is responsible for their own development or fall-backs in obtaining career-self efficiency.

**Research limitations/implications** –The findings and logical analysis of this paper is a radical shift from the confinements of *War for Talent*, and conventional organisational career models. This paper is a qualitative and thematic analysis paper, that can be tested within mainstream inductive and deductive conceptual frameworks regarding key themes and topics of employability, work readiness, graduate resourcing, and graduate development. However, the series of semi-structured focus groups of third level engineers was conducted within

a short space of time, capturing the transitory and intrinsic perspectives of an engineering student's perceptions and expectations of employability and talent within a restricted career map and limited workplace experience. This unfortunately illustrates the preliminary effects of talent evolution. Conclusions based on this paper is limited to evidence procured within the scope of the working sample. Most notably, only five women were included in this study, which is relative the participation levels within the collective student body and the engineering degree of a third-level institution located in Dublin. Therefore, by examining the assumed relativity of these engineers, against theoretical and contextual data, elevated the suitability of talent evolution, expanding the academic, conceptual, and thematic models of employability and graduate talent management. Further indepth longitudinal and quantitative studies, relating to third-level students as the new theorists of employability, is necessary to transfer talent evolution within various geographical points, adapting the proposed conceptual model to various academic disciplines. Either at a national and international scale, analysing the structural and interpretative frameworks of 'what defines employability?' is necessary to determine if the theory of 'Talent Evolution-Who has Control?' is an effective theoretical and practical model, addressing the underlying issues related to managing an intergenerational workforce. In addition, this further research within various geographical and academic spectrums is crucial to prove that talent evolution is not solely confined within this paper working sample, third-level engineering students or in Dublin, Ireland.

**Practical implications** – There is an assumption that individuals must conform to the ideal of career efficiency, and must religiously exercise in theoretical models of employability. These theoretical models, such as Dacre Pool et al., (2007) 'Key of employability', Knight and Yorke (2004) USEM model, and Law and Watts (1977) DOTS model are governed by the principles of generic organisational and firm specific SHRM perspectives. Realistically, talent from an organisational perspective, are exclusively chosen groups of individuals that receive access to opportunities that enhance their careers, as graduates are perceived as precious assets to an organisation, illustrating strategic effectiveness to high performance and profitability, Cabellero and Walker (2010), Garavan (2007) and Bedingfield (2005). This paper proposes that third level students/graduates are the new theorists of employability, regaining control of their idiocentric career exploration and talent development. Collectively, third-level students have regained control over the employer-employee exchange, compelling employers, and corporations to mitigate their scientific and mass production talent strategies to a new forum. The recent recession has resulted in graduates' adopting an entrepreneurial and consumerist approach to job seeking activities, and embodying a new trend of voluntary resignations, causing a challenge in corporate SHRM and ROI tactics. Talent evolution recognises the need for corporations to treat graduates as individuals with various interpretations and engagements of employability. The practical implications of this paper are to refocus the employers theoretical and idealistic models of employability, using the graduate millennials as the new key to stabilise labour market demands and talent supply. Suggesting that third-level student's understandings and engagements of employability controls the supply-demand equilibrium within the labour market. Talent evolution, as a conceptual model, is an organic process, acknowledging that millennial graduates are on a quest to obtain challenging and meaningful work. Therefore, rather than orchestrate a linear process, talent evolution allows 'free' career management and individuals indefinite process in obtaining career-self efficiency as the new frame of reference, accepting employability a life-experiences of career exploration and talent development.

**Originality/value** – The main contribution of this paper is to refocus the individual's adaptive nature to the economic, technological, demographic trends and the uncertainty of the unregulated market. Individuals, such third level engineers must to manage their own careers freely, regaining control regarding employability and talent management capabilities, incorporating 'talent evolution' within a graduate's workplace learning and academic-skill development. This has altered the prospective workplace performance, subconsciously altering employer's perceptions of graduate development schemes, employer expectations and designing and procuring employability-based relationships, enhancing the prospects of self-efficiency and idiocentric career exploration.

**Keywords** – adaptability, career-efficiency, career exploration, 'career tasters', career resilience, consumerist approach, 'future vision', graduate management, graduate resourcing, self-efficiency, STEM, talent evolution, third-level engineers, workplace learning, work readiness, 2008 stock market crash (recent recession).

Paper type – Qualitative Investigation: Constructing a conceptual model.

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## Abbreviations

- AMO model- Ability, motivation, and opportunities model
- CareerEDGE- Career, experience, degree subject understanding/knowledge, generic skills, emotional intelligence.
- CIPD- Chartered Institute of Personnel and Development
- DOTS Model- Decision learning, opportunity awareness, transition learning, selfawareness
- **O** DMS model- Davidson, Matusz, and Shevchenko model
- ESF- Employability skills framework
- EU- European Union
- GPA Grade point average
- HPW- High Performance Workforce
- HRD- Human resource development
- HRM- Human resource management
- ICT- Information and communication technology
- MBA- Masters of business administration
- MNC- Multinational corporations
- NEET- Not in education, employment, or training
- PDP- Personal development planning
- POS- Perceived organisational support
- ROI- Return on investment
- SHRD- Strategic human resource development
- SHRM Strategic human resource management
- SME- Small and medium-sized enterprises
- **O** STEM Science, technology, engineering, and mathematics
- STV- Subjective task value
- USEM Model- Understanding, skills, efficacy beliefs, metacognition model
- **O** 70-20-10- On the job training, informal learning, and formal learning

## **Table of Contents**

Abstract	4
Acknowledgements	6
Abbreviations	7
Writer's Note	10
Section 1: Introduction	11
1.1 Shifting the concepts of employability to a new light	11
1.2 Context: The volatile environment that coined the new theorists of employability	18
Figure 1: Conceptual framework for building the theory of 'Talent Evolution - Who has Control?'	25
Section 2: Research Question	27
2.1 Title of Research	27
2.2 Specific aims: Structuring 'Talent Evolution- Who has control?'	27
Section 3: Literature Review	29
3.1 Introduction	29
3.2 Employability: More than just a 'Buzz word'	30
Figure 2: 'Key of Employability'	32
3.3 The theoretical models that frames 'Talent Evolution- Who has Control?'	33
Figure 3: Extracting the emerging themes that construct talent evolution as a conceptual model	37
Figure 4: Work readiness skills: A conceptual model	38
3.4 How conventional graduate management strategies are losing 'talented rough diamonds'	39
3.5 Conclusion	44
Section 4: Research Methodology and Method	45
4.1 Philosophical and epistemological foundation of this research	45
4.2 Methodological frameworks that support 'Talent Evolution- Who has Control?' as a conceptual model	47
4.3 Participants: Third level engineering students	51
4.4 Procedure adopted and research instrument	52
Table 1: Research instrument: Focus group questions	54
4.5 Data Analysis Strategy	56
4.6 Ethical Considerations	56
4.6 Problem areas and Limitations	59
Section 5: Findings, Results, and Discussion	60
5.1 Overview	60
5.2 Primary data analysis	62
Table 2: Coding categories and themes	63
5.3.1 Result 1: Engineering degree is adaptable to various career opportunities	65
Figure 5: Extracting the emerging issues that validate the adaptability of an engineering degree	72

Figure 6: Constructing 'future vision' and 'career tasters' as patterns of career exploration and talent management tactics   1     5.3.3 Result 3: 'Corporate fit' has been replaced with meeting graduate's 'personal fit', yet participants have mixed reviews on who has control in developing employability   1     Figure 7: Talent Evolution'- Who has control over Employability?   5     5.4.1 Results: Rubric Design   2     Table 3.a: Results from Focus Group 2   2     Table 3.b: Results from Focus Group 3   5     5.5.1 The adaptability of an Engineering student in the labour market   2     5.5.2 Work readiness and career exploration practices redefine employability   10     5.5.3 Woo controls employability and talent development? The practical implication and value of 'Talent Evolution' as a conceptual model.   10     Section 6: Conclusions and Recommendations   11   11     6.1 Introduction   11   6.2 Final thoughts   11     Figure 8: The outlining principles of Talent Evolution within contemporary graduate   12   12     6.4 Timelines and cost of Talent Evolution.   12   12   12     6.4 Timelines and costing for research recommendations   12   12   13     6.4 Timelines and costing for research recommendations   12   14   14   14 <th></th> <th>5.3.2 Result 2: Distinct patterns of career exploration and talent management practices emerged: 'career tasters' versus 'future vision'</th> <th>73</th>		5.3.2 Result 2: Distinct patterns of career exploration and talent management practices emerged: 'career tasters' versus 'future vision'	73
5.3.3 Result 3: 'Corporate fit' has been replaced with meeting graduate's 'personal fit', yet participants have mixed reviews on who has control in developing employability		Figure 6: Constructing 'future vision' and 'career tasters' as patterns of career exploration and talent management tactics	82
Figure 7: 'Talent Evolution'- Who has control over Employability?		5.3.3 Result 3: 'Corporate fit' has been replaced with meeting graduate's 'personal fit', yet participants have mixed reviews on who has control in developing employability	83
5.4.1 Results: Rubric Design   1     Table 3.a: Results from Focus Group 1   1     Table 3.b: Results from Focus Group 2   1     Table 3.c: Results from Focus Group 3   1     5.5 Discussion and implications for further research and practice   1     5.5.1 The adaptability of an Engineering student in the labour market   1     5.5.2 Work readiness and career exploration practices redefine employability   10     5.5.3 Who controls employability and talent development? The practical implication and value of 'Talent Evolution' as a conceptual model.   10     Section 6: Conclusions and Recommendations.   10     6.1 Introduction   10     6.2 Final thoughts.   10     Figure 8: The outlining principles of Talent Evolution within contemporary graduate.   11     6.3 Research limitations and recommendations for further research   12     6.4 Timelines and costing for research recommendations   12     6.5 Personal learning statement   12     7.1.a Focus Group 1: Characteristics and Transcripts   12     7.1.a Focus Group 1: Characteristics and Demographic Information   12     7.2.a Focus Group 2: Characteristics and Demographic Information   12     7.3.a Focus Group 3: Characteristics and Demographic Information   12		Figure 7: 'Talent Evolution'- Who has control over Employability?	92
Table 3.a: Results from Focus Group 1   1     Table 3.b: Results from Focus Group 2   1     Table 3.c: Results from Focus Group 3   1     5.5 Discussion and implications for further research and practice   1     5.5.1 The adaptability of an Engineering student in the labour market   1     5.5.2 Work readiness and career exploration practices redefine employability   10     5.5.3 Who controls employability and talent development? The practical implication and value of 'Talent Evolution' as a conceptual model.   10     Section 6: Conclusions and Recommendations.   10     6.1 Introduction   10     6.2 Final thoughts.   10     Figure 8: The outlining principles of Talent Evolution within contemporary graduate   11     management practices   12     6.3 Research limitations and recommendations for further research   12     6.4 Timelines and costing for research recommendations   12     7.1 a Focus Group 1: Characteristics and Transcripts   12     7.1.a Focus Group 1: Characteristics and Demographic Information   11     7.2.b Focus Group 2: Characteristics and Demographic Information   12     7.2.b Focus Group 2: Characteristics and Demographic Information   12     7.2.b Focus Group 3: Characteristics and Demographic Information		5.4.1 Results: Rubric Design	93
Table 3.b: Results from Focus Group 2		Table 3.a: Results from Focus Group 1	94
Table 3.c: Results from Focus Group 3   9     5.5 Discussion and implications for further research and practice   9     5.5.1 The adaptability of an Engineering student in the labour market   9     5.5.2 Work readiness and career exploration practices redefine employability   10     5.5.3 Who controls employability and talent development? The practical implication and value of "Talent Evolution" as a conceptual model.   10     Section 6: Conclusions and Recommendations.   10     6.1 Introduction   11     6.2 Final thoughts.   11     Figure 8: The outlining principles of Talent Evolution within contemporary graduate.   12     management practices   12     6.3 Research limitations and recommendations for further research   12     6.4 Timelines and costing for research recommendations   12     7.1 able 4: Timelines and cost of Talent Evolution   12     7.1.a Focus Group 1: Characteristics and Demographic Information.   12     7.1.a Focus Group 1: Characteristics and Demographic Information.   12     7.2.a Focus Group 2: Characteristics and Demographic Information.   12     7.3.a Focus Group 3: Characteristics and Demographic Information.   14     7.3.a Focus Group 3: Characteristics and Demographic Information.   14     7.3.		Table 3.b: Results from Focus Group 2	95
5.5 Discussion and implications for further research and practice   9     5.5.1 The adaptability of an Engineering student in the labour market   9     5.5.2 Work readiness and career exploration practices redefine employability   10     5.5.3 Who controls employability and talent development? The practical implication and value of 'Talent Evolution' as a conceptual model.   10     Section 6: Conclusions and Recommendations.   10     6.1 Introduction   11     6.2 Final thoughts.   11     Figure 8: The outlining principles of Talent Evolution within contemporary graduate.   12     management practices   12     6.3 Research limitations and recommendations for further research   12     6.4 Timelines and cost of Talent Evolution   12     6.5 Personal learning statement   12     7.1.a Focus Group 1: Characteristics and Transcripts   12     7.1.a Focus Group 1: Characteristics and Demographic Information.   14     7.2.a Focus Group 2: Characteristics and Demographic Information.   14     7.3.a Focus Group 3: Characteristics and Demographic Information.   14     7.3.b Focus Group 3: Characteristics and Demographic Information.   14     7.3.a Focus Group 3: Characteristics and Demographic Information.   14     7.3.b Focus Group 3		Table 3.c: Results from Focus Group 3	97
5.5.1 The adaptability of an Engineering student in the labour market   9     5.5.2 Work readiness and career exploration practices redefine employability		5.5 Discussion and implications for further research and practice	98
5.5.2 Work readiness and career exploration practices redefine employability.   10     5.5.3 Who controls employability and talent development? The practical implication and value of 'Talent Evolution' as a conceptual model.   10     Section 6: Conclusions and Recommendations.   10     6.1 Introduction.   10     6.2 Final thoughts.   10     Figure 8: The outlining principles of Talent Evolution within contemporary graduate.   11     management practices   12     6.3 Research limitations and recommendations for further research   12     6.4 Timelines and costing for research recommendations   12     Table 4: Timelines and cost of Talent Evolution   12     5.5 Personal learning statement   12     Section 7: Focus Group Characteristics and Demographic Information   11     7.1.a Focus Group 1: Characteristics and Demographic Information   11     7.2.a Focus Group 2: Characteristics and Demographic Information   11     7.3.a Focus Group 3: Characteristics and Demographic Information   12     7.3.a Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.a Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group		5.5.1 The adaptability of an Engineering student in the labour market	98
5.5.3 Who controls employability and talent development? The practical implication and value of 'Talent Evolution' as a conceptual model.   10     Section 6: Conclusions and Recommendations.   10     6.1 Introduction.   10     6.2 Final thoughts.   10     Figure 8: The outlining principles of Talent Evolution within contemporary graduate.   11     management practices   12     management practices   12     6.4 Timelines and costing for research recommendations   12     Table 4: Timelines and cost of Talent Evolution   12     6.5 Personal learning statement   12     Section 7: Focus Group Characteristics and Demographic Information   11     7.1.a Focus Group 1: Characteristics and Demographic Information   12     7.2.a Focus Group 2: Characteristics and Demographic Information   12     7.3.a Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information		5.5.2 Work readiness and career exploration practices redefine employability	101
Section 6: Conclusions and Recommendations.   10     6.1 Introduction   10     6.2 Final thoughts.   10     Figure 8: The outlining principles of Talent Evolution within contemporary graduate.   11     management practices   12     6.3 Research limitations and recommendations for further research   12     6.4 Timelines and costing for research recommendations   12     Table 4: Timelines and cost of Talent Evolution   12     6.5 Personal learning statement   12     Section 7: Focus Group Characteristics and Transcripts   12     7.1.a Focus Group 1: Characteristics and Demographic Information   12     7.2.a Focus Group 2: Characteristics and Demographic Information   12     7.3.a Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14 <td< td=""><td></td><td>5.5.3 Who controls employability and talent development? The practical implication and value of 'Talent Evolution' as a conceptual model</td><td>105</td></td<>		5.5.3 Who controls employability and talent development? The practical implication and value of 'Talent Evolution' as a conceptual model	105
6.1 Introduction   10     6.2 Final thoughts   10     Figure 8: The outlining principles of Talent Evolution within contemporary graduate   11     management practices   11     6.3 Research limitations and recommendations for further research   12     6.4 Timelines and costing for research recommendations   11     Table 4: Timelines and cost of Talent Evolution   12     6.5 Personal learning statement   12     Section 7: Focus Group Characteristics and Transcripts   12     7.1.a Focus Group 1: Characteristics and Demographic Information   12     7.2.a Focus Group 2: Characteristics and Demographic Information   12     7.3.a Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3-Transcript   14     7.4.b Focus Group 3-Transcript   14     7.3.b Focus Group 3-Transcript   14     7.3.b Focus Group 3-Transcript   14     7.4.b Focus Group 3-Transcript   14     7.5.b Focus Group 3-Transcript   14 <td>Se</td> <td>ection 6: Conclusions and Recommendations</td> <td> 108</td>	Se	ection 6: Conclusions and Recommendations	108
6.2 Final thoughts10Figure 8: The outlining principles of Talent Evolution within contemporary graduate11management practices116.3 Research limitations and recommendations for further research126.4 Timelines and costing for research recommendations11Table 4: Timelines and cost of Talent Evolution126.5 Personal learning statement12Section 7: Focus Group Characteristics and Transcripts127.1.a Focus Group 1: Characteristics and Demographic Information127.2.a Focus Group 2: Characteristics and Demographic Information127.3.a Focus Group 3: Characteristics and Demographic Information147.3.b Focus Group 3: Charact		6.1 Introduction	108
Figure 8: The outlining principles of Talent Evolution within contemporary graduate   12     management practices   12     6.3 Research limitations and recommendations for further research   12     6.4 Timelines and costing for research recommendations   12     Table 4: Timelines and cost of Talent Evolution   12     6.5 Personal learning statement   12     Section 7: Focus Group Characteristics and Transcripts   12     7.1.a Focus Group 1: Characteristics and Demographic Information   12     7.2.a Focus Group 2: Characteristics and Demographic Information   12     7.2.b Focus Group 2: Characteristics and Demographic Information   14     7.3.a Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.4		6.2 Final thoughts	109
management practices16.3 Research limitations and recommendations for further research16.4 Timelines and costing for research recommendations1Table 4: Timelines and cost of Talent Evolution16.5 Personal learning statement16.5 Personal learning statement15 Section 7: Focus Group Characteristics and Transcripts17.1.a Focus Group 1: Characteristics and Demographic Information17.1.b Focus Group 2: Characteristics and Demographic Information17.2.a Focus Group 2: Characteristics and Demographic Information17.3.a Focus Group 3: Characteristics and Demographic Information17.3.b Focus Group 3: Characteristics And Demographic Infor		Figure 8: The outlining principles of Talent Evolution within contemporary graduate	112
6.3 Research limitations and recommendations for further research   1     6.4 Timelines and costing for research recommendations   1     Table 4: Timelines and cost of Talent Evolution   1     6.5 Personal learning statement   1     Section 7: Focus Group Characteristics and Transcripts   1     7.1.a Focus Group 1: Characteristics and Demographic Information   1     7.1.b Focus Group 1-Transcript   1     7.2.a Focus Group 2: Characteristics and Demographic Information   1     7.3.a Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Transcript   1     4   1   1     Appendix 1   1		management practices	112
6.4 Timelines and costing for research recommendations   1     Table 4: Timelines and cost of Talent Evolution   1     6.5 Personal learning statement   1     Section 7: Focus Group Characteristics and Transcripts   1     7.1.a Focus Group 1: Characteristics and Demographic Information   1     7.1.b Focus Group 1: Characteristics and Demographic Information   1     7.2.a Focus Group 2: Characteristics and Demographic Information   1     7.2.b Focus Group 2: Characteristics and Demographic Information   1     7.3.a Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Characteristics and Demographic Information   1     7.3.b Focus Group 3: Transcript   1     4   1     Appendix 1   1		6.3 Research limitations and recommendations for further research	113
Table 4: Timelines and cost of Talent Evolution126.5 Personal learning statement12Section 7: Focus Group Characteristics and Transcripts127.1.a Focus Group 1: Characteristics and Demographic Information17.1.b Focus Group 1-Transcript.127.2.a Focus Group 2: Characteristics and Demographic Information127.2.b Focus Group 2: Characteristics and Demographic Information127.3.a Focus Group 3: Characteristics and Demographic Information147.3.b Focus Group 3: Characteristics14Section 8: References15Appendix 116		6.4 Timelines and costing for research recommendations	114
6.5 Personal learning statement12Section 7: Focus Group Characteristics and Transcripts127.1.a Focus Group 1: Characteristics and Demographic Information147.1.b Focus Group 1-Transcript127.2.a Focus Group 2: Characteristics and Demographic Information127.2.b Focus Group 2: Characteristics and Demographic Information127.3.a Focus Group 3: Characteristics and Demographic Information147.3.b Focus Group 3: Characteristics and Demographic Information147.3.b Focus Group 3: Characteristics and Demographic Information147.3.b Focus Group 3. Transcript14Appendix 114		Table 4: Timelines and cost of Talent Evolution	115
Section 7: Focus Group Characteristics and Transcripts127.1.a Focus Group 1: Characteristics and Demographic Information147.1.b Focus Group 1-Transcript127.2.a Focus Group 2: Characteristics and Demographic Information127.2.b Focus Group 2: Characteristics and Demographic Information127.3.a Focus Group 3: Characteristics and Demographic Information147.3.b Focus Group 3: Characteristics and Demographic Information147.3.b Focus Group 3: Characteristics and Demographic Information147.3.b Focus Group 3. Transcript14Section 8: References14Appendix 116		6.5 Personal learning statement	116
7.1.a Focus Group 1: Characteristics and Demographic Information   1     7.1.b Focus Group 1-Transcript   12     7.2.a Focus Group 2: Characteristics and Demographic Information   12     7.2.b Focus Group 2-Transcript   12     7.3.a Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3-Transcript   14     7.3.b Focus Group 3-Transcript   14     7.4.b Focus Group 3-Transcript   14     7.5.b Focus Group 3-Transcript   14	Se	ection 7: Focus Group Characteristics and Transcripts	119
7.1.b Focus Group 1-Transcript.   12     7.2.a Focus Group 2: Characteristics and Demographic Information   12     7.2.b Focus Group 2-Transcript.   12     7.3.a Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3-Transcript.   14     14   14     Section 8: References   15     Appendix 1   16		7.1.a Focus Group 1: Characteristics and Demographic Information	119
7.2.a Focus Group 2: Characteristics and Demographic Information   12     7.2.b Focus Group 2-Transcript   12     7.3.a Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3-Transcript   14     Section 8: References   19     Appendix 1   16		7.1.b Focus Group 1-Transcript	120
7.2.b Focus Group 2-Transcript.   12     7.3.a Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3-Transcript.   14     Section 8: References   15     Appendix 1   16		7.2.a Focus Group 2: Characteristics and Demographic Information	126
7.3.a Focus Group 3: Characteristics and Demographic Information   14     7.3.b Focus Group 3-Transcript   14     Section 8: References   15     Appendix 1   16		7.2.b Focus Group 2-Transcript	127
7.3.b Focus Group 3-Transcript		7.3.a Focus Group 3: Characteristics and Demographic Information	140
Section 8: References		7.3.b Focus Group 3-Transcript	141
Appendix 1	Se	ection 8: References	152
	A	ppendix 1	167

### Writer's Note

The composition of 'Talent Evolution-Who has Control?' that I wish to lay before you, has originated from constructing a critical theory in relation to employability, and here rests its strength. Its transparency and elasticity has revolutionised the fundamental and philosophical fabrics of employability and talent development, composing and orchestrating the importance of an authentic career-efficiency and self-efficiency equilibrium, but preludes an imperfect cadence. Self-efficiency is a radical concept, however, career-efficiency or selfefficiency by itself are damned to decompose and obstruct effective talent management, corporate governance and idiocentric personnel development. Henceforth, it is only a of union of the two, that orchestrates the indefinite process of talent evolution within an independent reality.

Drew Davis

### **Section 1: Introduction**

### 1.1 Shifting the concepts of employability to a new light

The concepts of employability, an ontological and highly phenomenological perspective, is controlled by various interpretations of what skills and competencies are perceived as employable, either from the perspectives of the employer, a third-level graduate, current or potential employee, Zheltoukhova and Baczor (2016), Cabellero and Walker (2010), Abraham and Karns (2009), Dacre-Pool et al., (2007), and McQuaid and Lindsay (2005). In addition, talent management can be described as a process of resourcing, obtaining, engaging, and retaining 'talented' employees, or 'top talent' to withstand labour market uncertainties, Nilsson and Ellström (2012), Davies and Davies (2010), Lewis and Heckman (2006), and Creelman (2004). Consequently, companies commonly adopt a unilateral 'best fit' or 'best practice' strategies that focuses upon organisational competitiveness, irrespective of organisational context, managing talent and inter-generational differences to achieve high performance workforce (HPW), Nilsson and Ellström (2012), Boxall and Macky (2009), Kalleberg, Marsden, Reynolds and Knoke (2006), King (2003), and Appelbaum, Bailey, Berg and Kalleberg (2000). A HPW is achieved by practicing a high-involvement decision making arrangement, aligning hierarchical, industry, workplace environments within the corporate and demographic structures, leading to a higher skill growth, Boxall and Macky (2009), CIPD (2006), Appelyard and Brown (2001), and Appelbaum et al., (2000), and MacDuffie (1995). As such, effectively managing an intergenerational workforce is difficult, as each generation inherits varying characteristics and expectations, such as Traditionalists, Baby Boomers, and Generation-Y, imprinting the knowledge and labour economy, Johnson and Lopes (2008), Shaw and Fairhurst (2008), Glass (2007), Eisner (2005), Knight and Yorke (2003), and Gardner and Liu (1997). From early career-high potentials to seasoned senior executives, training and development programmes must maintain labour market efficiency, securing long-term previsions of labour, prosperous organisational performance, open talent pools and human capital pipelines, and to expand business intelligence to withstand uncertainties in a highly aggressive operational and external environment, Jorgenson, Ho, and Samuels (2017), Pabst (2016), Zheltoukhova and Baczoe (2016), McCracken, Currie, and Harrison (2015), Nilsson and Ellström (2012), Kim and Scullion (2011), Shaw and Fairhurst (2008), Glass (2007), Boxall and Macky (2006).

However, for graduates to maintain a fluid transition from third level to the workplace environment, skills taught at university level, or in the workplace, determines organisational and an individual's productivity, and the ability for graduates to self-manage their career development, Kultalahti, and Viitala (2014), Wanrooy, Bewley, Bryson, Forth, Freeth, Stokes, and Wood (2013), Nillsson (2011), Wye and Lim (2009), Garavan (2007), Glass (2007), CIPD (2006), Martin (2005), and Knight and Yorke (2003, 2002). As examined by Shih and Allen (2007), the current third level students, born from 1982 to 2000, also referred to as Generation-Y or Millennials, have inherited multi-faced learning backgrounds, skill sets, experiences, and onerous employer expectations. Hence, erecting conflicts of interest between employer-graduate expectations, an epidemic between the idealist and realist expectations when forming graduate talent management strategies, O'Connor and Bodicoat (2017), McCracken et al., (2015), Davies and Davies (2010), Eisner (2010), Wye and Lim (2009), and Shaw and Fairhurst (2008). In addition, Generation-Y preference to remain constantly engaged and virtually connected, has shaped third level institutions curriculum, to engage in virtual experiential activities, hands on- interactive/collaborative assignments and inclusive 70-20-10 learning and development models. Furthermore, the millennial mentality has caused complications within the corporate structures, consequently effecting the possibility for early career potentials to engage in within the decision-making process, thus limiting their access to exclusive and invaluable career options, Zheltoukhova and Baczor (2016), Boxall and Macky (2009), King (2003), and Appelbaum et al., (2000). This disjoint in employability based relationships have contributed to millennials diverse talent management practices, leading to boundary less careers and life-long learning within postorganisational and organisational syntax, relating to the need for career efficiency within generic or firm specific requirements, Chambers et al., (1998), Gunn and Kafmann (2011), and Knight and Yorke (2003).

Career efficiency is derived from corporations attracting and retaining high-performers and the best talent or A-players. Chambers et al., (1998) *War for talent* pioneered this ideal, causing a ripple effect within employer-employee relations, prescribing corporations to initiate strategies to forecast the supply of A player employees to withstand workforce demand within the volatile external and business environment, Marginson (2017), O' Dwyer (2016), McCraken et al., (2015), Brown and Tannock (2009), Boxall abd Macky (2009), and Michael, Handfield-Jones and Axelrod (2001). Consequently, in coherence with *War for* 

*Talent* and the 'best fit' and 'best practice' approach, employability is achieved through collective traditional career models, such as resourcing only top talent, and develop skills and competencies that best suit corporate needs, Gyton (2017), Baruch and Vardi (2016), McGuire (2016), Zheltoukhova and Baczoe (2016), Stahl, Björkman, Farndale, Morris, Paauwe, Stiles, Trevor, and Wright (2012), and King (2003). The 'best fit' or 'best practice' approach is implemented throughout, affecting resourcing, performance, appraisal, and development of an employee, ensuring collective intelligence, effective teamwork and problem solving within the intergenerational workforce and profitable HPW regime, Boxall and Macky (2009), Kalleberg et al., (2006), and Appelyard and Brown (2001). Thus, War for *Talent* approach to talent management assumes that employees act in obedience in achieving the corporate vision, aligning one's values and beliefs towards an organisations cultural values, acting upon career efficiency, McCracken at al., (2015), De Vos, De Hauw, and Van Der Heijden (2011), Clark and Patrickson (2008), Shaw and Fairhurst (2008), Garavan (2007), Bedingfield (2005), and Martin (2005). Therefore, millennial students engaging with employability models to secure a job, sub-consciously gear towards career-efficiency, while emphasising hard skills and competencies, such as academic achievements, Grade Point Averages (GPA), and performances within institutional and workplace learning to remain marketable, McGuire (2016), Kultalahti, and Viitala (2014), CIPD (2006), Knight and Yorke (2002, 2000), and Gardner and Liu (1997). However, this philosophy does not consider the individual's personality traits and the biology of Generation-Y, such as blaming employers for career impediments within seemly egalitarian employment and transferable vocational opportunities, Wye and Lim (2009), Smith and Kruger (2008), Moreau and Leathwood (2006), Martin (2005), and Lent, Brown, and Hackett (1994). Furthermore, graduates act within a seemly idealist and subjective standards of employability. This is due to the recent recession and labour market uncertainty, the tough times characterised by excessive redundancies, 'Russian roulette dismissals', and minimalist's talent recruitment and resourcing, destroyed job security and organisational commitment, Kelly and Barrett (2017), Kelly and McGuinness (2013), and Nilsson and Ellström (2012). Today, this era has shaped the graduates transition from academic to a pawn in the workforce, and exercising frantic job hopping in search for challenging and meaningful work that focuses upon career resilience, diversity, and self-efficiency, d'Aguiar and Harrison (2016), McCracken et al., (2015), Ulrich (2014), Kelly and McGuinness (2013), Nilsson and Ellström (2012), Davies and Davies (2010), Shaw and Fairhurst (2008), Glass (2007), and Holden and Harte (2004). Thus, by

dissecting the concept of employability, a graduate's capability of instant work readiness, such as the possession of skills, competencies, commercial understanding necessary to achieve organisational objectives, is pragmatic, as a graduate's soft skills is dependent upon an individual's engagement within institutional learning and their relationship with their authority figures, such as managers and HR practitioners, figure 3, McCracken et al., (2015), Makki et al., (2015), Abraham and Karns (2009), Wye and Lin (2009), Dacre-Pool et al., (2007), Garavan (2007), McQuaid and Lindsay (2005), and Dweck and Leggett (1988).

However, due to the recent 2008 stock market crash, graduates have incorporated an enterprising and consumerist approach to job hunting, exercising swift voluntary resignations within the first two to three years of recruitment, in the search for meaningful and challenging work, engaging in alternative professional options, McGuire (2016), Kelly and McGuinness (2013), Wanrooy et al., (2013), Mellors-Bourne, Connor, and Jackson (2011), Bedingfield (2005), and Bandura (1995). Thus, graduates are engaging in Law and Watts (1977) DOTS model (decision learning, opportunity awareness, transition learning, and self-awareness) and Knight and Yorke (2004) USEM model (understanding, skills, self-efficacy, and metacognition) in obtaining self-seeking career development learning and boundary less careers. This has procured a theoretical basis for talent evolution and self-efficiency. The theory of self-efficiency, a concept derived from:

"... employability is being capable of getting and keeping fulfilling work. More comprehensively employability is the capability to move self-sufficiently with the labour market to realise potential through sustainable employment", (Hillage and Pollard, 1998, p. 2).

Henceforth, self-efficiency within the Generation-Y psychology is characterized by three variables; success, value, and security, advancing from the conventional theory that self-efficiency is based upon an individual's judgment to perform individualist focused behaviours, Makki et al., (2015), Martin (2005), and Bandura (1995). Success, evokes the importance of a person's ambitions and personal qualities in achieving high-performance mechanisms, procuring meaningful and challenging work, Wanrooy et al., (2013), Hinchliffe and Jolly (2011), Andrews and Higson (2008), Shaw and Fairhurst (2008), Bedingfield (2005). Thus, by arguing that talent is contrived by the indefinite mechanics of motivation and the constant attempt to advance academic skill-sets, adapting to high-competency levels within and outside specified job specifications, Davies and Davies (2010). This underlines the

importance of personal qualities, emotional intelligence, cognitive flexibility, and career exploration activities within the constantly changing labour market and professions, figure 1, Saad, Shamsuri, Robani, Jano, and Abdul Majid (2013), Dicken (2011), Wye and Lin (2009), Thijssen, Van der Heijden, and Rocco (2008), McQuaid and Lindsay (2005), Zinser (2003), Stewart and Knowles (1999), Goleman (1998) and Dweck and Leggett (1988). Value optimisation is centred self-awareness and self-reflection, such as an individual's engagement of informed subject learning aligned with workplace, labour market needs and personal development, Kultalahti, and Viitala (2014), CIPD (2016), and CIPD (2006). In addition, an individual's life and work-experience advances the variety of skills and knowledge that can be obtained outside SHRM/SHRD practices, obtaining an in-depth awareness of firm specific and generic trends within the STEM talent pools and human capital. This enhances the prospects of early high-career achiever's adaptability to perform Dacre-Pool et al., (2007), CareerEDGE model (Career Development, Experience, Degree subject understanding/knowledge, Generic Skills, Emotional intelligence), and career-efficiency to achieve organisational objectives, d'Aguiar and Harrison (2016), Ulrich (2014), Cabellero and Walker (2010), and Eisner (2010). However, achieving employability within one's professional and personal life is not as linear or simplistic as Dacre-Pool et al., (2007) 'Key of Employability', as one's motivation may be geared towards subjective task value (STV) and the social motivation model, comprising of the entity theory and incremental theory, figure 2, Kultalahti, and Viitala (2014), Matusovich et al., (2010), Knight and Yorke (2002), Gardner and Liu (1997), and Dweck and Leggett (1988).

As expressed by Dweck and Leggett (1988), the entity theory is fixated upon on strict social traits that conjure an individual's 'performance goal orientation', such as a millennial graduate's ability to increase positive judgement. While on the other hand, incremental and malleable beliefs erects the importance of 'learning goal orientation', an opportunity to increase emotional intelligence, and professional networking within a placement, internship, or entry level positions, and ultimately creating mutually benefiting learning environment between the employer-graduate/employee exchange, O'Connor and Bodicoat (2017), Makki et al., (2015), Wye and Lin (2009), Heaton, McCracken, and Harrison (2008), Garavan (2007), Bedingfield (2005), King (2003), Riemer (2003), and Dweck and Leggett (1988). Thus, one's value within the labour market is not solely determined by one's position within an organisation, or the ability to remain employed or simply achieving organisational objectives. Moreover, it is the composition of performance and/or learning orientation that

directs graduate career exploration practices to peruse meaningful and challenging work. Lastly, security, workplace security refers to the capability of an individual to exercise career mobility in advancing owes short or long-term career exploration within entity, personal and performance objectives, McGuire (2016), Andrews and Higson (2008), Garavan (2007), Gardner and Liu (1997), and Dweck and Leggett (1988). Furthermore, this concept inherently expands the internal and external boundaries of career development, sub-consciously advancing the competitiveness and intensifying the calibre of the collective knowledge economy, talent pools and human capital pipelines. However, as suggested previously, workplace security is no longer a certainly. These variables (success, value, and security) places the basis of procuring the conceptual model of talent evolution, evaluating employability within various environments including: political, social, economic, technological, and geographic trends, figure 1, Gratton (2010), and Cappelli (2008).

The aim of this research is to present a practical, coherent model, critically analysing emerging themes and topics that based on existing contextual data and prior research regarding employability and graduate talent management, table 1, section 5. Within this process, this paper will procure Talent Evolution-Who has Control?' as a conceptual model and qualitative investigation, analysing the vibrant individualised dynamics of a third-level engineer's ability to adapt within the labour market and STEM economy, presenting the diverse career exploration practices that encompass the concepts of career efficiency and self-efficiency, extracting, from a student's perspective, who is controls employability?

The target population of this study was third level undergraduate and postgraduate engineering students. The primary data of this research was collected from a series of semistructured focus group interviews. Consequently, this paper primary data gained an in-depth perspective from the non-experts of employability and talent development practices, advancing form research limitations regarding Generation-Y and their expectations of employers, table 1, section 7; 7.1.b, 7.2.b and 7.3.b., Shaw and Fairhurst (2008), Dacre-Pool et al., (2007), McQuaid and Lindsay (2005), and Knight and Yorke (2003). The working sample contained twenty-one millennial engineering students, consisting of sixteen males and five female participants, ranging from nineteen to twenty-four years of age, and who will be entering the workforce in the coming months or years, depending when their courses complete. This sample was evaluated utilising three sets of semi-structured focus groups, within a third level institution located in Dublin, Ireland. The engineering disciplines of the population sample include; chemical and bioprocess, biomedical, civil, chemical, biomedical, mechanical, energy systems, mechanical and business, and structural. This represented population sampling was coherent within an exclusive criterion, within a collective student body, enabling a confidence sampling study. The collective student body function is to engage and enhance engineer's career prospects within employer-led perspective including professional networking, access to corporate and employer expectations and entry level requirements expected from the engineering graduates.

This paper has procured a conceptual model, 'Talent Evolution-Who has Control?', by critically analysing related contextual data, preforming a thematic analysis of existing theories of employability and graduate talent management, such as but not limited to Makki et al., (2015), McCracken et al., (2015), Shaw and Fairhurst (2008), Bedingfield (2005), Knight and Yorke (2003). This process demonstrates the importance of employing a qualitative investigation to restructure epistemological persuasions of employability and to present talent evolution as tool that can be practically implemented within graduate managements tactics. In addition, the primary data collected within this research were examined within an interpretative method against conceptual texts and divine concepts of War for Talent, shifting the concepts of employability to a new light based upon an accumulation of themes and ideas from contextual data to the invaluable insights of thirdlevel engineers, figure 1, figure 5, figure 6, figure 7, Zheltoukhova and Baczoe, (2016), McCracken et al., (2015), Nilsson and Ellström (2012), Shaw and Fairhurst (2008), Darce-Pool et al., (2007), CIPD (2006), Lewis and Heckman (2006) and Brown, Hesketh, and Williams (2004). By critically analysing themes and ideals presented the capability for the theory of talent evolution to be examined within organisational and institutional frameworks, procuring a compelling argument regarding HRM and graduate development, figure 1, table 2, Einsenhardt and Graebner (2007), Braun and Clarke (2006), and Yin (1994). As such, by utilising a post-structural approach, the conflicts power, politics, and practices of the generic or firm specific recruitment, retention, and talent development strategies were examined with the third-level graduate's perspectives rather that of the SHRM viewpoint, Zheltoukhova and Baczoe, (2016), McCracken et al., (2015), CIPD (2006), and CIPD (2005).

Henceforth, talent evolution is derived from the compelling argument, aligning the heuristic natures of a graduate's access to obtaining and exploring career choice options, referring to the conflicting theories of academic excellence versus workplace performance. Ultimately,

positioning the idealists and the realists within the employer-graduate exchange and viewpoints, coining the theory of 'Talent Evolution-Who has Control?', Makki et al., (2015), Henderson et al., (2010), CIPD (2006), Gardner and Liu (1997), and Eisenhardt (1989). Thereafter, the epistemological persuasion of this novel theory is derived from McCracken et al., (2015) and Einsenhardt and Graebner (2007) in constructing conceptual framework of talent evolution, an ideal that suggests that employability is an indefinite process, unlike Dacre-Pool et al., (2007) chromatic model, figure 1 and figure 2. Henceforth, talent evolution applies theoretical employability models, such as Knight and Yorke (2004) USEM model and Law and Watts (1997) DOTS model, to a selection of engineering students by posing the question: 'Do you develop your skills just to get the job, or to work for a particular company? Or do you develop your skills for your own interests, almost taking control of your career path?', table 1 illustrates the pilot questions for the focus groups. This inquiry ultimately procured a true profile of how millennial graduates understand and apply employability, a research like Tymon (2013) and Matusovich et al., (2010), see section 5 results.

In examining the components of talent evolution, this paper questions the vibrant dynamics of career-efficiency and self-efficiency, portraying the game of power between the employer and the graduate. A compelling argument worthy of study, 'Talent Evolution-Who has Control?' shifts the stereotypical assumptions *War for Talent*, inherited graduate employability and conceptual models, to a novel vantage point, arguing the importance of the new theorists of employability, third-level students. As a product of qualitatively engaging in these new theorists and insights, a shift and reformation of the sacred boundaries of McKinsey's *War for Talent* has formed, activating a revolutionary perception of talent development and graduate employability, examining the metacognition of these students, questioning; who holds the upper hand when playing the game of talent? Who has the control of employability? Who has control in developing talent? The graduates or the employers?

1.2 Context: The volatile environment that coined the new theorists of employability

The rationale of this highly diverse concept is derived from a student's mindset, incorporating third level students as the new theorists of employability. In other words, a graduate's heuristic and metacognition when applying the Knight and Yorke (2004) USEM model is determined by the volatile business environment, affecting a graduates personal, professional development, work readiness and career exploration tactics. The business environment directs the need for corporations to be highly competitive regarding resourcing and retaining high

ability candidate's. Resourcing the high-ability candidate or A player is an employer-led phenomenon, recruiting and retaining a person with an ideal capability of hard and soft skills. This employer-led expectation has altered the student's concepts of employability, when engaging in the CareerEDGE model, career exploration, and self-belief versus malleable belief, figure 2, Marginson (2017), McCracken at al., (2015), Dacre-Pool et al., (2007), Bedingfield (2005) and McQuaid and Lindsay (2005). Ultimately, employers place immense importance on a graduate's generic or transferable skills, illustrating control over what competencies that are to be expected at an entry-level employability, and the underlying function of third-level institution's and national incentives is to:

"Give us [corporations] a bright and engaged graduate, and we will build specific expertise for this organisation on top of that", (Knight and Yorke, 2002, p. 2).

However, in procuring talent evolution as a conceptual model and a testable theory, one must audit the symptoms of career and self-efficiency, and mark the recent stock market crash of 2008, as the underlying factor in constructing the concept of 'Talent Evolution-Who has Control?' within an Irish context. Inherently, the world political arena has become the dictator of national and international trade, world economy, social demographics and mobility within the world labour market, Pabst (2016), Kelly and McGuiness (2015), and Gratton (2010). Leading economies such as the US and Europe, but specifically Ireland, have experienced severe job shortages, currency deflation, excessive redundancies across all sectors, and prolonged economic deterioration, deeply effecting employment rates and employability within macro/micro-economic dynamics, Bergin, Kelly, and McGuinness (2015), and Dicken (2011). In addition, the EU 'Education and Training Strategy of 2020', which aimed to reach 82% employment rate for recent graduates aged 20-34 in its member states, has become an idealistic concept, as it was based on upon the labour market and climate pre-the recent recession, European Commission (2016). The European Commission report: 'Education and Training Monitor 2016' profile of Ireland demonstrates that:

"...There are emerging skills shortages in certain sectors of the economy (e.g. ICT) and a need to further up-skill and reskill the adult population, in particular by increasing participation in further education and training", European Commission (2017).

Consequently, the seemly unobtainable 'Education and Training Strategy of 2020' and Irelands profile, has procured a sense of urgency for corporations to resource talent as a longterm investment. As organisations systematically address talent development, selecting candidates for further development inclusively or exclusively, obtaining A-players to reduce unforeseeable risk with the metaphorizing and volatile business environment, Kelly and Barrett (2017), O' Dwyer (2016), Zheltoukhova and Baczor (2016), Sin and Neave (2014), Cappelli (2008), Smith and Kruger (2008), Glass (2007), and Bedingfield (2005). This demonstrates the power of authority among decision makers, placing a subjective definition in identifying talent that can complete short-term business objectives efficiently. This consequently moulds the graduate's capability of achieving Law and Watts (1977) DOTS Model and career-self efficiency within the graduate-employer exchange. At a national level, Irish universities have responded by clarifying what employability skills are most desirable for each discipline, but within basic and generic concept. Henceforth, the fabrics of microeconomics inherits the demands of the employee-employer relationship, and constructs a graduate's position within the knowledge economy, influencing a graduate's transition from an academic (theoretical expert) to an efficient employee that enhances productivity within corporate objectives, Baruch and Vardi (2016), Jackson (2013), Saad et al., (2013), Davies and Davies (2010), Gratton (2010), Beechler and Woodward (2009), Shaw and Fairhurst (2008), Glass (2007), CIPD (2006), CIPD (2005), McQuaid and Lindsay (2005), and Knight and Yorke (2002).

Currently in 2017, the scarring implications of the recent recession the potential fall of globalisation, UK's Brexit, President Trump's behaviour and US protectionist antics has landlocked Ireland in a notion of nationalist isolation, and the mind frame of 'every man for himself', IBEC (2017), Wolf (2016), Barrett and Kelly (2012), and Garavan (2007). Quantifying the implications of these political attributes, the CSO (2017) found that the youth unemployment rate (persons aged between 15 and 24) has fallen from 21.0% in May 2015 to 11.7% in May 2017. Furthermore, the average employability rates within EU member states in 2015 was at 76.9 % for graduates collectively (78.6 % for male and 75.3 % for female), and presently business confidence in Ireland has fallen from +40 in Q6 2010 to +23 in 2017, which suggests Ireland's attempt to remain competitive within the international labour market within an unprecedented socio-economic climate, Brightwater (2017), Kelly and Barrett (2017), European Commission (2016), and Kelly and McGuinness (2013).

Presented by the 'Education and Training Monitor 2016', skill gaps, talent shortages and gender inequality, most notable female participants within STEM and engineering occupations and is a constant issue in Ireland. Inspecting the graduate class of 2014 (incorporating a variety of disciplines), 19% females had reached the  $\epsilon$ 21,000 –  $\epsilon$ 24,999 salary bracket, whereas 13% males had reached this level, furthermore 8% of males had obtained the  $\epsilon$ 37,000 –  $\epsilon$ 40,999 salary bracket only 3% of females had reached this level, (Higher Education authority, 2016, p. 50). Therefore, decreasing gender inequality, bridging necessary skill-gaps to remain marketable, as well as sustain competitive power within and outside the employer-graduate exchange is problematic. To survive, corporate strategies commonly revert to the conventional mechanism of *War for Talent* to increase the efficiency for employees to become invaluable assets, and obtain effective competitive advantage, IBEC (2017), Jorgenson et al., (2017), Marginson (2017), Brightwater (2016) and Saad et al., (2013).

As evident by European Commission (2016), the employment rate of recent graduates is at 76.9%, 5.1% less than expected. This reverts to a sacred hypothesis, that graduates must specialise within a discipline and gain a high qualification to gain accessibility to greater opportunities, exercising in Bandura (1995) ideals of mastery experiences, vicarious experiences, and social persuasion, and the CareerEDGE model, figure 2, Higher Education Authority (2016) and Dacre-Pool et al., (2007). Yet, critically examining the engineering class of 2014, the Higher Education Authority (2016) found that 68% of BA honour student's post-graduation are employed in an engineering occupation at that 57% reside in Ireland and 11% have travelled overseas to gain employment, and 25% of engineering students were perusing in further study. The Higher Education Authority (2016) alongside the European Commission (2016) has sketched the demographics of millennial Irish graduates, yet they do not uncover the underlying trend of underemployment (from the A-players to the F-players), the aggressive upskilling with early career potentials, and the reluctance of students entering the workforce due to workplace insecurity and seemly unattainable employer requirements in meeting their expectations, CIPD (2016), d'Aguiar and Harrison (2016), Kultalahti, and Viitala (2014), McGuire (2016), Mellors-Bourne et al., (2011), Shaw and Fairhurst (2008), Bedingfield (2005), DeLong and Vijayaraghavan (2003), and King (2003). To add to this uncertainty, organisation-wide policies have acknowledged the complexity of talent management and the nature of employability, yet demonstrate an unshared sense of an ideal graduate skill sets and define potentially talented employee, other than hard skills or

academic excellence, European Commission (2016), and McCracken et al., (2015). This has heightened the ambiguity within the employer-graduate exchange within the Irish graduate labour market and raises the practical implications of examining and implementing talent evolution to the graduate-employer exchange, Pillai, Khan, Ibrahim, and Raphael (2012), Garavan (2007), and Slaughter, Stanton, Mohr and Schoel (2005), Hillage and Pollard (1998) and Kanter (1997). The volatile environment has presented the need for a graduate's work readiness and self-efficiency to be independent from any organisation, exercising in career resilience. Thus, challenging conventional processes of graduate management and HRM policies. Talent evolution embraces this independence and change of culture and the metacognitive orientations, and accepts that the volatile business environment created thirdlevel students as the new theorists of employability, figure 2, O' Dwyer (2016), Makki et al., (2015), Ulrich (2014) and Cabellero and Walker (2010).

Henceforth, the political, social, economic trends have inherently influenced a graduate's engagement in their academic performance, career/self-management, work culture assumptions, and labour market awareness, placing them within the STEM and knowledge economy. Brexit will have a long-term impact on business confidence of FDI, MNC, and SME's within the Irish economy, effecting the availability of suitable and sustainable talent supply, Forstenlechner, Selim, Baruch, and Madi (2014). As observed by the CIPD (2017a) Employee Outlook spring 2017 survey, over one third of employees felt that their organisation has been effected by the international political dynamics either to a great 6% or to some extent (26%) regarding the fluidity of human capital disturbing the fabrics of gender equality, between Ireland, UK, and the world. In addition, Brexit and will heavily imprint on the Irish economy, projecting a with a contingent exposure of 'The Capital versus The Rest of the Irish State', with more career opportunities and higher salaries, concentrated in the capital, saturating the talent pools and human capital, IBEC (2017), Brightwater (2017), d'Aguiar and Harrison (2016), Higher Education Authority (2016), and O'Dwyer (2016). Consequently, this has resulted in corporations metamorphosing the labour flow within the European and world stage, creating and recreating graduate recruitment and resourcing strategies. This moulds a graduate's ability to adapt employability capabilities within the Irish working environment, cutting the 'Key to employability' of undergraduate and post-graduate engineers to a door of chartered territory of employability within the STEM labour market and macro/micro-economic specifications, illustrated in figure 2, figure 3, figure 4, IBEC

(2017), Makki et al., (2015), Cabellero and Walker (2010), and Dacre-Pool et al., (2007). As such, the labour market, and notably the STEM sector, has become highly individualised, referring to importance of an individual to secure employability that is not merely rely on scaling internal positions within a firm or following the liner procedure to be employed, figure 2, Dacre-Pool et al., (2007) and Kanter (1997). Talent management cannot be simply implemented as a generic or frim specific strategy, but must mitigate within graduate expectancies. This supports the ideal of effective human capital for a given organisation versus the graduates attitude towards the workplace, illuminating the conflicts of interest between the idealist and realist employability and talent resourcing strategy, to an evolutionary approach of managing graduate talent and strengthening STEM human capital, O'Connor and Bodicoat (2017), Kultalahti, and Viitala (2014), Jackson (2013), Wanrooy et al., (2013), De Hauw et al., (2011), Eisner (2010), CIPD (2006), Martin (2005), and Morton (2002). This concept determines a graduate's ability to adapt employability and their talent, from outside influences, and as argued by Garavan (2007) a firm's rhetoric is commonly not appropriately aligned with SHRD practices that compliment an employee's expectations, and

career prospects, McCracken et al., (2015), Gratton (2010), and McQuaid and Lindsay

(2005).

This paper has adopted a qualitative investigation and thematic analysis, using the methodological frameworks of McCracken et al., (2015), Eisenhardt et al., (2007), Braun and Clarke (2006), Yin (2003), Denzin and Lincoln (1994), and Yin (1994) research and methodologies to construct a conceptual model and practical theory regarding graduate management, as illustrated in figure 1 and figure 8. The main objective of this paper is to explore the actions of third level engineering student's ability to create and innovate development within the STEM and knowledge economy, and explore a student's capability to control HRM and SHRD practices through the medium of self-worth within entry-level employability. Political phases such as Brexit, neoliberalism, globalisation and privatisation, and the impacts of the recent economic downturn have characterised Ireland's national labour market characteristics, and formed talent evolution as a necessary concept to advance contemporary HR literature and practices regarding employability and graduate talent management in an Irish context, Kelly and Barrett (2017), Pabst (2016), Kelly and McGuinness (2013), Stahl et al., (2012), Brady (2010), Gratton (2010), Cappelli (2008),

Davidson, Matusz and Shevchenko (2008), Smith and Kruger (2008), and Cappelli (2000). This will incorporate the value of talent evolution in relation to resourcing, and understanding the millennial graduates and future leaders, verging the idealist and the realist to constructive HRM perspective, corresponding to academic performance, competency development within the matrix of success, value and security, Ulrich (2014), De Vos et al., (2011), Abraham and Karns (2009), and Bedingfield (2005). Thus, by understanding the implications of the external trends, and engaging in self-reflection enhances a student's employability profile, advancing from Dacre-Pool et al., (2007) 'Key of Employability' model, and Knight and Yorke (2004) USEM model to the indefinite process of talent evolution in obtaining meaningful and challenging work, figure 1, figure 2 and figure 8.

Reviewing the existing graduate talent management concepts, entry-level employability is derived from individuals who are dependent on employers demands and specific requirements, playing the game of *War for Talent*, and subconsciously exercising in career-efficiency in adapting to work readiness (an individual's ability to complete a task) and functional employability, rather than pursuing and individualised career, Gyton (2017), Zheltoukhova and Baczor (2016), Nilsson and Ellström (2012), Fuller-Tyszkiewicz (2011) and Caballero and Walker (2010). Therefore, the fundamental approach to constructing the theory of 'Talent evolution- Who has control?' is founded upon the need for individuals to transition from career efficiency to self-efficiency. A conceptual framework that enables graduates to freely manage their careers, engage in career exploration in a proactive manner to achieve career goals and personal objectives within an indefinite time-scale, figure 1. To regain control of their development and fight for talent, transitioning from brick layer to architect in resourcing and their own development, advancing one's employability as:

"...there is little to be gained in developing employability if, at the end of the day, a student cannot identify a market in which to advertise their newly developed employability", (Foster, 2006, p.5).

To restructure the imprisonments of functional and market-driven employability, employers and graduates must stop the vicious wheel of *War for Talent* and creative destruction, as the A- players of today could be the F-players of our tomorrow, Cappelli (2008), DeLong and Vijayaraghavan (2003), and Cappelli (2000). 'Talent Evolution- Who has Control?' is a radical concept that disregard the conventions of *War for Talent*, and accepts third-level students as the new theorists of employability, legitimising a graduate's judgement and the

conceivable attempts of obtaining self-efficiency, 'free' management of their career exploration, altering between self-belief and malleable belief, figure 1. The aim of this paper is to draw upon a series of semi-structured focus groups, qualitatively examining the cognitive and ontological models, experiences, and expectations of millennial engineers, investigating the concepts of employability, and questioning who holds the responsibility of their career development. By incorporating a qualitative research method in alignment with the post-structuralist approach. Conclusions drawn from contextual data have been critically analysed, with reference to the geographical syntax of Dublin, Ireland, in positioning the new theorists of employability as the controllers of employability, the continuous persistence of obtaining challenging and meaningful work gains self-efficiency, and ultimately employability. This place the importance of accurate judgement, rather than preconceived ideas within the employer-graduate exchange, redefining the collective nature of HRM, SHRD and graduate resourcing and development techniques to the idiocentric and career resilient needs of a graduate, Harvey (2001).





Figure 1: Conceptual framework for building the theory of 'Talent Evolution - Who has Control?', concept adapted from Makki et al., (2015), Wye and Lim (2009), and Eisenhardt and Graebner (2007), and Dacre-Pool et al., (2007). The War for Talent and the Stock market crash of 2008 are the pillars of talent evolution, the environment that created 'career resilience' and the consumerist millennials, the graduates that grew up with uncertainty and the thirst for personal and professional development, IBEC (2017), O'Dwyer (2016), Hinchliffe and Jolly (2011), Beechler and Woodward (2009), Michael et al., (2001), and Waterman et al., (1994). Employers are the dictators of talent, resourcing and directly controlling graduate's capability. In response, there is an assumption that graduates must religiously exercise in the 'Key of Employability' acting as bricklayer their career and talent development, figure 2, Beechler and Woodward (2009), Brown and Tannock (2009), DacrePool et al., (2007), and Chambers et al., (1998). Thus, corporate strategies raise the importance of career-efficiency, soft skills such as emotional intelligence, self-awareness, wider life, and work experience. A strategy that places skill based solutions to the competitive business environment, social deprivation, and skill-gaps within the global/glocal labour markets, Calnan (2017), Wolf (2016), Tymon (2013), Brady (2010), Gratton (2010), Cappelli (2008), Tomlinson (2008), Glass (2007), Cappelli (2000), and Goleman (1998).

Talent evolution is contrived with the assumption that the individual, such as engineering students and graduates, adapts to fulfil short-term firm specific objectives to survive. Depending upon career efficiency to regain control career exploration and talent development is an unfruitful exercise, as one is reliant upon the employer's expectations. The employer's assumption of instant work readiness and vocational assets are skills and competencies influences operational competitiveness and a newly/potential employee's sustainability within generic or firm specific requirement, IBEC (2017) and Holland (1997). Yet these skills such as cognitive, social emotional and behavioural intelligence are only gained within career exploration encounters, outside the prescriptions of career efficiency, advancing from the generic approach of 'Key of Employability', expanding the indefinite process of talent development, figure 2, Sadd et al., (2013), Wye and Lim (2009), Zinser (2003), Gardner and Liu (1997), Lent, Brown, and Hackett (1994). In refining graduate's identity and employability within the labour market, Graduates must use a hybrid of careerefficiency and self-efficiency, acting as controllers of their own career destiny, enhancing their own capabilities, self-management, continual learning, critical reflection, and selfassessment to advance from entry-level employability, Hinchliffe and Jolly (2011). This

philosophy circulates the ability for individuals to transition from firm dependency, to advancing their skills to an independent position within the labour market, becoming the architect of talent development, achieving self-belief, high-adaptability within various career disciplines and career malleability, Eisner (2010), Knight and Yorke (2003), and Harvey (2001). This stress the importance of a graduates control and independence within employability and talent development, illustrating the significance of career exploration and an individual's engagement of obtaining meaningful and challenging work. The indefinite process of talent evolution, who is in control?, McCracken et al., (2015), Makki et al., (2015), Eisner (2010), Shaw and Fairhurst (2008), and Stewart and Knowles (1999).

### **Section 2: Research Question**

### 2.1 Title of Research

'Talent Evolution - Who has Control?' – A conceptual framework: A qualitative investigation into the concepts of employability within third level undergraduate and post-graduate engineering students in Dublin, Ireland.

### 2.2 Specific aims: Structuring 'Talent Evolution- Who has control?'

The specific aims of this research are, but not limited to:

- Ascertain the assumptions of third level engineers understanding of what it means to be employable. Exploring the demographic, institutional and the employer(s) influences upon a student's understandings and capability of work readiness, talent, and employability.
- 2. Obtain a profile of millennial third-level engineers by conducting a series of in-depth semi-structured focus groups. Incorporating a qualitative and thematic analysis upon engineering student's perceptions of his/her value within the knowledge and STEM economy against their capability to obtain work readiness, and exclusive and invaluable career opportunities.
- 3. To present 'Talent Evolution-Who has Control?' as a conceptual framework, diverting from the conventional thinkers' of employability to an enlightened perspective. Critically analysing emerging themes from contextual data against the valuable insights of the perceptions from the new theorists of employability, thirdlevel graduates, regarding employability, career-self efficiency and graduate talent development.

While constructing 'Talent evolution- Who has control?' as a conceptual model, employing a hybrid of Einenhardt and Graebner (2007) and Eisenhardt (1989) theory building process and Braun and Clarke (2006) thematic analysis, this research paper will attempt to procure the theory of talent evolution, that is academically and theoretically compelling. Within this process, the organic and indefinite process of talent evolution will revolutionise graduate management theories and conceptions, arguing that the new theorists of employability are the third level graduates. 'Talent Evolution- Who has Control?' is a hypothesis worthy of study, as not only acts as a counterpoint argument to McKinsey's War for Talent and conventional theories, but enlightens concepts of talent and employability within an inductive qualitative framework. Talent evolution shifts the premise that employers merely control employability, and that employees must adapt to career-efficiency to survive. Talent evolution argues that gaining employability is an indefinite and organic process, shifting towards the flexibility of career-self efficiency, arguing that the employer-employee exchange is ultimately the rift between the realists and the idealists, illustrating the disjointed expectations and workplace reality between employers and graduates. The origins of this novel perspective are originated from the 'ill-equipped theorists' of talent management and employability, millennial third level engineering students. Contrary to conventional thought, the 2008 stock market crash has caused third-level graduates to practice career resilience, employing a consumerist and individualist approach to the labour market, resulting in conventional SHRM strategies to become obsolete. Differentiation and career resilience are behaviours that support the growing trend within third-level graduates, a bi-product of the volatile business environment. As argued by Calnan (2017) corporate strategies cannot restrict developed with conventional and peripheral ideals, resourcing and developing the ideal A-players, but to understand and address talent as an evolutionary process, an inclusive approach, presenting the third-level graduates, including the 'talented rough diamonds', as the leaders of our future and the new theorists of employability, figure 1, table 1 and section 7; 7.1.a - 7.3.b, O' Dwyer (2016), Zheltoukhova and Baczoe (2016), Eisner (2010), Matusovich et al., (2010), Beechler and Woodward (2009), Brown and Tannock (2009), Thijssen et al., (2008), CIPD (2006), and DeLong and Vijayaraghavan (2003). The contextual data and prior research aligned with the collected primary data (semi-structured focus groups) procured reliability to the empirical structure of talent evolution, figure 1 and figure 8. The thematic structure and codes employed within the data analysis were selectively chosen, to re-position the concepts employability, table 2. Arguing the interpretative approaches to career-efficiency and selfefficiency within the conceptual models of employability, formed from post-organisational and organisational perspectives, figure 1, see section 5: results 1-3, Saad et al., (2013), Cappelli (2008), Smith and Kruger (2008), CIPD (2006), CIPD (2005) and Brown et al., (2004) and Zinser (2003).

## Section 3: Literature Review 3.1 Introduction

As the creator of 'Talent evolution- Who has control?' and a member of the Generation-Y community, defining employability and talent must be a subjective yet an independent research, McCracken et al., (2015), Eisner (2010), and Martin (2005). In constructing talent evolution as a conceptual model, an inductive philosophy must be adopted, analysing an organic phenomenon that is in constant movement between desire and need, controlled by the labour market demands that cognitive position of its subjects, in other words third-level engineering students, McGuire (2016), McGuire (2014), and Lent et al., (1994). Talent evolution, as a conceptual model, has the potential to radically advance corporate strategies and theoretical assumptions regarding War for Talent and employability, as it considers the students ability of taking control of potential opportunities within the knowledge economy and market-driven approach to talent management, examining the consumerist and entrepreneurial nature of graduate development, Cappelli (2008), and Cappelli (2000). Thus, implying the practical implications of 'Talent evolution- Who has control?' as a testable theory of further study, a tool in restructuring an idealistic to realistic employer-graduate expectations to a constructive compromise, figure 1, figure 8, table 3. This literature review will procure a contextual and theoretical framework, regarding several issues and themes relating to resourcing and maintaining graduate employability, with specific interest in STEM and engineering third-level student's capability of work readiness, career-self efficiency. Academic conceptions of employability, alongside significant talent development models such as Dacre-Pool et al., (2007) 'Key of Employability', CareerEDGE aid, Knight and Yorke (2004) USEM model, and Law and Watts (1977) DOTS model, is necessary within a qualitative research methodology, to illustrate the theoretical and thematic basis of talent evolution, figure 1, figure 2, McQuaid and Lindsay (2005), and Denzin and Lincoln (1994).

#### 3.2 Employability: More than just a 'Buzz word'

Employability, in its simplest form, is referred to the innovative skills, knowledge, and competencies that an individual must obtain to efficiently adapt to the workforce and to remain in employment, Makki et al., (2015), Nilsson and Ellström (2012), Moreau and Leathwood (2006), McQuaid and Lindsay (2005), and Hillage and Pollard (1998). Therefore, it is important to align highly skilled or 'talented' workers with essential employability skills to sustain labour market demand at a national and international platform, Makki et al., (2015). To construct the 'Key of Employability' as a conceptual and practical model, as illustrated in figure 2, employability can be defined as:

"... having a set of skills, knowledge and understandings and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful", (Dacre-Pool et al., 2017, p. 280).

But what does it mean to be satisfied and successful? Is employability merely controlled by organisations, and it is the employee's duty to match generic skills and behaviours to the corporate needs? Or does 'satisfaction' and 'success' of an individual have a deeper meaning, the components that control self-belief and malleable belief to talent development and employability?

Critically analysing the 'Key of Employability' model, employability and talent development is directly geared towards a graduate's career-efficiency, work readiness and CareerEDGE aid, yet it is restricted by policy makers and employers, McCracken et al., (2015), Makki et al., (2015), Nilsson and Ellström (2012), and McQuaid and Lindsay (2005), figure 2. The 'key' suggests that employer-led career development and learning is valuable, and that organisational work experience and workplace learning informs subject learning and efficient employability and work readiness post third-level graduation, figure 4, Mikki et al., (2015), Nilsson and Ellström (2012), Dacre-Pool et al., (2007), CIPD (2006), and Knight and Yorke (2002). Yet, the 'Key of Employability' model is a suitable guide for graduates to obtain an entry-level job, but does not consider the recent effects of the business environment regarding effective work readiness or the millennial's desire to obtain professional personal development outside organisational strategies, Knight and Yorke (2003). In other words, where satisfaction and success is orientated by one's desire to advance and grow his/her own skills within and outside corporate coherence or employer-led strategies, advancing from generic skill sets and minimum qualification requirements to gain employment, Makki et al., (2015). This phenomenon stems from Law and Watts (1977) DOTS model and selfefficiency, such as personal marketing, social and professional networking, and efficient communication, a theoretical basis that drives talent evolution as a tool to outline and understand the complex career path of a graduate, Makki et al., (2015), Smith and Kruger (2011), and Zinser (2003). The lack of availability of self-presentation and self-management outside the prescriptions of work readiness and employability, has resulted in high expenditure rates and rapid loss of millennials recently employed due to preconceived generational judgements, figure 2, figure 4, Dries (2013), CIPD (2006), Bedingfield (2005), Knight and Yorke (2003), and Kanter (1997). Shaw and Fairhurst (2008) and Bedingfield (2005) argue that the widespread cause of voluntary resignations within millennial graduate recruits is the individual's pursuit of meaningful and challenging work. In addition, by simply measuring the time-line of a student's transition from academic to employed as a satisfactory outcome, does not illustrate whether the graduate can exercise in personal development

within the workplace environment, or if there are being underutilised, pointless upskilling or have obtained a non-graduate role, affecting the efficiency of a graduate's employability, Calnan (2017), CIPD (2017b), d'Aguiar and Harrison (2016), Higher Education Authority (2016), McCracken et al., (2015), Beechler and Woodward (2009), Heaton et al., (2008), Tansley, Turner, and Foster (2007), CIPD (2006), and CIPD (2005).

Therefore, the word 'employability' and 'talent' are often used as buzzwords as they are described as;

"a fuzzy notion, often ill-defined and sometimes not defined at all", (Gazier, 1998, p. 298).

Yet, the significance and conceptualization defining employability and managing talent will not lose its value, even if the terminology changes, see figure 3, McCracken et al., (2015), Dries (2013), Thijssen et al., (2008) and Brown and Tannock (2009). In addition, Rae (2007) depicts entry-level employability as:

"...a learning outcome, may be said to result from the cumulative learning over a series of course modules, together with parallel personal development through a range of formative experiences and wider contextual learning...", (Rae, 2007, p. 608).

A notion, that suggest that job security and lifelong employment do not control employability, but is geared towards effective work readiness within various occupational sectors. It is career reliance, motivation and an individual's engagement in their own personal development enables career exploration and the possibilities of obtaining a virtual/boundary free career which thrives on personal development, enabling self-belief and or malleable belief within organisational structures and the knowledge economy, Mikki et al., (2015), Nilsson and Ellström (2012), Stewart and Knowles (1999), and Nabi and Bagley (1998). The hypothesis preludes talent evolution, synthesising the contextual data and theoretical models concerning employability, identifying the key 'transferable' soft skills and competencies such as but not limited to: discipline expertise, workplace maturity, reliability, time management, accountability, strategic thinker and problem solver, and a hunger for continual learning and professional advancement, figure 3, figure 4, Mikki et al., (2015), Andrews and Higson (2008), Shaw and Fairhurst (2008), Bedingfield (2005), Knight and Yorke (2004), Zinser (2003), and Nabi and Bagley (1998). The capability and availability of individuals to obtain transferable skills beyond institutional learning and generic skill sets is integral to graduate employability and work readiness, and demonstrates the basis of career-self efficiency and talent evolution within third level graduates.





**CareerEDGE - The Key to Employability** 

Figure 2: 'Key to Employability', (Dacre-Pool et al., 2007, p. 281). Figure 2 illustrates a visual representation to the capabilities that students and employers have upon enhancing the prospects of functional employability and career-efficiency. However, incorporating an engineer's attempts to advance one's position in the STEM and labour market is a highly complex phenomenon. The Key shows the underlying conditions that employers place upon determining the position of STEM third level graduate's, influencing the individual's initiative to develop their employability within and outside an organisation, d'Aguiar et al., (2016), Mellors-Bourne et al., (2011), Pegg et al., (2012), Dacre-Pool et al., (2007), Hillage and Pollard (1998), and Law and Watts (1977). By obtaining a degree, basic skills, emotional intelligence, and career development, the CareerEDGE aid, illustrates a cookie cutter approach that a graduate must implement in their career development practise to gain employment Moreau and Leathwood (2006) and Morton (2002). In addition, the 'Key' does not aid a graduate within a specific degree or job requirements, like Makki et al., (2015) conceptual model of graduate engineering, emphasising on people qualities/skills, professional knowledge and skills, and technology knowledge and skills, McGuire (2016), and McGuire (2014). Therefore, by acquiring employability beyond the key, expanding graduate career options, self-implemented career plan and personnel marketing will lead to effective career exploration/exposure, the union of career efficiency and self-efficiency that breaks the mould, Forstenlechner, Selim, Baruch, and Madi, (2014), Harvey (2001), and Stewart and Knowles (1999).

#### 3.3 The theoretical models that frames 'Talent Evolution- Who has Control?'

With relevance to this research, Knight and Yorke (2004) USEM model, that consists of interrelated components of understanding, skills, efficacy beliefs and metacognition, and Hinchliffe and Jolly (2011) present the theoretical architecture for talent evolution and the various intersubjective interpretations of employability, figure 3. By dividing this model US versus EM, projects the theories of career-efficiency versus self-efficiency, illustrating the dynamics of industry specific, generic, and vocational skills and understandings that are necessary for students to adapt to the unregulated labour market, IBEC (2017) and Holland (1997). In addition, the US partite correlates to a graduate's ability to adopt work readiness traits into the workplace such as adapting to the organisational culture, working with a group, practice work ethics within the workplace, Makki et al., (2015), Brady, R.P. (2010), CIPD (2006), and Knight and Yorke (2003). Putting this theoretical concept into practice, a

graduate engineer can be described as having a mechanical and highly analytical mindset, excerpting specific behaviours such as evaluating how a process works, and how it can be improved, traits that are in high demand within a wide spectrum of careers, Makki et al., (2015), McGuire (2014), McQuaid and Lindsay (2005), and Knight and Yorke (2000). This illustrates the technical skills that a stereotypical engineer has obtained by exercising the CareerEDGE model, suggesting the influences of institutional learning and the career efficiency, and the preconceived expectancy value of a student's understanding of what employers are looking for in a graduate and what vocational skills they can expect, figure 2, figure 4, table 1 and section 7; 7.1.b, 7.2.b, 7.3.b., Makki et al., (2015), Saad et al., (2013), Wye and Lim (2009), Dacre-Pool et al., (2007), Knight and Yorke (2003), and Holland (1997). Smith and Kruger (2011) stresses the importance of personal qualities, such as emotional intelligence, decision making, professional networking, communication, task related maturing and health and safety competence as the main characteristics of employability, Law and Watts (1977). This argument relates to the EM partite of Knight and Yorke (2004) model, as the matrix of one's success, value and security is derived from an individual's willingness to learn within and outside organisational structures, figure 3, Garavan (2007), King (2003), and Kanter (1997).

An individual's emotional intelligence, and entrepreneurship enables a graduate to adapt transferable skills such as teamwork, communication, adaptability, self-management, critical thinking, innovation, and competencies within various job roles. These skill sets increase the ability for a graduate to transition from malleable-belief and self- belief, advancing one's capability and talents, exercising in career efficiency, work readiness and personal development planning (PDP), figure 4, Gyton (2017), Makki et al., (2015), Hinchliffe and Jolly (2011), Smith and Kruger (2008), McQuaid and Lindsay (2005), and Goleman (1998). Yet, due to the employer's assumption that a third level student lacks life-experience and the ability to effectively manage their career and talent development, corporations will only invest in functional employability, prioritising functional competence, vocational skills and firm-specific skills that is in demand, McGuire (2014), Resen, Slater, and Johnson (2013), Pegg, Waldock, Hendy-Isaac and Lawton (2012), Beechler and Woodward (2009), Dacre-Pool et al., (2007), and Holland (1997). This shows the employers control over a graduate's learning and vital experiences, beyond graduate development schemes or entry level roles, and obstructs a graduate's ability to develop a rounded skill-set and exercise efficiency

beliefs and metacognition, in other words self-efficiency, Calnan (2017), Gallardo-Gallardo, Dries and González-Cruz (2013), Cabellero and Walker (2010), Martin (2005), Knight and Yorke (2003), Cappelli (2000), and Harvey (2000). Therefore, two extremes within thirdlevel graduates have emerged, underemployment and hazy aggressive upskilling, CIPD (2017a), CIPD (2017b), d'Aguiar and Harrison (2016), and CIPD (2006). As STEM graduates are being evaluated as potential collective assets, lacking in core scientific knowledge, workplace experience, and specialised post-graduate education, demonstrates the employer's favouritism of the US particle of Knight and Yorke (2003) model rather than the EM partite, in other words self-efficiency, figure 4. Therefore, the corporations attempt to remain competitive, while enforcing SHRM practices lessens the possibility of a graduate to exercise in reflective continual learning, problem solving and proactive creativity within and outside corporate specifications, Faragher (2017), d'Aguiar and Harrison (2016), McGuire (2016), Mellors-Bourne et al., (2011), Bedingfield (2005), Knight and Yorke (2003), and Lent, et al., (1994). This disjoint of career-efficiency and self-efficiency obstructs effective talent development, corporate governance and idiocentric personnel development, influencing the supply-demand equation within the labour market and limits the capability of effective employability.

The underlying conditions of graduate employability is centred upon the supply-demand equilibrium within the labour market, but most importantly, employability is dependent on the ability for a graduate to have transferable vocational skills, engage in career-self efficiency and achieve work readiness efficiently as demonstrated in figure 4, Makki et al., (2015), McCracken et al., (2015), McQuaid and Lindsay (2005), Holden and Harte (2004), Nabi and Bagley (1998), and Holland (1997). However, due to the recent economic downturn and the world political dynamics, from Brexit to President Trump, the employer-graduate relations have become intense and highly strained, Calnan (2017), Kelly and Barrett (2017), Pabst (2016), and Kelly and McGuinness (2013). In addition, the capability for graduates to experience career-efficiency and self-efficiency is an indefinite procedure that may not be achieved by a 'realised potential' or 'sustained employment' as expressed by Hillage and Pollard (1998). It is also not sufficient to assume that it is only a 'unsuccessful individual' that finds himself/herself being underemployed, underutilised or did not secure a self-fulfilling role, limiting the possibilities of positive career exploration practices, figure 4, Makki et al., (2015), O'Dwyer (2016), Higher Education authority (2016), Bergin, Kelly, and

McGuinness (2015), Kelly and McGuinness (2013), Barrett and Kelly (2012), McCash (2006), and Law and Watts (1994).

Employers face a constant battle of procuring a balanced graduate recruitment, development, and retention strategy, that concurs with gender equality, competitive efficiency, and intergenerational voice, within the employer-graduate exchange, figure 1, figure 3, CIPD (2017a), CIPD (2016), Johnnson and Lopes (2008) and King (2003). Extracting from Heaton et al., (2008) research, to mitigate this challenge, employers are attempting to localise strategies to redress this globalised issue of attracting and retaining graduates with work-ready skills, so that employees that can quickly adapt to unprecedented changes with and outside the corporate infrastructures. An ideal concept, but it is not as liner or as simplistic as graduates following the 'Key of employability', CareerEDGE model, or Makki et al., (2015) work readiness conceptual model, to remain marketable but is dependent upon self-management, differentiation, and career resilience tactics, figure 2, figure 3, figure 4, Calnan (2017), McGuire (2016), Dacre-Pool et al., (2007) and Waterman, Waterman, and Collard (1994). As concluded in Dacre-Pool et al., (2007) paper:

"Employability is a lifelong issue and nobody is every perfectly employable. There will always be aspects of a person's employability that would benefit from improvement", (Dacre-Pool et al., 2007, p. 288).

To realise a graduates or employee potential, employability must be considered as a movement, acting upon self-management, social networks, and previous experience to remain marketable, Nilsson and Ellström (2012). Ulrich argues that a employees career-self efficiency actions drives the force of change within macro and micro economics, architecting the characteristics of the labour market, expanding, or obstructing human capital strategies within social, (inter)generational, technological, and demographic advancement tendencies cross time and space, Gyton (2017), Kultalahti, and Viitala (2014), Ulrich (2014), Gratton (2010), Beechler Woodward (2009), Brown and Tannock (2009), Giancola (2006), Michael et al., (2001), Martin (2005), and Waterman, Waterman and Collard (1994). This ideology disregards the 'best fit', and *War for Talent* strategy of HRD and places the talent evolution to the foreground, examining the complexity of millennial graduate's engagement with career resilience, suggesting the conflict between a desire to obtain meaningful and challenging work and the control employers place upon them gaining employment and talent
empowerment, figure 2, Nilsson and Ellström (2012), McQuaid and Lindsay (2005), and King (2003).

Figure 3: Extracting the emerging themes that construct talent evolution as a conceptual model

Reference	Construct terminology	Breakdown of skills/attributes
(Gardner & Liu, 1997)	Workforce readiness	Skills and Competencies: Speaking and listening, Reading, Writing, Mathematics, Thinking and Reasoning, Organisational, Analysing data, Job Skills, Personal Skills
(Casner-Lotto, Barrington & Wright 2006)	Workforce readiness	Applied Skills Critical thinking/problem solving, Oral communications, written communication, teamwork/collaboration, diversity, information technology application, leadership, creativity/innovation, lifelong learning/self-direction, Professionalism/Work ethic, Ethics/Social responsibility
(Hart, 2008)	Work preparedness	Tearnwork, Ethical judgement, Intercultural skills, Social responsibility, Quantitative reasoning, Oral communication, Self-knowledge,, Adaptability, Critical thinking, Writing, Self-direction, Global knowledge
(Hambur, Rowe & Luc, 2002; Stewart & Knowles, 1999)	Graduate transferable skills & qualities ("Graduateness")	Personal Attributes Motivation, Organisational ability, Teamwork, Interpersonal/social skills, Leadership <u>Communication</u> Written, Verbal and non verbal skills <u>Problem-Solvina</u> Initiative, Creativity, Decision Making
(Gabb, 1997)	Graduate transferable skills & qualities	Motivation, Enthusiasm, Interpersonal skills, Teamworking, Flexibility, Adaptability, Oral communication, Initiative, Proactivity, Problem-solving
(Stewart & Knowles, 2000)	Graduate transferable skills & qualities	Motivation, Initiative, Creativity, Organisational Ability, Communication Skills – Verbal, Communication Skills – Written, Tearnworking, Interpersonal/Social, Problem Solving, Leadership, Numeracy, Information Technology
(Atlay & Harris, 2000)	Graduate employability	Information retrieval and handling, communication and presentation, planning and problem solving, social development and interaction
(Knight & Yorke, 2003)	Aspects of Employability	Personal Qualities Malleable self-theory, self-awareness, self-confidence, independence, emotional intelligence, adaptability, stress tolerance, initiative, willingness to learn, reflectiveness.
		Core Skills Reading effectiveness, numeracy, information retrieval, language skills, self-management, critical analysis, creativity, listening, written communication, oral presentations, explaining, global awareness

Figure 3: Extracting the emerging themes that construct talent evolution as a conceptual model, (Caballero and Walker, 2010, p. 19). Andrews and Higson (2008), Hart (2008) and Casner-Lotto, Barrington, Wrigtht (2006) and Gardner and Liu (1997) present the thematic and theoretical underpinnings of career-self efficiency of a graduate and entry level employability, conforming to employers preconditions and expectations such as obtaining hard skills- individual's GPA/class degree), professional knowledge- listening and communication skills, organisation system and climate, time task and resource management, and soft skills such as personal qualities and prior work-life experience, figure 4, Makki et al., (2015). However, Hambur, Rowe and Luc (2002), Stewart and Knowles (2000), Atlay and Harris (2000), Stewart and Knowles (1999), and Gabb (1997) argue the potential capacities of a graduate's career resilience and self-efficiency within the unregulated labour market and knowledge economy is dependent upon an individual motivation, STV, and personal preference regarding professional and personal development, Matusovich et al., (2010), and Dweck and Leggett (1988). Furthermore, Makki et al., (2015) and Knight and Yorke (2003) present the admirable skills, higher order thinking (such as rationale reasoning, health and

safety precautions, conflict resolution capabilities, and self-control), a characteristic that employers favour over basic occupational skills, Holland (1997). This allows a graduate the flexibility to exercise proactive innovation, creativity and enhance social and professional networking, contributing to progressive employability, Caballero et al., (2011), and Harvey (2001). However, academic excellence, which consummate highly rewarded employment, is subjected to the compelling intersubjective certifiability of co-curricular participation, career exposure, such as validity of placements and internships of the individual. Knight and Yorke (2004) USEM model suggests the adaptability of the individual's physiological mindset is relevant to organisational and individual expected performance standards, work readiness and inherited flexibility to the uncharted territory of globalised workforce of engineering.

#### Figure 4: Work readiness skills: A conceptual model



Figure 4: Work readiness skills: A conceptual model, (Makki et al., 2015, p. 1009). Makki et al., (2015) present career exploration as the vital tool in assessing employability. Yet, obtaining a progressive career path originates from a graduate achieving three sets of skills; people qualities, professional knowledge, and technology skills to achieve success, high attainment value and security within career exploration practices, Hinchliffe and Jolly (2011). Although Makki et al., (2015) study relates to third level engineers work readiness, this conceptual framework over simplifies the capabilities and competences necessary to regain control of one's career path and talent development, and does not consider the external conditions of employability, an element similar to Dacre-Pool et al., (2007) 'Key of employability model', see figure 2 and figure 3. However, applying expectancy value theory and Eccels model (competence beliefs, task value beliefs and motivated goals and actions) to Makki et al., (2015) work readiness model raises the importance of personal identity, past experiences, and influencers, such as family members, lecturers, and colleagues, in gaining career exploration, employability and work readiness, Hinchliffe and Jolly (2011), Brady

(2010), Caballero and Walker (2010), Matusovich et al., (2010), Abraham and Karns (2009), Eccles (2005), Stewart and Knowles (1999), and Eccles, Adler, Futterman, Goff, Kaczala (1983).

# 3.4 How conventional graduate management strategies are losing 'talented rough diamonds'

Intergenerational labour market characteristics and desires of millennial graduates have caused challenges within graduate management, shifting the concepts of War for Talent of resourcing high calibre applicants with suitable working skills to innovative and localised strategies, Calnan (2017), CIPD (2017b), McCracken et al., (2015), Nilsson and Ellström (2012), Cappelli (2008), Johnnson and Lopes (2008), Heaton et al., (2008), Lewis and Heckman (2006), Bedingfield (2005), McGuire (2014), and King (2003). Although national and regional regimes are focused upon promptly delivering graduate candidates to eliminate skill gaps and talent shortages, there is an estimated 40,000 shortfall of STEM graduates in the labour market, Calnan (2017) and Faragher (2017). It is not the quantity of graduates, but the quality, due to what Rae (2007) describes as "disaggregation" designs of academic understanding of talent management, where graduates fail to recognise the linkages that create a holistic concept of employability, combining one's university experience and interactions within the wider "world of work", Caballero and Walker (2010), Davies and Davies (2010), Nillsson (2010), Lewis and Heckman (2006), Knight and Yorke (2002), Warn and Tranter (2001), and Harvey (2000). While graduate talent is recognised as an invaluable to process creative thinking alternative workplace performances within an intergenerational workforce. However, graduate talent it is treated as a generic yet intangible commodity, that can be quantified and addressed supply chain management tactics. A oppressive strategy, most known as the 'best fit' approach, was perfectly acceptable in procuring a 'talent-ondemand' equilibrium and ultimately sustaining a competitive advantage, McCracken et al., (2015), Gallardo-Gallardo (2013), Cappelli (2008), and Michael et al., (2001).

As described by Davies and Davies (2010) talent management is the:

"... systematic attraction, identification, development and engagement/retention, deployment of those individuals with high potential who are of particular value to an organisation", (Davies and Davies, 2010, p. 149).

From a strategic human resource viewpoint, resourcing, retaining, and developing graduates as invaluable assets are constructed by rigorous systematic methods, either adopting a 'best

fit' or 'best practice approach'. Screening, assessments, capability management and processing applications for firm specific, vocational and industry skills to obtain the Aplayers in demand, McCracken at al., (2015), Rayner and Papakonstantinou (2015), Eisner (2010), Boxall and Macky (2009), Knight and Yorke (2003), and Holland (1997). Nonetheless, this 'best fit' technique of obtaining the 'right talent', a person who exhibits generic meta-competence, either managerial or interpersonal, and hard technical or operational competence, are persons controlled by the employer(s) subjective assumptions of employability and company/capability requirements, Nilsson and Ellström (2012), Caballero and Walker (2010), Tansley et al., (2007), and DeLong and Vijayaraghavan (2003). Thus, employers are exercising their duty to compose the essential workforce per financial and organisational obligations and predicting the future performances of their human capital, gaining HPW with efficient team work problem solving capabilities, McCracken et al., (2015), Niilsson and Ellstrom (2012), Boxall and Macky (2009), Appelbaum et al., (2000), and MacDuffie (1995). Yet, recently STEM graduates do not possess the necessary work readiness to sustain the supply-demand equilibrium as graduate talent management that is centred upon superiority rather than egalitarianism, a process controlled by competitive performance, business and competitive strategies Calnan (2017), Faragher (2017), Makki et al., (2015), McCracken et al., (2015), Nilsson and Ellström (2012), Brady (2010), Caballero and Walker (2010), Brown and Tannock (2009), Cappelli (2008), and Gardner and Liu (1997). Thus, the 'best fit' and 'best practice' strategy is an idealistic concept, controlled by employer-led values and market-driven approach to resourcing talent, providing a sense of stability within supply-demand cycle and labour market, fracturing the ideals presented in the 'Key of Employability model', figure 2, McCracken et al., (2015), Dries (2013), Cappelli (2008), Lewis and Heckman (2006), and Cappelli (2000).

In an Irish context, there is a significant default within the supply-demand equilibrium, more specifically within the graduate STEM talent pool, that can be sourced to institutional learning and a graduate's dependency on career efficiency within the organisational social level, McCracken et al., (2015), Nilsson and Ellström (2012), and Cappelli (2000). From the perspective of the graduate class of 2014, only 67% BA honours and 70% of Masters/Doctorate engineering degrees was relevant to the working life of an engineer, illustrating the inefficiency of the US partite of Knight and Yorke (2004) USEM model, Higher Education Authority (2016). In addition, CIPD Resourcing and Talent Planning 2017 report found that 32% of organisations surveyed claimed that second and third level

institutions are not equipping students with work ready skills, CIPD (2017b) and CIPD (2006). This illustrates a disjoint in Eccles model and the expectancy value theory, where employer-graduate expectations of success is highly diverse, demonstrating an inefficiency of a graduate's ability to apply and understand corporate content knowledge, disciplinary skills, workplace awareness, workplace experience, and generic skills equilibrium, CIPD (2017b), Nilsson (2010), Cappelli (2008), CIPD (2006), Eccles (2005), King (2003), Bennett, Dunne, and Carre (1999), and Eccles et al., (1983). Analysing the Higher Education Authority (2016) statistics regarding engineering graduates, Smith, McKnight and Naylor (2000) argue that a graduate's transition from college to the workplace, including unemployment and inactivity proceeding a student's graduation, usually between 6-8 months, is related to an engineer's GPA/class of degree, engineering discipline studied, previous qualifications and social class background. This corresponds to labour market pressures of talent shortages and skill gaps, and the organisations demand of obtaining a high performing talent pool of critical skills such as innovative and technology advanced employees necessary for corporations to remain competitive in the business environment, Faragher (2017), Makki et al., (2015), Nilsson and Ellström (2012), Wye and Lim (2009), Cappelli (2008), CIPD (2006), and CIPD (2005). As observed by Ulrich (2014) and Bedingfield (2005), the transitional gap from academic to worker, alters the graduate's ability to obtain invaluable 'soft skills', work readiness and the increasing demands of profitability and productivity otherwise known as Return on Investment (ROI), Makki et al., (2015), Smith and Kruger (2011), Brady (2010), Bedingfield (2005), and Zinser (2003). This process is not instantaneous, it is that a life-skill that advances on personal qualities and higher thinking, such as social and professional networking, self-awareness, leadership, self-initiative, team work, team building and importantly for millennial graduates applying constructive criticism to shape personal development and into their personal and professional lives, figure 1, figure 3, Ulrich (2014), Hinchliffe and Jolly (2011), Cabellero and Walker (2010), Andrews and Higson (2008), Shaw and Fairhurst (2008), Glass (2007) Dacre-Pool et al., (2007), Bedingfield (2005), CIPD (2005), and McQuaid and Lindsay (2005). Yet from a graduate and or entry level stance, obtaining a 'high-potential' vocational skills are obtained within a multidimensional environment, incorporating 70-20-10 talent management incentivises, such as third level education and corporate training programmes. Consequently, these activities enrich career efficiency, critical skills, and enhancing an employability profile beyond entry level, but is derived from firm specific needs, CIPD (2017a), Zheltoukhova and Baczor (2016), Wye and

Lin (2009), Shaw and Fairhurst (2008), CIPD (2006), CIPD (2005), and Holden and Harte (2004). As a result, employers practice conventional managerialist approaches to talent management, that are sometimes idealistic process, focusing upon functional employability to source top talent and advance human capital, Nilsson and Ellström (2012) and King (2003). In addition, this approach treats potential graduates as collective assets, used to enhance firm performance and achievement of corporate objectives, without addressing the interests, motivations and expectations of their human capital, traits that can be originated to Chambers et al., (1998) War for Talent, Thunnissen, Boselie, and Fruytier, (2013), Boxall and Purcell (2011), Shaw and Fairhurst (2008), and Gardner and Liu (1997). Therefore, talent is controlled by a graduate's dependence on career-efficiency, functional employability, and an organisations resources to retain graduates and deliver talent development programmes, Zheltoukhova and Baczor (2016), CIPD (2006), CIPD (2005), and McQuaid and Lindsay (2005). Yet, individual's level of exposure to organisational recruitment and retention strategies are the engineering graduates attempt to match skills, knowledge and abilities to organisational STEM labour market and supply demand. This alludes to Davidson et al., (2008) DMS model regarding a student's engagement in industry dynamics, and firm productively, illuminating the risks of mismatched, overqualified, and underutilised talent, CIPD (2017a), CIPD (2017b) and CIPD (2016), McGuire (2016), and Mellors-Bourne (2011). However, this task-based approach HRD is not an effective nor sustainable practice, as organisations competitive strategies and entry level requirements change in response to the external environment dynamics, resulting in the constant inequality in assortative matching as argued by Nilsson and Ellström (2012).

As observed in the Resourcing and Talent Planning 2017 survey, there is a 30% increased intake of graduates aligned with a decreased intake of 17%, a falling percentile compared to 2015 survey report, suggesting a restriction of participants in graduate programmes and strategies, CIPD (2017b). These statistics correlate to Boxall and Purcell (2011) Ability-Motivation- Opportunity (AMO) model, where 'best fit' or 'best practice strategies' influences an individual's access to opportunistic encounters, acting upon career-efficiency activities within graduate development strategies, which are subjected to the day-to-day management, staff performance needs, and the graduate's ROI, focusing talent development upon firm-specific skills within large organisations, CIPD (2017a), CIPD (2017b), McGuire (2016), Zheltoukhova and Baczor (2016), CIPD (2006), CIPD (2005), Bedingfield (2005), and Creelman (2004). Frequently corporate strategies regarding learning and development are

tailored to firm-specific needs, commonly based upon learning from peers (94%) and on the job training (92%), not to a graduate's desire of professional and personal development planning (PDP), CIPD (2017a), Zheltoukhova and Baczor (2016), CIPD (2006), and CIPD (2005). This imbalance of employer-graduate exchange within internships, partnerships, placements, graduate programmes and or entry level roles, can either impair or enlighten a student's capability to self-manage, and engage in personnel development, engaging in Law and Watts (1994) model while exploring career opportunities, and engaging in life-long learning practices within organisational and post-organisational structures, O'Connor and Bodicoat (2017), CIPD (2017a), Budd and Colvin (2007), Creelman (2004), Garavan (2007), and Holden and Harte (2004).

The disjoint between the idealist and realist entry-level employee's capability on soft skills has caused graduates, prior to induction, to consider their next career step, in the search for more meaningful and challenging work, voluntarily resigning before corporations can regain profitable ROI, Wanrooy et al., (2013), Bedingfield (2005), Eccles (2005) and Eccles et al., (1983). As presented by CIPD (2016) roughly 33% of Irish graduates being underutilised in the workforce, with an additional 38% of graduates performing in non-graduate jobs. Furthermore, the Institute of Employment studies reports that employers are tentative to support a student's MBA due to cost, elevated expectations, and a tendency to leave at the end of the course, in addition 86% of graduate recruits tend to leave at the end of their third year, Shaw and Fairhurst (2008), Moreau and Leathwood (2006), Bedingfield (2005) and Connor, Hirsh, and Barber (2003). This trend can be described as a graduate's attempt to gain better career prospects, training opportunities and improve work-life balance, and not being swayed by financial gain, unconsciously exercising in Eccles model and expectancy-value theory, figure 4, CIPD (2006), Bedingfield (2005) Eccles (2005) and Eccles et al., (1983). This demonstrates the need for graduates to obtain self-efficiency, acting within Wanrooy et al., (2013) and Waterman et al., (1994) 'career resilience' strategies, adapting to change within and outside organisational governance.

Self-efficiency and career resilience incorporates personal marketing, emotional intelligence, social and professional networking. It is a behaviour that enables self-management, teamwork, and potential leadership within organisational expectations but derived from an individual's persistence in personal growth not just to deliver on employer's expectations, figure 3, figure 4, Gyton (2017), Makki et al., (2015), Ulrich (2014), Hinchliffe and Jolly

(2011), Smith and Kruger (2008), McQuaid and Lindsay (2005) Eccles (2005), Goleman (1998), and Eccles et al., (1983). Self-efficiency and career resilience behaviours are necessary for a graduate to be distinctive, but also vital to survive within the rapid changes in the labour market and workplace demands, employing 'expectancies of success' to career exploration and talent evolution practices, figure 2, figure 4, Higher education Authority (2016), Gallardo-Gallardo et al., (2013), Wanrooy et al., (2013), CIPD (2006), Knight and Yorke (2003), Kanter (1997), and Waterman et al., (1994). Consequently, managers and HR practitioners run the risk of losing the 'talented rough diamonds', or prevent the ability for a graduate to evolve within the labour economy and the capability to transition from careerefficiency to self-efficiency, if employers then continue to practice War for Talent and taskbased approach as a means of resourcing and recruiting talent. Employers commonly draft the expectations of entry level positions or graduate programmes based upon the collective identities and beliefs of Generation-Y, classifying a third-level graduate's aspirations, values, and expectations within that generational stereotypes, McCracken et al., (2015), Kultalahti, and Viitala (2014), Eisner (2010), Martin (2005), and McCash (2006). This system of graduate management is highly flawed concept, as employer-led values, objectives and resourcing strategies quantifies one's high-order thinking, past performance portfolios, academic and firm/generic skills of a graduate from a cookie cutter approach to employability and graduate management, figure 1, figure 2 and figure 3, CIPD (2017a), Makki et al., (2015), McGuire (2014), Saad et al., (2013), Davies and Davies (2010), Matusovich et al., (2010), and Shaw and Fairhurst (2008). Commonly classifying the A players or 'talent' as persons with exceptional characteristics to the F players that don't fit the code, singling out the high potentials and disregarding the rejects to improve workplace productivity,

Marginson (2017), CIPD (2016), McCracken et al., (2015), Smith and Kruger (2011), Brady (2010), CIPD (2006), DeLong and Vijayaraghavan (2003), and Zinser (2003). This can inevitably restrain the ability for third-level graduate to exercise in self-managed careers, confidence in effectively managing work readiness and the ability to take control of their own skills and engagements with employability.

# **3.5 Conclusion**

How can an employer apply an objective approach to a versatile and subjective topic such as one's personal qualities, employability capabilities and an individual's career path and direction? The answer is inconclusive, as each individual either a graduate, employer or

career guidance counsellor, STEM industries or corporation rarely share a unified consensus of what skill sets an engineering or any graduate should possess, McCracken et al., (2015) and Pillai et al., (2012), Caballero et al., (2011), and Caballero and Walker (2010). It is this inclusive resolution illustrates the need for institutions and corporations to focus upon competency-based approach, where the talent development is structured upon long-term organisational fit that is flexible and mobile and is geared towards one's expectancy success value career-self efficiency capabilities. Examining a graduate's expectancy of success, and refocus graduate management strategies upon personal and behaviours traits, ultimately shifting preference from US particle of Knight and Yorke (2003), such as generic/transferable and vocational skills, to an individual's expectancy of success, efficacy beliefs, value, metacognition, and security, Calnan (2017), Nilsson and Ellström (2012), Clardy (2007), Eccles (2005), Nabi and Bagley (1998), and Eccles et al., (1983). It is exactly this concept that coined the theory of talent evolution as an inductive phenomenon that must be justified to advance the concepts of employability and graduate talent management within a qualitative and inductive research approach, figure 1, Lent et al., (1994). 'Talent evolution- Who has Control?' presents a conceptual model that aids employers understanding of a graduate's performance and career resilience behaviours, identifying the external environment as the regulator of the labour market demand, which consequently alters the needs and values of its workforce. This view on graduate talent development is unified by institutional, individual and organisational dimensions, procuring the need to analyse the levels of control that a thirdlevel graduate can exercise regarding career planning and engaging within the matrix of selfefficiency (success, value and security), in resourcing and managing not just the A-players to achieve short-lived objectives, but the broaden the horizons, rebuilding confidence within the unregulated business environment, capturing the 'talented rough-diamonds' for the extended future, figure 1, Wolf (2016), Nilsson and Ellström (2012), and DeLong and Vijayaraghavan (2003).

#### Section 4: Research Methodology and Method

# 4.1 Philosophical and epistemological foundation of this research

The philosophical grounding for this research is a qualitative inquiry within a poststructuralist and interpretivism approach, exercising in empirical qualitative and inductive methodologies. This research is centred upon a qualitative research regarding third level engineer's assumptions and experiences regarding employability, work readiness and career exploration. The primary data was collected using three sets of 30-45-minute semi-structured focus groups, questioning the intersubjective and interpretative nature of the employer-graduate exchange, from the perspectives of the engineers, Quinlan et al., (2015), Gibbs (1997), Kitzinger (1995) and Denzin and Lincoln (1994). With specific interest on the third level graduate's assumptions of work readiness, talent development, career-self efficiency, and employability, see section 4.4. Academic literature, theoretical models, contextual data and emerging themes regarding graduate employability and talent management procured the foundational structure of a post-structuralist and interpretivism paper, table 1, section 7; 7.1.a-7.3.b. In addition, the post-structuralist element of this research critically analyses the transition between the institutional learning, such as secondary school and third level education, to workplace learning, extracting the structures and systems relating to graduate employability and talent development within third-level engineering students in Dublin, Ireland. Employer-led influences such as socio-economic demographics and technological advancement was analysed within epistemological and theoretical persuasions to define the controlling factors that employers and corporate governance places upon the concepts employability and graduate talent, influencing SHRM and HRM practices in graduate resourcing and management, table 1, Bergin et al., (2015), Kelly and McGuinness (2013), Barrett and Kelly (2012), and Gratton (2010).

In short, this paper aims to engage:

"...with theories and concepts it contains, try to develop the body of knowledge, create new concepts, to develop old concepts and to move the discipline onward", (Quinlian et al., 2015, p. 64).

The conceptual framework of this paper, figure 1 and figure 8, is positioned upon theorising and analysing the collected data, providing an enlightened contribution to deductive and positivist theories and epistemological persuasions *War for talent* and employability, such as McCracken et al., (2015), Dacre-Pool et al., (2007) model, Knight and Yorke (2003), and Michael et al., (2001), Chambers et al., (1998), and Law and Watts (1977) research.

In constructing this inductive theory, elements of social phenomenology were adopted, to demonstrate how a social experience has legitimised the third level students as the new theorists of employability, effecting the career resilience, diverse career exploration practices to effectual manage and develop talent, Saldaña (2015), Eisenhardt and Graebner (2007),

Denzin and Lincoln (1994), Yin (2003), Yin (1994), and Schutz (1967). Therefore, building the theory of talent evolution is centred upon employability as an ontological phenomenon, extracting the capabilities of a student to be self-sufficient and independent from organisational control in developing and maintaining career exploration and talent, Eisenhardt and Graebner (2007) and Eisenhardt (1989). At the same time, one must consider the effects of the intergenerational workforce and the mind-frames of the Generation-Y population, as Generation -Y is characterised as being highly diverse and complex population sample. Thus, this qualitative study attempts to procuring a profile of third level engineering students and gathering their assumptions of employability. Expressing the complex nature of the employer-graduate exchange, without over simplifying its content, rationalising retrospective and replicated logic to adjust the theoretical and epistemological perspective of employability towards the prospects of talent evolution. Ultimately, providing some compelling insights and robust arguments in constructing the conceptual model of 'Talent Evolution- Who has Control?', figure 1, table 1 and section 7.

# 4.2 Methodological frameworks that support 'Talent Evolution- Who has Control?' as a conceptual model

At the centre of this research, there is a challenging question, what defines employability? Who dominates and controls the exchange between the graduate and the employer? How can we measure and analyse the intersubjective nature of graduate employability and talent management, while procuring a research question worthy of study, and illustrate the findings in a cohesive manner?

This paper presents a qualitative study, framed by the theory building approach, analysing academic literature and epistemological persuasions regarding graduate employability and talent management. The purpose of this qualitative inductive research was to provide 'Talent Evolution- Who has Control?' as a conceptual mode, creating a better understanding of the intersubjective nature of employability and graduate talent management from the perspective of third-level undergraduate and post-graduate engineers in Dublin, Ireland, Eisenhardt and Graebner (2007), Yin (2003), Denzin and Lincoln (1994), Yin (1994), and Eisenhardt (1989). Talent evolution was examined within two distinct types of research instruments; contextual data (including academic literature/existing theories) aligned with semi-structured focus groups of third level engineers, incorporating a post-structural, interpretivist and inductive approach within Kitzinger (1995) guidelines.

Contextual data was used to design the empirical and theoretical foundations of talent evolution, extracting the emerging themes and issues that co-related to the career-self efficiency, employability and graduate talent management. This technique was aligned with the findings obtained within the three sets of semi-structured focus groups, presented intersubjective credibility and validity to this research, figure 1, table 1, section 5 and section 6, Eisenhardt and Graebner (2007), Kitzinger (1995), and Eisenhardt (1989). An inductive approach is utilised as a medium to critically analyse the elements of talent evolution within existing theories and academic literature, shifting the conceptual and theoretical prescriptions of War for Talent upon graduate talent management, at an empirical level, to ascertain a datadriven approach to the theory building process, figure 1, table 2, table 3.a-3.c., Saldaña (2015), Eisenhardt and Graebner (2007), Eisenhardt (1989), and Boyatzis (1998). In addition, by corresponding this phenomenon with an inductive approach procures the possibility to test the theory of talent evolution within conventional theories and related issues such as 'skill gaps', 'talent shortages', 'transitional gaps', employability and work readiness within a new vantage point, from the perspectives of the students and not the corporations, Zheltoukhova and Baczoe (2016), McCracken et al., (2015), Brady (2010), Thijssen et al., (2008), CIPD (2006) and CIPD (2005).

Elements of talent evolution have been previously examined within various methodological frameworks. Jackson (2013) research on employability and Brady (2010), Caballero and Walker (2010) and Caballero et al., (2011) studies of work readiness, integrates this subjective and ambiguous topic within quantitative analysis, presenting a deductive expression and positivist structure to this highly complex and personal phenomenon. Furthermore, Wye and Lim (2009) used questionnaires survey to mark from a five-point Likert scale the top ten qualities and skills that are valuable for employment, from the perspectives of employers and graduates. Similarly, Jackson (2013) conducted a skills and behaviour audit, with items measured within the Employability Skills Framework (ESF).

Jackson (2013) also used the Cronbach's alpha, internal consistency scales, and constant sum allocation to analyse the results of the undergraduate's self-assessment, yet only portrayed the skills and behaviours that meet the ESF requirements as personal characteristics worthy of study, Jackson and Chapman (2012). Hence, aligning qualitative and quantitative expressions suggests that the conclusions drawn from the research is limited from formal flaws, and inhibits the availably of alternative understandings of the subject matter outside corporate

governance, figure 1, Caballero and Walker (2010), Patterson (2001), and Steckler, Kenneth, McLeory, Goodman, Bird and McCormick (1992). As such, analysing the primary data collected during this research within a positivist and quantitative approach, and examining the data with instruments such as SPSS, Mann-Whitney U tests and Independent-Samples Test, as shown in Jackson (2013) and Wye and Lim (2009) paper's, would be a counterproductive exercise. In addition, reviewing the data within a deductive premise would be flawed, as the boundaries of deductive reasoning would lead one to believe that the ideals drawn from this argument must be true facts that is unquestionable, and its findings would be conclusive. These quantitative analyses allude to a one-dimensional, academically sound, positivist thought and confides graduates as a product, an intangible asset, oversimplifying its cognitive and intersubjective characteristics to procure employer-led values which inhibits alternative interpretations of talent and employability, Lent et al., (1994), and Steckler et al., (1992). Yet these methodologies are a customary practice within corporate graduate talent and SHRM strategies, CIPD (2017a), CIPD (2017b), Higher Education Authority (2016), CIPD (2006), and CIPD (2005). An inappropriate rationale in examining employability and the conceptual model of 'Talent Evolution- Who has Control?'.

Diverting away from quantitative research, Beechler and Woodward (2009) explored a comprehensive search methodology, using contextual archives and academic internet search. Beechler and Woodward (2009) accumulated 400 academically compelling and related articles to critically analyse McKinsey report of *War for Talent*, examining corporate competitiveness, performance, and the core principles of talent management. This technique alongside Eisenhardt and Graebner (2007) and Eisenhardt (1989) 'theory of building from cases' was adopted to construct the conceptual model 'Talent Evolution- Who has control?' Unlike grounded theory as presented by Eisenhardt and Graebner (2007) and Strauss and Corbin (1994), talent evolution is based textual data analysis, evaluating existing theories, epistemological models, and emerging trends within the labour market to procure a conceptual model based upon academic literature and the idiocentric experience of its subjects, third level engineering students. In addition, research paper's such as Makki et al., (2015) work readiness model, Matusovich et al., (2010) qualitative longitudinal research on engineering graduates, Caballero and Walker (2010), and Braun and Clarke (2006) thematic data analysis, procured the methodological and analytical framework of this paper.

As evident by the title, talent evolution is a progressive process, observing the

(re)evolutionary process of employability, extracting the social construction of reality, poststructural entity, and the subjective interpretations of millennial third-level engineering students, Zheltoukhova and Baczoe (2016), Beeckler and Woodward (2009), Eisenhardt and Graebner (2007), and Yin (1994), table 1, section 5, section 6 and section 7. This study addresses employability and talent as an intersubjective phenomenon, examining the complex dimensions of one's objective reality, engaging in a graduate changing conscious when adapting work readiness, career resilience and career-self efficiency to their career exploration activities. In short, 'Talent Evolution- Who has Control?' is a theory of interpretation that is open-ended that cannot be detached from consciousnesses and selfawareness and self-reflection, figure 1, Quinlian, Griffin, Carr, and Babin (2015). As talent evolution is derived from consciousness, the constant shift between gaining career efficiency and being self-sufficient, interpretivism and social phenomenology was necessary to elevate and enlighten millennial students understanding and interpretation of the employergraduate exchange. It is also this premise that allows the prospect of talent evolution to be accepted and tested within mainstream deductive and inductive constructs, theoretical contexts, population samples and geographical locations, redressing issues within glocal and global talent spectrums, Quinlian et al., (2015), Eisenhardt and Graebner (2007), and Denzin and Lincoln (1994). These elements are essential to verify this paper qualitative findings to construct a robust argument, and talent evolution as a theory and conceptual model worthy of further study, Eisenhardt and Graebner (2007) and Eisenhardt (1989). By conducting three sets of focus groups, as instructed by Quinlan et al., (2015), Gibbs (1997), and Kitzinger (1995), and applying academic literature to prove an inductive rational, accepts the possibility for further alterations and various interpretations with regards to the conceptual model, figure 1. This methodology critically analyses existing theories regarding employability, graduate talent development, career exploration and work readiness. 'Talent Evolution-Who has control?'

"...is highly scoped within the context of an existing theory, and the justification rests heavily on the ability of qualitative data to offer insight into the complex social process that quantitative data can not reveal", (Eisenhardt and Graebner, 2007, p. 26).

'Talent Evolution- Who has Control?' is an open-ended inter-related conceptual model, that accepts the intersubjectivity between the academic theorists of employability, the employers, and the third-level graduates, figure 1. By adopting an interpretivism interpretation to this

research, arguing that a graduate's viewpoint and experiences are all equal in value to that of an employer, provides a compelling intersubjective credibility within engineering students. In addition, the student's naturalistic inquiries and responses restructures the boundaries of theoretical employability frameworks, demonstrating the underlying degree of control and freedom a graduate can practice within their own career exploration, self-efficiency, and talent development. By critically analysing the assumptions of employability and the prospects of talent evolution at a third-level students' perspective, shifts the graduate talent management practices to a new vantage point. This illustrates the importance of employing an interpretivism interpretation and raises the need to distinguish graduates as consumerist and individualists with distinct goals, aspirations and capabilities rather than intangible assets or commodities that can be marginalised, categorised, and easily attainable, see figure 1, table 1 and section 7; 7.1.a-7.3.b, Quinlian et al., (2015), Cappelli (2008), and Eisenhardt and Graebner (2007). Consequently, by observing the working population, third-level engineering student's, understanding and concepts of work readiness, talent management, careerefficiency, self-efficiency and their position within the STEM and knowledge economy demonstrates the intersubjective employer-graduate exchange. This exchange determines the effectiveness of a graduate's employability, as graduate applies the prescribed procedures of Dacre-Pool et al., (2007) 'Key of Employability' to their career exploration practices, developing their own skills and capabilities, see table 1, table 2, section 5. By reviewing the STEM and knowledge economy, and the volatile business economy that determines the interdependence of graduate supply-demand justifies the need to examine talent evolution qualitatively, and most importantly inductivity.

# 4.3 Participants: Third level engineering students

The working sample of this paper consisted of twenty-one participants, sixteen male and five females, and theoretical and snowball sampling method was used to obtain this population sample. The participants of this research were based upon their suitability, in enlightening the intersubjective exchange between the graduate and the employer, procuring a robust foundation for constructing the conceptual model and theory of talent evolution within a qualitative framework. The students were also members of a collective student body at a third level institute that focuses on enhancing the employer-graduate exchange, regarding career prospects, employability, and work readiness, suited to the employer's needs and specific requirements. This student body was chosen to construct a similar research to Makki et al., (2015) and Matusovich et al., (2010) yet using real time cases and not a longitudinal study.

The working sample consisted of individuals from various backgrounds, and engineering disciplines, ranging from second year undergraduate to final year post-graduate, see section 7; 7.1.a, 7.2.a, and 7.3.a. Of the participants, seven, (four females, three males) were master's students, with over one or more years' experience in their field of study, while 10 (1 female and 9 male) were undergraduate students, who have participated in 3-4-month summer internships and/or placements within the STEM economy. Lastly, four male participants have gained experience from alternative occupations, such as volunteering, working in a gym or shop. Experiences unrelated to their field of study or the STEM economy, yet demonstrates the mobile nature of millennial student's activity within the labour market.

#### 4.4 Procedure adopted and research instrument

The qualitative interview sessions were initiated on the March 4<sup>th</sup>, 2017. Three participating focus groups were examined for 30 to 45-minute sessions, and were sourced within a collective student body in a third-level institute. Third-level engineering students were chosen as participants of this research to obtain robust foundation for constructing 'Talent Evolution-Who has control?' as a conceptual model, and to procure invaluable insights regarding employability, career resilience, graduate talent management as a means of counterbalancing the theoretical and employer led-views. Participants in each sample (focus group 1, 2, 3), were examined within inclusion criteria, where students from various courses and experiences form together and share their assumptions and insights within the group. The groups were observed separately, and was asked a serious of semi-structured questions, examining trigger events such as experiences in placement(s), internships and job applications, illustrated in table 1. This was to illuminate the possibility of 'premature saturation' and 'group think' while conducting the focus groups and to expand the scope of the research material. The consent form and questions were distributed to the prospective participants prior to the focus group session, explicitly illustrating the purpose of the study, refer to Section 4.6: Ethical Considerations for further details, table 1, table 3.a-3.c, appendix 1.

The structure of the semi-structured focus groups was based upon Quinlan et al., (2015), Gibbs (1997), and Kitzinger (1995) prescriptions, demonstrating an in-depth analysis of the conscious and subconscious actions of a graduate's balance of career and self-efficiency to the workplace and institutional learning, in other words talent evolution, figure 1, table 1, table 3.a-3.c. The semi-structured focus groups were conducted face to face. Demographic

data such as fictional name, gender, age, student title (undergraduate/masters), engineering discipline, and year of study was collected for each focus group, section 7: 7.1.a, 7.2.a, 7.3.a.

The 'modus operandi' consisted of questions that were personally drafted from a variety of academic sources, such as research paper's, reports, case studies and newspaper articles, table 1. Each question can be originated to academic literature that has previously addressed employability and talent management within its own working sample. However, in constructing talent evolution as a theory and conceptual model, these questions were specifically chosen to re-adjust epistemological and theoretical persuasions of existing research, such as War for Talent report and SHRM practices, and analyse emerging themes from the viewpoint of the participants, third level engineering students, figure 1, table 1, table 2, Zheltoukhova and Baczoe (2016), Cabellero and Walker (2010), Beechler and Woodward (2009), Brown and Tannock (2009), Wye and Lim (2009), Cappelli (2008), Garavan (2007), Einser (2005), and Creelman (2004). During the focus groups, the flow of Q/A generated further relevant questions, so each focus group was unique, section 7; 7.1.b, 7.2.b, and 7.3.b. The content of the focus group explored the participants perspective of 'What does it mean to be employable? Do graduates simply comply with career efficiency, dependant on employer management practices to gain employment within the niche labour market of engineering? Do you have control of your capability to be employable, or does the employer or the company that you are applying for?'. This approach gained an insight to an engineers (in)ability to adopt within the workplace environment, labour market, the capability to express and pursue a self-managed career and control talent development incentives, advancing from entry level employability. This qualitative investigation advances academic research limitations, procuring an in-depth study into the subjective nature of millennial engineer's career, allowing for open ended questions and ideas related to graduate employability and talent development to be explored, see table 1 and Section 7; 7.1.b, 7.2.b and 7.3.c, Kitzinger (1995). This methodology addresses the individualist and consumerist characteristics of a millennial graduate. Presenting a third-level graduate's ability to (re)define efficiency beliefs towards the 'Key to employability', illustrating the matrix of one's identity and employability, demonstrating the various interpretations of success, value, and security within and outside the knowledge and STEM economy, figure 2, Hinchliffe and Jolly (2011), Dacre-Pool et al., (2007) and Bedingfield (2005). Additionally, the main element of the focus groups was to exercise in an empirical and qualitative practice as

outlined by Denzin and Lincoln (1994) and Kitzinger (1995). Creating an open and inclusive environment, to collect and thematically analyse the primary data, practicing an interpretative inquiry to the various expectations and assumptions of employability and talent within third level engineers in Dublin, Ireland, Denzin and Lincolm (1994), figure 1 and section 7; 7.1.b, 7.2.b and 7.3.b. The focus group sessions were recorded and then transcribed to the theoretically analysed, see section 5 and section 7: 7.1.b, 7.2.b, 7.3.b.

#### Table 1: Research instrument: Focus group questions

- 1. What made you pick engineering?
- 2. Are you studying engineering to be an engineer or is it a stepping stone for other opportunities?
- 3. Do you think your course will be adaptable to other career opportunities? How?
- 4. What do you look for when applying for a job?
- 5. How did you find the transition from college to a working environment?
- 6. What skills do you need to make an impression in an interview, first, last day at work? In other words, what makes you employable? What do you think employers are looking for in a graduate?
- Does your G.P.A/ College degree define your career opportunities, add value to the workplace? If so how? If not, what does?
- 8. Why do you join a company? (internship, placement, graduate scheme) Is it or the career opportunities in that company, or is it a stepping stone to get somewhere else?

9. Talent Evolution- Do you control develop your employability or does the employer? *Table 1: Focus group: Structured Questions: Talent Evolution- Who has control? The pilot questions were constructed based on contextual data. Existing conceptual data, theoretical evidence and emerging themes were used to construct the questions listed in table 1, architecting data collection and data transformation process of the semi-structured focus groups, see table 2, tables 3.a-3.c, and section 7.* 

The purpose of asking these specific questions was to generate a true and honest response, and to profile the mind-frames of millennial engineers. Through inductive reasoning, the data collected presents the probability that talent evolution exists within the working sample. It is important to note, due to the nature of a semi-structured focus group, the questions illustrated in table 1 were as a guide to keep the conversation relevant to the topic at hand. But, if an idea or interesting perspective was brought to the table, it was debated among the group. Consequently, the data gathered within the focus groups had comparable information, but due to the individual's interactions and unique group think, the structure would be slightly different.

Q1 and Q2 were used as introductory questions and originated from Makki et al., (2015) and Matusovich et al., (2010) research. These questions were used to profile the working population, distinguishing the persistent to the non- persistent, whether participants will be practicing engineers in the future, and for whatever reason. In addition, Q2 looks at the evolution of the novel work patterns and culture phased employment within millennial students, questioning the 'career tasters' view of career and industry experience, binge working and the alternative experiences, procuring a qualifiable explanation to Bedingfield (2015) research, regarding the latest trends on graduate ROI.

Q3 and Q4 touches on Wanrooy et al., (2013), Bedingfield (2005) theory of millennial students adopting a consumerist approach to talent management, and their expectations after they graduate and their cognitive mind frame on career exploration practices, expanding from Shaw and Fairhurst (2008), Stewart and Knowles (1999) and Lent et al., (1994) research. Q3 and Q7 are similar in nature, as they require the student to position themselves in the STEM labour market national and regionally. Furthermore, they originate from Dacre-Pool et al., (2007) and Makki et al., (2015) conceptual model in aiding engineering student's perceptions of employability and examining the findings brought from CIPD (2006) report into a qualitative and natural light, CIPD (2017b) Marginson (2017).

Q5 is a simple question yet a reflective one, bringing the students to an experience where they excerpted specific behaviours within a workplace setting. It also examines Bedingfield (2005) research regarding the employer-graduate exchange within engineering students, and their first impressions of the working world, and did the employer meet their expectations. Q6 was directly drawn from Makki et al., (2015) work readiness chart. Without influencing the sample, skills, and competencies that the working sample found important were brought to light and debated amongst the group. Interestingly, trends emerged that correlated with contextual data, yet some phrases such as 'future vision' or 'career tasters' were used by the students to justify their understandings of employability, demonstrating the alliance between identity and employability, see section 7, Hinchliffe and Jolly (2011).

Q7 and Q8 relates to CIPD (2017b), CIPD (2016), CIPD (2006) reports regarding graduates within the workplace and the vocational transactions between institutional learning and corporate strategies and talent management. In addition, Q8 relates to Matusovich et al.,

(2010) and expectancy value theory for obtaining a engineering degree and applying for an entry level role, De Vos et al., (2011), Eccles (2005) and Eccles et al., (1983).

Q9 proposes the concept of career exploration, career-efficiency, and self-efficiency to the working sample. Like Q1 and Q2, this question examines the level of engagement the students have on their career, talent, and professional development. Naturally, elements of Generation-Y, and personal ambitions of what it means to employable and invaluable, the peripheral outline of the 'Talent Evolution- Who has Control?'.

#### 4.5 Data Analysis Strategy

The data corpus accumulated within this research paper was thematically analysed with the use of manual transcription of the focus groups, aided by audio recording devices, to decode and interpret the assumptions and experiences of the third level graduates against academic literature and contextual data. The data corpus (3 transcripts) was read several times to interpret aspects of talent evolution, Caballero and Walker (2010), Braun and Clarke (2006) and Boyatzis (1998). Commonalities and diversities within the data corpus was isolated and categorised to transform and expand the data analysis process, table 3.a, 3.b, 3.c. Data items and extracts were segregated into categories as demonstrated in table 2. The student's interpretations and meanings of talent and employability were used as the unit of coding, representing the preliminary framework of this research qualitative and conceptual theory building process, Quinlian et al., (2015), Eisenhardt (2007), Denzin and Lincoln (1994), and Eisenhardt (1989). The transcripts were primarily coded using six broad categories. Once the transcripts have been coded within the six broad categories, contextual data (academic literature and existing theories) was used to procure a descriptive qualitative analysis of the data corpus, analysing elements of talent evolution as a conceptual model, figure 1 and figure 8, and table 2. Themes within the data extract were represented with the use of graphs and tables to solidify understandings and interpretations for the reader, presenting a compelling investigation, similar to Makki et al., (2015), McCracken et al., (2015) studies, see section 5, section 6, and tables 3.a-3.c.

#### 4.6 Ethical Considerations

The moral principles that govern the context and working sample of this paper was to ensure the rights and the safety of all actors involved in this research, Quinlian et el., (2015), and Saunders, Lewis, and Thornhill (2009). Prior to conducting the semi-structured focus groups of the working sample, a pilot study was conducted of third level students in a different discipline. This practice or pilot study was obtained, constructed, and examined to the specifications of Quinlan et al., (2015), Gibbs (1997), and Kitzinger (1995), testing the proposed questions and procedures, prior to conducting actual evaluation of the third level undergrad and postgraduate engineers. This was to ensure that the questions and topics covered within the research topic can be understood by the working sample of this research. In addition, a provisional draft of this paper was submitted to the NCI for ethical guidelines and institutional clearance. Therefore, 'Talent Evolution-Who has control?' has met the 'Human participants ethical review' requirements and was accepted as a safe and ethical academic research topic.

The underlying ethical and moral obligations are as follows, in no order:

- 1. Objectivity avoid bias in the design, data analysis and distribution of aims, interpretations and findings of the focus groups while procuring a qualitative investigation.
- Non-discrimination practices in terms of all parties involved in the research. Discrimination of the collective or individual's gender, ethnicity, sexuality, and psychology will not be tolerated by any means.
- 3. The dignity, sovereignty, and privacy shall be practiced and honoured, ensuring the safety and protection for all parties involved.
- 4. Encourage positive relationships that honour open communication and value trust in terms of sharing experiences, respecting agreements/disagreements disclosed within the parameters of the primary data collection within the scope of the research.
- 5. Respecting an individual and/or group level of engagement and freedom to withhold or disclose their experiences and knowledge to the researcher and to the group.
- 6. Researcher acts as a gatekeeper of this paper's primary data, protecting the participants aural, oral, written expressions.

In practicing these moral and ethical obligations, each student who had participated in the focus groups was allocated a fictional name, allowing all participants to remain unidentifiable. The origin of the collective student body has been made anonymous. All chosen engineering students from the collective student body were over eighteen years of age, making all participants legally responsible for their own actions. A written consent was distributed to each of the participants prior to becoming actors in the study. The use of a

recording devise and explicit details of the research was specified and the intended use of the of all the information obtained within the focus groups, see table 1 and appendix 1. Each participant was given a sticker with their fictional name written on it. This method was used to insure confidentiality and trust with the researcher and the other participants while engaging in the focus group, transcribing the data, and analysing its findings. In addition, the fictional names were used to quote participants insights or themes raised with the focus group session(s), aiding the researcher's moral obligation to insure confidentiality and trust within the data analysis and research findings. The researcher is the sole trustee of all primary data collected within this research, and holds all the master documentation such as consent forms, transcripts, audio files and researcher notes. In addition, the researcher will hold all documentation only, unless a written consent of all participants involved is forged.

Clear and open communication with the participants was crucial to ensure mutual consent between the researcher and participants before and after the focus group sessions. This allowed time for the participants to ask questions concerning the research topic, the treatment of the collected data and aligned with the participants willingness to be used as the working sample of this research. It was crucial to ensure that everyone understood the expectations and the potential outcomes of this paper prior to participating within the focus group sessions, as their engagement and insights acts as the primary source of this research. Each participant was handed two copies of the consent form (one for the individuals to keep and one for the researcher's records), appendix 1. The consent form also consisted of the 'Research instrument: focus group questions', which explicitly identifies the key areas that and structure of the research topic, see table 1. A disclaimer was clearly presented within the consent form, stating that an audio recording device would be used to gather the data. As already discussed, fictional names were used throughout the focus group audio sessions, by both the participants and the researcher, and the audio will be destroyed on the date of that the thesis is submitted. Furthermore, to insure reliability and accuracy of the collected data, member checking of the audio, researcher's notes and data analysis had been made available to the participants within each focus group. Members checking of the data transcript(s), and the results of the data prior to submitting this thesis was essential, as the individual/ group have a right to exercise voluntary discontinuation.

Ethical practices were vital when conducting the semi-structured focus groups, in relation to phrasing the questions, evaluating different viewpoints of a group and individual that could

potentially project discrimination and bias outcomes of the 'dominant participant' or 'unresponsive participants' in the group. As the semi-structured focus groups allowed for open-ended questions and answers, it was the duty of the research to ensure limited bias, allowing all participants to have an equal opportunity to express their opinions and experiences to secure valid and reliable information. Also, it was important for the researcher to consciously redirect the conversation to the research question, and control anticipated questions, or topics raised by the engineering students, as their interpretations and assumptions occasionally differed from the pilot questions or insights found within academic literature or contextual data, see table 1 and section 7. This was to ensure reliable answers of the working sample that correlate to this research project and not diverge to unrelated subjects.

# 4.6 Problem areas and Limitations

Examining all engineering students in Ireland, like the Higher Education Authority (2016) report, would be impractical due to seer numbers, distance, and the time constraints in evaluating and procuring a finished thesis, Brayman (2008). Therefore, the working sample (twenty-one participants) presents a profile of a millennial engineering students, and their engagement within the employer-graduate exchange, inspecting their perceptions of employability, work readiness, and capabilities of self-management. The conclusions based upon this paper is limited to the evidence procured within the scope of the assumed realities of a small sample of third-level engineers within a collective student body. Furthermore, limitations of this research were subject to the characteristics of the working sample, such as demographic dynamics, the individual's competency of their qualities and skills, psychological frame of mind of the participants responding to the semi structured questions (research instrument) of the study, table 1.

There are numerous crucial factors to consider within the data corpus: overriding number of undergraduate students (fourteen out of twenty-one participants) who contributed to the focus groups, gender inequality (five females) and age range (nineteen to twenty-four years). Firstly, many of the participants were undergraduate students who have workplace environment no longer than 3-9 months in their field of study. This was caused by the theoretical and snowball sampling method in acquiring the working sample for this study. Secondly, the representation of women in this within the working sample is reflective of the collective student body, demonstrating a minor gender imbalance within the engineering

discipline. Thirdly, only persons between the ages of nineteen to twenty-four were examined. This is to ensure that this study profiled the millennial engineering students and not an intergenerational working sample. However, in the process, this excludes the availability of older/mature millennials experiences and interpretations of the workplace environment.

Another area of concern is the variety of perceptive while constructing an objective conceptual model, between the researcher's qualitative examination of selected contextual data against focus group findings, Denzin and Lincoln (1994). Unlike Matusovich et al., (2010) research, which illustrates a qualitative longitudinal study, the working sample was collected within one day. Thus, illustrating the cogitative framework of the participants within a real-time basis, thus restricting the findings of the study. As most of the working sample are new to the workplace, their 'rose tinted glasses' when interpreting the employergraduate exchange, employability, and graduate talent management presents a preliminary sketch of the practical effects of talent evolution, figure 1 and figure 8. Therefore, this paper finding may not be valid regarding generalising talent evolution as a theory and conceptual model across various third-level disciplines, globally and nationally. Preserving a valid and reliable hypothesis, the objective of this paper is neither to prove or disprove the concept of talent evolution, but to analyse, within an inductive lens, the level of control that engineering students have on their own career prospects. This paper's objective is to procure questions and an innovative conceptual model that binds rich qualitative evidence to main-stream inductive research of employability and graduate management procedures.

# Section 5: Findings, Results, and Discussion

#### 5.1 Overview

To address the essential issues of employability and graduate talent management, section 5 illustrates the findings that have emerged from the series of focus group interviews of third-level engineering students in Dublin, Ireland. The following results are interrelated in nature and are summarised in tables 3.a, 3.b, 3.c. and coding categories and themes are illustrated in table 2.

Framed in ontological concepts of employability, this research proposed to answer: Talent Evolution- Who has Control? positioning talent evolution as a conceptual model using millennial third-level engineers, figure 1. Recalling the methodology section, the purpose of this research is to critically analyse conceptual frames of thought, and enlighten a better understanding of the intersubjective nature of employability and talent management from the perspective of third-level engineers.

In brief, the outline of this research objectives are as follows:

- 1. Ascertain the assumptions of third level engineers understanding of what it means to be employable.
- 2. Obtain a profile of millennial third-level engineers, evaluating an engineering student's perceptions of his/her value within the knowledge and STEM economy against their capability to obtain work readiness, and exclusive and invaluable career opportunities.
- 3. To present 'Talent Evolution-Who has Control?' as a conceptual framework.
- In response, the primary data analysis and research shows three overarching findings: 1.

Engineering degree is adaptable to various career opportunities

Supported by:

Theme a) Millennial (Engineering student)

Theme c) Employability

Theme d) Work readiness

 Distinct patterns of career exploration and talent management practices emerged: <u>'career tasters' versus 'future vision'</u> Supported by:

Theme b) Talent Management

Theme c) Employability

Theme e) Attitude to work

3. War for talent has been replaced with meeting graduate's 'personal fit', yet participants have mixed reviews on who has control in developing talent.

Supported by:

Theme b) Talent Management Theme c) Employability Theme d) Work Readiness Theme f) The employer-graduate exchange -Who has control? Recalling the methodology section, the participants were asked a series of structured questions, expressing their assumptions and experiences within the workplace or job application process, table 1. The responses form the engineering students unveiled the rationale behind behaviours and actions regarding employability and talent management. Due to the nature of a qualitative analysis and highly individualistic views of the participants, the findings and the thematic analysis of this research are subjective and inductive due to the researcher's interpretations and theorization of the primary information. Note that some responses from the semi structured questions in tables 3.a-3.c are left blank as the participant(s) did not respond to the question due to their level of engagement and flow of the discussion within the focus groups. Within the research's findings, it was concluded that talent evolution is a lived experience and is positioned within consciousness, where an individual's actions and perseverance on their talent management, career mapping efforts and exploration embodies a 'career tasters' or a company's 'future vision'. In other words, the variables that influence the identity and employability capabilities of a graduate, such as obtaining a career-self-efficiency and the power-exchange between employer and graduate, presenting the practical implications of talent evolution, figure 1, Hinchliffe and Jolly (2011).

# 5.2 Primary data analysis

The coding and qualitative description process of the data corpus was conducted within an integrated methodology, employing an inductive and theoretical thematic analysis of the findings procured within the focus group sessions against contextual data, see table 2, tables 3.a, 3.b, 3.c. This method was used to insure reliability and validity when addressing this research intersubjective findings, aligning the student's perspectives within existing theoretical frameworks and theories while simultaneously honouring the inductive nature of talent evolution as a conceptual model, figure 1, Braun and Clarke (2006) and Boyatzis (1998). The following passages illustrate the findings procured from the semi structured focus groups. Each of the results will be analysed separately, aligned with the supporting themes and contextual data to answer this research paper's question: 'Talent evolution- Who has control?' and this paper research objectives in procuring talent evolution as a conceptual model, table 2, table 3.a, 3.b., 3.c.

Tuble 2. Could call gol les and themes	
Millennial (Engineering student)	<ul> <li>Motivation for degree choice- flexible, adaptable, practical. Strengths- maths, science,</li> <li>teamwork, problem solving, analytical/technical knowledge, work ethics</li> </ul>
	• Weaknesses- generalist/basic skill set- need for further development (MBA/Business masters)
Theme b)	Career mapping
	• Career exploration
Talent management	• 'Future vision'- risk of 'pigeon hole effect'
	• 'Career tasters'
Theme c)	Career resilience- professional,
	personal, technical growth
Employability	• Differentiation (market saturation, career-self efficiency)
	• 'Missing asset'
Theme d)	Career mapping
	• Cultural fit = 'personal- fit'
Work readiness	1
Theme e)	Career transitions (related to 'career
	tasters')
Attitude towards work	• Pursuit of happiness- meaningful and challenging work, experience, and recognition.
	• Individualist, consumerist approach to choosing an employer.

Table 2: Coding categories and themes

Theme f)

The employer-graduate exchange-Who has control?  Employer's control- GPA/College degree, 'bright spark', career exposure/opportunities Graduate(s) control- high profile/competitive company, leaders, expectancy of

future growth- financed by employer (ROI)

Table 3: Coding categories and themes. In accordance with Quinlan et al., (2015), the theoretical thematic analysis and analytical framework was constructed within four stages descriptive analysis, interpretative phase, drawing conclusions and theorising data items. The themes and codes illustrated in table 2 support talent evolution as a conceptual model, figure 1. Themes a to f were obtained within an inductive frame of thought that correlate to contextual and academic literature, demonstrating the interpretive and post-structural nature of the data corpus. Theme a) was vital to profile of millennial engineers, illustrating the natural and acquired skills of the participants within each focus group, engaging in Knight and Yorke (2004) USEM model and Law and Watts (1977) DOTS model. Theme a) advances from McCracken et al., (2015), Makki et al., (2015), Brady (2010), and Shaw and Fairhurst (2008) research and responds to this paper's research aims of obtaining the assumptions of employability, work readiness, talent management from the perspective of millennial students, section 2.2. Theme b) is one of the most vital themes extracted from the primary data as being talented and employable are separate entities. 'Career tasters' and 'future vision' were codes coined by two individuals (Mark and Colm in focus group 3) who had conflicting views on the best possible career exploration technique and how best to regain control of their development from employers. These conflicting ideals surrounding 'career tasters' versus 'future visionaries' strengthens the existence of talent evolution, presenting the heuristic and indefinite process of achieving career-self efficiency and obtaining challenging and meaningful work while responding to Bedingfield (2005) query regarding the ROI of entry level employees, De Vos et al., (2011), Lewis and Heckman (2006), and Stewart and Knowles (1999). Theme c) sets the foundation of this research as employability and talent development orchestrate the processes of talent evolution. Yet unlike conventional theorists of employability, listing the competencies and capabilities necessary to be employable, the new theorists of employability stress the importance of such career

resilience, differentiation and being indispensable within and outside corporate governance as the key to employability, Calnan (2017), Zheltoukhova and Baczoe (2016) report, Wanrooy et al., (2013), Dacre-Pool et al., (2007) model: figure 2, Cabellero and Walker (2010), Andrews and Higson (2008), King (2003), Harvey (2001), Gazier (1998) and Waterman et al., (1994). Theme d) is derived from CIPD (2006) report: Graduates in the workplace and CIPD (2005) Report: Recruitment, Retention, and Turnover, examining the assumptions of work readiness and the relevance of an engineering degree to work readiness, figure 1. Yet, one of the underlying issues presented by the participants is the union of 'company fit' and 'personal fit', where an individual's career goals and aspirations fit the companies' objectives, corporate culture and job requirements. Interestingly, obtaining a 2.1 alongside having alternative or unique skill sets advances the possibility of efficient work readiness and reduces the 'transitional gap' among entry level graduates in the workplace, Makki et al., (2015), McCracken et al., (2015), Eisner (2010), CIPD (2006), Garavan (2007), and Dweck and Leggett (1988). Theme e) is directly related to career exploration practices and to Generation-Y as a generational workforce, McCracken et al., (2015), Shaw and Fairhurst (2008), Martin (2005), and Stewart and Knowles (1999). Theme d) and e) represent an individual's attitude and engagement towards career-efficiency and selfefficiency to obtain meaningful and challenging work, Holden and Harte (2004) and Holland (1997). Theme f) represents the relationship between the employer-graduate, bridging the realists from the idealists regarding effective graduate talent development strategies, and the expectancy value theory of the third-level graduates, De Vos et al., (2011), *Eccles* (2005) *and Eccles et al.*, (1983).

# **5.3 Results**

# **5.3.1 Result 1: Engineering degree is adaptable to various career opportunities.**

From a Birdseye view, the primary data highlights the variety of reasons why students choose engineering. Family and institutional influence, subjects enjoyed in school such as mathematics and science, the thrill of understanding how parts work independently and as a unit, and work ethics such as employing analytical, theoretical, and critical thinking to work practices are all appealing features related to studying an engineering degree as argued by the participants of this research, figure 5, table 3.a, 3.b, 3.c, and section 7: 7.1.b, 7.2.b, 7.3.b. These findings are aligned with Matusovich et al., (2010) study, demonstrating variables of a student's STV, the rationale behind choosing engineering as a field of study and vital

modules that further enhance one's employability and adaptability such as computer aided design (CAD), Finite Element Analysis (FEA), and technical communication as stated by Eva and Peter, table 3.b, 3.c. The STV concept illustrates the importance of a graduates' individualistic behaviours, inspecting a millennial consumerist approach to prioritising transferable skills to PDP, figure 3, figure 5, Hambur, Matusovich et al., (2010), Matusovich et al., (2010), Rowe and Luc (2002), Stewart and Knowles (2000), Atlay and Harris (2000), Stewart and Knowles (1999), Nabi and Bagley (1998), Gabb (1997) and Dweck and Leggett (1988). However, there was a consensus that an engineering degree is a 'concrete degree' or 'safe option' that provides stability to the world political insecurity, technological advancement, and the impact of the economic downturn of 2008. One of the main pull factors in studying this discipline was the ability to that explore one's problem solving capabilities, technical and analytical skills, competencies, and capabilities that are invaluable for employers and open avenues for alternative career paths, figure 5, table 3.a, 3.b, 3.c., Makki et al., (2015), Jackson (2013) and McGuire (2014), Abraham and Karns (2009), Wye and Lim (2009). This relates to the motivational factors for choosing a degree and field of study, illustrating elements of work-readiness and STV construct regarding the employability of engineers.

Of the 21 participants, 8 wishes to specialise within their field of study and explore career options within the engineering sector, 10 participants are unsure if they would pursue a career in pure engineering and would be open to STEM related occupations or managerial roles. It is interesting to note, that out of the 7 master's students, 3 of which are studying an engineering and business degree and are open to pursue a career in either field, see figure 5, table 3.a, 3.b, 3.c. This relates to Eccles (2005) and Eccles et al., (1983) expectancy-value theory, theorising the rationale behind a graduate decision to either pursue or not pursue an occupation in their field if study, reflecting the perceptions of self- concept (value as an engineer) within the STEM and knowledge economy, enabling elements of self-management, employability and talent evolution, figure 1, figure 5. Expectancy-value theory orchestrates the potential for an engineering graduate to adapt within the labour market and STEM economy, Eccel (2005) expectancy theory, justifying choosing engineering rather than a science degree because:

"...I needed a highly flexible and adaptable skill in order to break into the market and gain as many opportunities as I can. The market (knowledge/ STEM economy) is over saturated at

the moment, and that's what drove me do engineering instead of science degree." (Focus Group 2, John, mechanical, student).

Mark argues that engineering graduates are highly sought after within the STEM labour market due to an:

"...engineer's ability and their adaptability, applying themselves to a scenario which maybe foreign to them, solving problems on the spot efficiently and effectively". (Focus Group 3, Mark, mechanical and business, master's student).

While showing signs of career resilience, John and Mark's statements demonstrates belief that that an engineering degree is beneficial for themselves and their career growth, as the engineering degree acts as a base for alternative career options, and is appealing to employers, as resourcing diverse human capital expands boundary spanning and rapid innovative growth, figure 5, McGuire (2014), Wanrooy et al., (2013), Stewart and Knowles (1999), and Waterman et al., (1994). This beneficial exchange stresses a student's adaptability, excerpting competencies of a potential leader through self-efficiency and proactive employability in meeting the needs of the employer, traits considered important in CIPD annual conference roundup of 2016, people management (2016), Zheltokhova and Baczoe (2016) and Sin and Neave (2014).

Colm stated that the time invested into qualifying as a chartered engineer (4-7 years) shows resilience, as:

"...engineers are people who get up after a fall many times, and are still determined to see a problem through to the end..." (Focus Group 3, Colm, mechanical, undergraduate student). John's, Mark's, and Colm's quotes demonstrate a belief that an engineering degree is an invaluable to employers, and acts as a tool in differentiating oneself from the vast quantities of STEM graduates that enter in the labour market. The degree also matches a student's desire to obtain skills that are transferable within the labour market. This statement supported by Hollard (1997), Nabi and Bagley (1998) and Lent et al., (1994) career-decision making models, where a graduate's interest-based career choices and self-reflection as an engineer is dependent upon the volatile business environment and employer-led values of employability, influencing work readiness and professional development, figure 1, figure 5, Wolf (2016), Zheltoukhiva and Baczor (2016), Sin and Neave (2014), Brady (2010), Eisner (2010), Gratton (2010) and Shaw and Fairhuirst (2008).

Alongside John and Colm, other participants (Richard, Ron, Lee, Ciaran, Hazel, Laura, Mark, and Sarah) demonstrate a similar philosophy towards studying an engineering degree. This can be linked to Faragher (2017) research, presenting a battle between the millennials and the volatile business environment, demonstrating the urgency for graduates to draw upon career efficiency traits to talent management, enhancing one's strengths while critically analysing one's weakness that could potentially inhibit adaptability within the workplace environment and therefore employability, figure 5, O' Dwyer (2016), Forstenlechner et al., (2014), and CIPD (2006). This outlook presents a high-level of career resilience, self-awareness, and an instinct for self-management, unknowingly aligning Knight and Yorke (2004) USEM model by engaging in reflective learning, proactive creativity to career development, Saad et al., (2013), Wanrooy et al., (2013), Lewis and Heckman (2006), and Harvey (2000). Furthermore, John and Mark's perspective relates to personal assumptions and engagements of employability, where the union of career-self efficiency drives personal, professional, and technological growth within and outside the corporate structure, figure 5.

Regarding an engineering graduate's adaptability within the labour market, Ron stresses that: "...your first graduate job, determines the opportunities that you are going to end with..." (Focus Group 1, Ron, chemical, undergraduate student).

This refers to the decision learning, opportunity awareness and the degree of control that employer's places upon a graduate's capabilities of career mapping and exploration practices within and outside corporate structures, elements of Law and Watts (1977) DOTS model. Ron's statement promotes self-awareness in positioning one's competencies and capabilities within the STEM market, stressing the importance of obtaining the right job that matches one's 'personal-fit', in other words aligning one's goals and career-based interest within the right company that expands one's employability and work readiness capabilities, see result 3, Brady (2010), Hollard (1997) and Lent et al., (1994). Ron's statement also signifies components of self-efficiency, the matrix of success, value, security. Ron suggests that obtaining a good job post-graduation determines one's success, and the value of the experience in that company secures a graduate's position in the labour market. Yet, equating success, values and security is only achieved if the graduate has self-confidence in their abilities and aware if their weaknesses, and being proactive in retaining employability and work readiness. Although engineering discipline has its benefits, Lilly's statement uncovered 'insecurity' as a key component that drives employability and prevents the adaptable nature of an engineering graduate:

"... The degree I am studying (masters in mechanical) is so broad that it sometimes feels like my skill-set is oversimplified, and I would be limited in what I can and can't do, being a generalist rather than a specialist in a niche area...it holds me back in my freedom to explore and manage my career." (Focus Group, Lilly, mechanical, master's student).

Lilly's statement derives from self-efficiency and work readiness, where securing a successful and valuable career is only achieved by constant skill development, a proactive attempt to progress professional and personal skills from institutional and organisational competences, a distinctive Generation-Y philosophy, McCracken et al., (2015), De Vos et al., (2011), Eisner (2010), Shaw and Fairhust (2008), Martin (2005), and King (2003). Lilly's belief that her course is over generalised displaces, institutional learning and Makki et al., (2015) work readiness conceptual model to a another viewpoint, as gaining generic elements for personal, professional , and technical knowledge restricts a graduates freedom of regaining control over career exploration and self-management, figure 3, figure 4, figure 5, McCraken et al., (2015), De Vos et al., (2011), Brady (2010), Caballero and Walker (2010), Beechler and Woodward (2009), Heaton et al., (2008) and CIPD (2006), Knight and Yorke (2003), and Stewart and Knowles (1999).

Interestingly, four undergraduate participants (Ron, Richard, Ciaran, and John) feel the need to obtain a MBA after graduation as:

"...companies can be bias against pure engineers, they would rather have someone with an MBA and an engineering degree. I want to do and learn about the business side of it, from looking at applications, that is where the trend is going for employers wanting graduates. For example, when they are selecting a student, ten years down the line." (Focus Group 2, John, mechanical, undergraduate student).

This rationale is centred upon growing concern that employers would be bias against pure engineering graduates, suppressing the level control that students can express regarding the transferability of an engineering degree to potential opportunities, thus implying Hollard (1997) and Lent et al., (1994) career-decision making models to PDP. John's perspective also addresses the importance of a graduate to be engaged with employer expectations and competencies and capabilities, a balance of idiocentric career efficiency and collective intelligence within the employer-graduate exchange. John's acknowledgement of graduate resourcing trends and employer expectations expands the prospects of entry level employability, as John's desire to learn more about business aligns with proactive employability and progressive development, adding to an individual's long-term success in the labour market, Zheltoukhova and Baczor (2016) and King (2003). Furthermore, John statement relates to human capital theory, where firms protect competencies through functional training and development. Therefore, a corporation's competitive advantage is determined by obtaining employees with unique and diverse capabilities that are difficult to imitate by employers to enhance long-term performance of the company and potential employee, Garavan (2007), Rainbird (1995).

Laura rationale for choosing engineering degree was to progress to 'something more':

"...Well for me, it's a stepping stone completely, I always knew that from the start as I wanted something more... I want to go into business, and apply a business analysis style in my approach to work...I want to learn how to analyse situations using my constructive mind, using a business perspective also." (Focus Group 3, Laura, mechanical and business, master's student).

This statement is part of a much larger response (result 2 and 3), where Laura's mentality originates from Hollard (1997) and Lent et al., (1994) career-decision making models and self-efficiency, figure 5, figure 6, figure 7. Laura's desire of 'something more' demonstrates an interest-based choice that is not predetermined my employer expectations or needs, it is a self-concept that thrives upon heuristic career exploration and talent development effort, using an individual's ideal of what is perceived employable and talented as a frame of reference, Hinchliffe and Jolly (2011). Adding to Laura's viewpoint, Harry explores the justification in choosing to specialise in engineering or to pursue an MBA/business degree:

"...if I want to work for the likes of Deloitte or something, then yes, I would get a business masters, but I don't. So, I want to stick with pure engineering, because I want to do engineering. In a sense, going towards a job that I want, not something that the employer wants me to do or be." (Focus Group 2, Harry, mechanical, undergraduate student).

John's and Harry's statements addresses the liability of SHRM and HRM utilising elements of *War for Talent* and universal trends of graduate development to their resourcing practices,

referring to long-term organisational fit and employer-led employability, which is in this case obtaining an MBA, Garavan (2007), Michael et al., (2001), Hillage and Pollard (1998) and Chambers et al., (1998). Harry' belief disregards Zheltoukhova and Baczoe (2016) argument, that employability is based upon meeting the needs of employer expectations, rather than following and heuristic and idiocentric career path. Instead, Harry's rationale to either obtain an MBA or advance in engineering post-graduation demonstrates a student's effort to align personal ambitions to professional advancements, regaining control in the game of power talent development to remain employable, see result 3, Calnan (2017), Beechler and Woodward (2009), Tomlinson (2008) and Chambers et al., (1998). In theory, employability is centred upon the:

"capability to move self-sufficiently within the labour market to realise potential through sustainable employment." (Hillage and Pollard, 1998, pp. 2).

Yet the participants of this study argue that employability of an engineering graduate is determined by employer expectations aligned with the student's self-concept to move efficiently within the STEM and labour market. The ambiguous nature of defining graduate talent, uncertainty of the labour market aligned with millennial graduate's doubt in attainment value, as Ciaran suggests, adapting to the labour market and satisfying employer's expectation is a:

"... guessing game of exactly what each employer wants.... Not all of them want the same things..." (Focus Group 2, Ciaran, mechanical, undergraduate student).

It is this ambiguity between the employer-graduate exchange, and insecurity within a graduate's self-concept of talent, reforms the Dacre-Pool (2007) 'Key of employability' to an individualist and employability-based relationships, aligning employability with a graduate's sense of self, Hinchliffe and Jolly (2011).

To conclude, result 1 qualitatively explains McCracken et al., (2015), Shae and Fairhurst (2008) and Bedingfield (2005) research limitations and addresses the displacement of graduate ROI and resourcing system of entry level positions from the perspectives of engineering students. From a broad stroke outlook, the participants approach to employability and self-concept regarding talent development, disregards Hillage and Pollard (1998) hypothesis of 'realised potential' or 'sustainable employment', but a process of self-discover and reflecting a graduate attempts to align employability with identity, O'Connor and

Bodicoat (2017), and Hinchliffe and Jolly (2011). An engineer's adaptability is not a strict structure, but an organic movement containing a graduates continual learning, critical reflection, and self-assessment, driven by an indefinite process of obtaining meaningful and challenging work, figure 1, figure 5, Zheltoukhova and Baczoe (2016). This statement leads us to result 2, demonstrating the two distinct paradigms of career exploration and talent management practices, 'future vision' and 'career tasters'.

# Figure 5: Extracting the emerging issues that validate the adaptability of an engineering degree



Figure 5: Extracting the emerging themes that validate the adaptability of an engineering degree. The three main themes that support result 1 are millennial (engineering student), employability, and work readiness, table 2. A millennial engineer's adaptability within the An individual's self-concept determines STEM and knowledge economy, adopting various engagements and meanings to success, value and security of workplace and labour market adaptability, Hinchliffe and Jolly (2011). The value of an engineering degree to the student is determined the competency and capability preference of the prospective employer, influencing the career path that a student undertakes. A graduate's choice in either practicing a career within or outside the engineering field, undertaking an MBA/Business masters, or further study in the engineering field demonstrates a student's higher thinking and self-awareness and interest based career model, Holland (1997) and Lent et al., (1994). Most importantly, it demonstrates an attempt to regain control over their own talent,
subconsciously applying Eccels (2005) expectancy value theory, Knight and Yorke (2004) USEM model and Law and Watts (1977) DOTS model to career exploration practices that suit one's 'personal fit' and long-term career success, De Vos et al., (2011), and Stewart and Knowles (1999). However, employer expectations control a graduate's skill-set and work readiness from institutional and corporate structures, enhancing employability from a variety of sources, such as informal, on-the-job training and the desire to obtain challenging work, see results 2 and 3. The participants of this study have limited workplace experience, which consequently confines the interpretations of employer expectations to specific employer-led values they have encountered within the application process or their time within workplace(s), figure 6, CIPD (2006). As millennials and remnants of the stock market crash, the participants stressed that career resilience and differentiation are the essential properties of employability, discovering new talents outside college curriculum participating in societies and their local community, figure 7, Wanrooy et al., (2013), and Knight and Yorke (2003, 2000). It is the unity of self-concept and employer expectations that architects a student's indefinite process of career-self efficiency, advancing entry level employability to a new medium, talent evolution, figure 1, table 3.a, 3.b, 3.c.

# **5.3.2 Result 2: Distinct patterns of career exploration and talent management practices emerged: 'career tasters' versus 'future vision'**

As presented by Zheltoukhova and Baczoe (2016) there are various theoretical underpinnings that determine talent, from a HRM, I/O psychology, and vocational psychology standpoint. From a HRM viewpoint, persons with talent are individuals who possess invaluable skills that raises corporate capital, I/O psychology argue that talent is derived from an individual's uniqueness, whereas social psychology presents talent as self-concept. For this study, all three theoretical underpinnings of talent are considered, as being talented and employable are inter-related entities that pre-determine a graduate's capability of career-self efficiency and within the competitive business environment, figure 5 and 6. For example, an engineering graduate may consider self-initiative, problem-solving, analytical mindset, work ethics, integrity within the employer-graduate exchange, confidence, intensive research and genuine interest when applying for a position within a company as traits of talent that result in successful employment. These attitudes to work originate from I/O and vocational psychology, demonstrating elements of career resilience that differentiate an engineering graduate when applying for a job or in the workplace, figure 6, table 2, table 3.a, 3.b, 3.c.

However, implementing these three frames of references limits the key findings to conceptual model of talent evolution to interpretative, analytical, and analytical framework. The following passage addresses the student's assumptions and understandings of talent management and employability.

Peter argues that differentiation is essential to be employable:

"... Employers want to hire someone that has the experience, but also have something that differentiates themselves from the group of candidates applying for the same position. The employer is looking for someone who has applied themselves outside a normal working environment." (Focus Group 3, Peter, mechanical, master's student).

Similarly, Mark stresses that:

"...employers want people with diversity, they want people with different backgrounds, approach problems with a different viewpoint. They must be used to getting the same old commerce graduates. With mechanical and business masters, it's a breath of fresh air..." (Focus Group 3, Mark, mechanical and business, master's student).

Peter and Mark's statements demonstrates the need for a graduate to differentiate oneself from potential candidates when applying for an entry level position. This represents a cognitive transition from 'brick layer' to 'architect' to one's talent development and career exploration tactics, a feature of career resilience and a key element of talent evolution, figure 1, Zheltoukhova and Baczoe (2016), Wanrooy et al., (2013), De Vos et al., (2011), Lent et al., (1994) and Waterman et al., (1994). In addition, employing invaluable skills such as cognitive, social, emotional, and behavioural competencies within one's career resilience efforts heightens the ability of self-management and ownership to talent development and career exploration tactics, figure 1, figure 6, Makki et al., (2015) and Forstenlechner et al., (2014). This is a counterargument to Dacre-Pool et al., (2007) hypothesis, that a graduate obtains employability by rigorously abiding by the 'Key of Employability' model and CareerEDGE aid to their career mapping practices, figure 2.

As argued by Bedingfield (2005) and Royality (1996), there is a revolution of a new kind of work pattern and PDP practices that have been introduced by the high career potentials that is disrupting corporate ROI, Gyton (2017), Makki et al., (2015), McCracken et al., (2015), and Hinchliffe and Jolly (2011). Newly employed millennials are frantically job-hopping, binge working or aggressively upskilling, with high rates of voluntary resignation within the first

three to five years of employment, using work experiences as stepping stones to 'something more' in their career development and PDP, figure 5 and 6, d'Aguiar and Harrison (2016), Kultalahti, and Viitala (2014), and Bedingfield (2005). In addressing this issue this research has uncovered two different patterns of talent management across the entire participants that embody a graduate's uniqueness, self-concept, employer expectations with regard career resilience, employing either 'career tasters' and/or 'future vision' tactics to their career mapping efforts, Zheltoukhova and Baczoe (2016) and Hinchliffe and Jolly (2011).

As within an inductive and interpretative process, these terminologies 'career tasters' and 'future vision' was coined by two individuals in the focus group in their attempts to analyse and describe the process of career mapping ventures and talent management practices, figure 6. Implementing these two terminologies to this research, of the 21 participants, 8 demonstrated strong elements of career efficiency or 'future vision', 5 participants demonstrated traits of self-efficiency or 'career tasters'. Moreover, 3 participants stated that there needs to be a balance between accountability for one's own developed but guided by mentors in developing one's skills, illustrating the importance of career-self efficiency, and 5 were unsure how to approach their talent development and exploration techniques. These paradoxes towards talent management is originated from the various values and belief systems, transitioning from institutionalised learning to workplace performance. In addition, labour market structures, macro/micro economics and corporate governance influence the ability of professional advancement, determining a graduate's attitudes towards work and what is expected from an employer within the workplace environment, figure 6, Zheltoukhova and Baczoe (2016), Kultalahti and Viitala (2014), Gursoy, Maier, Chi (2008), Shaw and Fairhurst (2008), and Somola and Sutton (2002).

Colm devised the term 'future vision', a mentality that employers recruit graduates:

"...and develop them (graduates) into what they want (employers), in other words a 'future vision', what a company sees as valuable, creating an all rounded employee suited to their (employer) needs. A person that fits easily anywhere with that company..." (Focus Group 3, Colm, mechanical, undergraduate).

An interesting concept derived from the theory of career efficiency, where one's PDP and talent development is dependent upon employer led recruitment infrastructure, graduate schemes and commercial objectives, Smith and Kruger (2008), Gunn and Kafmann (2011),

Knight and Yorke (2003), and Chambers et al., (1998). In addition, Colm's philosophy reverts to two of Bartel (1995) categories of on-the-job training; core training regime, a strategy to improve specific qualifications or occupational apprising of a graduate, and employee development training targets generic skill sets to match prospect promotions within the corporate structure, aligning perceived organisational support (POS) to corporate objectives. In assessing who has control of talent development, 'future vision' is a strategy that implies graduate PDP dependency, in other words, the employer has control over a graduate malleable belief and talent development, figure 1, figure 6, Calnan (2017), Zheltoukhova and Baczoe (2016), McCracken et al., (2015), Barrett and Kelly (2012), Barrett and O'Connell (2001), and Bartel (1995).

Putting 'future vision into context, James approach to redress the mismatch between degree relevance and workplace proficiency is achieved by formal and employee development training as:

"...what you learn here (third level), studying the theoretical concepts of engineering, is not necessarily what you are going to use, in the real world (workplace). So much so, when you get a job/new job, they will train you up..." (Focus Group 1, James, biomedical, undergraduate).

Furthermore, Chris view suggests a high expectation of an employer regarding personnel future growth and employer-funded training or investments:

"... but you can always go in and work in a company and they can help you get your masters or whatever you think you need..." (Focus Group 2, Chris, mechanical, undergraduate student).

Colm, James, and Chris statements responds to Dweck and Leggett (1988) entity theory, where corporate structure and an individual's motivation is centred on 'performance-goal orientation' when adapting to the job market, McGuire (2016) and Mellors-Bourne (2011). Future visionaries present a graduate's high expectation towards their prospective employers regarding PDP and talent development, yet exhibit limited accountability for self-managed careers, questioning the relevance of their current degree discipline, CIPD (2016), O'Connor and Bodicoat (2017), McCracken et al., (2015), Thunnissen et al., (2013), Shaw and Fairhurst (2008), Partridge and Hallam (2006), Einser (2005) Martin (2005). This lack of accountability towards talent management exposes an early career potential to be underutilised and mismanaged, consequently affecting retention and ROI, as addressed by

CIPD (2017a), CIPD (2017b), CIPD (2016), Bedingfield (2005), Creelman (2004), and Brown et al., (2004). Laura expressed concerns regarding her employability and SHRD regimes as:

"...in large companies, it can be easy to get 'pigeon-holed' and be stuck doing the same thing repeatedly..." (Focus Group 3, Laura, mechanical and business, masters student).

Laura's statement is related to the negative effects of 'future vision', decreasing a graduate's confidence in progressing in the workplace environment and labour market. Lilly's statement addresses the potential pitfalls of core training and employee development, processes that maybe liable to ineffective transitional gap and talent shortages within early career potentials

O'Connor and Bodicoat (2017), and Bartel (1995). The 'future vision' method is influenced by HRM concept of talent, where corporate 'talent-on-demand' and employee training regimes centred upon sustaining competitive advantage, where only exclusive few or 'bright sparks' are selected for further investment and long-term success agents in the labour market, figure 6 and 7, Gyton (2017), Baruch and Vardi (2016), McGuire (2016), Zheltoukhova and Baczoe (2016), McCracken et al., (2015), Gallardo-Gallardo (2013), Cappelli (2008), and Michael et al., (2001). Complementary to Hillage and Pollard (1998) hypothesis, the effective application of 'future vision' to PDP relies upon the explicit harmony between the employer graduate exchange, encompassing a realist perspective of a graduate's 'employability assets' and work readiness within the necessary human capital to progress corporate competitive advantage. In addition, 'future vision' draws upon Becker (1967) ideal that where corporate specific training strategies and investments must align with millennial individualist and consumerist expectations and exact capabilities of a graduate to reduce job mobility, McCracken et al., (2015), Shaw and Fairhurst (2008), Sieben (2007), Bedingfield (2005) and Royalty (1996).

In contrast, Mark expresses 'career tasters' as the effective strategy in accelerating the pace of learning, obtaining intensive vital workplace experiences:

"...When I graduate, I don't want to be in a position for more than two to three years, I just want to explore the engineering industry...it's a process or a system that I would use in identifying what I enjoy doing, industry or role rather than aiming to work for a specific company..." (Focus Group 3, Mark, mechanical and business, master's student).

Mark statement suggests a career exploration strategy is geared towards self-efficiency, I/O and vocational psychology of talent (a balance of self-malleable belief) and Sieben (2007) and Bartel (1995) third category of job training; retraining for a new occupation. Career tasters thrive on short-term employment, boundary-less careers, and life-long learning within and outside organisational structures, embracing diversity and self-awareness as the fundamental assets of employability and talent management, relating to Dweck and Leggett (1988) 'learning goal orientation'. The 'career tasters' ideology supports self-efficiency, a graduate's personal qualities, higher thinking and experimental career exploration is essential to develop 'all-rounded' skill base and knowledge education, subconsciously exercising in USEM model and elements of talent evolution, figure 1, figure 6, De Vos et al., (2011), Training & Management Development Methods (2004), Knight and Yorke (2004, 2003, 2002, 2000), and Harvey (2000). Furthermore, 'career tasters' are not controlled by generic or firm specific investment within organisational dimensions, but are recognised by an individual's unique and diverse adaptation to employability interventions to achieve their own aims. Thus, enhancing the individual's intellectual tools, efficiency beliefs and intrinsic interests, increasing value optimization of learning and development, De Vos et al., (2011), and Bandura (1995).

In analysing Mark's theory of 'career tasters', Fionn and Ciaran waiver their options when choosing to apply for a role. Fionn wants to pursue a career that he would excel personally and professionally:

"...I want to do something I would really enjoy. So, I would look at job adverts and specifically look for an engineering position that I want to specialise in the future... what industry I go into is not 100% important to me..." (Focus Group 2, Fionn, civil, undergraduate student).

In this expert, Fionn explains his thought process when applying for a position, rather than looking for a long-term commitment, Fionn places emphasis on specialising his skill set within and outside the engineering industry. Whereas Ciaran exclusively selects roles in reputable companies that have intensive training facilities that would enhance his CV and open opportunities to avail of graduate programmes. Fionn's statement supports Ciaran believes that happiness and workplace retention is achieved by heuristic career exploration practices in finding what you excel at, obtaining meaningful and challenging work in the process:

"...When you are good at something, there is an unbelievable amount of satisfaction into how you apply those skills, regardless of what they are...being employable has a lot to do with yourself, finding out your own skills, strengths, and weaknesses, and one you know what they are, you can sell yourself. But not only sell yourself, but also having an idea of what you are good at and where you should be going. So, I would say, you have the capability to be employable, it's down to yourself, it's your responsibility." (Focus Group 2, Ciaran, mechanical, undergraduate).

Mark, Fionn and Ciaran's statements illustrate behaviours associated with the participants individualist, consumerist approach to talent management, subconsciously gearing towards self-efficiency, figure 1, figure 6. Aligned with Wye and Lim (2009) report, the behaviours of the engineering students are strongly associated with the labour market demand, economic uncertainty, and volatile business environment in Ireland. Personal marketing, social and professional networking, and efficient communication enables a graduate to discover self-management and potential leadership capabilities independent from corporate governance. Engaging in these 'career tasters' traits subconsciously alter a graduate's attitude towards work, as John stresses:

"...it's a big responsibility, and you probably won't find exactly what you are looking for at this stage of your career, come of us are only starting our first jobs after all..." (Focus Group 2, John, mechanical, undergraduate student).

Responsibility plays a central role in a graduate's career exploration and graduate resourcing tactics, balancing organisational expectations while simultaneously negotiating a graduate's individualist and consumerist careers. This conveys John's self-confidence, dependence, and transferability within the labour market, illustrating the importance of Ulrich (2014) argument of proactive leadership within and outside corporate governance. Thus, advancing from Dacre-Pool et al., (2007) 'Key of Employability model' to the indefinite medium and of talent evolution, figure 1, figure 2, figure 6, Zheltoukhova and Baczoe (2016), Gallardo-Gallardo et al., (2013), Warn and Tranter (2011), CIPD (2006), Knight and Yorke (2003) and Kanter (1997). 'Career tasters' renders the idiocentric capabilities of procuring metacompetence, post organisational competence, adopting individualism of responsibility of PDP, and self-reliance regarding development and employability investments for vacancies and graduate opportunities.

'Future vision' and 'career tasters' are codes prescribed by the participants of this research, a tool to outline a graduate's position within the STEM economy and knowledge economy, aligning the various interpretations employability and talent management to an enlightened perspective, McCracken et al., (2015), Tymon (2013), and Thijssen et al., (2008). These distinct talent management strategies are the student's response to the competitive talent market, shrinking supply of the 'right talent' or the A-players, and collective assumptions of the rooted institutionalised 'human capital' and 'market based view' of organisational productivity, Nilsson and Ellström (2012), Harvey (2005), DeLong and Vijayaraghavan (2003). To address the conceptual model of talent evolution, the student's engagement, and level of taking control of potential opportunities within labour market has altered the presumptions of War for Talent, Michael et al., (2001), and Chambers et el., (1998). Strong performance ethic, attainable corporate aspirations with rapid growth, wealth accumulation and attractive jobs for early career potentials are not enough for these millennial engineering graduates, as intensive career exploration and self-discovery fractures corporate idealist methodology of only resourcing top talent, see result 3, Chambers et al., (1998). It is only the transition from a 'future vision' to 'career tasters' that represents the indefinite process of achieving meaningful and challenging work, employing the theoretical basis of talent evolution within employability and talent development regimes, figure 1, figure 6 With regards to this implications and limitations of result 2, the conditions of 'future vision' and 'career tasters' are invaluable insights to the millennial engineer mind frame, addressing research limitations of SHRM and graduate management research concerning third-level engineering students, McCracken et al., (2015), Makki et al., (2015), Shaw and Fairhurst (2008) and Bedingfield (2005). The participants distinct patterns in managing talent procures and career exploration patterns, have consequently shifted HRD systems to adapt on-the-job training, graduate training incentives that promotes workplace learning for an individual to progress quickly in an organisation, McCracken et al., (2015), Nilsson and Ellström (2012), and De Vos et al., (2011). This suggests the graduates level of control, and their ability to manipulate organisational demands, structures, and supply of engineers in the national and global market. Consequently, fracturing the conventional thoughts regarding War for Talent to the mechanisms of talent evolution, figure 1, and 7.

Corresponding to the conceptual model of talent evolution, figure 1, 'future vision' and 'career tasters' are not based upon self-achieving purpose, but rather based upon the

individual's longitudinal critical analysis of their ideals of employability. From academic understanding of talent towards adaptable work readiness capabilities these two diverse career exploration tactics demonstrate the perceived assumptions of the early career potentials employability efficiency, De Vos et al., (2011), Davies and Davies (2010), and Lewis and Heckman (2006). However, as a constructive criticism to theorising 'future vision' and 'career tasters', the participants short-term experiences within a workplace environment (ranging between 3 to 8 months), within restricted experience to a specific company or role limits the scope and transparency of the data. Unlike Matusovich et al., (2010) research, which was conducted over a 4-year period, the intersubjective certifiability of the participants graduate's statements towards career exploration patterns is derived from a limited experience of the working world, and therefore may be prejudiced to companies, roles, or job application efforts and techniques. Although the key findings of this paper are interpretative and post-structuralist in nature, the scope of a free-form observations is limited to the participants initial assumptions of work readiness, limiting the capacity of 'future vision' and 'career tasters' to interpretative and qualitative nature. To limit this effect, further study is necessary to determine the effects of 'future vision' and career tasters', enforcing these distinct patterns of graduate career exploration and management tactics, inspecting the graduates control of talent and employability within institutional and employer structures, figure 1 and 7.

Figure 6: Constructing 'future vision' and 'career tasters' as patterns of career exploration and talent management tactics



Figure 6: Constructing 'future vision' and 'career tasters' as patterns of career exploration and talent management tactics. The main themes that support result 2 are talent management, work readiness, attitude towards work, and the employer-graduate exchangewho has control?, table 2. Career resilience is an idiocentric and intersubjective phenomenon, as a student's interpretations and capability of work readiness, talent and employability is influenced by demographic, institutional and corporate frameworks. The economic crash of 2008 has formed the millennial engineer's individualist and consumerist approach to career exploration and efficient talent management, Wanrooy et al., (2013), and De Vos et al., (2011). However, the career-making decision patterns are divided into two categories of interest; self-concept (relating to self-efficiency) and employer expectation (relating to career efficiency), Hollard (1997) and Lent et al., (1994). From a 'future vision' to 'career tasters' perspective, a student's attitude towards work varies, depending on their understandings of employability and ways to regain control of career and talent development due to the absence of job security, CIPD (2016, 2006). Perusing a career in either a 'future vision' or 'career tasters' viewpoint, presents the theoretical and practical importance of Knight and Yorke (2004) USEM model. US partite is related to career efficiency and therefore 'future vision', where employer-led values and competencies control an early career potential career exploration and metacognition, adjusting to a 'corporate fit' approach to talent development and employability. 'Future vision' demonstrates industry specific and generic understanding of valuable skills, practicing functionalist employability standards. 'Career tasters' represents the EM partite of Knight and Yorke (2003) model, demonstrating a student's ability to 'freely' manage their career opportunities, due to efficacy beliefs and metacognition, relating to personal management processes, Lent et al., (1994). However, there are negative effects of practicing either career path, 'future vision' or 'career tasters', such as the pigeon hole effect, lack of loyalty or long-term commitment to an organisation, presenting issues in corporate structures, graduate resourcing, development, and ROI O'Connor and Bodicoat (2017). Therefore, employing career resilience and effective employability is not a statement, but a process of career-self efficiency, that is reformed by the individual's experiences, knowledge, and life-long learning. Talent evolution expands from a graduate attempts to regain control of their talent, acknowledging the importance of accountability for their own development, figure 1.

## **5.3.3** Result 3: 'Corporate fit' has been replaced with meeting graduate's 'personal fit', yet participants have mixed reviews on who has control in developing employability

There is a significant trend regarding the participants and their viewpoints on the elements of *War for Talent*, graduate resourcing, and the power dynamic within the employer-graduate exchange. As determined by the students, there are two opposing sides to evaluating the controller of employer-graduate exchange, the graduates versus the employer. As argued by Sarah, there has been a shift in graduate resourcing, from high academic performers or 'A students' to competent 'all-rounded' graduates that may have been conventionally categories as C students':

"...I think it has moved away from the 'Straight A' student and moved more towards competent employees who can work well in a team and communicate...I think a "C student" who can communicate and work with a team is more desirable than an "A student" with low communication skills and desire to learn differently..." (Focus Group, Sarah, structural, master's student).

Sarah believes that the employers are on the hunt for a graduate who has more than just a first-class honour or a high GPA, but an early career potential that can problem solve and work effectively in a team setting, excerpting an expected value of employability. This is related to Jackson (2013), De Vos et al., (2011), and Davies and Davies (2010) research regarding stakeholder participation (employer, career advisor, educator and student) and responsibility of supporting a graduate's relevant industry specific employability skills and capabilities, figure 5, figure 7, see result 1 and result 2.

This frame of thought shifts the graduate's importance of obtaining a high GPA to in-demand soft skills that are not acquired within formal training, emphasising on invaluable but heuristic acquired competences such as cogitative, social, emotional, and behavioural traits, figure 1. Employers control the expected value of employability, resourcing what Lilly and Jay describes as 'bright sparks', a graduate who is excerpts self-initiative, innovative, organised, enthusiastic, adapt to various working-life, environments and capability to work well with others, elements of *War for Talent*, CIPD (2017a), Dries (2013), De Vos et al., (2011), DeLong and Vijayaraghavan (2003), Michael et al., (2001). Yet the standard of 'corporate fit' or invaluable employability capabilities, such as work readiness and effective transition from college to workplace environment, required for an early career potential:

"...can be too idealistic I find, that the bar is set too high, and discourages me to apply. If this is what they expect from just the job description, will I be capable to fulfil my tasks allocated to me?..." (Focus Group, Lilly, mechanical, master's student).

This reverts to SHRM strategies, such as 'best fit' or 'best practice', that corporations put in place to obtain HPW, Eisner (2010). Conservative 'corporate fit' practice led by employer expectations and values that runs the risk of looking 'talented rough diamonds', placing impractical requirements upon entry level positions, restricting career exposure and opportunities to early career potentials.

Responding to the employers graduate management tactics, the participants of this research presented a shift in employability and talent tactics from 'corporate fit' to 'personal fit' that embodies a best talent management system from the perspective of the students. 'Personal fit' overlooks conventional practices of *War of Talent* to an individualised consumerist medium advancing from Eisner (2010), Shaw and Fairhurst (2008), Eisner (2005) and King (2003) regarding millennials in the workplace. Eva argues that the 'perfect fit' can be achieved by

aligning corporate structures and attributes to personal and professional aspirations, sustaining proactive meaningful and challenging work:

"...For me, meaningful work in the area I see myself excel at personally, so that everyday doesn't feel like work, and professionally, that I become the best and highly successful in what I do...a company with a good reputation, regarding their calibre of employees and their support standards, and the ability for my professional opinion to be heard and my career to flourish..." (Focus Group 2, Eva, Biomedical, undergraduate student).

In this quote, Eva classifies the taxonomy of a worthy corporation that is orientated around an individualist expectancy, POS, and value of employability, such as sustaining a proficient reputation regarding employee support, a vibrant workforce and potential leadership opportunities for the graduate.

After an 8-month placement in a big-named company, Sarah changed her career exploration tactics from a 'corporate fit' to components of 'personal fit':

"... after I graduate and start my job in September, I choose a slightly smaller company, I can be easily more recognised for my work and will allow me more control and have more responsibility to my assigned work and to develop my career.

Sarah's anticipation to excerpt more freedom and gain access to greater opportunities within a big-named company was diminished, causing her to readjust career-decision process to a more practical working environment, O'Connor and Bodicoat (2017), Ulrich (2014), Nillsson (2010), Steward and Knowles (2000), Hollard (1997) and Lent et al., (1994). This realisation, stems from Sarah's former expectations, experience, and assumptions towards work readiness and corporate graduate management tactics, causing Sarah to transition from 'corporate fit' to 'personal fit'. This transition indicates self-concept and an individualist value on employability, exhibiting controlled specifications that a corporation must abide by to be considered by a graduate upon application.

Accompanying the ideals of 'corporate fit and 'personal fit', one of the key findings of this research is the participants interpretations of the employer-graduate exchange, and the controllers of the expectancy-value of each of the players in the *War for Talent*, the graduate and the employer. Within the social action and phenomenology process, a graduate's psychological frameworks, various understandings of what is and what isn't considered employable, life-experiences, and solutions for talent development and career exploration,

influence capability of employability based relationships and the indefinite process of careerself efficiency, figure 1, Schutz (1967). However, a graduate's social action and careerbased and AMO models administer the role in which the graduate or the employer plays in the game of power in controlling employability, Zheltoukhova and Baczor (2016), McCracken et al., (2015), Boxall and Purcell (2011), Boxall and Macky (2009), DeLong and Vijayaraghavan (2003), Appelbaum et al., (2000), Hollard (1997) and Lent et al., (1994).

Lee suggests that the employer controls a student's talent capabilities:

"...the employer still wants you to have a degree, which entails your opportunities. So they defiantly control you, having to go through your course, get a job, or arrive at that level that isn't a minimum wage job with no degree or prospect of future career opportunities...it depends on the type of job you are looking for and what level you want to get to, its ultimately up to the individual..." (Focus Group 1, Lee, biomedical, undergraduate student). Lee's statement draws attention to Zheltoukhova and Baczor (2016), Higher Education Authority (2016), Thunnissen et al., (2013), and McCracken et al., (2015) findings, suggesting that individuals working in high skill roles and degree level qualifications, have desirable and suitable training and development options compared to unskilled no third level qualification.

For Jay, picking a company or a role is catch 22 predicaments, choosing an employer/role to suit oneself or to change one's career-decision orientation to suit the company he aspires to join, Hollard (1997) and Lent et al., (1994). Jay enthusiasm to learn, incremental and malleable belief displaces the importance of a role in a specific company or 'company fit' to an indefinite learning strategy of personal fit':

"...I would try to change myself, to what I want to aspire to be. So if I recognise that the role that the company is offering is going to push my limits, and that's what I want to do, then that is what I will do. But if it's something that doesn't meet where I see myself going in the future, the I wouldn't stay or take that position... (Focus Group 2 Jay, mechanical, undergraduate student).

Lee and Jay's statements relates to elements of Kanter (1997) and self-efficiency, where success value and security correlated to employability. Jay also exhibits an open-ended and boundary-less career, presenting a hybrid of 'performance-learning goal orientation' when applying for a job and engaging in the labour market, Dweck and Leggett (1988). Both Jay

and Lee are proactively interacting with employer expectations and values, the ultimate deciding factor is where student would like to his/herself in the future, placing emphasis on meaningful and challenging work and accountability for career development and employability, figure 7. This shift in thought from 'corporate fit', where the employer controls employability, to 'personal fit' where the graduate takes accountability for their own actions regarding talent and employability.

Three different responses emerged across the twenty-one participants concerning the controllers of employability and the observed responsibility for career development; the graduates themselves, the employer, or eclectic variations of the two, figure 7. This insight was derived from Sin and Neave (2014) argument of expected value of employability. It is interesting to note that the participants who engage in 'future vision' are dependent on their employer, controlled by employer-led values and expectations regarding a student's capability to be employable, Zheltoukhova and Baczor (2016) and Sin and Neave (2014). Whereas 'career casters' believe that the individual achieves employability through heuristic career exploration practices, independent from firm specific or generic HRD strategies, to obtain unique marketable, and intense personal and professional development. The last category signifies the importance of the career-self efficiency approach, where the union of 'future vision' and 'career tasters' within employability tactics to fulfil the indefinite process of talent evolution, figure 1, figure 6 and figure 7, see result 2, 7.1.a, 7.2.a, and 7.3.a.

Lilly stresses the importance of being conscious of the potential controllers of one's capability to be employable:

"... The way I see it, the employer, and the environment in which you work in, acts as a tool to help realise and develop your skills that you may be ignorant of having the capability to achieve...the employer can have a huge effect on developing your skills and developing you as a person." (Focus Group 2, Lilly, mechanical, master's student).

These statements support elements of career-efficiency and 'future vision', demonstrating the complexity of the graduate's position in negotiating employability and talent development within employer expectations and values. Furthermore, Lilly and Eva's beliefs position the effects of the volatile business environment and corporate graduate management to a millennial graduate's career-decision process, skill compass, experience and assumptions of work readiness and workplace adaptability, figure 1, figure 5, and figure 7, see result 1 and result 2, O' Dwyer (2016), Eisner (2010) and Eisner (2005). Lilly considers the business

environment and the employer as the controllers of employability, and is responsible for the graduates personal and professional development. Whereas Eva demonstrates preliminary traits if self-efficiency, choosing roles that she would potentially enjoy, yet alters her skill sets to remain marketable for the potential employer. Lilly and Eva's realisations careerefficiency psychological frameworks support Garavan (2007) and Semler (1997) theory that corporate SHRM strategies, such as 'best fit' or 'best practices', must be flexible to respond to changes, controlling the dynamics of the external environment while effectively adjusting to millennial individuals and consumerist AMO structures, Calnan (2017), Boxall and Purcell (2011), Boxall and Macky (2009) and Appelbaum et al., (2000). Lilly acknowledges the possible liability of the employer to take control of her opportunities within a graduate or entry level work design. This insecurity stems from Lilly's capability to be involved in the corporate work systems, due to her status as an early career potential and considered inexperienced to contribute to the decision-making process within the corporate functions and governance. This limits availability of Lilly to advance her abilities and motivation to excel as a high performer, McCracken et al., (2015), Makki et al., (2015), Boxall and Purcell (2011), Appelbaum et al., (2000).

Supplementary to Lilly's argument, Mark claims that the employer or direct line manager has the capability and authority to overlook a graduate's potential:

"...I think it depends on your manager as well, they have the power to enable you or restrict you which depends on what they see in you, if you have that potential they are looking for..." (Focus Group 3, Mark, mechanical and business, master's student).

In this quote, Mark describes the power of authority within the workplace environment, and the potential for direct line managers have on an early career potential's talent management and employability capabilities. As discussed previously, the ambiguous and subjective nature of a "bright spark" can cause mismanagement and underutilised, CIPD (2017a), CIPD (2017b), Baruch and Vardi (2016), CIPD (2016), McGuire (2016), Jackson (2013), Nilsson and Ellström (2012), Mellors-Bourne (2011), CIPD (2006), Brown et al., (2004), and Appelbaum (2000). Mark's insecurity of a limited career exploration and restrictive career options illustrates the importance of self-efficiency or 'career tasters', being independent from employer-led values, employing individualist and career resilience within the volatile business environment, O' Dwyer (2016), Wolf (2016), Wanrooy et al., (2013), and De Vos et al., (2011).

Related to power of authority and workplace environment is the student's capability of reflective learning and self-awareness within and outside corporate governance. Ciaran suggest the need for a graduate to be self-aware and efficient when developing employability:

".... Only you know yourself, what abilities you have...you have your foundation set on what you want to do, and you are not given that opportunity by the employer, then you go do it, take control of the situation, and take the responsibility to go and do it..." (Focus Group 2, Ciaran, mechanical, undergraduate student).

Ciaran's response to the 'wrong workplace environment' rises the importance of accountability for one's AMO, talent and employability development stems from self-efficiency or 'career tasters' mentality and Law and Watts (1977) DOTS model, Boxall and Purcell (2011), Boxall and Macky (2009), and Appelbaum et al., (2000). Ciaran's outlook on employability development is to insure long-term success and employability development supported by interest based values, self-concept, and consumerist expectancy value within and outside corporate structures, figure 1. However, this idiocentric and millennial concept displaces the simplicity and effectiveness of a corporation's intergenerational workforce, Eisner (2010) and Eisner (2005).

For a millennial engineer to thrive within economic and corporate uncertainty, engaging in mutually beneficial exchanges within the labour market, Einser (2010) and Eisner (2005). Jack believes that the 'right workplace environment' for proactive employability-based relationships must be accepted, practiced, and controlled by both the employer and the graduate:

"...I feel that it is 50/50 at times... if you go into an internship, you don't know a huge amount going in. So you are being taught on the job, for that specific job. That is making you employable in that certain area. Where it is then you control your own path, and see where you feel is most suitable and would suit you best, you go out and aim for that job. So, when you move on from that internship or first job, you move on to a job that is more suited to your area... (Focus Group 1, Jack, civil, undergraduate student).

Hazel further solidifies Jack's beliefs, placing the graduate and the employer responsible for employability-based relationships and development:

"...I think there is a bit of both, that the employer and the employee has control over your employability. To put it bluntly, at the end of the day, I will only apply to positions in a

company that I want to work for, and that is the first step that will ultimately shape the choices and learning options available to me..." (Focus Group 2, Hazel, energy systems, master's student).

Both Jack and Hazel acknowledge the importance of an entry-level role or internship, using the experience and employer-led values to reconstruct skill-sets and aspirations best suited to the individualist and consumerist needs of a graduate, setting the foundation of heuristic talent development practices. This mentality enforces elements of talent evolution, exhibiting the process of career-self efficiency, advancing from Dacre-Pool et al., (2007) 'Key of Employability' and entry level employability. Jack and Hazel's career decision framework portrays the importance of the employer-graduate exchange, obtaining in-demand skills and competencies, and remaining marketable, while simultaneously altering career options to personal and professional interests, regaining control over career exploration while subconsciously practicing career-self efficiency to talent management and employability development, figure 2 and figure 7.

Laura claims that it both the employer and the graduate's responsibility to progress productive employability based relationships, yet is up to the individual to realise of he or she is underutilised and mismanaged and prevent roadblocks in learning and development:

"...I think it is a two-way development, if the opportunities are there for you to develop in your career, you must of course take the opportunities to progress into an experienced, learned engineer. However, in large companies, it can be easy to get "pigeon-holed" and be stuck doing the same thing repeatedly. It is down to the engineer to recognise the potential for this to happen...it is down to yourself, to recognise where and how you can best develop your skills and employability..." (Focus Group 3, Laura, mechanical and business, master's student).

This statement, Laura addresses the importance of the employer-graduate exchange to learning and development tactics, highlighting the social systems within a corporate structure that can either reform or obstruct a graduate's career options, O'Connor and Bodicoat (2017). The assumption that after a period a graduate will be "pigeon-holed" within a corporate structure leads into Eccles (2005) and Eccles (1983) expectancy value theory and the importance of career-self efficiency regarding exclusive career options and employabilitybased relationships. Laura suggests a shift of power away from the employers to the graduate, a contradictory to Zheltoukhova and Baczor (2016) hypothesis. Laura claims it is the

90

student's responsibility to take over skill and career development, to fulfil career aspirations within and outside their current organisation, ensuring long term success within the STEM economy and labour market, CIPD (2017a), CIPD (2017b) and CIPD (2016).

John believes that it is solely the individual who controls the capability of employability:

"... Even if someone has the attitude that it is the employer's responsibility, I think that will only get you so far. That caps you somewhat, you are continually chasing the employer's expectations of you, trying to get onto the next run in the ladder (positions in a company). ...getting to each stage within a company, such as promotions and recognitions, people will start to notice you, but you are setting up for a fall eventually, if you go for the employer outlook. Looking at it from a long-term view, taking ownership of your skills and your abilities will take you where you need to be..." (Focus Group 2, John, mechanical, undergraduate engineer).

Jack, Laura, and John's statements disregards Chambers et al., (1998) 'winning employee value proposition', jobs that early career potentials would want to keep, placing emphasis on 'corporate fit' and long-term commitment for the strong performers or 'A players' to predict and enhance long-term corporate value, Marginson (2017). This rationale presents a shift in the *War for Talent* and 'corporate fit' to individualised and consumerist medium that thrives on a 'personal fit' approach and the conceptual framework of talent evolution. Presenting the importance of what DeLong and Vijayaraghavan (2003) describes as the B players and Kanter (1997) hypothesis of self-concept and acquiring marketable employability as the drivers of talent development, figure 1 and figure 7. In addition, Jack, Laura, and John's proactive responses leads to the expected value of employability, gaining invaluable career opportunities for themselves, placing emphasis on self-awareness, self-improvement, and reflective learning as the effective process of remaining competitive in the STEM and labour market.

Figure 7: 'Talent Evolution'- Who has control over Employability?



Figure 7: Talent Evolution- Who has control over Employability? The main themes that support result 3 are talent management, employability, work readiness, employer-graduate exchange- who has control?, table 2. Who has control over talent and employability, who holds the responsibility of managing graduate talent and employability, the graduate themselves or the employer? This is the most important aspect of this paper, as it places conceptual and theoretical formulas of talent evolution to the participants of this study, thirdlevel engineering students, figure 1. Accumulating key findings from result 1 and 2, the distinct career patterns of graduates 'future vision' (career-efficiency) or 'career tasters' (self-efficiency) or a hybrid (career-self efficiency) supports the characteristics of student's career decision models, expectancy value, AMO and interest based value, defining the controllers of employability, Harvey (2001). These attributes are related to a student's self-concept or employer expectations when managing talent and employability development, and employability based relationships while adapting to the workplace environment, STEM economy and labour market, Sin and Neave (2014), Boxall and Purcell (2011), Eisner (2010), Boxall and Macky (2009), Eccles (2005), Appelbaum et al., (2000), Hollard (1997) and Lent et al., (1994), Eccles et al., (1983). Figure 7 demonstrates the complexity and the

game of power between the employer-graduate exchange, that impersonates the capability and role the participants can excerpt when regaining control of employability and conventional frames of War for Talent as students subconsciously employing Knight and Yorke (2004) USEM model and Law and Watts (1977) DOTS model. These models originate from a student's distinctive an instinctive engagement of self-concept and employer expectations, implementing the efficiency and metacognition within work readiness, career exploration and meltability development, Holden and Harte (2004), Holland (1997), and Lent et al., (1994). Graduates who regard the employer as the provider of employability development graduate exercise in 'corporate fit; aligning personal and professional goals to employer-led values and in-demand competencies and capabilities, prioritising career efficiency. Yet employer dependency can expose graduates to functional employability, causing the 'pigeon-hole' effect, mismanaged and underutilised talents from misjudged perceived POS, leading to restricted career options CIPD (2017a), CIPD (2017b) and CIPD (2016). 'Personal fit' demonstrates the various diacritic interest based values, assumptions of work readiness and career exposures that benefit the individuals personal and professional development, a consciousness that alternates between self-belief and malleable belief advancing employability capabilities. Talent evolution is a movement, a cadence that expands and contracts labour market taxonomies, leading to 'transitional gaps', 'talent shortages', ineffective ROI to labour market saturation and generic graduate tendencies, McGuire (2016), McGuire (2014), and Mellors-Bourne (2011). To this effect, result 3 demonstrates a graduate attempts to regain control of their talent, acknowledging the importance of accountability for their own development, shifting the War for Talent from employer-led values and resourcing top talent to graduate demands, expectancies aligning the best employability and talent management systems, exploitation, and exploration practices from the perspective of the students, figure 1, Calnan (2017), O'Connor and Bodicoat (2017), De Vos et al., (2011), Garavan (2007), McQuaid and Lindsay (2005) and Michael et al., (2001).

#### 5.4.1 Results: Rubric Design

This section outlines and the findings from the series of semi-structured focus groups, aligning the questions and subjects contextual and theoretical frameworks (table 1) to the responses from the engineering students, section 7: 7.1.b, 7.2.b, 7.3.c. Tables 3.a to 3.c present the engineering students perspective on talent evolution and who has control of employability, graduate talent development and management.

### Table 3.a: Results from Focus Group 1

······		J		1					
	What made you	Are you	Do you think your	What do you look	How did you	What makes you	Does your GPA/College	Why do you	Talent Evolution-
	pick	studying to be	course will be	for when applying	find the	employable?	degree define vour career	join a	Who has control?
Quartiens	-		- Janda bla da adh an	fra - 1-19	4	HThe of discussion	and a stand the fact of the states		D
Questions	engineering:	an engineer or	adaptable to other	<i>jor a job</i> :	nunsmon	w nai ao you	opportunities/aua value	company: Is u	Do you develop your
		is it a stepping	career		from college	think employers	to the workplace?	for the career	employability or
		stone for other	onnortunities, if		to a working	are looking for		onnortunities in	does the employer?
		,,	· · ·						and any engine
		career	so how?		environment?	in a graduate?		that company,	
		opportunities?						or is it a	
		2.5						stenning stone	
								stepping stone	
								to getting	
Name of								somewhere	
Participant								also?	
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Craig	Enjoyed subjects		Basic skill set		Time and		Important for the		
	in school: maths		after college-		project		interview phase.		
	and anionan		haliawaa that		monogomont				
	and science.		Ucheves mat		management				
			employer will		(gym).				
			train graduate for						
			the needed of						
			uie necessary						
			skills.						
James	Enjoyed subjects					Trust and self-		Money isn't a	
100000000000000000000000000000000000000								C	
	in school: maths.					mitiative.		lactor if the	
	Engineering is a					Long term		employer	
	practical hands-					commitment		presents an	
						T 1			
	on degree.					Employer will		invaluable	
						train you up for		career	
						entry level		opportunity	
								-pportointy.	
						position.			
Richard	Enjoyed subjects	Wants to pursue			Time	Trust self.	GPA is not the defining		1
Richard	Lujoyed subjects	wants to pursue			1 mile	arust, sell-	S. A is not the demuing		
	in school: maths	a master in			management	initiative, able to	factor.		
	and chemistry.	business - pure			9-5 routine.	ask questions.			
	Influenced by	engineering				Genuine interest			
	teacher- better	degree is not				and commitment			
	culture oction	degree is not				and communication			
	pay/job.	enougn (post-				to the company			
		internship				when applying			
		experience).				for a position			
Jack	Enjoyed subjects					Mutual trust.	When interviewing for a		50/50-
CALCULATION OF	in school: maths					CONTRACTOR CONTRACTOR	placement, they never		Graduate/employer
	in school. mittis						placement, diey liever		oraduate employer
	and science.						asked.		responsibility.
	Problem solving.								Employability equals
									enjovment.
									Chartershin
									Chartership
									membership required
									to gain access to
									further/excluding
									training and
									4
									development
									programmes
									(masters are
									necessary).
Ron	Enjoyed subjects	Insecure			Time	Intensive	Important for the CV A	Will join a	
	in school	Realizes #				receptoh of the	good GPA is just the	component i fut	
	m school. mains,	incluses the			ananagement	icsearch of the	good GrA is just the	company it mey	
	science.	value of 'first			9-5 routine.	company before	added gloss', employers	(employer)	
		job' will impact		1	Underutilised,	applying. Serious	are more focused on the	funds the MBA.	
		his future career			only given	about joining the	quality of the individual.		
		opportunities.			basic tasks.	team. The			
L	1		1	1	200000000000000000000000000000000000000	0.0000000000000000000000000000000000000	1		1
						employer can			
					1	trust your			
				1	1	integrity workin-	1	1	
					1	and a distance working			
					1	for the company			
					1	and with their			
					1	team.			
Lee	Enjoyed subjects	Concrete degree	-	1	+	Confidence	The expected standard of		Employers control
		/ II			1		CD1 1		Suproyers control
	in school: maths	(problem			1	experience,	GPA depends on the roles		empioyability.
	and science.	solving is a			1	common sense,	and the company.		Require a basic
	Biomedical	benefit to			1	health and safety.	Culture and company fit		degree, depending
	(enjoy working	employers			1	and	is more important		upon level and tree
	(enjoy working	cmpioyers).		1	1	and	as more important-	1	apon rever and type
	with people)	Work system-			1	responsibility.	personal skills		of role/skills
		see things			1	Trust is very			required.
		separately and			1	important.			
		as a unit			1				
		as a unit.			1				
		Understand how			1				
		it comes and			1				
		works together			1				
4	1	works together.	1	L.	d	1		1	1

### Table 3.b: Results from Focus Group 2

Fionn	Enjoyed subjects		1	Cultural fit must	The	Advance from	Bigger companies: 2.1	
	in school: Maths,			balance 'personal	importance of	CV. Ability to	class degree is the 'cut-off	
	physics and			fit'. Enjoyment is	motivation	talk/hold an	point'.	
	chemistry.			key.	and self-	informed	Willingness to learn is	
	Construction				initiative to	conversation.	key.	
	project in				get work	Become	2.2 may prevent an	
	school- desire to				done.	indispensable-	opportunity to study a	
	study civil					'missing asset'.	PhD.	
	engineering.							
Harry	Personal choice		Total emphasis on			Adaptability.	2.1 is a minimum	Employer controls a
	(airplanes).		engineering,			Importance of	requirement. A standard	graduate's ability in
			rather than			self- initiative.	and a stepping stone to	advancing their skill
			employer				other career avenues.	set. Influenced by
			expectations					company's
			(business/other).					requirements and
								restrictions and
								expectations.
Ciaran	Enjoyed subjects	50/50	Need to				Employers 'Perfect	Career exploration is
	in school: maths.	Engineering and	differentiate.				candidate' is a 1.1 class	a tool to find what
	Engineering	other	Need for future				degree as well as having	you are good at.
	degree is a safe	occupation.	development-				alternative skills- too	Only you know the
	option.	Engineering	Masters in				idealistic.	level of your
		degree-	engineering and				Realistically, a 2.1 GPA	capabilities.
		practical	business (MBA).				(2.1) is good to have, but	To be employable is
		(technological					obtaining different skills	knowing strengths
		development).					that you have learned in	and weaknesses and
							real	to be able to sell
							life/societies/alternative	

	What made you	Are you	Do you think your	What do you look	How did you	What makes you	Does your GPA/College	Why do you	Talent Evolution-
	pick	studying to be	course will be	for when applying	find the	employable?	degree define your career	join a	Who has control?
Questions	engineering?	an engineer or	adaptable to other	for a job?	transition	What do you	opportunities/add value	company? Is it	Do you develop your
		is it a stepping	career	1120	from college	think employers	to the workplace?	for the career	employability or
		stone for other	opportunities, if		to a working	are looking for		opportunities in	does the employer?
		career	so how?		environment?	in a graduate?		that company,	
		opportunities?						or is it a	
								stepping stone	
								to getting	
Name of								somewhere	
Participant								else?	
Eva	Enjoyed subjects	Wants to pursue		Meaningful and		Skills learned in	Other routes if GPA is not		Unsure. Employer
	in school:	a pure		challenging work.		college applied to	satisfactory. GPA is not		will guide you
	technographic.	engineering		An opportunity to		work- computer	the defining factor.		(graduate).
	Family	occupation		excel		aided design			
	influence.	(biomedical).		professionally and		(CAD), finite			
				personally in an		element analysis			
				area of interest.		(FEA).			
Chris	Enjoyed subjects	Wants to pursue			5	Experiences with	If you have a low GPA,		Employer will guide
	in school:	a pure				people from	you must sell yourself-		the graduate. Open
	design,	engineering				different social	use real life experiences.		to employer's
	communication	occupation. No				classes. Respect			suggestions.
	and graphics.	interest in				different points			
	Seeing	further study.				of view.			
	individual parts,								
	how they work								
	separately and								
	together.								

-	70	a	x		×		
						experiences makes you	yourself. It's your
						stand out.	own responsibility.
							Guessing game in
							defining what
							employers
							want/require from an
							entry level graduate.
							If employer is
							holding you
							(graduate) back, you
							must take control
							and responsibility of
							developing your
							skills and
							experience.
Jay	Seeing	Wants to pursue		Location.	Be interested.		
	individual parts,	pure		Competitive	Research the		
	how they work	mechanical-		company.	company and		
	separately and	marine engineer		Change to suit	potential team.		
	together.			company's needs,	Diversity.		
				only of it matches	'Bright spark'-		
				current aspirations	self initiative.		
				and future goals.			
John	Engineering		Wants to pursue	Training	Networking-	Employers prefer 2.1,	Attitude.
1	degree- highly		MBA down the	opportunities and	target right	assume that 1.1 student's	Believing that the
1	adaptable.		line. Concerned	reputation of the	person to solve	lifestyle is intense/college	employer is
	Break into the		that employers	company. Only	an issue.	driven. GPA and college	responsible for
	labour market		would be bias	stay for a few		curriculum is geared	employability

		(	1						
	(saturated with		against pure	months. Pick a		Breaking	towards 'learning how to		limited and controls
	general science		engineering	company that looks		stereotypes of	take tests'.		your development.
	graduates)		graduates.	good on the CV		engineers	In a work setting, the		The graduate must
			Aware that	and advance skill		(inability to	ability to negotiate and		take ownership of
			companies are	set		network,	adapt is key.		skills and abilities
			selecting			resulting in high			for future
			graduates for			consultancy			development.
			long-term			rates).			
			investment.			~~~			
Lilly	Enjoyed subjects	Concerned that	Engineering	ROI/Employer-		'Bright-spark' -	Personality and work		Employer and
	in school: maths	the engineering	degree- adaptable	Graduate exchange.		creative,	ethics are more important		environment can be
	and design.	degree would be	to other careers.	What can I offer?		innovative,	than a high GPA.		used as a tool to
	Family	too	Company controls	Experience in a		organised,			realise skills
	influence.	broad/generic.	the roles/projects	competitive/high		enthusiastic,			necessary to develop
		Would not	assigned to a	profile company		honest and works			talent and skill sets.
		acquire	team/individual.	looks better on a		well with others			Employer effects
		necessary skills		CV, better chance		(teams).			development
		for niche		in achieving your		'Bright-spark'- to			(professionally and
		market. Would		goals and obtain		idealistic,			personally).
		need 'on-the-		the 'dream job'.		discouraged to			
		job training/		Differences you if		apply for a role.			
		experience'.		you have					
				experience there.					
Hazel	Problem solving,	Engineering	Adaptable degree-	Cultural fit equals	College work	Cultural fit.	GPA can define your	0	50/50 (Graduate and
	and design.	Degree-	open doors to	'personal fit'.	is theoretical.	Personable, able	eligibility for applying to		employer) will only
	2.00	adaptable to	other career	Join a company	Laboratory	to work under	position/role.		apply to a job/role
		various career	opportunities.	that I admire, and	work is	pressure and			that is enjoyable and
		opportunities.		suits current		produce logical			

Problem solver	Work ethics of an	career/goal	computer	solutions.		is liked in with your
and able to	engineer: problem	aspirations	generated.	Ambition and		(graduate) interests.
work under	solver and work			eagerness to		Interests will
pressure.	under pressure,			work.		influence choices.
	skills that is					
	transferable and					
	valued by					
	employers.					

Lable J	o.c. Kesu	us jrom .	rocus Gi	oup s					
	What made you	Are you	Do you think your	What do you look	How did you	What makes you	Does your GPA/College	Why do you	Talent Evolution-
	pick	studying to be	course will be	for when applying	find the	employable?	degree define your career	join a	Who has control?
Questions	engineering?	an engineer or	adaptable to other	for a job?	transition	What do you	opportunities/add value	company? Is it	Do you develop your
		is it a stepping	career		from college	think employers	to the workplace?	for the career	employability or
		stone for other	opportunities, if		to a working	are looking for		opportunities in	does the employer?
		career	so how?		environment?	in a graduate?		that company,	
		opportunities?				Sector.		or is it a	
								stepping stone	
								to getting	
Name of								somewhere	
Participant								else?	
Laura	Concrete degree;	Engineering					Chartership- require		50/50 (Graduate and
	adaptable,	degree is a					students to have a		employer): Avoid
	technical and	stepping stone-					masters' degree (since		being 'pigeon-
	analytical skills	wants to pursue					2012)- GPA defines that		holed',
	(with business)	a business					possibility.		graduate's
		analyst side.							responsibility to
		Opportunity to							recognise how best
		use constructive							to develop skills and
		mindset from							employability.
		engineering to							
		other careers							
		(business).							
Peter	Subjects enjoyed	Unsure if	Engineer graduate		Daunting at	Willingness to	GPA is a strong indicator	Career	The graduate
	in school: maths.	college degree	would suit a		the beginning.	participate in the	of performance and work	exposure.	responsible for being
	Work experience	relates to	managerial role-		A few weeks	local community,	ethic.		employable.
	in civil	workplace	work ethics;		to settle. Time	active in college			Graduate can be
		needs.				societies,			

### Table 3.c: Results from Focus Group 3

	engineering	critical analyti	cal	management	differentiates the			aided by mentors,
	company.	mindset.		9-5 routine.	candidate.			and co-workers.
					Chose technical			
					communication			
					to advance			
					teamwork and			
					presentation.			
Mark	Mapped	Engineer and	What can I get out		Work ethic.	GPA depends on your	'Career tasters'-	50/50 (Graduate and
	subjected	Business grad	ate of this? Career			future/career path. There	system of	employer): swayed
	choices for	brings diversit	y to transitions; 2/3			are other avenues.	identifying	by 'my future
	leaving cert to	the employer:	years.			Depends on the	what is	vision'/aspirations.
	enter	approach	Explore the			position/role you apply in	enjoyable. Stay	Power struggle- the
	engineering	problems with	a engineering			a company.	in a role for 2/3	manager can enable
	course.	different	industry- intensive				years: intense	or restrict the
		viewpoint.	'on-the-job				career	graduate's
		Math related	training'.				exposure,	development.
		disciplines/rol	es;				opportunities.	Being enthusiastic
		employers targ	et				Would stay in a	realigns power to the
		engineers base	d				company if felt	graduate.
		on their					challenged,	
		adaptability to	3				skill set	
		problem solve	and				evolved.	
		thrive on the					Career	
		unknown.					ambition/path-	
							aerospace,	
							automotive,	
							finance.	

Mathew	Family influence- lifestyle choice		Thought process, 'Get it done' attitude.	Role that is not mundane. Vibrant workforce- open to change. The role/company to acknowledge his value as an engineer.		Personable.	Learned more practical skills from societies than college modules. Worth ethic. 2.1 degree- 'cut off point'.		Develop skills for own interest.
Sarah	Subjects liked in school: maths, physics, and technical drawing. Personal choice, likes to problem solve.	Open to other career opportunities- Maths related (insurace, finance, banking, and actuary)		Apply to roles in highly accomplished and recognised companies. Look at quality of staff (deep research on future employer, team on LinkedIn; viewed experiences and skills).	8-month placement unlocked the opportunity to apply theoretical knowledge to team project.	Employers are not just looking for a straight A student, but a competent employeel(team work, communication, personable).		Experience in §-month placement: access to greater opportunities. Chose a slightly smaller company for first job (starts in September)- easily recognised/ responsibility for work).	
Colm	Concrete degree- security	Wants to be an engineer- automotive industry. Wants		Picked a company with a 'future vision'. Employer trains you		Engineers are resilient. 4-7-year course see	GPA - 'cut off point'.		Advance natural and acquired skills from various companies

to advance	(graduate) to	through till the	that match career
skills in	facilitate current	end.	aspirations.
aerodynamics.	and future needs.	Personal/people	Tailor CV when
		skills and	applying for
		maturity.	role/position: obtain
			skills necessary for
			the role/company's
			needs.

#### 5.5 Discussion and implications for further research and practice

This section critically analyses the key findings of this research, positioning the student's insights within talent management and employment within existing literature. In presenting a coherent and meaningful explanation to the results obtained within this research, the value talent evolution as a conceptual model will be reviewed, advancing academic literature regarding millennial graduate development and employability tactics within the employer-graduate exchange.

#### 5.5.1 The adaptability of an Engineering student in the labour market

The complexity of millennial employability and graduate talent management has become a rising issue, effecting 70-20-10 learning and development strategies, third-level institutional development and graduate resourcing, retention, and ROI, CIPD (2016), McCracken et al., (2015), Cappelli (2008), Hart (2008), Rae (2007), CIPD (2006), Bedingfield (2005), CIPD (2005), and Creelman (2004). The findings of this research indicate that engineering students place notable attention to expectancy and interest based upon the subjective value of employability, and the tasks associated with a student pursuing an engineering degree or alternative career paths within the Irish labour market, McGuire (2016), McGuire (2014), Thunnissen et al., (2013), Mellors-Bourne (2011), Eccles (2005), and Stewart and Knowles (1999). However, a student's STV is influenced by in-demand skills, POS, and PDP taxonomy's, adapting effective transitions to the workplace, Eisner (2010). Career decision making models, as presented by Dries (2013), Matusovich et al., (2010), Holland (1997), Stewart and Knowles (1999), Lent et al., (1994) represent the importance of interest based career paths and AMO features in corporate strategies, referring to 'future vision' and 'career tasters' to remain marketable. As early career potentials, the results of this research are illustrating that career choices and employability tactics, such as career-efficiency and/or selfefficiency, aligned with an engineering student's, self-interest and assumed position within the STEM, employing career resilience techniques, an attempt to adapt to the unregulated labour market, Kelly and Barrett (2017), Makki et al., (2015), Kelly and McGuinness (2013),

and Lent et al., (1994). This study advances from O'Connor and Bodicoat (2017), Bergin et al., (2015) McCracken et al., (2015), Matusovich et al., (2010), and Shaw and Fairhurst (2008) research, demonstrating the various codes of 'value' from a self-concept to employer expectations within graduate internships and placements, outlook. This research does not suggest that a student's rationale of employing either a 'future vision' or career-efficiency talent management strategy is associated with inefficient and backwards thinking, or a student's uncertain career mapping demonstrates vulnerability, lack of higher order thinking and inactive engagement less meaningful than a 'career tasters' or self-efficiency perspective. Instead, this research advances from Hinchliffe and Jolly (2011) research and demonstrates a student's identity and employability tactics. More importantly the findings of this research indicate the indefinite process of talent evolution, demonstrating the diverse assumptions and experiences that a student practices to improve career and talent management, Dries (2013) and Holden and Harte (2004). Thus, reducing the conceptual gaps of understanding the dynamics and harmonies between millennial students, unpredictable business environment, corporate governance, individual and organisational objectives, Calnan (2017), IBEC (2017), Wolf (2016), Beechler and Woodward (2009), McQuaid and Lindsay (2005), Chambers et al., (1998). This frame of thought overlooks McCash (2006) and Seymour and Hewitt (1997) that only intelligent, proficient students can pursue a career in a non-engineering discipline, and failure to exercise in the DOTS model is a consequence of an unsuccessful individual, Law and Watts (1977). Alternatively, this research suggests the societal problems within Ireland have had a profound effect on the participants of this study, altering the probability of sustainable employment, availability of career opportunities and involvement with their own career options within corporate structures, Kelly and Barrett (2017), Zheltoukhova and Baczor (2016), Bergin et al., (2015), Sin and Neave (2014), Kelly and McGuinness (2013), and Boxall and Macky (2009). Therefore, a student's persistence of obtaining meaningful and challenging work is aligned with a student's self-concept within the volatile business environment, STV, expectancies of success and personal identity beliefs influencing career resilience and differentiation tactics within and outside the Irish labour market, IBEC (2017), Hinchliffe and Jolly (2011), Matusovich et al., (2010), Eccles (2005), Hollard (1997) and Lent et al., (1994). Therefore, adapting to employability and the labour economy is not liner but a process, that is reformed by the individual's experiences, knowledge, and the psychological embodiment of life-long learning and being constantly self-aware when engaging in career exploration tendencies. This suggests the importance of interpersonal and

vocational skills, derived from students adjusting to the workplace environment, demonstrating individualised responsibility for their own development within long-term career planning, figure 1, Holden and Harte (2004) and Holland (1997). This aligns with employers shift to resourcing talent for medium to long term objectives, demonstrating the importance of transferability within the STEM economy, Rayner and Papakonstantinou (2015), Dries (2013), and Spinks, Silburn and Birchall (2006). However, due to the demand of engineering and STEM graduates, the capability of an engineering graduate to transfer occupations within the business environment, the findings of this study could be irrelevant to other disciplines, where formal training, institutional development, and restricted job requirements prevents occupational transferability, McGuire (2016), McGuire (2014), and Nabi and Bagley (1998). Therefore, further research regarding STEM and non-STEM graduates, advancing from Abraham and Karns (2009) and Atlay and Harris (2000) studies regarding student's transferability, is necessary to support these paper's findings, defining the capability of graduates of 'freely' managing their careers, examining capability of adaptability/flexibility within the labour and business environment, IBEC (2017), Wolf (2016), Gunn and Kaufmann (2011), Mellors-Bourne et al., (2011), Harvey (2001), and Seymour (1997).

Accessing appropriate employability skills among the participants and graduate management is highly significant to survive in the competitive graduate labour market. Yet the various interpretations, career resilience tactics and accountability within this research findings alters graduate development, accepting diverse career exploration practices within the Irish labour market, Kelly and Barrett (2017), Bergin et al., (2015) and De Vos et al., (2011). From an organisational perspective, high performance team is determined by dependant individuals, and training and development is most effective within the right environment and opportunities exposed to an individual, Gyton (2016), Garavan (2007), Barrett and O'Connell (2001), Gardner and Liu (1997). Yet, who has control of this environment? Who has the control of a student's capability to be employable and achieve personal goals and achievements? This study acknowledges that there are various interpretations of who holds the power in stabilising the 'right environment' for proactive employability, but focuses upon the participants subjective interpretation of who controls employability.

This calls to question the validity of 'best fit' and 'best practice' and suitability of *War for Talent* as a work trend. As found by Beechler and Woodland (2009):

"... A new creative paradigm of 'talent solutions' is evolving. These are innovative, integrated and strategic responses, rather than tactical war battles, to create more cooperative and generative talent approaches..." (Beechler and Woodward, 2009, p. 279).

The unchartered business environment, economic growth, and technological development, as examined by IBEC (2017), O'Dwyer (2016), Bergin et al., (2015), Kelly and McGuinness (2013), Wanrooy et al., (2013), Gratton (2010), Cappelli (2008) and Barrett and Kelly (2012), as complicated the employer-graduate exchange, leading to inefficiencies to attract, and retain the right talent at a corporate perspective for the immediate and long-term future. As argued by Beechler and Woodward (2009) the intergenerational workplace environment and employability based relationships between the employer and potential employee is becoming a relational, not transactional as presented by Calnan (2017), Johnson and Lopes (2008), Garavan (2007), Martin (2005) and Chambers et al., (1998). This research shifts the traditional conceptions of work trends, such as *War for Talent*, and talent movement, exemplifying a qualitative empiric rationale regarding millennial engineering students, ascertaining the various development, training needs, POS, and leadership styles and personal and professional motivational factors, Ulrich (2014), Dries (2013), Shaw and Fairhurst (2008), Beechler and Woodward (2009), Johnnson and Lopes (2008), and Barrett and O'Connell (2001).

#### 5.5.2 Work readiness and career exploration practices redefine employability

This research and the conceptual model of talent evolution is a proactive response to the ambiguous nature and documented accounts of addressing skill provision in the higher education, learning outcomes and the talent quality and quantity within the labour market within an Irish context, Dries (2013), Jackson (2013), Barrett and Kelly (2012), Cabellero and Walker (2010), Andrews and Higson (2008), Wye and Lim (2009), Brown et al., (2004), Giancola (2006) Bennett et al., (1999). A student's career-decisions, AMO capabilities within an organisation, career resilience, and personal development is one of the key attributes in describing a third-level engineer's talent management tactics and work readiness, responding to persistent graduate 'skill gaps' and incompetence within STEM and Irish economy, McGuire (2016), Bergin et al., (2015), McGuire (2014), Wanrooy et al., (2013), and Brady (2010). While expressing the long-term effects of the external environment, such as the industrial revolution and globalisation within the Malaysian macro/micro and knowledge economy, Makki et al., (2015) work readiness model is a framework most comparable to

talent evolution. Makki et al., (2015) model demonstrates the underlying factors, such as engineering educators and external environment that influence an engineer's capability of career self-efficiency, career exploration, and invaluable employability proficiency within graduate placements/roles, figure 4, O'Connor and Bodicoat (2017) and Dries (2013). While being aware of the various control expectancy factors that influence graduate's employability. 'Talent Evolution-Who has Control?' follows a similar path, but in an Irish context, based around the 2008 Stock market crash, resulting in the individualist, consumerist and career resilient behaviours of the engineering students in this study, figure 1.

This study illustrates that proactive employability, best talent, marketability, competitive advancement and long-term performance within corporate governance is not sourced by obtaining top talent or A players or 'bright sparks' that strictly align with functional employability and 'corporate fit'. Instead the findings refer to an 'all-rounded' student or the 'talented rough diamonds' that may not meet the 'top talent' mark (10%-20% of the workforce), yet have the potential to contribute to an organisation's long-term performance and workplace productivity, Marginson (2017), O'Connor and Bodicoat (2017), Dries (2013), Beechler and Woodward (2009) and DeLong and Vijayaraghavan (2003). Rather than simply justifying B or C players as less ambitious as the A players, with low self-confidence and independence as reported by, the 'best talent' is found within enlightened mindsets that accepts the interconnected, dynamic, and rich levels of diversity including vocational attributes, cognitive (in)abilities, and perceptions of 'perfect fit', advancing from conventional wisdom and *War for Talent*, De Vos et al., (2011), Hinchliffe and Jolly (2011), Beechler and Woodward (2009), Holden and Harte (2004), King (2003), Michael et al., (2001), Chambers et al., (1998) and Holland (1997).

This study confirms the millennial engineering student's behaviours of career resilience and diversity as the key sources of employability and enhanced workplace performance. The engineer's various insights demonstrate the various attitudes and behaviours towards the workplace environment, advancing from De Vos et al., (2011), CIPD (2006), and Gardner and Liu (1997) research, presenting effective methods of executing idiocentric career exploration and successful career path within the STEM and knowledge economy from the perspectives of the engineering students, Kelly and Barrett (2017), Bergin et al., (2015), Rayner and Papakonstantinou (2015), McGuire (2014), Kelly and McGuinness (2013), Jackson (2013), Johnnson and Lopes (2008), Martin (2005), Holden and Harte (2004), and

Morton (2002). A student's accountability, recognition, and expectancy value employability positions a student's distinct career decision models, such as 'future vision' and/or 'career tasters', to the forefront of personal and professional employability vital skill provisions, Eccles, J.S (2005). This finding presents the transact between graduate recruitment and a student's successful development and long-term success within and outside corporate governance, Jackson (2013), Tymon (2013) and Lent et al., (1994).

Two career exploration practices within millennial engineering students emerged, 'future vision' and 'career tasters'. The concepts of 'future vision' and 'career tasters' are diverse tactics, coined by the participants of this research to describe vocational attributes to employability and talent management. Thus, supporting Thijssen et al., (2008) argument of various definitions and interpretations of employability, illustrating the engineer's positive or negative experience within idiocentric career exploration, work readiness and talent management practices, Dries (2013), De Vos et al., (2011), Brown and Tannock (2009), and Stewart and Knowles (1999). This research underlines the (in)adequate interaction between institutional and formal learning, effecting the efficiency of a graduates vocational-related skills within the workplace environment, aiding CIPD (2017b), CIPD (2016), Zheltoukhova and Baczor (2016), CIPD (2006), and CIPD (2005) reports regarding millennials within the workplace. The participants attitude toward work, observations on university and formal learning is determined by meaningful, challenging work and progressive career development, Nillsson (2010), and Knight and Yorke (2002), Warn and Tranter (2001), and Knight and Yorke (2000). However, due to the population sample and research instrument, table 1, the participants have limited comprehensive outlook on alternative talent management experiences within corporate and workplace environments, limiting the availability to address major issues presented by Harvey (2001, 2000) regarding effectiveness of institutional learning and employability. Therefore, to address issues presented within millennial employability and graduate management, further longitudinal qualitative study, examining the same population sample, is necessary if the organisation is fulfilling the needs and satisfying their capabilities of a 'future vision' or 'career tasters'.

This the key findings demonstrated in this research support McCracken et al., (2015), Higher Education Authority (2016), Hinchliffe and Jolly (2011), Eisner (2010), Brown and Tannock (2009), Rae (2007), CIPD (2006) and CIPD (2005) predicaments regarding the millennial graduate's position within the intergenerational workforce. The complexity of a graduate's

shift from career-self efficiency, self-belief to employer expectations rises the presumption of interchangeable demands and expectancies of workplace satisfaction regarding personal growth and development, O'Connor and Bodicoat (2017), Riemer (2003), Harvey (2000), Stewart and Knowles (1999), and Gabb (1997). As argued by Johnson and Lopes (2008), this is an ongoing issue within the intergenerational workforce and the rising complexity in the business environment, effecting students and graduate's confidence in obtaining invaluable career options, a primary role of a third-level curriculum, O'Connor and Bodicoat (2017), Rayner and Papakonstantinou (2015), Boulton and Lucas (2011), Knight and Yorke (2002, 2000). The students sense of insecurity relates Higher Education Authority (2016) report that the 'skill-gap' between institutional development among engineering graduates is broadening, obstructing the effectiveness of work readiness and employability, Smith and Kruger (2008) and Bennett et al., (1999). Furthermore, a student's engagement in either 'future vision' or 'career tasters' orchestrates the theoretical, contextual, and metacognitive strategies regarding employability and talent, derived from an engineer's personality or behaviours, and vocational capabilities when engaging in professional development, Holden and Harte (2004) and Holland (1997). This ideology is supported by natural strengths and taught skills within institutional or workplace development, advancing from entry-level employability generic work readiness capabilities as argued by Calnan (2017), McCracken et al., (2015), Rayner and Papakonstantinou (2015), Biswas-Diener, Kashdan, and Minhas (2011), Brady (2010), Eisner (2010), Dacre-Pool et al., (2007), and Lent et al., (1994).

The participants acknowledge the proficiency of an engineering degree within employer and labour market and would not choose a different course, yet more than half of the participants interested in a business-related discipline to strengthen one's position in the graduate market, Thunnissen et al., (2013), and Stewart and Knowles (1999). This is finding opposes Matusovich et al., (2010) ideal of low/medium/high attainment values in studying an engineering discipline. Instead, this finding demonstrates the complexity of attitudes to work and work readiness, from a self-concept to employer expectations, influencing career development, and the cogitation of job satisfaction, and the indefinite process of achieving meaningful and challenging work, referring to Eccles (2005) expectancy value theory, Hinchliffe and Jolly (2011), and CIPD (2006). These practices reflect the priorities of millennial students and an early career potentials workplace environment, addressing 'skill gaps', 'transitional inefficiencies' from third level to workplace environment, and mismanaged talent, Baruch and Vardi (2016), CIPD (2016), McGuire (2016), Jackson and

Champman (2012), Bedingfield (2005), and Brown et al., (2004). Mitigating the possible graduate management strategies, this research ascertained and critically analysed the millennial engineer's recognition, level of engagement and active responsibility for obtaining employability skill resourcing, advancing from CIPD (2017a), CIPD (2017b), CIPD (2016)

European Commission (2016) 'Education and training strategy 2020', Jackson (2013), Tymon (2011) and Tomlinson (2008) arguments of student's capability to implement employability within the workplace, Eisner (2010).

However, critically evaluating the findings of this research, there is one major weakness that retracts the potential literature advancement regarding work readiness and career exploration practices, and that is the shortage of female participants in this study. As within the STEM disciplines, there is a gender imbalance within students and female employees within the engineering discipline, thus distorting the engagement and skill development activities within male and female millennial engineers. To this effect, these paper finding cannot build-upon the previous findings that suggest that females are more active in advancing employability capabilities, Jackson (2013), Tymon (2011), Nabi and Bagley (1998) and Royalty (1996). This presents a significant limitation of this study as the population of female students engaging in STEM disciplines is on the rise, and therefore needs to be further examined to assess the relative importance of employability skill provision, work readiness and talent development within Irish and global demographic characteristics, O'Connor and Bodicoat (2017), European Commission (2016), Higher Education Authority (2016), Brady (2010), Holden and Harte (2004), and Stewart and Knowles (1999).

# 5.5.3 Who controls employability and talent development? The practical implication and value of 'Talent Evolution' as a conceptual model

The student's principles of obtaining either employing a 'corporate fit' or 'personal fit' mindset corresponds to power conflicts between the stakeholders of the employer-graduate exchange. This ultimately affects the labour market landscape, altering the industry expectations and graduate outcomes of graduate employability, O'Connor and Bodicoat (2017), Jackson (2013) and Andrews and Higson (2008). This paper suggests the acetic nuances of the millennial third-level student's understandings and engagements of employability controls the supply-demand equilibrium within the labour market. Advancing from Sin and Neave (2014) and Jackson (2013) research, the participants tactics on employability skill resources, exhibiting career efficiency and self-efficiency signifies the

importance of individualist and consumerist employability, interest based value and AMO preferences regarding personal and professional development.

The mixed outlooks of who is responsible for talent and employability-based relationships can be associated with the challenges individual experiences when regaining control of their career exploration and PDP, while remaining marketable in the current competitive STEM and knowledge economy, O'Connor and Boicoat (2017), Rayner and Papakonstantinou (2015), and Seymour (1997). As documented within HRM practices, the development of a potential employee is based upon the 'gatekeepers' of development subjective 'value' while analysing the potential contribution of a graduate to achieve corporate-specific objectives, O'Connor and Bodicoat (2017), Zheltoukhova and Baczor (2016), Arthur, Herdman and Yang (2016), Dries (2013), De Vos et al., (2011), Eccles (2005), and Harvey (2001). Yet, as argued by Calnan (2017) conventional corporate strategies are losing the 'best talent', resulting in a conflict between 'corporate fit' and 'personal fit'. This mentality identifies the capability of authorities of power, such as line managers/hr practitioners, 'gatekeep' development strategies, exclusively choosing 'high-potentials' for further investment, Calnan (2017), McCracken et al., (2015), McCash (2006), McQuaid and Lindsay (2005) and King (2003). It is this risk that positively or negatively affect work relationships, student's motivation, and ability to freely manage one's career and lack of access to opportunities to develop outside functional or corporate obligations leads to ineffective work and employability based relationships. In this study, 'corporate fit and 'personal fit' are the participants responses to advance their career sequences, regaining autonomy of their work De Vos et al., (2011). This concept provides a practical evocation in addressing current graduate recruitment infrastructure, schemes, and commercial objectives, within an innovative process of talent evolution', aligning self-concept and corporate expectations to graduate management as demonstrated by Calnan (2017), O'Connor and Bodicoat (2017), Zheltoukhova and Baczor (2016), De Vos et al., (2011), Beechler and Woodward (2009), Andrews and Higson (2008), and Bedingfield (2005).

Talent evolution provides clear evidence necessary for Bedingfield (2005) and Creelman (2004) ROI graduate and millennial management systems, to accept career exploration, diversity, individualist career-based choice(s), McCracken et al., (2015), Eisner (2010), Martin (2005), and Stewart and Knowles (1999). Assessing self-management as proactive employability tactics procures an invaluable insight into regulating millennial expectations,

emotional intelligence, boundary-less talent pools, boundary spanning and human capital pipelines within the intergenerational workforce, Hinchliffe and Jolly (2011), Riemer (2003). Applying talent evolution to the organisational ethos and development structure shifts exploitation and exploration SHRD structures from short-term and internal objectives to an enlightened medium, O'Connor and Bodicoat (2017). Thus, presenting the possibility of adaptive organic capability, knowledge management incentives, redefining behaviours, and performance expectations to employability based relationships that advocates an equilibrium of employee and employer interests, O'Connor and Bodicoat (2017). Garavan (2007), Guest and Peccei (2006), Espedal (2005), Harvey (2001). This research shifts the Cappelli (2008) and Becker (1962) core principles within the talent demand-supply equilibrium, signifying the importance of a balanced employer/employee interests, and a varies development system, positively influencing graduate retention and effective career progression and ROI, McCracken et al., (2015), De Vos et al., (2011), Johnson and Lopes (2008), Eccles (2005), and Creelman (2004).

The purpose of constructing talent evolution as a conceptual model is to inform the outlining provisions and practical implications regarding employability based relationships, graduate management from the perspective of millennial engineers. This model provides an interpretative mechanism, advancing from Dacre and Pool et al., (2007) 'Key of employability' and Gyton (2017) and Gunn and Kaufmann (2011) outlook, deconstructing the complex nature of employability to a new perspective, clarifying the importance of individualist and consumerist approach to planning, implementing, and progressing graduate management schemes, De Vos et al., (2011). The overarching aim of this paper and talent evolution was to re-focus the employers theoretical and idealistic models of employability, using the millennial engineers as the 'key' to comprehend the employer-graduate exchange, and the controllers of graduate talent to a novel medium. Rather than presenting a simplistic model that refers to War for Talent tendencies such as functionalist HRM, aggressive hiring ad top talent fixation, talent evolution presents an innovative response to graduate resourcing, mobility, diversity, and business transformation, Calnan (2017), Aurthur et al., (2016), Gunn and Kaufmann (2011), Beechler and Woodward (2009), Brown and Tannock (2009), Andrews and Higson (2008), Michael et al., (2001) and Chambers et al., (1998). Responding to Beechler and Woodward (2009) 'talent solutions', talent evolution is a conceptual model encompasses various ideals and theoretical frameworks, presenting the evolving and practical nuance to comprehend the ontological nature of employability and talent management, Gyton (2017). Due to the complexity and introspective and inductive nature of the research topic and the primary data, simplifying this conceptual model would not be justify the intense nature of this research topic.

Talent evolution is a valuable tool to augment, re-enforce knowledge transfer, fracturing stereotypes within the employer-graduate exchange and competitive bureaucratic practices that thrive on 'winner/looser' SHRD mechanisms, Aurthur et al., (2016), McCracken et al., (2015), Kultalahti, and Viitala (2014), Dries (2013), Gallabardo-Gallarado et al., (2013), Gunn and Kaufmann (2011), Cappelli (2008) and Garavan (2007). While adjusting to a global mindset, retrospective AMO preferences, learning ability, channelling the top performers and the 'talented rough diamonds' to a proactive employability viewpoint. In addition, talent evolution is a conceptual model that can be examined within a graduates/student's life stage and career compass, advancing entry level employability within an integrated, employability-based, and mutual benefiting relationships, Calnan (2017), Zheltoukhova and Baczoe (2016), McCracken et al., (2015), Ulrich (2014), Davies and Davies (2010), Wye and Lim (2009), Andrews and Higson (2008), and Shaw and Fairhurst (2008). With further validation and improvements, talent evolution could provide academics, HR practitioners, business partners, graduate employers and students with a qualitative, analytical, and interpretative framework, assessing the ambidextrous construct of talent, reinforcing employability-based relationships while achieving organisational and personal objectives of potential employees, McCracken et al., (2015), Davies and Davies (2010), Lewis and Heckman (2006). In addition, talent evolution presents a model that aims to understand millennial engineer's rationales to implement effective mutual benefiting SHRM practices locally and globally within future employment perspectives, O'Connor and Bodicoat (2017), Thunnissen et al., (2013), Gunn and Kaufmann (2011), Thijssen et al., (2008), Heaton (2008), and Tansley et al., (2007)

#### **Section 6: Conclusions and Recommendations**

#### 6.1 Introduction

This section will conclude the main findings of this study, presenting restatements regarding the research objectives, and will outline further research suggestions and recommendations that would enhance the validity and reliability of the findings presented in this paper. Lastly, a brief consideration of the possible cost benefit of implementing talent evolution to graduate employer and millennial management strategies will also be presented.
#### 6.2 Final thoughts...

This paper has procured a research question worthy of further study, recognising corporate and human resource management techniques that position the 'Talent Evolution - Who has Control?' as an enlightened model and the student's viewpoint on employability, Tymon (2013). The overall findings of this paper demonstrate talent evolution's practical implications within academic literature and corporate management systems regarding graduate talent resourcing, Generation-Y, and proactive employability-based relationships, influenced by millennial graduate expectations and the unchartered territory of the external business environment in an Irish context, figure 1 and figure 8, section 2.2, CIPD (2017b), O'Dwyer (2016), Pabst (2016), Wolf (2016), Rayner and Papakonstantinou (2015), Beechler and Woodward (2009), Wye et al., (2009) and Tansley et al., (2007).

Proposing a critical examination to who is responsible for gaining a competitive advantage, the authorities of power or is it the employee, or is it the graduate's responsibility? Is there an expectation for organisations to distribute opportunities for career development or is it continuous self-improvement in retaining competitive in the globalised labour market? This thesis has answered these series questions, comprehending a graduate's perspectives towards regaining control over their talent development, demonstrating an enlightened perspective to implement effective SHRM practices, advancing academic limitations regarding Generation-Y and workplace behaviours, CIPD (2017b), McGuire (2016), Pabst (2016), and McQuaid and Lindsay (2005).

By presenting talent evolution within academic literature, the objectives of this study were to critically analyse who is responsible for gaging the competitive advantage regarding employability resourcing and talent planning, the graduate or the employer? By using rich qualitative evidence from third-level engineering students, concepts such as *War for Talent*, and conventional theories of employability and talent were challenged, analysing social constructs of employer expectation, market-driven HRM strategies on a third-level engineer's talent development towards the medium of talent evolution, within a post-structuralist and interpretative approach, CIPD (2017b), Zheltoukhova and Baczoe (2016), McCracken et al., (2015), Makki et al., (2015), Beechler and Woodward (2009), Wye et al., (2009), Shaw and Fairhurst (2008), Garavan (2007) and Michael et al., (2001). The results of this paper highlighted the intersubjective nature of an engineering student's perceptions of nature of success, value optimization and security within graduate's attitudes towards employability,

and the availability for an engineering student to manipulate job search to their specifications and obtain career goals, and practicing the conditionalities of the idiocentric development, Zheltoukhova and Baczoe (2016), Wye et al., (2009), CIPD (2006), and Nabi (2003). Consequently, these insights have repositioned the effects of *War for Talent* and conventional corporate assumptions to an informative and enlightened medium, shifting employer-graduate idealist expectations to a compromising yet career resilient medium, Tymon (2013), Wanrooy et al., (2013) and Waterman et al., (1994).

The findings presented within the 'Talent Evolution- Who has Control?', is centred upon millennial engineer's assumptions of what it means to be employable and the constant pressures to obtain challenging and meaningful work. An organic process, demonstrating the effects of the 2008 stock market crash, while placing meaning upon a graduate's value and adaptability of an engineering degree to current labour-market demands, Thunnissen et al., (2013). Therefore, rather than orchestrate a linear process, such like Dacre-Pool et al., (2007) 'Key of Employability model, or Makki et al., (2015) work readiness conceptual model, talent evolution allows 'free' career management and individuals indefinite process in obtaining career-self efficiency as the new frame of reference, accepting employability a lifeexperiences of career exploration and talent development, figure 1, figure 2, figure 3, CIPD (2017a). Students attempt to advance vocational capabilities demonstrates the indefinite process of critically reflecting and analysing the potential explanations for Bedingfield's (2005) observed trends within early career potentials, effecting the capability of ROI and corporate stability within early career potentials, Stewart and Knowles (1999). Yet the motives of obtaining an engineering degree is individualistic and consumerist actors, presenting the underlying influences of (in)dependence, employer-expectations, and selfconcept, which subsequently convey talent development and a student's expectancy value theories within the employer-graduate exchange, McCracken et al., (2015), Shaw and Fairhurst (2008), and Bedingfield (2005).

Self-concept, employer-expectations, and attitudes to work readiness, exemplifies a student's attempt to adapt to the kaleidoscopic nature of employability and talent management, adjusting exploration and exploration processes, such as 'future vision' and 'career tasters' within the demographic, employer-graduate exchange, volatile business environment and institutional frameworks, mitigating employability-based relationships to their advantage,

O'Connor and Bodicoat (2017), O' Dwyer (2016), Pabst (2016), Zheltoukhova and Baczoe (2016), Stahl et al., (2012), and Tansley et al., (2007). These heuristic career exploration practices, 'future vision' and 'career tasters', has a procured a novel insight to employability based relationships, while disregarding the simplistic, generic perspectives of functional employability and conventional War for Talent strategies, figure 1, figure 8, Gunn and Kaufmann (2011), Tymon (2013), Clarke and Patrickson (2008), Knight and Yorke (2003), Chambers et al., (1998), and Schutz (1967). The fundamental revelation within this researcher's findings is the multidimensional viewpoint of who controls talent and employability, from a millennial engineer's viewpoint, it is an interdependent concept between career-efficiency and self-efficiency, signifying the importance of talent evolution within an early-career potentials career cycles. Thus, demonstrating the diverse career exploration practices of 'future vision' and 'career tasters', advancing from Zheltoukhova and Baczoe (2016) research by aligning a student's identity and accountability with proactive employability and work readiness tactics, Davies and Davies (2010), and Stewart and Knowles (1999).

Finally, it is important to note, the primarily objective of this paper is neither to prove or disprove the concept of talent evolution, but to analyse, within an inductive lens, the level of control that engineering students have on their own career prospects. This paper's objective and its recommendations is to procure questions and an innovative conceptual model that binds rich qualitative evidence to main-stream research of employability and graduate management procedures that expands and contracts within the various dimensions of employability and talent management, Gunn and Kaufmann (2011), Beechler and Woodward (2009), Clarke and Patrickson (2008), Tansley et al., (2007), and Knight and Yorke (2003). Consistent revisions of 'Talent Evolution-Who has Control?' is necessary to proactively engage with the controllers of employability, corresponding to the multidimensional influencers of global talent such as regional and global economics, glocal labour markets, institutional educators, and regional demographics that influence the supply-demand equilibrium within the labour market. The interconnected composition of employability talent evolution cannot be validated as a closing statement, nor detached from subconscious biases within employer-graduate exchange. Instead, talent evolution argues that employability is not a statement, but a process, that is reformed by the individual's experiences, knowledge, and the psychological embodiment of life-long learning, from graduates and employees adapting

to a workplace and the individualised responsibility for their own development and independent realities.

### So, who controls employability? Only you can decide.

Figure 8: The outlining principles of Talent Evolution within contemporary graduate management practices



Figure 8: The outlining principles of Talent Evolution within contemporary graduate management practices, corresponds to figure 1 and results 1-3. For effective to graduate management and to remain competitive in the current business environment and graduate labour market, employers when implementing corporate strategies must consider talent evolution as a frame of reference when re-aligning graduate employers and corporate response to millennial career resilience behaviours, McCracken et al., (2015), De Vos et al., (2011), Gunn and Kaufmann (2011), Eisner (2010), Shaw and Fairhurst (2008), Tansley et al., (2007), Martin (2005), Knight and Yorke (2004, 2002, 2000). A graduate's success is ingrained within a student's personal and professional behaviours and career aspirations, either employing career-efficiency, self-efficiency, or career-self efficiency. The realignment of power demonstrates the career resilient behaviours of the millennial engineers within the volatile business environment and the diverse yet intersubjective nature of a student's selfconcept and employer expectations. Thus, illustrating a profile of a student's inclination regarding his/her position within the knowledge and STEM economy against their capability to obtain work readiness, and exclusive and invaluable career opportunities, CIPD (2017a), CIPD (2017b), and d'Aguiar and Harrison (2016). Graduates upon entering the workplace environment, must perform as creative social innovators upon delivering corporate responses, transitioning from career-efficiency perspectives towards self-efficiency, a process that redefine effects of graduate management, CIPD (2006), CIPD (2005), and Knight and Yorke (2003). Thus architecting graduate success and corporate efficiency within employability-based relationships. The intersubjective differences in talent and employability and political-economic climates structure the delineate capabilities, restricting or excerpting levels of control from the employer to the graduate. A corporation's support systems, have a direct impact on a graduate's performance development and the effectiveness of vocational capabilities and work readiness initiatives and corporate efficiency, Bedingfield (2005). Interestingly, time and exercising in a consumerist/glocal-mindset, using career exploration differences as an advantage, that enlighten corporate management, and objectives, that excerpt mutual benefits to all inter/intra stakeholders Rayner and Papakonstantinou (2015), Dacre-Pool et al., (2007), and Stewart and Knowles (1999).

#### 6.3 Research limitations and recommendations for further research

Despite the conscientious nature of this research, there are some limitations that effect its intricate findings and contributions. The most critical is the minority of female participants distorting the effects of talent evolution to some preliminary resolutions and graduate management without sufficiently addressing the gender imbalance and within the STEM economy, but most importantly within the engineering sector, d'Aguiar and Harrison (2016), Rayner and Papakonstantinou (2015), Mellors-Bourne et al., (2011), and Tansley et al., (2007). To redress this issue, further research is required regarding female members of the third-level engineering and STEM economy, to give a fair representation of the effects of talent evolution, and the growing numbers of the female population within STEM occupations. By studying talent evolution through the conceptual lens of a female third-level students, this could potentially validate the findings of this research, and present a possible opportunity to critically analyse the gender difference between career exploration practices. In addition, features such as 'future vision' and career tasters', and (in)dependence on employer-led values on employability, work readiness, talent and self-management within an

Irish context. This presents an opportunity to implement an evidence-based management plan, presenting a glocal mindset in addressing labour-demand supplies, to ensure employability-based relationships, nurturing a graduates professional and personal qualities, to produce proficient employees, resilient within the evolving business and workplace environment, Wye and Lim (2009), Bedingfield (2008), CIPD (2006), CIPD (2005), and Stewart and Knowles (1999).

Reviewing the sample size and characteristics of the participants, examining 21 participants for a qualitative study brings variety to the revelations obtained within this research findings and analysis, yet causes a possibility for subconscious bias when validating talent evolution model. Due to the third-level engineers inexperienced with the labour market and as seasoned actors within a workplace environment, these insights can be argued as 'perceived expectations' of employer-expectations, employer-led values, career exploration practices and liabilities of career and talent impediment. However, obtaining a larger sample would overgeneralise the inductive and qualitative process, depreciating the open-ended questions and personal viewpoints of who is in control of talent and employability, and misrepresent the distinct and insightful nature of a student's assumptions of employability and talent management, Tymon (2013). To redress this one-dimensional dependency and 'perceived expectations' of the third-level engineers, longitudinal research, including the perspectives of the employers and HR practitioners, is necessary to validate the practical implications of millennial mentalities to employability and the workplace 'corporate fit' and 'personal fit' and career exploration practices: 'future vision' and 'career tasters' through the student's career-life cycles, advancing from CIPD (2017a), CIPD (2006) and Wye et al., (2009) research. Evidence procured within this longitudinal study could potentially advance from Sieben (2007) study of the interconnected nature between training turnover within the STEM graduates, and interpersonal attributes, strengthening the practical effects of talent evolution. Thus, intersubjective certifiability within student's viewpoints the practicality of employability and career advancement aligned with corporate strategies and labour-market taxonomies.

### 6.4 Timelines and costing for research recommendations

Implementing the conceptual model of 'Talent Evolution' to corporate practice is within corporate strategies is an incremental and flexible process, a constant analysis of the changing nature of the workplace, graduate management and resourcing, assessing current graduate trends and external environments that influence a graduate' employability, talent management, work readiness behaviours and the workplace. The pending challenge within graduate management and learning and development schemes is to effectively harmonise the expectant values of ROI, from both the employer and the early career potential. Table 4 briefly demonstrates timeline and cost implementation within the Talent Evolution.

Early career potential- Career exploration practices	Timescale	Cost	Benefit
Future vision	1-3 years	Formal development programmes, geared towards corporate objectives and demands. Significant development- salary, external, internal development.	Importance of 'corporate fit' and career- efficiency. Learning and Development is centred upon corporate objective, demonstrating am inclusive strategic unit and high attainment value on a 'common purpose'. Moderate operational contribution- can exercise universal/generic collective plans for performance management and appraisals.
Career Taster	1-3 years	Significant development, rising importance of informal and on-the-job training. Personalised plans that <u>must</u> satisfy a graduate's professional aspirations. Salary, and development cost- opportunity for the graduate to regain accountability for career progression within the corporate structure.	Importance of 'personal fit' and self- efficiency. Learning and development is centred upon individualist aspirations of a graduate. Individual and personalised plans can be used as a retainment tool. Strategic/exclusive contribution is at the discretion of management.

Table 4: Timelines and cost of Talent Evolution

Table 4: Timelines and cost of Talent Evolution. From a graduate employer standpoint, the timelines and cost of talent evolution are similar to Bedingfield (2005) report regarding ROI on early career potentials. A graduate's characteristics of either career or self-efficiency presents an opportunity for employers to implement an in-depth, extensive, and evidence-based management, converging diverse learning activities, employability provisions to all ranges of graduates, from the A players to the 'talented rough diamonds'. This concept

directly effects professional learning and graduate development strategies, such as 70-20-10, AMO models, individualist and career resilient behaviours. Extracting elements from this research recommendations, longitudinal study is necessary to expand the timeliness and scope of this research. This is essential to suitably implement various learning and development tactics and gender differences of expectancy value(s), motivation, personnel marketing, social development, and professional networking within male and female engineering and STEM graduates, enforcing adopt cooperative and innovative approach to 'future vision' and 'career tasters' career-compass and life cycles.

#### 6.5 Personal learning statement

Exactly one year ago, I decided to take on a MA in Human Resource management. It was a choice that was necessary for me, to transition from BA arts 2.1 graduate to a HR professional. In a sense, it was a transition from a brick layer to an architect of my career development, advance my skill base and adapt to new and exciting opportunities. As I was attending lectures and seminars, such as CIPD Ireland student conference, I noticed a trend emerging within millennial graduates. Issues such as skill shortages, talent gaps and corporation's difficulties in attracting and retaining the right talent is currently effecting corporate governance and the labour supply demand in Ireland. I wanted to uncover the possible causes of this trend among engineering graduates. Who is controls employability? Who controls talent development? This was where my research began.

I started by collecting data from academic journals, newspaper clippings, people management magazine, TEDTalks, reports and publications from CIPD. I observed trends within the contextual literature, analysing McKinsey Quarterly *War for Talent* report alongside the HR gurus such as Ulrich, Garavan, Cappelli, Eisner, Gazier, Goleman, King, McQuaid and Lindsay regarding SHRM, employability, graduate resourcing and talent management in Ireland. As a millennial, who has lived through the collapse of the Irish economy, the workplace environment post-stock market crash of 2008 has driven employers to employ strategic and highly competitive strategies in resourcing graduates, regaining power within the volatile labour market. Consequently, the expectations of employers have become idealistic, as the *War for Talent* and the race to find the best talent is at the cost of a graduate's happiness in obtaining meaningful and challenging work resulting in low ROI and aggressive job hopping. This recent trend suggests a dawn of a new era, reign of *War for Talent* and the races.

Coining Talent Evolution- Who has Control? as an organic and inductive concept was a challenging process. As with any research paper, refining the research question and exclusively selecting key components from academic literature to fit within the conceptual model was a critical and methodical procedure. The purpose of building talent evolution as a conceptual model is to incorporate individual experiences, life-learning to theoretical thoughts of employability and talent, and to understand the individualist and consumerist behaviours of millennials entering the workforce. A topic for a PhD I suppose, but alas this is a master's dissertation. The research objectives have been severally reduced to synthesise appropriate methodological frameworks to the conceptual model of talent evolution and to accommodate the MAHRM dissertation requirements, which inevitably limited the inductive nature of this study.

One of the most significant limitations of this research is cognitive limitation. It can be argued that the topics addressed within this thesis is from one perspective, the researcher, from analysing the primary data, theorising inductive philosophies of the engineering students and to drawing conclusive arguments and recommendations for further study. Due to cognitive limitations, I learned to prioritise the data, citing contextual data that supports talent evolution as a conceptual model and avail of all the resources made available efficiently and in a time sensitive manner. By prioritising key findings, this research contributes an insight to the ambiguous behaviours of millennial graduates regarding career exploration, work readiness and talent management practise, while also theorising the assumptions of employability and talent from the perspective of third level students. All engineering students who participated in the focus groups unveiled interesting perceives relating to the research topic, yet only a selected few were quoted and their theories expanded and critically analysed within contextual literature. This was imposed to effectively time-manage, prioritise key findings, synthesise novel findings to existing research, while meet personal deadlines, creating reliability and validity to the research in the process. These are employable skills and essential to the HR profession or an occupation in a fast-paced environment, where strategic corporate strategies and ad-hoc principles must be prioritised and dealt with, within appropriate time parameters to mitigate contingent liabilities.

Subjectivity and bias was a major concern through this whole process; however, this is normal within a qualitative research paper. The data instrument employed was personally constructed, gathering relevant information and existing theories of graduate employability and talent management. This method formed the structured questions asked at the focus group sessions, to ascertain the engineering graduate's ontological assumptions of employability, work readiness and graduate talent management. Yet, this method proved very difficult, as the researchers predisposed ideals in interpreting the primary data may have unconscious elements of bias within the research's discussion, interpretation, drawing conclusive arguments and theorising the data analysis. In addition, remaining impartial when conducting the focus groups also proved a challenge, as phrasing questions, probing new insights objectivity was critical to not influence the participants in answering to what the researcher would like to hear, or sway their views and opinions towards a 'group think' consensus. To limit this risk, I asked 'ripple-effect' questions, where if one participant unveiled an interesting concept, I asked other participants what they thought, opening lines of communication, and ensuring the participants that there is no one correct answer for each question yet focusing on the question at hand, talent evolution. Throughout this whole process, I had to become highly sensitive to my own theoretical concepts and assumptions concerning HRM strategies and graduate managements. This technique is simple in theory but difficult to practice, elements from mediation and conflict management module proved useful in becoming self-aware of my own biases, conscious and subconscious assumptions. Objectivity and authenticity supports this research paper's aims, giving voice to the new theorists of employability, third-level graduates, within the process of gathering relevant contextual data responding to 'Talent evolution- Who has Control?'.

In short, writing this thesis was the most challenging, yet rewarding experiences to date in my professional and personal life. Presenting a well-focused argument within impartial perspective was central to writing a qualitative research paper, providing insightful arguments and critical evaluations while remaining consistent to the subject matter of this research. From my experience, four main skills in writing a notable thesis are as follows; simplicity, critical reasoning, logical justification/explanation, and confidence. 1) Simplicity: restrict the research question and key findings to the research aims of the study. This adds logical flow and consistency throughout. 2) Be controversial, critically analyse conventional thoughts and present an enlightened perspective. This presents an opportunity for peer apprising, to debate themes and key findings of the research with other theorists. 3) Be logical, when interpreting new insights relate back to literature to theorise key findings. This will add validity and reliability to the research. 4) Be curious and confident. Writing a thesis is not about finding 'a cure' to a phenomenon, it is about presenting an informed and enlightened perspective,

engaged new discussions, and uncover new insights and paradoxes. I believe the skills that I have obtained within the process of writing this thesis has advanced my employability capabilities, fine-tuned my academic writing techniques, aided my ability to critically analyse and problem solve efficiently and effectively.

### **Section 7: Focus Group Characteristics and Transcripts** 7.1.a Focus Group 1: Characteristics and Demographic Information

Participant	Gender	Age	Undergraduate or Masters Student	Engineering Discipline	Year	Future Career: Engineer or Other	'Future Vision' or 'Career Tasters'
Group 1							
Craig	Male	21	Undergraduate	Chemical and Bioprocess	3 <sup>rd</sup> Year	Engineer	Future Vision
James	Male	20	Undergraduate	Biomedical	3 <sup>rd</sup> Year	Engineer	Future Vision
Richard	Male	20	Undergraduate	Chemical and Bioprocess	3 <sup>rd</sup> Year	Engineer	
							Unsure- showed elements of Future Vision
Jack	Male	19	Undergraduate	Civil	2 <sup>nd</sup> Year	Engineer	Future Vision
							& Career
							Taster (50/50)
Ron	Male	19	Undergraduate	Chemical	3 <sup>rd</sup> Year	Engineer	Future Vision
Lee	Male	20	Undergraduate	Biomedical	3 <sup>rd</sup> Year	Other	Unsure- showed
							elements of
							Career Taster

### 7.1.b Focus Group 1-Transcript

### Focus Group 1, Date: 4/4/17

Participants for Focus Group 1: Craig -3<sup>rd</sup> year Chemical and Bioprocess Engineering, James- 3<sup>rd</sup> year Biomedical Engineering, Richard- 3<sup>rd</sup> year Chemical and Bioprocess Engineering, Jack – 2<sup>nd</sup> year Civil Engineering, Ron- 3<sup>rd</sup> year Chemical Engineering, Lee, 3<sup>rd</sup> year Biomedical Engineering.

#### Drew- So to start off, why did you pick engineering? Anyone can start.

Ron-I ended up in engineering because I am good at maths, good at science and felt that it would be the right mix, it made sense and here I am.

Richard- I picked engineering because I liked maths and chemistry. My Chemistry teacher told me to do engineering, and that I would get better had better pay and a better job.

Craig: Good at maths

James: I liked maths a lot in school, I thought that doing engineering I would be able to be more hands on, building things as opposed to being in class or being a mathematician, sitting inside writing numbers all day.

#### Drew- So it is putting what you have learned from class to practice?

James: Yes. Engineering is an opportunity to put what you have learned in class to practice. Lee: I put down physio was my first choice and engineering was my second, because I saw that there was a biomedical option. And I thought, oh, that's good I would like to do something with prosthetics. But at the same time, I was good at maths and science in subjects in school, and I said, well, I already have a good basis in maths and science, so let's go for it. Jack: I like problem solving, maths and science. But problem solving is my favourite thing to

do, engineering is more hands on and building things really interests me.

## Drew- Would you consider your engineering degree as stepping stone to a different career path? Or do you think that this discipline is what you want to do?

Lee- I would like to help people as much as I can, and biochemical is a fantastic way to do that. If I come out with an engineering degree, I feel like that's a good degree for any

discipline you can go into, because of the problem-solving aspects of it. When you are finished your degree, it shows to the employer that you are committed to your work and that you understand how different things work, first separately and then ultimately understanding the concepts in a holistic unit. See parts to each problem, how you can apply it, look at all the parts and see it as a 'whole'.

Richard- When I was doing an internship there a few summers ago. I had the inkling that engineering is just not enough, but to peruse an engineering and business as masters is the way forward.

Ron- When you come out at the end, your first graduate job, determines the opportunities that you are going to end with. However, I don't want to commit to anything yet, until I have to go searching for a job. I am not ready yet college wise, to fully contribute to a full-time position as an engineer.

Drew- Good point, so when you are searching for a job, do you look at the job description, or to do say, these are the skills that I have, maybe there is a skill gap here between what I have and what they are looking for in a candidate, but I am going to apply anyway. Has anyone ever experienced that dilemma?

Richard- Yes, I do that a lot.

James: I do that a lot but I haven't heard if I have gotten an interview yet, but it's still early days, I have only applied to a few positions a week ago. But when I applied for a summer internship and other positions in the past, the feedback that I have gotten back, is that they (employers) suggest that I reapply next year, "when you graduate give us a shout, but we can't take you for just three months".

### Drew- So it's not only the time that they want, but the prospect of a long-term commitment as well do you feel?

James: Yes, I have always been told that the biggest thing. In saying that, what you learn here (third level), studying the theoretical concepts of engineering, is not necessarily what you are going to use, in the real world (workplace). So much so, when you get a job/new job, they will train you up.

Drew- Interesting, thank you for that. Moving forward, how did you find the transition from college to work?

Richard- It was a mixture, for me when I was working in a summer internship. The actual work load was a lot easier than what college would be. But it was much more difficult to try and stay awake all the time. I got in trouble for falling asleep in a training day, so that was difficult to keep a high level of concentration over an 8-5 or 9-5 period.

Ron- I feel the same way as Richard, work load is so much easier, especially in an internship. You would know some of the major things that they (colleagues) would have been doing, because you haven't been taught that in college. You are given the basic stuff, look through this excel file, proof read this document. The hardest part was the 9-5 routine. As like when you are a student, you come in at 8 and leave whenever you want. However, this required you to be in at 9 every day and can't leave till 5. And that sometimes that was impossible to keep up with, my mind isn't that strict or routine, I am night studier so my prime time is after 6pm.

#### Drew- So you think time management and project management is key?

Craig- Yeah, I work in the gym also and I find it very easy, well for me anyway. Although it's not engineering related, project and time management is essential.

# Drew- Thank you for that. Next. What skills do you think you need to make a good impression in an interview? First day, last day at work, in other words, what makes you employable? What do you think employers are looking for in a graduate?

Lee- Confidence, experience, common sense, and responsibility. Responsibility is a large part of it. They (employers) can see that you are going to come in and do the project. If there is any danger, like conducting experiments with potentially harmful toxins, there could be dangerous chemicals involved, you must follow and practice the proper procedures. They (employers) know that they can trust you, and have confidence in you as a worker, to follow health and safety guidelines as part of an unwritten rule.

Jack- Also there needs to be potential for mutual trust, that your boss can trust in you, and that if you don't know something, you can ask a question to mitigate potential mishaps in work.

#### Drew- So trust is an important aspect?

Ron- Yes. But I find, in interviews, if you come in and have done some element of research about the company, it shows that you genuinely want to work for them and be a part of their team. I know people who have gone into interviews and the call out the wrong company. It has happened before, so long as you go in and you know that 'I want to work here because I have researched your company, I know what you do, I know your processes and procedures' attitude goes a long way and makes you stand out from the crowd. It also gives the impression that you are serious about joining their team. It gives your potential boss the confidence that, OK, you are interested in what you are doing, not that you are looking for a job for the sake of it. They wouldn't want to hire you because you are trying to get one (an interview) and go away, they want to be able to trust in your integrity when applying and while working for their company and with their team.

## Drew- Thank you for that, so moving forward. Does your GPA/College degree define your career opportunities, or add value to the workplace?

Richard- I don't think a GPA has a massive impact. I have been applying for internships for the summer and people with worse GPA's than me can got the same job I was also applying for. It is not the most important thing in the world.

Jack- I got a job there for the summer and they didn't even ask. Like they went on an interview base and experience. I was really surprised.

Lee- I feel like, if you have the college degree, that is important to particular roles that you are applying for, but the interview is a huge part of it, because they (employer) can see that they can work with you. They don't think that you are some 'odd ball' that doesn't fit the company dynamic at all. So, if you have the degree, have that built foundation, then they can work with you. That would be better than having a 4.1 and being a 'recluse'.

Craig- I think that the GPA is kind of important. Enough to get the interview. Once you are in the interview, they will look at, well what other skills do you have? Do you have work experience, do you take part in societies? Just many specific companies within an industry might look for a high GPA, but there must be more to it than that? Isn't there?

Ron- I have applied for four jobs this semester, and I got an interview for one. So, it's not about the GPA at all, it's about the quality of the individual. They (employer) do look at your CV, they do look at your GPA, but it is the CV that gets you your interview, it takes up the rest of that cv that concerns them the most. Your GPA is an added gloss, it is not going to be your deciding factor, in my opinion anyway.

Drew- Now finally, 'Talent Evolution- Who has Control? Do you have control of your capability to be employable, or does the employer or the company that you are applying for?

Jack- I feel that it is 50/50 at times, because you have the likes of, if you go into an internship, you don't know a huge amount going in. So, you are being taught on the job, for that specific job. That is making you employable in that certain area. Where it is then you control your own path, and see where you feel is most suitable and would suit you best, you go out and aim for that job. So, when you move on in from that internship or first job, you move on to a job that is more suited to your area. Say the first year, you are doing something that you are not a huge fan of. You realise that and that you need to work on the area that you know that you will enjoy.

## Drew- When you start a job first, do you look at the pay check, or do you look at the prospects of career or experience or exposure?

James- I think it depends on certain parts. The money is a factor for me, but is not the factor. But certainly, I feel that I have put a lot of work into my degree, I should get a decent return. But I would happily take a pay cut, minimum wage for the summer to get experience. I feel that is progressing me towards something, that it is a long-term experience, then money is not really an issue. If it is working towards what I want to get.

Ron- Personally, when I graduate, my plan is to go and to an MBA. But I don't want to pay for it, so my plan is to work for any company that would be willing to sponsor me, to pursue my MBA. More than likely they will pay me minimum wage, for exchange in sponsoring my MBA. But I know with my MBA, I can make back they pay in which I lost, and quickly. I know the company has put time and effort into me and in exchange I will accept less money. But if a company refuses to sponsor that, then I will look at your pay, then I will ask myself, would I be able to sponsor myself? If a company is willing to give me what I want, I am happy to accept a reduced pay cut.

Lee- Going back to employability, I don't know about the rest of you, but I want to go through college, but... I feel a bit useless, I don't feel like I need to be doing this. But the employer still wants you to have a degree, which entails career opportunities. So, they defiantly do control you, having to go through your course, to get that job, or to arrive at that level that isn't a minimum wage job with no degree or prospect of future career opportunities. But even in a company, you would have to go through other assessments to advance your career path, such as applying to be a part of a team for research project. In other words, if you wanted to grow and develop in prosthetics or tissue engineering, you do have to jump through hoops to get to that point. Then again it depends on what type of job you are looking for and what level you want to get to, its ultimately up to the individual.

Jack- There is likes of chartership in Engineering Ireland as well, when you finish college. And you have to go on another three years' work experience to then apply for it. That is also another controlling factor that some employers insist that you have to gain access to development or training programmes.

### Drew- Perfect, Thank you all for your contributions.

Participant	Gender	Age	Undergraduate or Masters Student	Engineering Discipline	Year	Future Career: Engineer or Other	'Future Vision' or 'Career Tasters'
Group 2							
Eva	Female	22	Undergraduate	Biomedical	3rd	Engineer	Future
					Year		Vision
Chris	Male	23	Undergraduate	Mechanical	3rd	Engineer	Future
					Year		Vision
Fionn	Male	21	Undergraduate	Civil	3rd	Engineer/Other	Career
					Year		Taster
Harry	Male	20	Undergraduate	Mechanical	2 .	Engineer	G
					Jrd Voor		Career
Ciaran	Male	21	Undergraduate	Mechanical	Teal	Other	Tuster
Claran	Male	21	Childergraduate	Weenamear	3rd	Other	Career
					Year		Taster
Jay	Male	20	Undergraduate	Mechanical	3rd	Engineer	Future
					Year		Vision
John	Male	21	Undergraduate	Mechanical	3rd	Engineer/Other	Future
					Year		Vision and
							Career
							Taster
							(50/50)
Lilly	Female	22	Masters	Mechanical	1 st	Engineer/Other	Future
					Year		Vision
Hazel	Female	23	Masters	Energy	1 st	Engineer/Other	Career
				Systems	Year		Taster
				•			

# 7.2.a Focus Group 2: Characteristics and Demographic Information

### 7.2.b Focus Group 2-Transcript

#### *Focus Group 2, Date: 4/4/17*

Participants for Focus Group 2: Eva- 3<sup>rd</sup> year Biomedical engineering, Chris- 3<sup>rd</sup> year Mechanical engineering, Fionn- 3<sup>rd</sup> year Civil engineering, Harry- 3<sup>rd</sup> year Mechanical engineering, Ciaran- 3<sup>rd</sup> year Mechanical Engineering, Jay- 3<sup>rd</sup> year Mechanical Engineering, John- 3<sup>rd</sup> year Mechanical, Lilly- 4th year Mechanical Engineering and Hazel-1<sup>st</sup> Year Masters Energy Systems.

### Drew- So, to start, what made you pick engineering as your degree?

Fionn- I suppose I will start. I was studying constriction studies in school along with physics, chemistry, and maths, which I really enjoyed. But in particular, we had an assessment in construction studies where we got to do our own case studies. So, I chose to an analysis on how to make and construct house, to make it environmentally sustainable. I did a lot of investigation in geo-thermal energy, heat forms and engineering devices. And from that, that encouraged me to go on and study civil engineering.

Lilly- My dad was an engineer. Growing up with my father involving me in his projects at a young age, like visiting a site or looking at some preliminary drawings and my love for science and design sealed the deal for me really. An engineer's life was for me, I love it and I couldn't see myself doing anything else.

Jay- I did technology when I was doing the leaving cert. I liked the aspect of building something and figure that, this would be the career for me.

Harry- Initially, I wanted to be a pilot. But then realised that I didn't want to drive a plane, but I wanted to work on planes and see how they are made. So that's why I chose mechanical engineering.

Eva- I was drawn to the techgraphics. Put something into a computer and build it from what you have drawn. And everyone in my family is doing engineering. I have seen them, and what they do. I just kept the family tradition alive really.

Chris- For junior cert I did metal work and for leaving I did engineering and Cert Design and Communication Graphics (DCG). I just enjoyed working and making physical stuff. So, I was like, right well, when I learn the different parts of everything, understand how each part works, and then ask, how can I make it better? So, if I was designing something, I will know why this goes where, why certain materials are used at certain stages, that sort of thing. John- I was doing all sciences for leaving cert. I was thinking of doing science in college, but I didn't see the practical aspect of it. I needed a highly flexible and adaptable skill in order to break into the market and gain as many opportunities as I can. The market (knowledge/ STEM economy) is over saturated at the moment, and that's what drove me do engineering instead of science degree.

Ciaran- My sister did civil in Cork, and she never used her engineering degree, well not in the daily life. She ended up into an accountancy firm (Deloitte). I also like applied maths and I thought if I do an engineering degree, I could do anything. Although I might never use it but it is good for you to have, it's a safe career option in my opinion.

Hazel- Well, I picked engineering because, similar to Chris, I like problem solving, designing things, and understanding how things work as a separate identity but also comes together as a functioning unit. That is something that has always attracted me. Also, not to mention the core subjects that engineering explores such as sciences and maths, I really enjoy studying and applying those subjects in college to the workplace.

# Drew- Good answers, so the next question. Are you studying engineering to be an engineer or is it a stepping stone, like what Ciaran mentioned about his sister, to other gain and experience other opportunities?

Ciaran- It's a bit of both. To have some degree in engineering, overall, is a discipline that will stand to you and is highly practical, especially in the wake of technological development. But I might not stay in it for long term.

# Drew- Interesting, what do you want to do, or what do you see yourself doing in the future?

Ciaran- Say for example, just in terms of looking at master's degrees, I want to the business and engineering one, like a MBA or general business. So that can give me an idea of efficiency and outputs in businesses and not just in engineering. That's what I would like to pursue and I can learn a lot more.

### Drew - Great, does anyone else feel the same way or different to Ciaran?

Hazel- At the moment, my goal is to work as an engineer. However, I am aware that this degree can be adaptable to various career opportunities and can opens doors for several vastly different career prospects, like what Ciaran has mentioned just there. Engineering is a qualification that is difficult to define. Taking from what I have learned in my undergrad, and applying it to my work experiences, engineering primarily taught me to become a problem solver, under pressure at times. This is a skill that is vastly transferrable and highly valuable in any job, whether it be engineering or otherwise.

John- I am the same, I was talking to a few past students last year. They were saying that they weren't doing that much engineering in the workplace, they were pretty much coding and supply chain work. They also saying there is little to no point doing a pure engineering degree within the business they do for their as customers. For other companies, they said that companies can be bias against pure engineers, they would rather have someone with an MBA and an engineering degree. I want to do and learn about the business side of it, from looking at applications, that is where the trend is going for employers wanting graduates. For example, when they are selecting a student, ten years down the line.

Jay- I want to become a marine engineer. I was watching the discovery channel one day, I saw engineers working on a ship, and I want to do that.

Eva- Yeah, I will probably stick to biomedical engineering. I like the mechanical side of it as well. I don't have any plans to diverge from it.

Lilly- Well, to be honest, I'm not sure yet, if I want to pursue a pure engineering career that is. It is just the uncertainty, that unsecure feeling of what and where my career will be, or what I will end up doing in the future. The degree I am studying (masters in mechanical) is so broad that it sometimes feels like my skill-set is oversimplified, and I would be limited in what I can and can't do, being a generalist rather than a specialist in a niche area. For instance, if an employer or the position I want to apply for, is looking for a skill or capability that I don't have or I have but don't have the acquired experience to back that up, it holds me back in my freedom to explore and manage my career. But because of my passion for science and design and my father's influence, for the moment, my career path is set on being a mechanical engineer, how long that lasts, only time will tell.

Chris- I will probably go into design, at some stage, either that is engineering or not. I probably won't do a master, because, I would feel that that would be putting me down a road,

where I don't want to go forward in. I want to design things, I want to know what is happening in the background. The Bachelor's degree is enough, I would probably look at a additional short course in design, where and when that will be, I am not sure.

## Drew- That's ok. Thank you for your answers. Now we are going to move on to the next question. What do you look for when applying for a job?

John- Training and the reputation in the company are key. You are not looking for a longterm job, you are looking for something for a few months, like a summer internship or placement. So, you want a company that looks best for your CV, and can potentially give you a graduate programme, or a full-time position when you finish. It's a big responsibility, and you probably won't find exactly what you are looking for at this stage of your career, come of us are only starting our first jobs after all.

Eva- For me, meaningful work in the area I see myself excel at personally, such as every day doesn't feel like work, and professionally, that I become the best and highly successful in what I do. The opportunity to travel/working abroad is also a good factor, salary, and a company with a good reputation, regarding their calibre of employees and their employee support standards, and the ability for my professional opinion to be heard and my career to flourish.

#### Drew- Interesting, does anyone else feel the same or different? Any other drivers?

Jay- I look at location, I live with my parents and I am not ready to move out yet. I want to build up the money first before I move out.

Hazel- I always look at the job description and the culture of the company and ask myself, 'would I fit in, can I adapt my skills that I have learned to this company that I admire?', 'Does the position I am applying for, and the company I wish to join, suit my current goals and career aspirations?'. 'Is it a job I would enjoy doing?' A company's reputation, location, and the prospect of being offered rewarding but challenging work in a friendly working environment, will allow my skills as an engineer to excel and would advance my career.

Lilly- I think it's a very difficult to accurately define what do employers want? What candidate are they looking for when they post a position on Jobs.ie or GradIreland? and what can I offer in exchange, to be the right person for that role. But, as a graduate, experience in a respectable company differentiates yourself from seemly bland CV's that other entry level candidates might have. Also, applying to high profile and competitive corporations is an efficient way of achieving your goals and landing in your dream job. It's all a part of the fun. Practical

Fionn- I want to do something I would really enjoy. So, I would look at job adverts and specifically look for an engineering position that I want to specialise in the future. I am inclined to be someone at the front end, like I think I have a lot of motivation and selfinitiative in getting get things done. Like, I am not a person that would enjoy sitting behind a desk and design something, which is enjoyable, but at the same time, just not what I enjoy doing. I would prefer to go out at talk to people and be in a role that is more customer support and sales orientated. But, I think in terms of, well to an extent I would agree with John, what industry I go into is not 100% important to me. If it (the job) has a lot of the things that I enjoy, and have interests in, but wherever I want to go, does not really, at this point in time

matter, because I have no responsibilities, money isn't a big aspect in it. Where I live, is a big aspect, not because of moving away from home, its thinks like, where and what can I take part in things that I enjoy. Is it a good environment, can I go cycling at the weekends or swim in the sea? Is there a good nightlife, are there people that are young in the area where will have to relocate for the job? Lifestyle factor is very important to me. In terms of the culture of the company, are the people that I could potentially be working with? Would I I enjoy working there, are the mindsets of my potential peers like mine? Would I be able to work for them? When I go into an interview, those are the questions I would be have at the back of my mind.

### Drew- Just to add to that point, would you pick a company to suit yourself, your own aspirations, or would you change yourself to suit the company that you want to be in?

Jay- I would try change myself, to what I want to aspire to be. So, if I recognise that the role that the company is offering is going to push my limits, and that's what I want to do, then that's what I will do. But if it's something that doesn't meet where I see myself going in the future, then I wouldn't stay or take that position.

Lilly- In my opinion, studying engineering in general, is a highly adaptable degree that can be applied to other career opportunities. So, the company has an element of control over what projects they assign to you, but because of the inherited skills that are essential in being a practicing and engineering student, such as critical thinking and quick but accurate problemsolving techniques, are extremely valuable, when it comes to your employability. It also creates an opportunity for an engineer to manifest his/her skills to their own aspirations and ambitions.

### Drew- Thank you Jay and Lilly, does anyone else feel the same or different?

Harry- I think that comes back to choosing the masters, the business masters that John and Ciaran are thinking. That, for me anyway, if I want to work for the likes of Deloitte or something, then yes, I would get a business masters, but I don't. So, I want to stick with pure engineering, because I want to do engineering. In a sense, going towards a job that I want, not something that the employer wants me to do or be.

## Drew- Speaking of employers, has anyone participated in placements, graduate programs, internships, worked in a shop over the weekend? Anything at all?

Ciaran- Volunteering but not proper jobs.

#### Drew - Interesting, so what do you volunteer for?

Ciaran- Based on what I have now its summer camps with kids. It's unbelievable crack. But know I should stop and look for a proper internship. Its weighing in on my thought process. I know that there are opportunities in an internship related to the degree and the course that I am doing. I am not as terrified as I maybe should be, going out and getting experience because of my volunteering experience. I want to enjoy myself and do what I see as being the most beneficial thing, like volunteering specifically, that is a good thing to do. In terms of working, I am not looking for a 'proper job' in engineering, or anything like that yet, I am doing what I can, what I want to do and see where I go from there.

Hazel- For me, my placement was a welcome change. I found that the working world has a lot less theoretical content, and that laborious work is completed at the click of a button. Also, when your work day has finished its finished and you can enjoy the rest of your day, which is study and stress free.

Drew- Interesting points, thank you Ciaran and Hazel. Now the next question, what skills do you think you will need to make an impression in an interview, first day and last day at work. In other words, what makes you employable, what do you think employers are looking for? Harry- It can vary, but the core skill I would say, is to be able to adapt. They will train you to do what they want you to do. They degree is the stepping stone, to get in the door. Obviously, the summer work comes in and that you are active, and you have already show the ability to adapt.

Eva- Probably the skills that you have learned in college. Even Computer Aided Design, (CAD) which is used to create precision drawings or technical illustrations, and Finite Element Analysis, FEA which is a technical and computerized method for predicting how a product reacts to real-world forces such as vibrations, heat transfers, fluvial elements, and the like. It is also important, for me anyway, to be able to apply these specific skills to the role and that you wish to move into.

Lilly- Not to be stereotypical, but employers are looking for someone who is creative and innovative, a 'bright spark', who is organized, enthusiastic, honest and has the adaptability and capability to work well with others. Sometimes that can be too idealistic I find, that the bar is set too high, and discourages me to apply. If this is what they expect from just the job description, will I be capable to fulfil my tasks allocated to me?

Chris- Working in a group, like team and people skills. Engineering is working in teams all the time, there is no engineer that is going to do everything on their own from the start to finish. They (employers) should be looking for, whether its team sports, that you are active, confident, and to be able to talk and communicate with people, that is important. Being personable and chatty to everyone is also a nice thing, when you are working in a company, you are going to meet every type of person in the work place. But it is important to perform well and sell yourself at the same time, making your boss recognise your achievements that may lead to your future career development.

John- Employers are maybe looking for someone who is good at networking. Like if you are having an issue, there is always someone in a company or someone that you may know, that understands how to do something, it can be as easy as someone in the same of different department, but you just haven't met that person yet. Sometimes, its knowing what other people have been working on and to be able to link a problem with a solution, by targeting the right person to help resolve that issue. So, the ability to network, is so important. There are stereotypes that engineers don't talk to people, we stay among ourselves, we don't get help from other people and that we don't use the available skills and resources that are on our doorstep, leading to high consultancy rates because people are not networking effectively.

Jay- I know someone on their first day, setting up their laptop within the companies preface procedures. It usually takes three days for someone to set it up, because of the attitude, it's not my job, so I am not going to do it. It took him a day, because he wasn't waiting around for anyone else, to be able to self-initiative and his skills efficiently. This is a key element or a sign of a potential 'bright spark' I suppose.

Fionn- When you think of skills, you need to make an impression, first impressions are lasting impressions in some cases. Refraining from the skills that you have on paper, like your LinkedIn or CV, the ability to talk to them (employer), to be able to hold an informed conversation with the employer is crucial. While you are in the interview, just having that open attitude to conversation, change and direct that conversation to show your knowledge and research in a specific area of interest, something that the employer might not have known before. It shows that you are interested and subtly making a case as to why you should work there, as opposed to them dictating the questions and conversations. Giving the employer a need, a missing asset in that company, ultimately the need to have you on their team.

## Drew- What skill do you think you have, to be able to fill that need in a company. Any ideas or experience, anything at all?

Jay- Be interested. Research the company and research the people you could be potentially working with. Know if there is space for you and if you can bring something different to the table.

Hazel- I totally agree with Jay and Fionn, the most important asset when it comes to doing an interview, in my opinion, is having a good personality that will fit with the organisation, and the ability to think under pressure and come up with logical solutions. Also ambition and an eagerness to work is good also.

# Drew- Perfect, thank you all. So, the next question, does your GPA or college degree define your opportunities or add value to the workplace? Basically, this means, does your GPA define your career.

Lilly- To an extent, yes absolutely. But I believe the personality and work ethics are more important to an employer than a high GPA.

Ciaran- Yeah, I agree with Lilly there, like you have people that would kill themselves in college, and then be only decent at their job. Looking at someone who has come out with a

2.1, and has learned other skills throughout their time in college, like being involved in different activities.

### Drew- Like volunteering or working in a shop?

Ciaran- Yes. Of course, having a high GPA is a good thing, but you are more than just a 1.1, but you have a degree and have other valuable skills. A good GPA is not going to define how good you are in a job.

### Drew- Very good point. Would anyone like to add to that?

Chris- If they question your GPA in an interview, which might not be good, you should have the ability to sell yourself in other ways. Illustrate times where you have adapted skills to a pressing situation, and how you have learned from it and how I can contribute these skills to your team or company that you have worked with before. On the other hand, others with a higher GPA, might not be able to show that real-life example.

### Drew- How would you be able to sell yourself in that instance?

Chris- For instance, someone with a high GPA may not have the experience working in a shop of volunteering. In my experience, getting to know people from different social classes and could engage in conversations and respect different points of views is a big factor when entering in the workplace.

John- I talked to a few people in a career fair, and many of them said that they don't like hiring people with 1.1, they (employers) only hire people with 2.1's. Because they (1.1 students) did nothing but study, and their lifestyle is unbelievably intense with college work. Trying to create a bond with someone who just studies is difficult, in addition, they (1.1 students) may not act well with people who have less motivated. They are less likeable among people who are not 'cut from the same cloth', with different attitudes. When companies are looking for people, they want to see a potential employee can work with people who may have different aspirations, less intense, and I think your GPA doesn't matter at all. I think it's your record of accomplishment and your portfolio that really matters.

# Drew- In a sense, that's relating back to the idea of team work and adaptability that we spoke of earlier.

Harry- I think there should be some standard. They (employer) wouldn't want somebody with a the lowest out of the three, like a 2.2 and just pass.

Fionn- Bigger companies might consider a good GPA as a necessity, as part of their minimum requirement. Like for example they would focus on applicants with 2.1's and will scan past the rest, because they must get thousands upon thousands of applications, and maybe the 2.1 is a 'cut off point', if you don't have that, then that's you out of the question. But, there are always other avenues to entry, well certainly in Ireland anyway, you might know someone who works in that company, then you might get an interview. So, there are loads if different back doors, GPA's are good on paper, that you have the willingness to learn. But, I think, as Harry said, it's a way of just getting in the door. But once you are in the door, once you get into that entry stage, it is down to you, rather than being defined by your GPA.

Ciaran- You can get a 1.1 and have done other things, and have alternative skills, obviously, you are the 'perfect candidate'. But that is unbelievable, and sometimes too idealistic for the employer to expect that kind of person coming out of college. For us muggles and normal people, as much as the GPA is important to have, you should have different skills that make you stand out, and give examples what you have learned in real life situations by applying those unique skills. Your GPA is not going to define your success.

#### Drew- That's a very good point, would anyone else like to add?

Harry- In the same sense as Ciaran, the GPA is a stepping stone.

Hazel- In my opinion, having a good or bad GPA does define if you are 'eligible' or a preferential candidate, in regard to interviews or other career opportunities. But, I cannot know whether it has ever enhanced or jeopardised my chances of getting a job, I am a little unsure and sceptical about how my GPA determines my career.

John- I think the idea of your GPA, and all the tests in the engineering course that I am doing, are focused on 'can you understand this concept?', how you articulate situations and is your response. A lot of exams in college, even reverting to secondary school I suppose, are learning how to take tests. Well in the workplace, it's not like that, I don't think, companies are looking for someone who has some negotiation, to be able to learn and adapt to different dynamic contexts.

Fionn- In a sense as well, it does define your career opportunities as you directly leave college. Like if you just get a pass, like a 2.2 for instance, you are not going to get an offer to go and study a PhD or to be a researcher.

Eva- Well the GPA like the leaving cert in some ways. There is always different routes and avenues you can take. To get to where you want to go.

Chris- Defiantly, but you can always go in and work in a company and they can help you get your masters or whatever you think you need. But, with someone with a 2.2, you are not going to go straight into doing something that you would like, because of your low GPA. But then again, if you are not doing as well in college, would you want to? I am not stereotyping here, but, it's less likely that they would want to go on further studies, they are obviously finding it difficult. Maybe they want something different?

### Drew- Interesting answers, so we are now on the last question, 'Talent evolution'- who has control? Do you have control of your capability to be employable, or does the employer or the company that you are applying for/working in?

Ciaran- I think it depends on the individual person. Say specifically for me and while I am in college, I joined every single society and tried everything that college has to offer, and tried all the activities that I could in my first year in college. At that point, you will find what you like, you will find what you are good at. When you get good at activities you start to enjoy them a lot more. The same can be said when you first join the workforce. When you are good at something, there is an unbelievable amount of satisfaction into how you apply those skills, regardless of what they are. Maybe you thrive working with a team, networking, or communication, within the workplace, being employable has a lot to do with yourself, finding out your own skills, strengths, and weaknesses, and one you know what they are, you can sell yourself. But not only sell yourself, but also having an idea of what you are good at and where you should be going. So, I would say, you have the capability to be employable, it's down to yourself, it's your responsibility.

Lilly- The way I see it, the employer, and the environment in which you work in, acts a tool to help you realise and develop skills that you may have been ignorant of having the capability to achieve or learn those certain traits. But, I think it is the individual that is in control of their employability. The employer can have a huge effect on developing your skills and developing you as a person, but ultimately it is down to you, your goals, your internal drives, like what makes you get out of bed on a Monday morning, and what makes you satisfied in your professional and personal life.

John- Even if someone has the attitude that it is the employer's responsibility, I think that will only get you so far. That caps you somewhat, you are continually chasing the employer's

expectations of you, trying to get onto the next run of the ladder (positions within a company). There will always be someone alongside you who wants to be better than you and try get that position that you want and need to develop your skill and advance your career. At the same time, getting to each stage within a company, such as promotions and recognitions, people will start to notice you, but you are setting yourself up for a fall eventually, if you go for the employer outlook. Looking at it from a long-term view, taking ownership of your skills and your abilities will take you where you want to be.

Ciaran- It's also a guessing game of exactly what each employer wants as well. Not all of them want the same things.

### Drew- Interesting perspectives there, dose anyone else think differently to what John, Lilly and Ciaran discussed?

Eva- I would probably only go for a job that if I have an interest in it. I wouldn't want to apply if it's not what I want to be spending my time doing. So, if I was interested in a certain type of job within engineering discipline I specialised in, and see what requirements that I would need to meet and if I would possibly like or enjoy doing them, I would try work on the skills that they need of me, and get an opportunity out of it.

# Drew- Would you do it for the career and see how you get on, and see where that takes you.

Eva- If I was really interested in that discipline and the company that I could be potentially be working for. Where I want my career path to take me and I need these skills to get into that job, then yes.

Hazel- I think that there is a bit of both, that the employer and the employee has control over your employability. To put it bluntly, at the end of the day, I will only apply to positions in a company that I want to work for, and that is the first step that will ultimately shape the choices and learning options that are available to me, in that corporation, and I will take it from there, I suppose. However, a job I will enjoy will be a job that is linked with my interests and my interests will influence my choices.

Chris-If someone has an aspiration to be something or go somewhere, they would be more likely to shape themselves. But, at the same time, if you are not sure the employer will sort of guide you into what they would think would be right for you, if you are in the right job and company for a start. I would be open enough to see what happens in my career path. I know I will have a certain set of skills when I graduate, but if an employer suggested something that I might be good at, because he (the authority figure) might see something in me that I don't, I would be open to that. If it went to something else, something that I didn't plan myself doing, but I enjoyed it, I would be happy with that. So, in my opinion, it's a mixture of both. They (the employer) would have dealt with students coming out of college all the time, and if they see something in me and suggested something for me to do, then I would go for it. I would trust their expertise, if it would make me happy and I liked where this new career path could take me of course.

Harry- I think the employer defiantly has a certain element of control to developing your skills. Certain amount but not all, you will take the first step in applying for a position to where you see yourself going in that point in time, which is controlling your capability as an entry level engineer. But control in their hands, as the employer, falls back to what they offer at that point in time and what restrictions they have put in place when advertising that position. If I want to do something, or apply for a position in that company and approach them, and if they say no then that's an employer's control on your career path. Ciaran-I suppose, taking the concept of control. If an employer is not letting you or not providing opportunities for you to enhance your skills because they don't see it in you, then they are not letting you do something that you could be potentially good at. Only you know yourself, what abilities you have. If you think a different line of work would be more suited to you, and you have the potential to excel there, and they (your employer) is stopping you from doing that, then at that point maybe you should question yourself, 'is this the place for me?'. You have your foundation set on what you want to do, and you are not given that opportunity by the employer, then you go do it, take control of the situation, and take the responsibility to go and do it.

#### Drew- That's all we have time for. Thank you all for your opinions and contributions.

Participant	Gender	Age	Undergraduate or Masters Student	Engineering Discipline	Year	Future Career: Engineer or Other	'Future Vision' or 'Career Taster'
Group 3							
Laura	Female	24	Masters	Mechanical and Business	1st Year	Engineer/Other	Future Vision & Career Taster (50/50)
Peter	Male	23	Masters	Mechanical	2nd Year	Other	Unsure- showed elements of Future Vision & Career Taster (50/50)
Mark	Male	23	Masters	Mechanical and Business	1st Year	Engineer/Other	Career Taster
Matthew	Male	23	Masters	Mechanical and Business	1st Year	Engineer/Other	Unsure- showed elements of Career Taster
Sarah	Female	23	Masters	Structural	2 <sub>nd</sub> Year	Engineer	Unsure- showed elements of Future Vision
Colm	Male	19	Undergraduate	Mechanical	2 <sup>nd</sup> Year	Engineer/Other	Future Vision

### 7.3.a Focus Group 3: Characteristics and Demographic Information

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### 7.3.b Focus Group 3-Transcript

#### *Focus Group 3, Date: 4/4/17*

Participants for Focus Group 3: Laura- Year 4: 1<sup>st</sup> year in Masters in Mechanical Engineering and Business, Peter- Year 5: 2<sup>nd</sup> year in Masters in Mechanical Engineering, Mark- Year 4: 1<sup>st</sup> year in Mechanical Engineering and Business, Matthew- 4<sup>th</sup> Year; 1<sup>st</sup> year in Masters in Mechanical Engineering and Business, Sarah- 5<sup>th</sup> year in Masters in Structural Engineering, and Colm- 2<sup>nd</sup> year in Mechanical Engineering.

## Drew- You are all very welcome, so to start what made you pick engineering as your degree?

Peter- I chose engineering because I liked maths, and I did applied maths in fourth year in school, and that alone made me want to study engineering. Then I did a week internship, or work experience in a firm, BAM Civil, it's a civil engineering company, and I decided that, yes, I think this is my path. I basically picked leaving cert subjects based on that, and ended up getting in here.

Sarah- I picked engineering because it defines my personality, it is a part of me almost. From a young age, I have always been interested in problem solving. I had found enjoyment from playing with such toys as Lego and Mecano and this developed through my school years. I excelled at maths, physics and technical drawing in school which led me to choose Engineering. Structural Engineering stood out for me as the prospect of shaping the future in the structures that I can build appealed to me.

Mark - I chose engineering and commerce. Engineering was higher points. I mapped out that leaving cert subject that I needed to get into the course. It was on the top of my CEO and I didn't get it, so I got engineering and business so here I am.

Laura- I wanted to work with people, but I also wanted a more concrete degree. With business, I wanted to get a better skill set then just studying purely engineering. I went into engineering in my undergraduate and then I was really interested in studying management. So now I am doing business and mechanical engineering, which is more geared towards management and working with people, which is something that I am passionate about.

Drew- It's a mix of both worlds.

Laura- Yes. You get involved in the technical background, and of course you are very employable because of your analytical skills, and I love maths so it seemed logical.

Colm- Well, from a security level, engineering sets you up for life. I was always a problem solver and aptitude exams and spatial awareness, rather than my grammar or my English. I just don't have the patience for it, writing long essays, I might have to change that, for my thesis anyway. For now, I would sit down and do a maths question, and that really drives me to learn and to do it better.

### Drew- And what about yourself Mark?

Mathew- Well, there was nothing else that I wanted to do, and it's what I have been geared up to for years. For instance, I entered small competitions when I was younger, engineering, robotics, those kinds of things. So, it made sense to do it in college.

### Drew- So engineering is more of a lifestyle choice, similar to what Sarah?

Mathew- I nearly did another science discipline, but I don't like making mistakes and I know that mistakes will happen sometimes in the way I work.

Sarah- Well, I am studying to be an engineer. I have a job opportunity starting in September that focuses on what I excel in and what I am passionate about. The job is exactly what I wanted from the first day of college and I am very excited about it.

### Drew- Thank you all, so the next question, which touches on what Sarah just shared with us, are you studying engineering to be an engineer? Or is it a stepping stone for other opportunities or a different career path?

Peter- I am a little on the fence.

Laura- Really? But you did pure Mechanical?

Peter- It's just that... although I like the theory side of it, like mechanics, fluids, and solids, I like learning the theories, but I am not very practical myself. Although I am doing engineering and doing a lot of labs, I am not fantastic at making something up on the spot. You know those design challenges, I wouldn't be great at those. So, in the real world, after college, I don't know if it's going to be my thing, later down the line. I think my dream job really would be a maths teacher. I will just have to see what happens, but, I don't know if I will be doing engineering in the next 40 years.

Laura-. Well for me, it's a stepping stone completely, I always knew that from the start as I wanted something more.

### Drew- What is that, 'something more?'

Laura- Well, I want to go into business, and apply a business analysis style in my approach to work. But of course, use my degree and they skills that I have learned in college, but advance my analytical thinking, but not from purely technical, like just learning how to control machines. I want to learn how to analyse situations using my constructive mind, using a business perspective also.

Sarah- There seems to be an ongoing trend for engineers, like, for example, engineering students would complete their coarse and realise that an engineering career isn't best suited for them. Since engineers have of coarse a high standard of maths, often students would go into other math-related careers such as; Insurance, Finance, Banking, Actuary etc.

# Drew- Would anyone else have something different or would like to add to what Laura and Sarah just spoke about?

Colm- I want to be an engineer. I like the whole aspect of it. I don't want to be a boring engineer, I want to get into the automotive industry.

### Drew- What area within the automotive industry do you want to get into?

Colm- I am really interested in the design aspect of it, not necessarily the artistic side of things, I am more inclined at gearing my skill set to aerodynamics.

Peter- Colm, that's a good point, I would still consider 'being an engineer', I don't know if I would be, as you say 'creative', or be an artistic engineer. I would like to use my knowledge from the theoretical side of engineering and using it within a practical sense.

### Drew- So we are going to move on to the next question. Do you think your course is adaptable to other career opportunities? We touched on that topic already, but does anyone like to share anything different, something not previously mentioned?

Mark- I think it defiantly is. I will give an example of a company Accenture, they are always looking for engineers, like what Sarah spoke about earlier. They often scout out and hire engineers, for example, I am one of those. I say the only reason is because of the engineer's ability and their adaptability, applying themselves to a scenario which maybe foreign to them, solving problems on the spot efficiently and effectively. Matthew- Basically, many company looks for engineers because of the types of skills that they have, their personalities and the ability to work within a team. An engineer's thought process is invaluable to employers and there way of approaching problems can be second to none. They have a 'get it done' attitude, seeking a problem through to the end, rather than passing it on and making it someone else's problem. Especially what I have learned from college, you learned it that way, you learn the hard way in some cases. But I am so happy that I chose it.

Mark- I think employers want people with diversity, they want people with different backgrounds, approach problems with a different viewpoint. They must be used to getting the same old commerce graduates. With mechanical and business masters, it's a breath of fresh air. For instance, an artistic person, with no engineering degree, may come up with a different but compatible solution to a pending problem.

Colm- I think engineers are very resilient, from starting college to entering the workplace, an engineer's education may be as long as 4-7 years or even more. Engineers are people who get up after a fall many times, and are still determined to see a problem through to the end.

Peter- Some of the reasons why some engineers are well suited for a managerial role is because of their critical analytical mindsets, fine tuning each element, and transition to future tasks with a critical eye.

# Drew- Perfect, so the next question. What do you look for when applying for a job? This includes internships, placements, and graduate programmes, what made you choose the companies that you chose?

Matthew- I was looking for a company where I wouldn't be doing the same thing day in and day out. Something different, people focused and not stuck doing the same analytics every day. I was also looking to join a vibrant workforce, I didn't want to be working in a company, where there would be an office full of old people that were set in their ways and scared of change.

Sarah- From personal experience, when I was applying for jobs, I would look at highly accomplished and recognised companies, as I can assume that these companies would be bidding on larger multi-million jobs. I then looked at the portfolio and the history of the various companies I was interested in applying or I would wish to pursue in the future. But most importantly, I would look at the quality of their staff, LinkedIn came in handy when
trying to find information on my potential boss or colleagues. It was interesting to see their career paths and who they are today in the engineering world, and how their skills and experiences can match mine and the ability for me, as an entry level, to progress my own career and workplace learning. Then I would look at location, salary etc.

Mark- For me, its interacting with people, and work within a people orientated job, as a lot of engineering projects would be conducted within a team.

Colm- I picked a company that has a 'future vision'.

## Drew- 'Future vision?' What does that mean?

Colm- That they are taking in people, graduates like ourselves, and develop them (graduates) into what they want (employers), in other words a 'future vision', what a company sees as valuable, creating an all rounded employee suited to their (employer) needs. A person that fits easily anywhere with that company.

## Drew- So you believe it's the company's objective and responsibility to pick students like yourself, as a blank canvas and mould you into what they need for the future. Is that what you mean by 'future vision?'

Colm- Yes, Employer wants to give you the best possible training and skills, to facilitate their current and future needs.

Mark- Just adding from what Colm said about 'future vision', I look at a placement and see 'What can I get out of this?'. I would stay in a position for two years and change into something different.

## **Drew- Two Years?**

Mark- Yes. When I graduate, I don't want to be in a position for more than two to three years, just to explore the engineering industry.

## **Drew- Why is that?**

Mark- Well, in this point in my career, I don't know what I like until I tried it. For instance, for my internship, I worked in the finance sector. However, working as an intern you can't really tell if you would be suited with that position because of the job requirements and the length of time you spend there. Right now, I want to learn as much skills as I can. But that

can change, I could get a position in a company and really enjoy and like the challenges that it brings and see myself in that position for long-term commitment.

Matthew- I was thinking, when applying for a position, I want my internship or a couple of years at work, to represent my value, and to try to be an engineer. I put so much effort and dedication into becoming who I am today, that it would seem a waste to apply for a position what wouldn't reflect my engineering capabilities. Have a few years of engineering experience behind me first, before I shift into the business sector. My engineering experience will stand to me.

Mark- That's it. I totally agree.

## Drew- Thank you all. Next question, how did you find the transition from college to the working environment.

Peter- Ok. I did an internship last year, for just under eight months and when I started it, I found it a little bit daunting at the beginning. I had the impression that I had to be on the ball, and to on top of my game all the time. I tried to hit the ground running as quickly and efficiently as I could. I avoided asking seemly stupid questions at the start, that maybe resulted into problems that could have easily been avoided, theoretical questions I should have known but couldn't think of on the spot. It took a couple of weeks to really settle down, and I had to get used to the fact that you focus your time and energy between nine to five, five days a week. It's also nice in a way, because then you have your evenings and weekends to look forward to. That was the biggest transition, for me was focusing my energy within that time-window, whereas with college there is a greater sense of flexibility and less responsibility. It a different way of operating, you have to put your effort and time in certain time slots, and for me, it took a bit of time to get used to working within that strict structure.

Sarah- I really enjoyed the college-work transition during my 8-month placement. However, I found it very difficult to study for the final year. But the projects I was assigned and my work allowed me to see first-hand what I had learned in college, apply the theories, and adapt myself to a workplace environment, which consequently led me to construct and design a feature in a team project during my placement.

Drew- Ok, I am going to move on to the next question. What skills do you think you need to make an impression in an interview, first day or last day at work? In other words, what makes you employable, what do you think employers are looking for?

Colm- It's a personality I suppose. You are going to be integrated within the company and in a team. If you are unbearable, too loud, too quiet in an interview, it affects you even getting offered that position.

Matthew- In my view, an employer will look for someone who they can have a coffee with, because they will be working with you. Maybe not directly but at some stage in the future, it could be a possibility that you could be working with that person who hired you at the interview stage.

Mark- I think your work ethic has a huge implication in getting the interview, and what makes you employable.

Colm- Maturity as well I suppose.

Sarah- I think it has changed largely in recent years, adding to what Colm and Mark spoke about. I think it has moved away from the 'Straight A' student and moved more towards competent employees who can work well in a team and communicate. Communication skills are the most important and how you hold yourself in conversation, again the ability to have a cup of coffee, to be personable and likable and competent at the same time. Obviously, the ability to carry out the job is a necessity; however, I think a "C student" who can communicate and work with a team is more desirable than an "A student" with low communication skills and desire to learn differently.

Peter- I have done a few graduate interviews in the last few months. The most common questions that the employers ask me were; 'give me examples of situations where you showed certain qualities'. From that perspective, adding to Sarah's point there, as a potential employee, getting involved in societies or being active within the community in which you live in is vital. Employers want to hire someone that has the experience, but also have something that differentiates themselves from the group of candidates applying for the same position. The employer is looking for someone who has applied themselves outside a normal working environment.

## Drew- Great. So, to the next question. Does your GPA/College degree define your career opportunities, and add value to the workplace?

Matthew- But, it depends on what you want your career to be. If you want to be a pure analytical engineer, who crunches numbers all day, then I suppose your GPA will be a greater indicator of that. But, for myself, I feel like I have learned so much more skills by being involved in various societies, than my four years studying engineering. There is so many different modules I do, I feel like some of them are never going to be relevant to me when I graduate and start a full-time position. Of course, you adapt the concept of work ethic by the number of modules that you do, and you essentially study to pass the exam, I am good at doing that. I get the grade, just I can't obtain the information I have crammed for that exam for very long.

Laura- Well, in recent years, engineering institutions, such as Engineers Ireland, has changed their policies. For instance, graduates after the year 2012 must have a Master's degree to obtain a chartered membership for an established Engineering Institutions. So, in a sense, your GPA and college degree defines that possibility.

Mark- I think it also depends on what you study afterwards, such as professional or chartership exams, they dictate and control future opportunities. Like by brother, he got a 2.2 in finance, but then did his accountancy exams within a company, and he got a high grade and is now currently at a high level and that is what he is judged on. So, the degree isn't given much consideration by the employer because of his professional exams and his results, it was second chance I suppose.

### Drew- When you apply for jobs or positions, did they ever ask for your GPA?

Mark- Yes, they do. It depends on the positions that you apply for and the company.

## Drew- What company asked you for your GPA results.

Mark- EY

Matthew- I was asked to produce transcripts, but that was after I was given the internship. It was on my CV and I feel like, we have been told, I don't know if it's true or not, if you don't have a 2.1, a lot of companies and employers will not consider you as a potential candidate. They will scan for those with the 2.1 or higher and move on from there. I don't know of that is true or not, but that's what I have been told.

Peter- I think the GPA in general is a strong indicator of your performance over a period, also, from an employer's point of view a 2.1 reflects a good work ethic and a high standard of performance. But at the same time, for some companies the GPA doesn't really matter. Colm- The GPA is one of the first things that you, as a student looking for a full-time position, puts on a CV. It's one of the first things that an employer will look for, a standard that they set to get the interview I suppose. Drew- Ok perfect, we are moving on to the last few questions, what made you choose the company for your placement, graduate internship programs? Is it for the career opportunities for that company, or is it stepping stone for something else? That is linked to what you said earlier Mark, staying in a company for two or more years than moving on. So, what's the mentality there?

Mark- It's a process or a system that I would use in identifying what I enjoy doing, industry or role rather than aiming to work for a specific company. The only reason I couldn't move would be because I liked it and I feel like I am challenged and I see a future where my skillset would grow and evolve in that company. But for now, I would like to go to aerospace, automotive and finance.

#### **Drew- Like career tasters?**

Mark- Well yes, that is a good thing- 'career tasters'. The advice I was given was to do exactly that, stay in a role or industry for a short period of time, two to three years, because you get so much career exposure and opportunities that wouldn't normally get, by just sticking to what you are comfortable with. But at the same time, in your 30's you might want to settle down, and have a stable career then. That's why I have this mentality, I want instability, adapt to change quickly before my life becomes more settled and stable.

## Drew- There is one question, that is like an elephant in the room. Say if an employer looks at your CV or LinkedIn, as sees this trend of 2/3-year career transitions, one can question 'Is this candidate committed, are they not loyal, why should we hire someone that has this behaviour?'

Peter- That's a good point. I would be very conscious of that as well. It all depends on what your motives are and of you can justify it. If it's for career exposure then great, but if it's the case that you hate the work, or if the employer lets you go, then maybe the engineering industry is not a career path for you.

Sarah- For my 8-month placement, I chose a big-named company, with the hope that I would have the freedom of gaining access to greater opportunities, while also participating in large scale projects, that can add to my CV. However, after I graduate and start my job in September, I chose a slightly smaller company, I can be more easily recognised for my work and will allow me more control and have more of a responsibility to my assigned work and to develop my career.

Matthew- I think it really depends on how you apply yourself, and how you justify each career transition, most importantly at the interview stage, because that is defiantly something that they will ask. So, long as you can back your case up I don't think that quick career transitions would be an issue.

## Drew- Thank you for that, now for the last question. 'Talent evolution- Who has control?' Do you have control of your capability to be employable, or does the employer or the company that you are applying for?

Colm- Personally, I try to acquire as many skills and experiences as I can. At this level, anyway. Maybe you go to a certain company or role, because that fits your career aspirations at the time.

# Drew- So what skills do you have that would fit into a company's role. Like the company that you would aspire to join?

Colm- I am highly organised, have an analytical/problem solving mindset, and I would also like to think of myself as a leader, someone that people listen to and respected. Those skills are somewhat natural to me, but are also one's that I want to further develop and apply when I enter the working world.

Laura- I think it is a two-way development, if the opportunities are there for you to develop in your career, you must of course take the opportunities to progress into an experienced, learned engineer. However, in large companies, it can be easy to get 'pigeon-holed' and be stuck doing the same thing repeatedly. It is down to the engineer to recognise the potential for this to happen. So, I guess I think it is down to yourself, to recognise where and how you can best develop your skills and employability.

Peter- You also have mentors within the company, that will guide you have aid you into developing skills that you might not have or not good at. So, to some extent, you develop yourselves, but also are aided by your co-workers, mentors' leaders, and managers within the workplace. So, there are two sides to controlling your employability, yourself and the team/company that will or could be potentially working with. Those two perspectives mould your career path essentially.

Mark- I think it depends on your manager as well, they have the power to enable you, or restrict you, which depends on what they see in you, if you have that potential they are looking for. At the same time, managers and employers want a candidate and an employee

that wants to learn new things. Being enthusiastic and that might enable that power to your advantage.

Mathew- I develop skills for myself, for my own interest. But it has always been not too far from my mind that the skills that I am developing for myself, will have to have some use, will it look good on my CV? or will this new skill that I am developing, make me employable and will make me unique when applying for positions? But I my priority is to develop skills for myself. People do a lot of crazy things because they were told 'oh it will look great on your CV'. That is a very common denominator and a driving factor for a lot of people, something to add on the CV.

## Drew- When we go back to the start of the session. I asked why did you pick engineering? A lot of you said, it was because you did similar subject in school, I applied to the CAO just to get into engineering. Do you apply the same mentality now when applying for positions?

Colm- I think tailoring yourself for your end goal is one of the key factors when looking and applying for roles. What is it you want to achieve, and how will I get there? If I am going to go into designing I am not going to ignore my designing modules that I completed in college. I am currently looking at job adverts for engineering and design positions in different companies and I am trying to gain the skills that I will need for that position now, to eventually end up where I want to be, it's how I get there is a struggle.

Mathew- I would say the control aspect of employability is a little bit of both, although I am swaged to one side, with my 'future vision'. Tailoring your CV, and in your interview and application, demonstrating modules that are more applicable for the job, such as project management for example, and your most relevant experience that can be practical to the position that you are applying for.

Peter- One of the modules that I chose for this year was technical communication. That entails three different presentations and is something that comes naturally to me. I just figured that it was the kind of module that would aid me in getting an interview and ultimately the position, as presentation and team work skills are so important in the world of work. I figured that technical communication would be a great module to have, rather than studying material science. It's more prudent to put my efforts and credits into modules that will expend past the academic spectrum, but can be easily applied to the real work of working as an engineer, or whatever career or future role I end up in. Only time will tell.

#### Drew- Thank you all for your contributions and your time, is it very much appreciated.

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## Appendix 1

## Focus Group 1: Informed consent form

Informed Consent Form

Research Study Title: 'Talent Evolution- Who Has Control?

Researchers Name: Drew Jay Davis

Researcher Status: MA Human Resource Masters Student in National College of Ireland

Researchers Contact Information:

Researchers Email Address: \_\_\_\_\_

Dear Sir/Madam

You are invited to participate in a research study, that examines the concepts of Employability and what this means for you regarding self-sufficiency and career sufficiency. If you would like to take part in this research, please sign write your current student status (for example final year student, masters) and the engineering discipline you are currently studying and sign at the bottom of the form. Participation of this research will involve a 20/30-minute semi-structured focus groups. Some of the questions that will be asked will be structured, to guide this topic at the purpose at hand, but open-ended questions and will enquire your view of what and who do you think controls your employability. All information obtained in this research will remain confidential and your identity shall remain anonymous. For the researchers use only, a recording device will be used, to insure reliability and accuracy in examining and constructing my analysis of this data and will be transcribed by the researcher. The researcher will only have access of these audio recordings, and transcripts and all information will be coded accordingly, to preserve your identity. All data collected shall be destroyed and disposed of on the completion of this research study.

Please read the following statements. Your signature illustrates your acknowledgement of the terms of to participate in this research and that you wish to be a part of this study, as in informed contestant. Please indicate your agreement in participating in this research my ticking the following boxes;

 $\circ$  I have read and fully understand the content of this study and what is being asked of me as a participant.

o I willingly consent to voluntarily participating in this research study.

• I understand that I have the right to withdraw my participation, without any consequence.

- 1. What made you pick engineering?
- 2. Are you studying engineering to be an engineer or is it a stepping stone for other opportunities?
- 3. Do you think your course will be adaptable to other career opportunities? How?
- 4. What do you look for when applying for a job?
- 5. How did you find the transition from college to a working environment?
- 6. What skills do you need to make an impression in an interview, first, last day at work? In other words, what makes you employable? What do you think employers are looking for in a graduate?
- 7. Does your G.P.A/ College degree define your career opportunities, add value to the workplace? If so how? If not, what does?
- 8. Why do you join a company? (internship, placement, graduate scheme) Is it or the career opportunities in that company, or is it a stepping stone to get somewhere else?
- 9. Talent Evolution- Do you control develop your employability or does the employer?