

Survey of Selected Multi-National Employers' Perceptions of Certain Graduates from Irish Higher Education

A Study for the Expert Group on Future Skills Needs, the Higher Education Authority and Forfás

December 2007



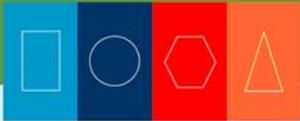
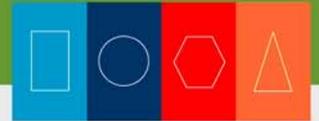
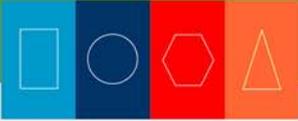


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1. Summary

Main objectives of the study

The objective of this study was to provide feedback on the suitability for employment of Irish graduates, looking specifically at the disciplinary groups of Science, Engineering, Business and Finance and Humanities, and comparing them to their international counterparts.

It looked at four main “characteristics”:

- Their domain-specific, theoretical knowledge
- Their practical ability to apply this knowledge in a “real-world” context
- The level of their soft or generic skills (inter-personal, communication, and so forth)
- A number of factors related to their overall attitude (flexibility, motivation, openness to change).

Having looked at these factors it aimed to try and understand the reasons for any differences found.

Method

To carry out the work, the study identified a list of key multinational companies - those that employ graduates from a range of countries and could offer views on comparisons. There are inherent difficulties in sizing the population of companies that may employ Irish graduates and meet the criteria required. The results presented below are clearly a sample and should be viewed in this light. The study then sought the opinions of company personnel, mainly in departments responsible for recruitment. The list of companies was based on:

- 100 largest IDA Ireland listed multinational companies by employment
- 10 InvestNI (Invest Northern Ireland) listed multinational employers
- 20 UK based multinational companies actively recruiting in the Republic of Ireland.

To this was added a list of 20 major multinational companies performing R&D in Ireland, since this was felt to be an important group for the recruitment of postgraduates.

The research was carried out by interviews: face to face and by telephone. Where people did not feel comfortable with discussing issues, we also offered the option of a back-up web survey that could be completed anonymously.

The study succeeded in speaking to 119 companies out of the total sample of 150. Of these, 57 were unable to complete the questionnaire for a variety of reasons, including that they had no basis for making the comparisons requested or, in the case of companies outside Ireland, had not recently recruited Irish graduates.

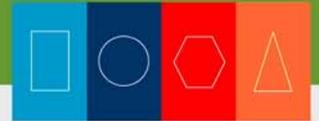


Exhibit 1: Responses by MNCs Contacted in Survey

Respondents	Completed	Can't help	Total
MNCs in Ireland (IDA List & Extra)	47	29	76
MNCs in Northern Ireland	1	16	17
MNCs in Ireland (R&D)	6	8	14
MNCs in the UK	8	4	12
Total	62	57	119

Results

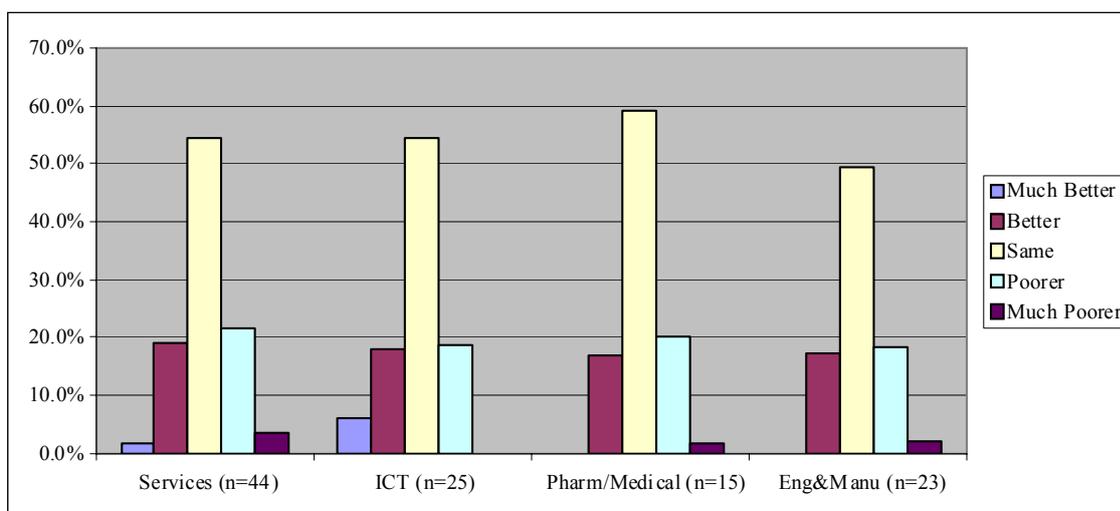
In terms of the overall pattern of recruitment of the responding companies, 81% mainly recruit after first degree, with a high level of recruitment of engineering and business/finance graduates. The main recruits from outside Ireland came from the UK and from Eastern Europe.

Overall, employers perceived very little difference between Irish and other graduates.

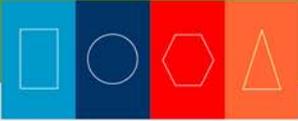
However, it is important to look beyond this overall opinion to examine whether there were any significant differences between the different characteristics - whether the Irish graduates were seen to be markedly different in any of the areas, and whether there were specific characteristics of other graduates that were highly valued.

Firstly, looking at the different employment sectors, there is no major difference in the views collected.

Exhibit 2: Overall Employers' Perceptions of Irish Graduates by Industry Sector



Looking at the four characteristics examined (specific knowledge, practical knowledge, etc.), however, it is possible to bring out some differences.



In the case of **domain specific knowledge**, there was little difference at an aggregate level, but some indications, in all sectors, of the strength of Eastern Europe graduates. This was seen as being due to superior maths, accountancy and practical application of the knowledge. Irish graduates with placement experience were valued more highly and it was commented that courses were not sufficiently practical.

The main steps for improvement suggested were that more courses should involve placements and that more should be done to prepare graduates for the reality of industry.

In the case of **practical skills**, the Irish graduates were perceived as similar overall to their international counterparts, although there were rather more negative comments in this area, and again there was a strong showing from the Eastern and Northern European graduates. Reasons cited for this were that foreign graduates work harder, have a higher technical ability and are in general somewhat older than their Irish counterparts. To some extent this may reflect two important factors - the different structure of courses in, for example, Germany and Poland, which means that they are longer and that the first qualification is at a level more equivalent to the Master's qualification than an Irish primary degree. Secondly, one would expect graduates who have emigrated to seek employment to be a self-selected, highly motivated group.

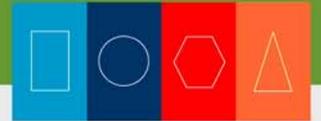
In order to improve the standing of Irish graduates, suggestions were that, as above, more courses should involve placements and that there should be more take-up of masters courses.

Soft/generic skills are where the Irish graduates were viewed most favourably, this being strongest for graduates and postgraduates and weaker for technician level (although the sample here is small). Irish graduates are seen as better communicators and team players, while foreign graduates face language barriers. Where improvements were suggested, this was again to be achieved through more placements and through a better and more informed careers service.

Looking at **attitudinal skills** Irish graduates were viewed as slightly weaker, with some reports of unrealistic expectations. Among the reasons put forward for this were again that foreign graduates have longer courses, and that older or more qualified graduates from other countries are more confident, with a better work ethic. Again, however, the sample is inherently biased due to the type of foreign graduates concerned. A further factor is current labour market conditions, where Irish graduates are very aware of recruitment problems and thus feel they can be more demanding than in periods of oversupply.

Steps for improvement again focused on the notion that courses should involve more work related skills.

Finally, looking at the **international comparisons overall**, there are some indications that the Irish graduates compare favourably to UK graduates, and compare less favourably to Eastern European



graduates but that there are few discernable differences with German/Northern European Graduates.

Conclusions

The overall conclusion is that there are relatively few important differences in employer perceptions between Irish and non-Irish graduates. Irish graduates appear to compare favourably in “Soft/Generic” skills, while foreign graduates are considered more eager and hungry in the working environment. Graduates from Eastern Europe are perceived as possibly better in domain specific knowledge and attitudinal skills - this may be due to longer periods in school and higher education and to high levels of unemployment in their home countries. In addition there are examples of well qualified Eastern Europeans being initially recruited to lower levels in companies due to language and cultural challenges; however these challenges are regarded as temporary by most employers and are being tackled by both companies and representative organisations.

Recommendations

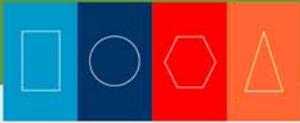
Recommendations fall into two groups: those resulting directly from the survey - which could be characterised as the direct recommendations of the recruiters - and a second set which look behind these at some of the underlying factors.

There is a strong recommendation from the recruiters for the **introduction of more placements to third-level courses in Ireland**. There is no doubt that these are highly valued. However, within the degree process there is inevitably a trade-off between time spent on placement and time spent acquiring knowledge. Here, placements address two issues - understanding of the workplace and the work ethos, and practical application of much more specific skills. In the former case, quite general work experience would be valuable and perhaps is not valued adequately by the graduates or recognised by the recruiters. Equally, formal placements have a much broader role in the development and operation of higher education/industry cooperation.

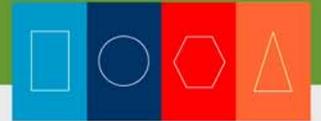
A second recommendation related to this is the need for **better communication to Irish students of the reality of the workplace** - which needs to be addressed by employers, and by higher education institutions. It relates both to curriculum design and careers guidance issues.

Thirdly, it was felt that Irish students needed to have **better management and business knowledge to understand their role in the workplace**. This factor relates to the issue of unrealistic expectations either of the type of work people would be doing, or of the short-term career prospects. Again, while concrete steps could be taken by Higher Education Institutions to include some of these issues in the curriculum, there is also an onus on the firms to ensure there is material and support available to assist students to prepare for the workplace.

Finally there was a recommendation that courses in Ireland should make more use of **continuous assessment to build team skills and confidence**. This does not imply a moving away from



examinations with all the attendant complications in assessment, but rather a move towards more collaborative working and thus personal development.



2. Introduction

Main objectives of the study

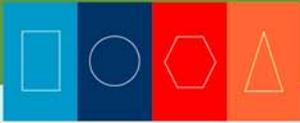
- To provide feedback on suitability for employment of Irish graduates
 - For the disciplinary groups of Science, Engineering, Business and Finance and Humanities
 - Compared to international counterparts
- Key characteristics examined were
 - Domain-specific, theoretical knowledge
 - Practical ability to apply this knowledge in a “real-world” context
 - Soft/generic skills (inter-personal, communication, etc)
 - Attitudinal Issues (flexibility, motivation, openness to change)
- To identify the reasons for any differences emerging from the research.

The quality of graduates is seen as an important component of Ireland’s future competitiveness, and the Enterprise Strategy Group (ESG) has put forward the goal that graduates from Irish higher education should be among the best in the world¹. The Expert Group on Future Skills Needs (EGFSN) and the Higher Education Authority (HEA) are jointly undertaking an international benchmarking of the quality of graduates from Irish higher education. This study is intended to provide an input into the comparison.

There is considerable anecdotal evidence, both nationally and internationally, that the quality of the *output* from the Irish higher education system is very high at present. This perception is, for example, repeatedly cited by foreign multi-nationals as a key consideration in their decision to locate in Ireland. However, while there has been recent international benchmarking of inputs into Irish higher education, such as the Quality Assurance processes, there has been no corresponding benchmarking of outputs.

This study aims to complement a number of other activities around the issues of quality of developments by providing a perspective from a limited but important group of employers in Ireland on the quality of output. Specifically, the study aims to provide feedback on perceptions of graduates of Irish higher education compared to their international peers to the higher education sector, to enable it to continue to elevate the quality of output. The feedback was sought from some key multi-national employers operating in Ireland, in particular those MNCs that have similar facilities overseas to their Irish operations and would therefore recruit comparable candidates to

¹ Ahead of the Curve, Ireland’s Place in the Global Economy, Forfás, 2004; <http://www.forfas.ie/esg>



corresponding roles. In addition, the survey also looked at UK-based employers that recruit regularly from Ireland.

The study designed, executed and analysed the results of a survey of a carefully selected group² of multi-national employers actively recruiting in Ireland to gauge their views on the comparative strengths and weakness of recent graduates (*i.e.* graduates of no more than 3 years standing) from Irish higher education, relative to graduates from other jurisdictions.

The study covers individuals in receipt of awards at levels 6-10 (inclusive) in the National Framework of Qualifications (NFQ) and looks at the following four major disciplinary groupings: Science; Engineering; Business/Finance; and Humanities.

The study aims to provide feedback on the suitability for employment of these Irish higher education graduates, in comparison to their international counterparts, with regard to the following characteristics:

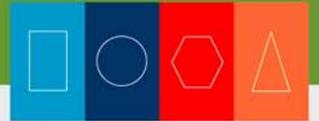
- 1 Their domain-specific, theoretical knowledge
- 2 Their practical ability to apply this knowledge in a “real-world” context
- 3 Their soft/generic skills (inter-personal, communication, etc)
- 4 Attitudinal Issues (flexibility, motivation, openness to change)

Looking to the background against which the study is being carried out, the annual Irish Management Institute (IMI) Survey of Multinational Corporations (MNCs) examines the key issues that such companies believe to be most important in Irish competitiveness. The top three factors have been consistent since their survey was launched in 1999: 1) Corporate taxation, 2) Political stability and 3) The education system.

With rapidly increasing international competition in the less skilled and more labour intensive industries, Irish Government Foreign Direct Investment (FDI) strategy has refocused on encouraging investment from higher skilled/higher knowledge content companies and supporting the existing MNC subsidiaries themselves in moving to higher value added activities. In manufacturing, this strategy change is seen in an emphasis on the Research & Development (R&D) and the other innovation related activities of MNCs. In services, the emphasis has been on an equivalent move to higher added value activities.

This change in Irish strategy is happening at a time when the constitution of MNC FDI is itself changing. For example, in 2004, in the Information and Communications Technologies (ICT) sector, for the first time globally, foreign investment through establishing R&D facilities abroad *exceeded*

² See section 3 for more details on how firms were selected

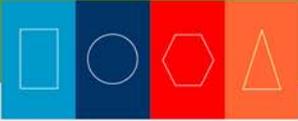


manufacturing investment abroad. Similar trends are to be seen in sectors such as automotives and pharmaceuticals. The refocusing of Irish FDI strategy and the changing structure of MNCs FDI both serve to emphasize the increasing weight likely to be given to the “educational system” factor in MNCs location decisions and the importance of their perceptions of the quality of Irish graduates.

The aim of this study is therefore to compare the quality of Irish graduates³ to that of their foreign counterparts as well as understanding and documenting some of the reasons for the perceived differences. The overall objective of the study is explicitly to support the development of Irish graduates. This will benefit indigenous enterprise but is also an important factor in the attraction of advanced, knowledge based FDI.

The analysis is based on the graduates of higher education who have been recruited by the firms selected - not necessarily a representative sample of Irish graduates as a whole. These are compared with “foreign graduates employed in Ireland”, who tend to be a self-selected group of highly motivated and mobile graduates. The comparison is explicitly not with the entire output of graduates in the comparison countries.

³ For the purposes of this study, “graduate” refers to individuals in receipt of awards at levels 6-10 (inclusive) in the National Framework of Qualifications (NFQ)



3. Methodology

Methodology

- Identify a key list of multinational companies made up of:
 - 100 largest IDA-listed multinational companies by employment
 - 10 InvestNI listed multinational employers
 - 20 UK based multinational companies actively recruiting in Ireland
 - 20 major multinational companies performing R&D in Ireland
- Interviews, face to face and by telephone
- Back-up web survey

Identification of Firms

This study focused on two sectors of employment:

- Internationally traded services and
- High value added manufacturing.

MNCs for the two sectors were identified from an IDA Ireland database. IDA listed companies were used as it is assumed that IDA supported companies represent the type of company that Forfás wish to attract to Ireland and that these companies will be employing a significant portion of graduates. Initially, companies from US, UK and Germany were considered but this was later widened to increase the number of companies available to be surveyed and thus increase the response rate.

Companies based in the UK but actively recruiting Irish graduates were also considered. Two methods were used to identify these MNCs:

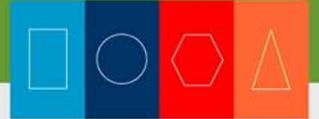
- Identification of large MNCs based in Northern Ireland registered with InvestNI, and
- First Destination Reports from the career departments of Irish Universities.

A final list of companies was formed of major performers of R&D to ensure that the survey included level 9/10 graduates. Companies were identified from the IDA and Enterprise Ireland websites.

The final list of companies comprised the following:

- 100 largest IDA-listed MNCs by employment
- 10 InvestNI listed MNC employers
- 20 UK based MNCs actively recruiting in Ireland
- 20 major MNCs performing R&D in Ireland.

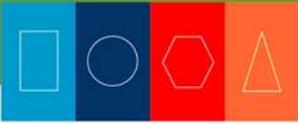
There are inherent difficulties in sizing the population of companies that may employ Irish graduates and meet the criteria required. The results presented below are clearly a sample and should be viewed in this light.



Data collection and survey design

Because of the nature of the information sought, it was agreed that the respondents should, as far as possible, be interviewed either face to face or by telephone, following a structured schedule. This was designed to capture as much information as possible without becoming unwieldy, and to enable the interviewer to codify the resulting data for analysis without losing the depth of the information.

In order to do this we constructed a database with a web interface, which was also made available to respondents where they were unable or unwilling to participate directly in the research.



4. Background

- Skills shortages:
 - in ICT, science and engineering across Europe and the US;
 - in all of the major Irish industry sectors including Engineering, IT, and Pharmaceuticals.
- Increasing mobility of workers across Europe
- Decline in numbers of Irish graduates seeking employment overseas
- Key differences in higher education systems around the world.

Current Trends

In order to interpret some of the data from the survey, it is important to look briefly at the skills and migration background in Europe.

A number of studies over the last few years have consistently pointed to difficulties in recruitment in the European ICT sector (Germany⁴, UK⁵ and Ireland⁶) and such shortages are expected to continue into the future. In response, most countries are or have been reforming migration and work visa rules to encourage both the flow of highly skilled/educated workers from outside the EU and the ease of mobility of workers within the EU. Similar general difficulties are seen as confronting the US, with shortfalls in overall science and engineering graduates due to the declining uptake of university courses in these areas⁷.

The EGSFN Skills Bulletin highlights a skills shortage in all of the major Irish industry sectors, including Engineering, IT, and Pharmaceuticals, with labour shortages identified in several sectors including Finance and Services⁸. Difficulties in the Irish ICT labour market are generally seen as a result of the Dotcom collapse and the effect it has had on students undertaking IT related courses, and their confidence in employment in the sector⁹. This has led to a tight ICT labour market. Similar shortages are being experienced in the engineering and scientific fields, with the Irish Academy of Engineers outlining in a recent report that, in order to become one of the top five richest economies in the world by 2020, Ireland would have to produce 14,000 engineers a year

⁴ Marianne Kolding, IDC (2002) "Networking Skills Shortage in Western Europe" available at: www.cisco.com/global/IT/training_education/networking_academy/idc_02.pdf

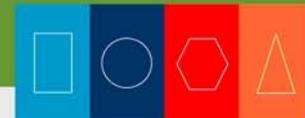
⁵ Michael Millar (2005) "Skills shortages hit 12-year high" available at: <http://www.personneltoday.com/Articles/2005/03/24/28811/skills-shortages-hit-12-year-high.html>

⁶ Brian Skelly (2005) "ICT skills shortage biting" available at: <http://www.siliconrepublic.com/news/news/nv?storyid=single5035>

⁷ Patricia Flynn (2006) "Skills Challenges Threatening U.S. Competitiveness in the Global Economy". National Skills Conference, Dublin (26/10/06)

⁸ EGSFN (2005) "New Report Highlights Jobs in Demand - Launch of National Skills Bulletin" available at: <http://www.skillsireland.ie/press/releases>

⁹ Brian Skelly (2006) "Weird science as students ignore buoyant tech sector" available at: <http://www.siliconrepublic.com/news/>



where the current annual output is only 5,100¹⁰. While these projections may be ambitious, it does identify the shortages as a crucial issue.

General international ICT shortages, differential unemployment rates/employment prospects and wage rates, when combined with easier international labour mobility - both in terms of physical transport and the abolition of restrictive labour regulations - means that the EU is becoming increasingly a complex network of human movement.

Domestic wage rates and unemployment rates are leading to skilled East European graduates seeking employment in Western Europe where they can enjoy a large increase in wages. The average wage in Poland (as of 2004) was £316 a month, a third of the EU average and well below potential earnings in UK, Germany and Ireland¹¹. Taken together with a 40% unemployment rate for the under 25s and low restrictions in movement and work between Poland and UK/Ireland, it can be expected that firms will find a large number of migrant workers (skilled and unskilled) from this region; far more so than, say, from the South of Italy.

There is a corresponding decline in numbers of Irish graduates seeking employment overseas. Exhibit 3 outlines a general overall decline in the number of Irish graduates seeking employment overseas with the most mobile group being recipients of higher degrees (12% employed overseas).

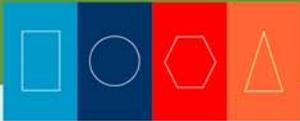
Exhibit 3: Preliminary Findings for First Destinations Report 2005 - What do Irish Graduates Do?¹²

Main Findings - Survey of 1995 - 2004 Award Recipients										
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	%	%	%	%	%	%	%	%	%	%
In Employment	43	45	46	51	49	51	47	45	46	49
IRELAND										
OVERSEAS	10	9	10	8	7	7	6	6	5	7
Work Experience Schemes	2	1	1	1	0	0	-†	-†	-†	-†
Seeking Employment	4	4	2	2	2	2	3	3	3	3
Further Studies/Training ‡	40	39	39	35	38	35	41	42	40	36
Not Available for work/study	2	2	2	3	4	4	4	4	5	6

¹⁰ Irish Academy of Engineering & Engineers Ireland "Engineering a Knowledge Island 2020" available at: <http://www.engineersireland.ie/Publications>

¹¹ Adam Easton, BBC News (2004) "Poland fears EU brain drain" available at: <http://news.bbc.co.uk/2/hi/business/3442329.stm>

¹² Available at: <http://www.heai.ie>



TOTALS	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of respondents	19,101	20,160	17,698	24,094	24,103	23,276	28,054	27,046	27,331	25,647

†“Work Experience Schemes” no corresponding category from FDR 2001 onwards

‡ Ireland and Overseas combined

There are few specific statistics on exactly where these graduates are working but a report from the National University of Ireland Maynooth (Exhibit 4) identifies the destinations for a number of their graduates.

Exhibit 4: First Destinations Report 2004, National University of Ireland, Maynooth¹³

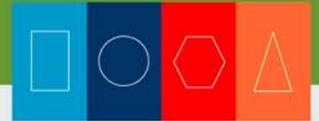
Employment Country	Primary Degree	Higher Degree	Totals
Australia	1	0	1
France	2	1	3
Germany	0	1	1
Great Britain (excluding N.I.)	1	4	5
Ireland	213	56	269
Italy	1	0	1
Japan	0	1	1
Korea	1	0	1
Spain	1	0	1
Switzerland	1	0	1
UAE	2	0	2
Totals	223	63	286

This shows that only 6% of surveyed graduates were working overseas, with eight out of seventeen graduates going to the UK and France for employment. The University of Limerick supports this finding, with only 6% of their graduates electing to take employment overseas (UL Careers Department, 2006). This reduction in the number of graduates seeking employment abroad was supported by discussions with members of university careers departments in Ireland. They saw it as a declining trend attributable to the number of available jobs in Ireland due to the increased FDI, the strength of the economy and resulting increase in wages, and overall perception of employment prospects in Ireland¹⁴. This is backed up by a recent study by the *Economist* ranking Ireland as number one in “the world’s best countries” league in 2005 based on a ‘quality of life index’¹⁵.

¹³ Available at: <http://www.careers.nuim.ie/staff/fdr.shtml>

¹⁴ Interviews with career department members in Trinity College Dublin, Dublin Institute of Technology, National University of Ireland, and University College Cork (2006).

¹⁵ Laza Kekic, *Economist* (2005) “The world’s best country” available at; <http://www.economist.com/theworldin>



The skills shortages in Ireland and the increasing percentage of Irish graduates choosing to remain in Ireland should mean that the study finds a diverse workforce within MNCs and that companies will be able to compare graduates from an array of countries. However, the number of companies outside of Ireland that take a significant amount of graduates from Ireland might be lower than expected due to the pull of employment within their own country.

Education Systems

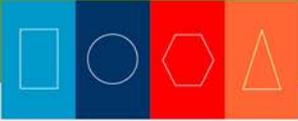
It is important to note that there are some key differences in higher education systems around the world that could have an effect on our findings.

The Bologna Declaration aims to have in place by 2010 a system of comparable degrees across the EU that will ready students for employment or further study. Two cycles will be put in place across all member states; a three-year undergraduate cycle, and a graduate cycle leading to a Masters or Doctoral qualification. Currently, this system is still in the process of being implemented in many countries. It is therefore necessary to look at the original systems in place across a number of countries to identify any notable differences. As this study is specifically interested in MNCs from US, UK and Germany we will focus on these systems. In addition, there is a migration of Polish workers to western European countries seeking employment in a number of skilled sectors so the higher education system in Poland will also be considered.

The first, and possibly most important, factor to highlight is the relatively longer duration of higher-level education in Poland, the US and Germany. To gain an undergraduate qualification in these countries takes a minimum of four years. It can take even longer in Germany due to the unstructured nature of the degree process. In the German system, students can pick and choose courses and institutions that satisfy their specific interests, with course completion certificates adding up to a final degree. In Poland and the US, undergraduate degree courses follow a more structured route but still take four or more years to complete. In addition, the implementation of the Bologna reforms and the move to the two-cycle system is either very recent or not fully implemented in Germany and Poland.

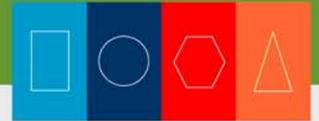
While duration of studies does not necessarily equate to quality of education, it may have a number of effects on the findings. Graduating a minimum of a year later could have a marked effect on the attitudinal skills of a graduate as they are progressing at a later stage in their life and have had longer to develop their own views and ideas on their chosen area of study. Specifically, the German system will produce graduates that have progressed at their own pace and decided their own direction of study for the preceding four to six years. The overall depth and breadth of knowledge acquired in a specific field of study could also be greater than that of those graduates who have taken three years to complete a degree. This, however, is something that will depend entirely on a comparison of individual courses.

This difference in course duration follows on to the next level, with postgraduate courses in Poland, Germany and the US taking an additional two years to obtain their post-graduate awards. In the first two countries, a Masters can be awarded after four to six years from the start of higher-level education. It is common for specialist courses such as electrical engineering to run for a minimum of



five years, with a Masters level qualification awarded at completion. This will have a bearing when graduates from different nationalities are directly compared to Irish graduates. Extended courses should offer graduates far stronger domain-specific skills and should equip them with the knowledge and confidence to argue/defend their own point of view more effectively in a professional environment than can those undertaking shorter periods of learning and research.

A final point to note is the presence of language barriers for graduates coming to work in Ireland. The education systems in Germany and Poland both offer English classes through the early levels. However, in third level education in those countries, students are taught in their national language which means that technical terms and any domain specific knowledge will have to be converted into English if they are to work within an English speaking workforce and environment. This, it is expected, may affect the performance of foreign graduates in skill sets such as domain-specific theoretical knowledge and soft and generic skills.



5. Analysis of the Survey

Respondents

Responses

- Over 150 companies contacted
- 62 surveys completed
- 57 other companies interested in participating but did not do so - current workforce is comprised of only Irish graduates, or they do not take recent graduates
- 12 companies in the UK and Northern Ireland did not currently recruit any Irish graduates.

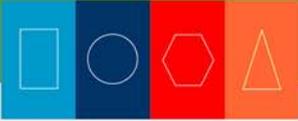
As outlined previously, it was the aim of this study to survey 150 companies in total. The majority of these were based in Ireland, with additional companies being surveyed in the UK and Northern Ireland. The response rate from MNCs in Ireland has been positive, but a number of companies were unable to participate due to low intake (if any) of International graduates.

Exhibit 5: Survey Respondents

Respondents	Completed	Can't Help	Total
MNCs in Ireland (IDA List & Extra)	47	29	76
MNCs in Northern Ireland	1	16	17
MNCs in Ireland (R&D)	6	8	14
MNCs in the UK	8	4	12
Total	62	57	119

It is notable that, from among 17 companies contacted in Northern Ireland, we were only able to complete a survey for one company that has taken on a significant (more than one) amount of graduates from the Republic of Ireland in the last three years. A number of UK based companies were contacted with a fairly positive response rate, only four companies could not help due to the fact that they have only just begun actively recruiting in Ireland. This relates back to the earlier discussion in section 4 on the migration patterns of Irish graduates and the skills shortages in the country. It would appear from the companies surveyed that few Irish graduates seek employment in Northern Ireland and that the number of Irish graduates seeking jobs in the UK is declining. Full employment and good salaries appear to be tempting Irish graduates to remain and gain employment in Ireland after completing their studies.

The majority of respondents from each category of companies come from within Human Resources and Graduate recruitment departments, as they have been found to be the most qualified to answer questions on recent graduates and how they compare internationally. However, senior members of the organisation in operations or production, for example, have also in some instances been consulted.



Respondent and recruitment patterns

Recruitment patterns

- 81% mainly recruit after first degree
- High level of recruitment of engineering and business/finance graduates
- Main recruits from outside Ireland came from the UK and from Eastern Europe.

The first set of questions relates to the respondent, their company, and the recruitment patterns of the organisation. The full results for each question can be found in Appendix A.1.

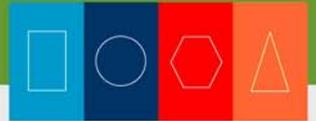
The majority of respondents worked in human resources/training (63% of respondents), but there were a number of respondents from other areas including operations and business support personnel, who had worked with graduates on training programs and on 'the shop floor'.

The respondent companies were predominantly located in the Engineering/Manufacturing and Banking, Insurance and Finance sectors, with the remainder in the IT software and pharmaceutical sectors. The majority (62%) of these companies employ 51-500 people in Ireland and originated from or had their HQ in the United States (45%), but there was also a good number of companies (34%) based in Ireland and the UK.

The recruitment patterns of respondents also followed some common themes. The large majority (81%) of companies most commonly recruit graduates with a primary degree, with Masters graduates being the second most commonly recruited type of graduate. These graduates came from a business or finance background with the rest commonly coming from engineering and science-based disciplines. Graduates usually take positions through the company in analyst/developer/researcher and operations/production positions. Few go straight into positions of coordination and higher management.

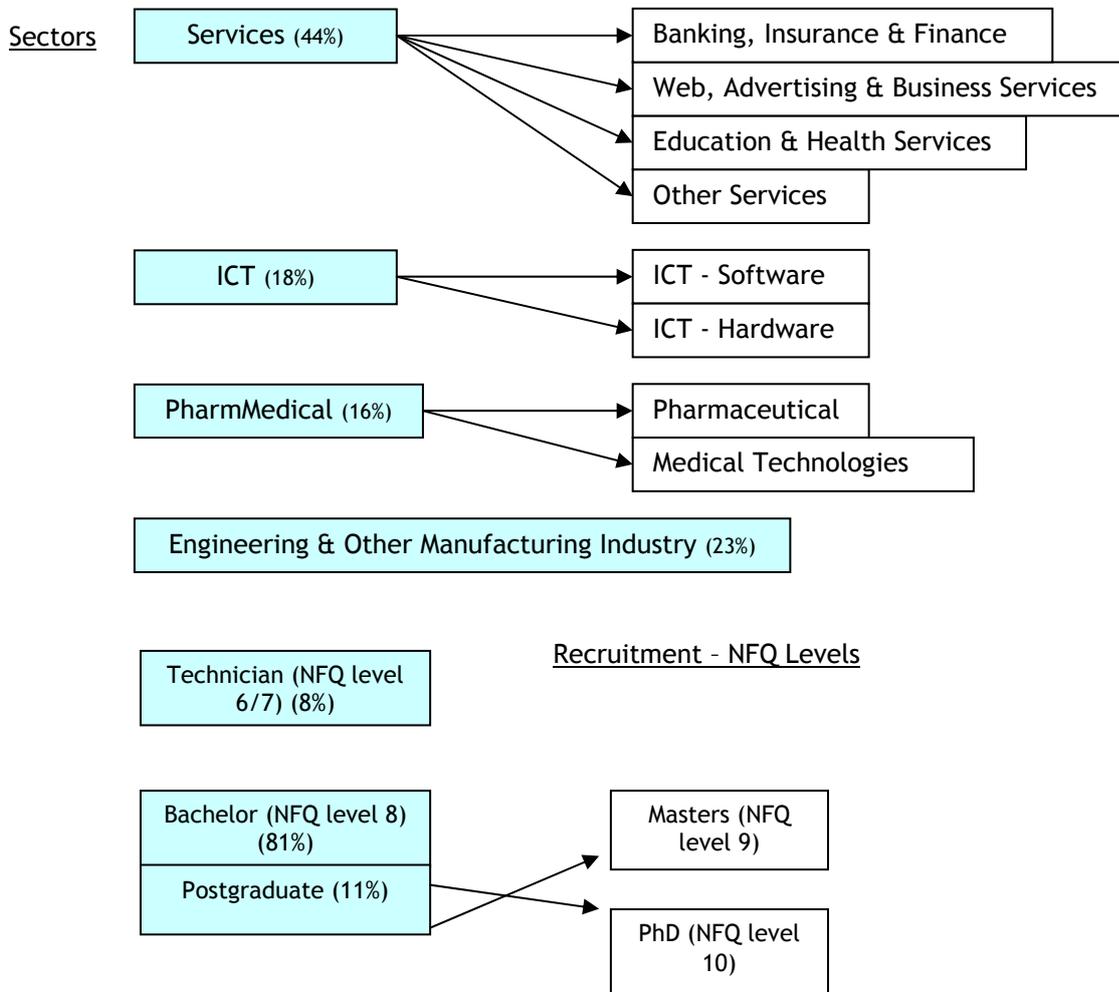
The majority of non-Irish educated graduates come from the UK or Eastern Europe. Of these, by far the majority were from Poland, with only a small number from other new accession states, such as Slovakia, the Czech Republic and Lithuania. Since there is a high degree of commonality in the educational and economic situations across these countries at a general level, we have concentrated on Poland as being the most important source.

These patterns are consistent with the migration pattern discussion in section 4, with large numbers of graduates from Eastern Europe seeking employment in Ireland due to relatively high wages in Ireland, high unemployment in Poland and the absence of employment restrictions. Most Irish graduates hold a bachelor degree as few students now complete their formal education at diploma level. Similarly, while the number of graduates staying on to masters and PhD levels in Ireland is on the increase, they are still well below the number of graduates completing their formal education at primary degree level.



Industry sectors have been grouped together in the following analysis so that there are enough participants in each sector to make a meaningful comparison. Similarly, responses for Masters and PhD level have been amalgamated to strengthen the comparability of groups.

Exhibit 6: Group Structures and Proportions



Although some groups have been brought together to increase the response rate for each allowing for a better comparison, technicians (5 respondents in total) and postgraduates (7 respondents in total) are still poorly represented in the survey and the sample size is too small to be statistically meaningful. Comments on these groups should be therefore taken as indicative only.

There were 62 respondents to the survey as a whole. A large number of these recruit several overseas nationalities and have therefore commented on how Irish graduates compare against more than one specific nationality. This leads to an average of 107 responses for each skill set and increases the number of usable responses for further analysis, as shown in Exhibit 7.

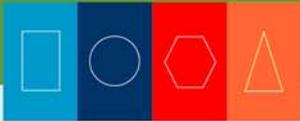


Exhibit 7: Number of Respondents and Average Responses for each Sector of Employment and Recruitment Level

Sector	Total Number of Respondents	Average number of responses Per Skill Set
Services	27	44
ICT	11	25
PharmMedical	10	15
Eng&Manu	14	23
Total	62	107

Level	Total Number of Respondents	Average Responses per recruitment level
Technician	5	10
Bachelor	50	84
Postgraduate	7	13
Total	62	107

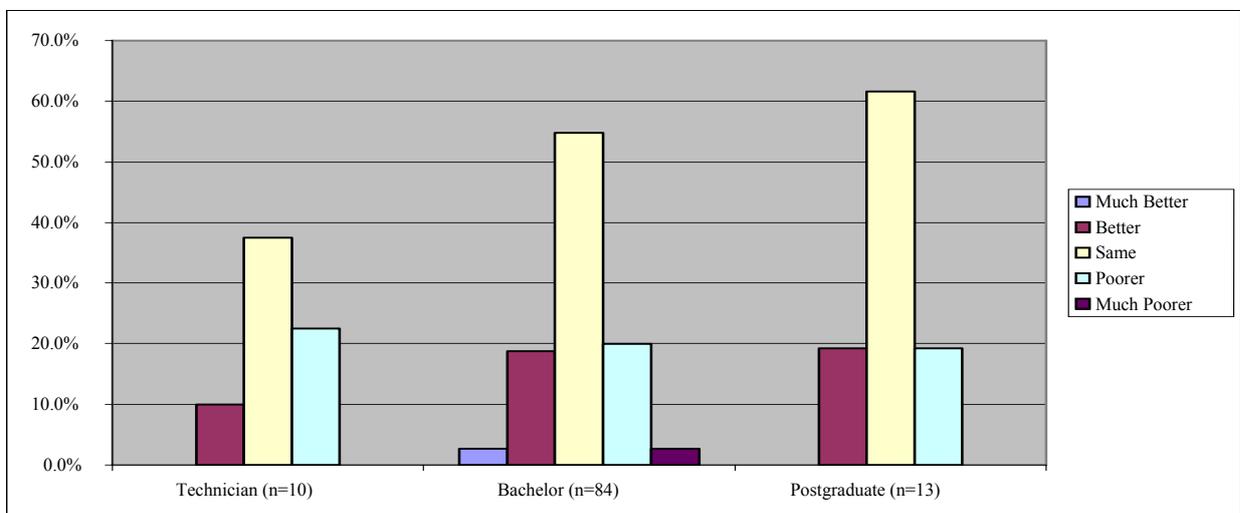
We now turn to examine the perceptions of employers at the overall level before focusing on each of the four skill sets.

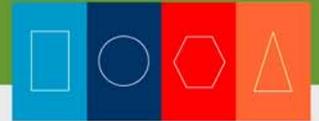
Recruitment Level Analysis

Overall analysis

- Employers perceive little overall difference between Irish and other graduates.

Exhibit 8: Overall Employers' Perceptions of Irish Graduates by Recruitment Level





The survey specifically asked how Irish graduates were considered on a scale ranging from ‘much better’ to ‘much poorer’ than their non-Irish counterparts. Exhibit 8 provides the core finding of the survey: employers perceive little or no difference between the overall abilities of Irish and non-Irish graduates. There is a near normal distribution of employer views on abilities: while over 50% of employers see no difference, 25% think Irish graduates are better and 25% think they are poorer. More detailed analysis indicates some small but significant differences at the level of the four core skill sets.

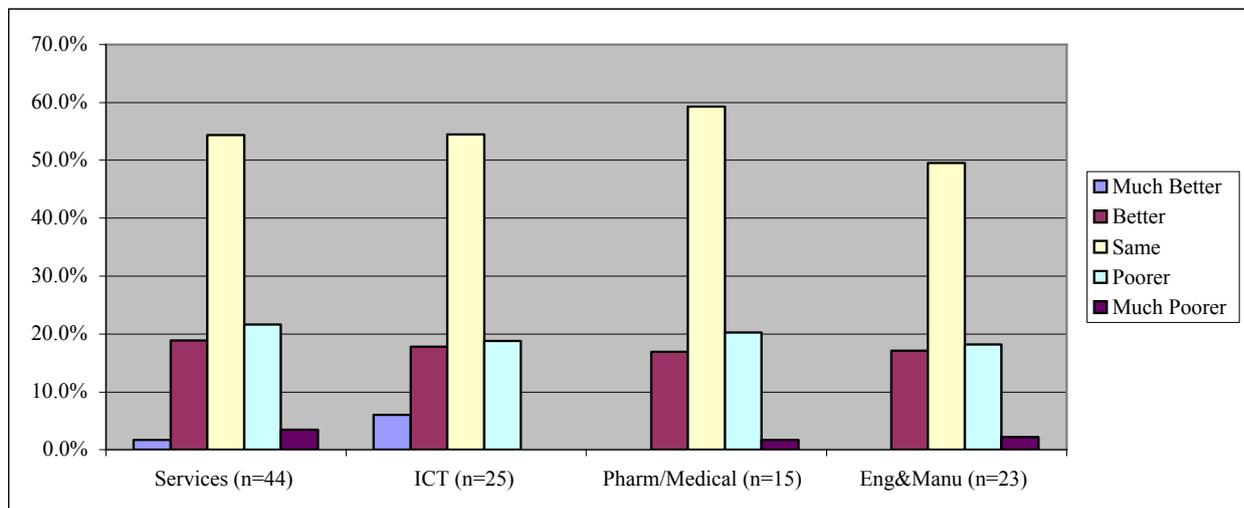
One reason for this difference could be the level at which international graduates enter the workforce in Irish based companies. According to the Industrial Liaison Officer at Engineers Ireland, language barriers can result in highly qualified engineers from Eastern Europe being placed in technician roles until these barriers are overcome. Engineers Ireland is tackling these issues by holding training events such as ‘Foreign Professionals in Construction’ which help participants to adapt to the Irish system¹⁶.

Sector Analysis

Sector level analysis

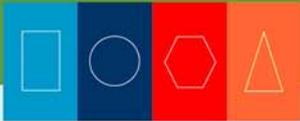
- Employers also perceive little difference between Irish and other graduates across the sectors

Exhibit 9: Overall Employers’ Perceptions of Irish Graduates by Industry Sector



Again, Exhibit 9, shows that across all industrial sectors there is no significant difference in the views of employers as regards the overall quality of Irish and non-Irish graduates - indeed the distribution looks normal. More detailed analysis indicates what may be the underlying reasons provided for assessing graduates as being ‘better’ or ‘worse’ in certain respects.

¹⁶ Interview with Una Parsons, Industrial Liaison Officer - Engineers Ireland (20th November 2006)



Domain Specific Theoretical Knowledge

- Results
- Overall little difference
 - Easter European graduates seen as significantly stronger
 - No significant differences between sectors
- Reasons
 - East Europeans have superior maths, accountancy and practical skills
 - Irish graduates with placement experience are valued more highly
 - Courses not sufficiently practical
- Steps for improvement
 - More courses should involve placements
 - More to prepare graduates for the reality of industry.

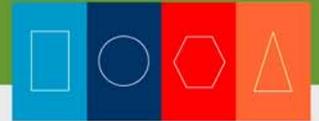
The first skill set that was considered, Exhibit 10, was the depth and breadth of domain-specific theoretical knowledge of Irish graduates and the relevance of this knowledge to the work they are performing.

Exhibit 10: Employers' Perceptions of Irish Graduates "Depth and Breadth of Knowledge"

Domain Specific	Much better	Better	The Same	Poorer	Much poorer	Don't know	Response Total
UK	1	5	(77%) 30	2	0	1	39
US	1	0	(67%) 4	0	0	1	6
Germany/North Europe	1	5	(52%) 13	5	1	0	25
Eastern Europe	0	4	(39%) 11	10	2	1	28
Asia/China	1	1	(55%) 6	1	0	2	11
Total	4	15	64	18	3	5	109

(Majority Response Percentages in brackets)

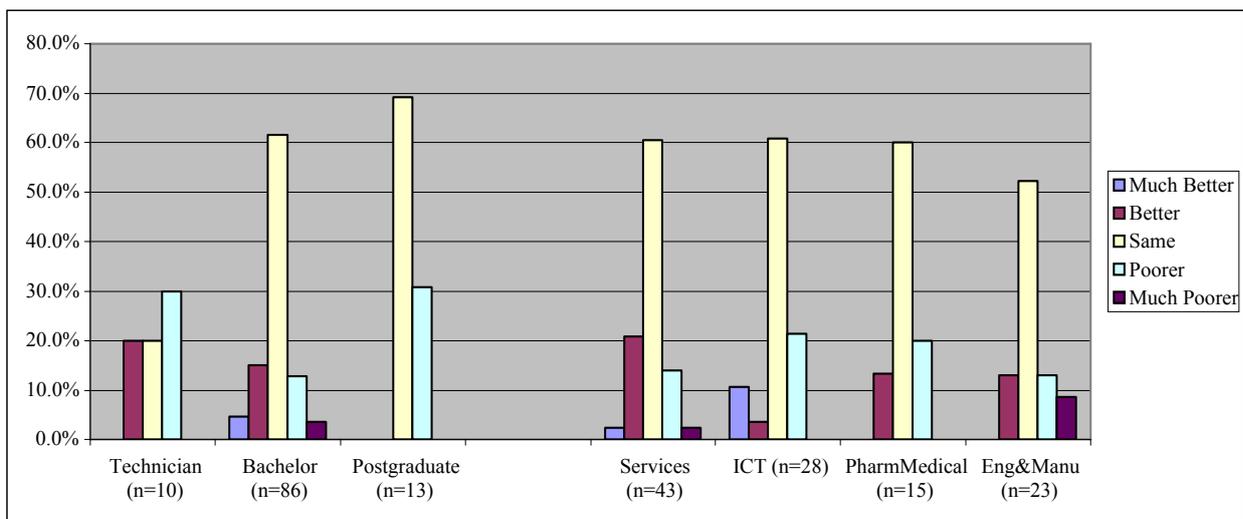
While again most employers generally saw little or no difference between Irish and non-Irish Graduates in terms of domain-specific theoretical knowledge at an overall level, there was a significant difference in the comparison between Irish and East European graduates, with East



Europeans seen as significantly stronger. This might be attributed to the extended duration of their third level education as discussed in section 4¹⁷.

There are no significant differences in the results, either for specific recruitment levels or across the sectors surveyed. Because of low survey numbers, any apparent differences at technician and postgraduate level are not statistically significant.

Exhibit 11: Employers' Perceptions of Irish Graduates by Recruitment Level and Sector of Employment - Depth and Breadth of Theoretical Knowledge



Employers' reasons for these differences

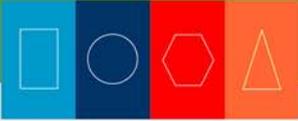
Following each question, employers were asked for their reasons for indicating Irish graduates were better/worse than their non-Irish counterparts. Here a number of issues arose:

- East Europeans/Polish graduates were seen as having superior maths, accountancy and other relevant practical skills as a result of their education
- However, in the services/banking/finance sector, there was an expressed lack of interest in such skills by a number of firms, as they teach their graduates in the relevant skills they require for their job. This was a common response from organisations that take graduates from a range of disciplines and train them towards specific qualifications such as accountancy and banking.

“Not an issue, we take people onto training contracts so they don’t rely on domain specific knowledge as such”, “we have little or no interest in their subject”.

(Operations Manager in Construction and HR Manager in Financial Services)

¹⁷ Respondents were asked to compare graduates at the same level of qualification, not at the level of actual employment



- It was highlighted by some organisations that foreign graduates are recruited to lower level technical jobs before progressing to the graduate schemes as they take time to adapt to the Irish system as mentioned previously by Engineers Ireland above. This may help explain the poorer assessment for Irish graduates recruited at technician level, as they are working with and being compared to higher skilled international graduates
- While the early stages of some Irish courses are very good, they can become weaker in later modules that would be more relevant to the industry. An example given was that the latter stages in software development (testing and support) are not touched on in some courses, with much more of the focus being on design and development
- Where Irish graduates were seen as better than non-Irish graduates, in-company placements during university were frequently mentioned as a contributing factor in equipping them with the necessary skills to start their job right away.

What can be done to improve Irish graduates' domain specific knowledge?

There was a majority response that courses in Ireland should be more practical, and include sandwich years or placements. These placements, it was mentioned by a couple of respondents, should be no shorter than three months. Internships in courses provided in Poland and Germany depend on the nature of the institution and the course - whether it follows an academic or vocational track.

Other responses included the need for more specialist graduates (that is to say first degree courses should be more focused) and importantly, career departments/course leaders should do more to inform graduates about the realities of working in industry. The option of employing more graduates at Masters level raises problems - partly because numbers are smaller, because higher degrees might command a premium, and because at least in the short term it would lead to a shortage of graduates, similar to the phenomenon already observable at the technician level. In addition, moving in this direction would mean a major cultural shift.

Practical Skills

- Results
 - Irish graduates overall similar to international counterparts, but more negative comments received
 - Strong showing from Eastern and Northern European graduates
- Reasons
 - Foreign graduates work harder
 - Foreign graduates have higher technical ability
 - Foreign graduates are older
- Steps for improvement
 - More courses should involve placements
 - More take-up of Masters courses.

The second skill set looks at the ability of Irish graduates to apply their knowledge in a real world context.

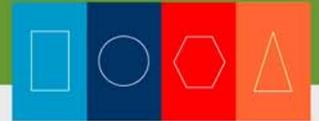


Exhibit 12: Employers' Perceptions of Irish Graduates "Practical Skills"

Practical Skills	Much better	Better	The Same	Poorer	Much poorer	Don't know	Response Total
UK	0	6	29 (71%)	5	0	1	41
US	0	1	3 (60%)	0	0	1	5
Germany/North Europe	2	0	17 (71%)	5	0	0	24
Eastern Europe	0	3	15 (56%)	8	1	0	27
Asia/China	0	1	6 (55%)	2	0	2	11
Total	2	11	70	20	1	4	108

(Majority Response Percentages in brackets)

Results indicate that Irish graduates are considered close to their international counterparts, but there was a noticeable skew in the distribution, with almost twice as many negative responses (19%) for Irish graduates as positive responses (10%). This can be attributed to a strong showing from Eastern European and German/North European graduates.

Exhibit 13 Employers' Perceptions of Irish Graduates by Recruitment Level and Sector of Employment - Practical Skills

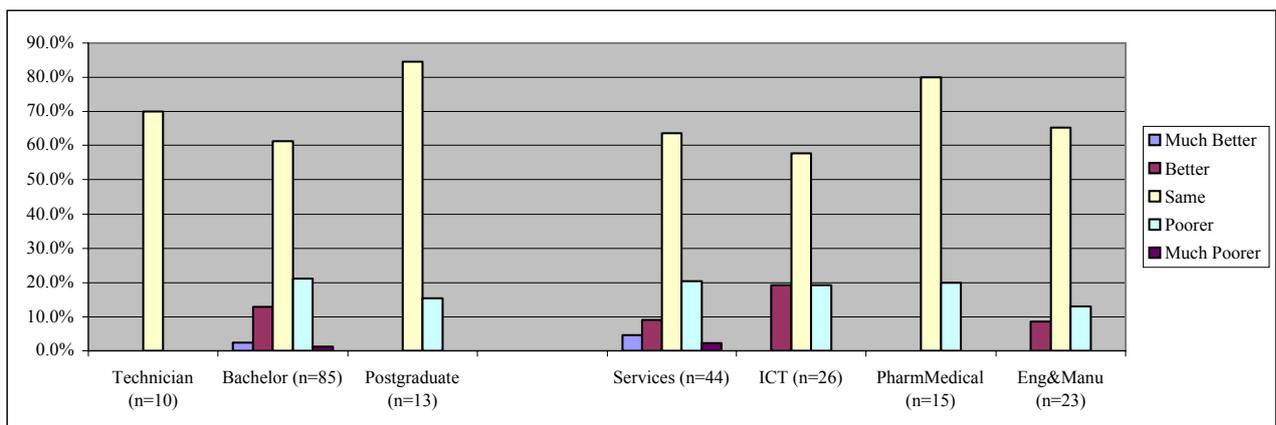
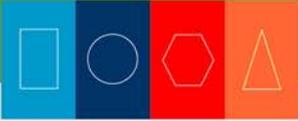


Exhibit 13 shows that respondents do not see any difference between technical graduates from different countries in this skill set. As before, there is a majority response highlighting that Irish graduates are similar to their international counterparts (average 72% across the levels).

Employers' reasons for these differences



Reasons offered by employers for non-Irish (particularly East European) graduates being better in terms of practical skills than Irish graduates, where this applied, include that:

- Although at first they come up against language barriers¹⁸, they generally work harder to get where they are. This is the most common response. This is also the case with some of the responses regarding Asian and Spanish graduates
- A number of respondents believe that they have a higher technical ability
- Also a number of respondents commented on the fact that non-Irish graduates are older than their Irish counterparts (See section 5).

It was considered that many Irish graduates do not get taught enough industry relevant skills from their courses and few participate in industrial placements. This response was given particularly by respondents in the 'PharmMedical' sector. A number of respondents feel that most practical IT and communication skills should be second nature, but that there is no real difference between graduates in this respect.

What can be done to improve Irish graduates' practical skills?

As previously mentioned, there is a call for more Irish graduates to take some form of placement or a sandwich year in industry:

"We have our own undergraduate intern program taking about 160 students per year. This is useful to us and also to the students - makes it more likely that we will employ them".

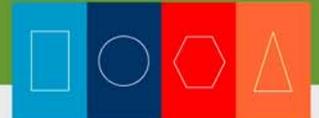
(Operations Manager in ICT Sector)

There is also a call for more practical courses at university that are kept up to date with industry developments, with one respondent highlighting the case of a university making regular visits to the company to maintain a relevant program and course structure for their students. Others mention that they would like to see Irish graduates proceed to specialise at Masters level. As before, employers would like to see a greater role for careers departments to improve graduates employability skills and interview techniques.

Soft/Generic Skills

- Results
 - Irish graduates viewed favourably
 - Strongest for graduates and postgraduates, weaker for technician level
- Reasons
 - Foreign graduates face language barriers
 - Irish graduates better communicators and team players
 - Older age profile of foreign graduates

¹⁸ When referring to language barriers in this case, it is both the real barriers (communicating in English language) and operational barriers (adapting to the way business is carried out and the unspoken language in social/business situations).



- Steps for improvement
 - More courses should involve placements
 - Need for better and more informed careers service

This skill set focuses on the ability of Irish graduates to make their meanings clear to others, work as a team, to be free thinkers and their ability to work under pressure.

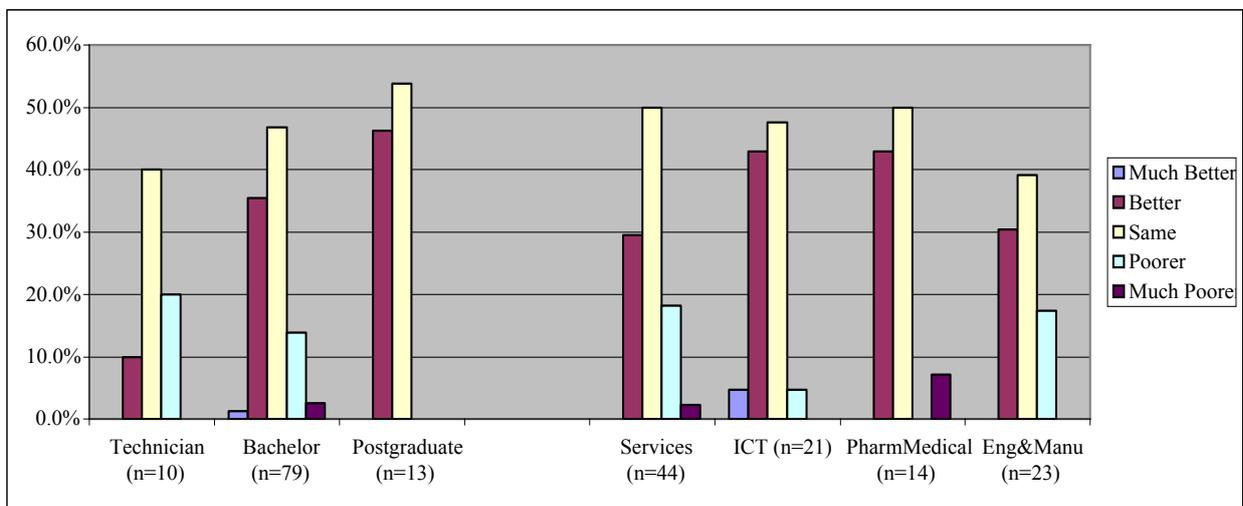
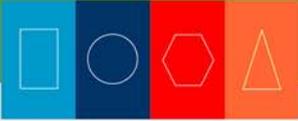
Exhibit 14: Employers' Perceptions of Irish Graduates "Soft/Generic Skills"

Soft/Generic Skills	Much better	Better	The Same	Poorer	Much poorer	Don't know	Response Total
UK	1	8	(64%) 25	4	0	1	39
US	0	0	(60%) 3	1	0	1	5
Germany/North Europe	0	(45%) 10	(45%) 10	2	0	0	22
Eastern Europe	0	(44%) 12	8	6	1	0	27
Asia/China	0	(56%) 5	2	0	1	1	9
Total	1	35	48	13	2	3	102

(Majority Response Percentages in brackets)

Irish graduates appear to compare favourably in this skill set and even fare well against graduates from Eastern Europe. There is a much higher proportion of positive responses than in the last two skill sets, with just over 35% of responses considering Irish graduates better or much better. Significantly, this is the first skill set in which Irish graduates perform better than rather than worse than their counterparts, but still the overall majority response considers Irish graduates the same. This is no doubt because language barriers have a marked affect in this skill set for effective communication with others.

Exhibit 15: Employer's Perceptions of Irish Graduates by Recruitment Level and Sector of Employment - Generic Skills



Graduates from bachelor and postgraduate levels are considered to be the same or better than international graduates in a large number of responses (82% and 100%). However, this is not the case for technical graduates, who are seen to be on a par with or poorer than their counterparts in the majority of instances (60%). This is interesting as it was mentioned before by Engineers Ireland that overseas graduates with poorer language skills are placed in technician roles until they are up to the level required by the organisation. Yet these graduates still appear to do better in a skill set they are expected to be poorer in due to language barriers.

This positive response in respect of Irish graduates is present in each of the four sectors in Exhibit 15, with each showing that in the majority of instances Irish graduates were the same (average 47%) or better (average 36%).

Employers' reasons for these differences

- Language barriers faced by non-Irish graduates can hold them back in the workplace
- Irish graduates are seen as better communicators with strong team skills
- However, companies still see merit in employing non-Irish graduates and are willing to invest time and money to help them to overcome language and cultural barriers.



The language and cultural barriers faced by foreign graduates particularly in some industries such as pharmaceuticals can be a major difficulty, due to strict regulatory conditions. This view was expressed by representatives of both IPHA and IMDA¹⁹ and highlighted in the sector level analysis.

When it comes to overall communication and team-working/people skills, it is considered that Irish graduates are better, attributed to higher levels of confidence. This, respondents believed, is a result of a shift in recent years to more continual assessment and a move away from traditional exam based courses, resulting in a more mature and “hardened” graduate. This is also an area in which Polish graduates are considered poor (as mentioned in a report by the World Bank on the tertiary education sector²⁰). It is interesting to note that there are a number of organisations which see merit in hiring foreign graduates despite this and now offer language and cultural training to foreign graduates so that they can catch up with Irish graduates.

“Socially, Irish are better and form networks of friends faster. Foreign graduates are very strong in their technical language but not as good in social language and communicating with others socially. The company runs social language courses for these employees”.

(HR Manager in ICT Software)

“Graduates are now developing earlier and generally stronger due to the fact they are competing at a very early age, e.g. trying to perform in their leaving cert. This filters through meaning grads are slightly more developed and mature which transfers to their soft and generic skills. Continuous assessment is helping, making grads work as a team. [Company] still have to develop grads a bit and integrate some basic skills in their graduate programs”.

(HR Manager in Telecommunications)

However, others believed that Irish graduates have it “too easy” - “they lack focus and want to know what we can do for them; they come along and don’t even know who we are/what we do”. It is considered to be a symptom of the labour market in Ireland that will be discussed in more detail later in the report. Eastern European graduates were perceived as being “more hungry” in the work place.

What can be done to improve Irish graduates’ soft/generic skills?

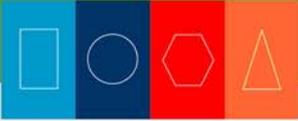
Where Irish graduates fared worse than their international counterparts, the suggested solution was to offer more sandwich years and placements during university courses. There was also a call for more team/group-based work to enhance the real world skills needed for the workplace. This could also be supported by careers departments in the universities by teaching graduates more about the working environment. Respondents reported a need in Ireland for a much stronger, and better informed career guidance service in HEIs.

Attitudinal Skills

▪ Results

¹⁹ Interview with Brian Murphy, Communications Affairs Manager - IPHA (20th November 2006) and Sharon Higgins, Director - IMDA (20th November 2006)

²⁰ The World Bank (2004) *Tertiary Education in Poland*, Warsaw Office, Poland



- Irish graduates viewed as slightly weaker
- Some reports of unrealistic expectations
- Reasons
 - Foreign graduates have longer courses
 - Older or more qualified graduates from other countries have better work ethic
 - Current labour market conditions
- Steps for improvement
 - More courses should involve more work related skills

The final skill set that was considered was the attitudinal skills of Irish graduates. This describes the willingness to question their own ideas, or those of others, to stand up for their point of view and to take other people’s views into account.

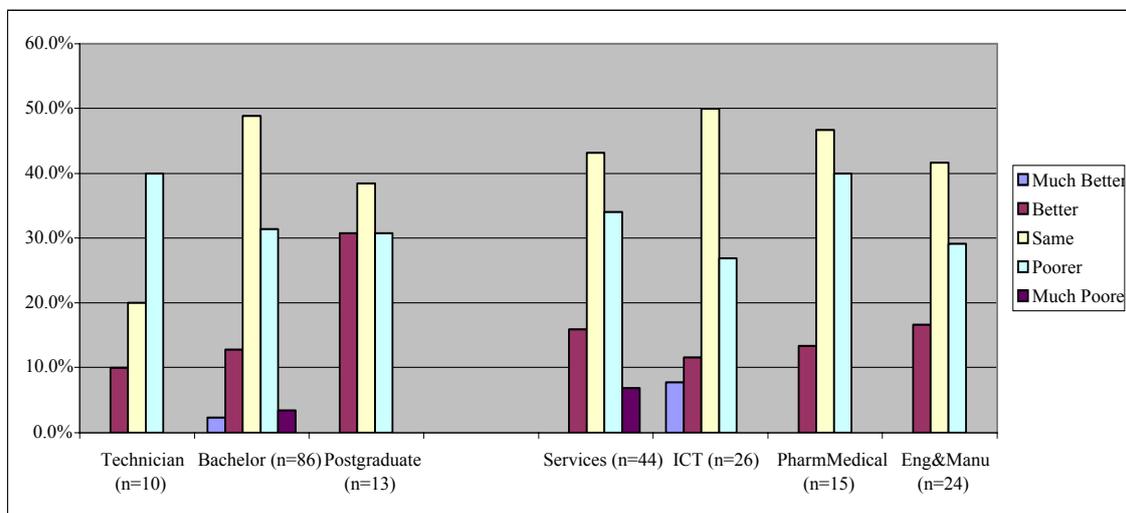
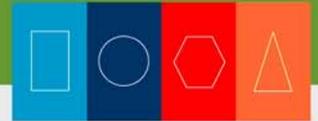
Exhibit 16: Employers’ Perceptions of Irish Graduates “Attitudinal Skills”

Attitudinal Skills	Much better	Better	The Same	Poorer	Much poorer	Don’t know	Response Total
UK	1	8	(52%) 21	9	0	1	40
US	0	1	(50%) 3	1	0	1	6
Germany/North Europe	0	2	(50%) 12	10	0	0	24
Eastern Europe	1	3	10	(45%) 13	2	0	29
Asia/China	0	2	(30%) 3	2	1	2	10
Total	2	16	49	35	3	4	109

(Majority Response Percentages in brackets)

Irish graduates are generally similar to their international counterparts in respect of this skill set but with companies again finding the skills of Eastern European and Germany/Northern Europe graduates slightly better than Irish graduates. In almost 35% of all responses Irish graduates were seen as poorer or much poorer than graduates of a different nationality, compared to 17% perceiving Irish graduates as better or much better.

Exhibit 17: Employer Perceptions of Irish Graduates by Recruitment Level and Sector of Employment - Attitudinal Skills



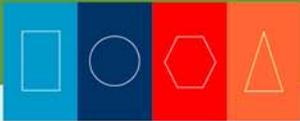
There are some indications that Irish graduates may be slightly weaker than non-Irish students in terms of attitudinal skills - particularly when looked at on an aggregated sectoral level in Exhibit 17.

Employers' reasons for these differences

In discussions with the respondents as to why such differences may exist, three issues discussed earlier arose again:

- The duration of courses, which could equip foreign graduates with higher levels of confidence in their own abilities and knowledge when it comes to the working environment.
- The entry level of foreign graduates into companies. This would mean that qualified non-Irish graduates are working in lower level jobs and therefore will be better than the lower qualified Irish graduates they are working with, giving them the confidence to defend their own ideas among their peers.
- The final issue is the labour shortage in Ireland and the affect that is having on the job market and attitudes of Irish graduates.

It was believed that what international graduates lacked in language skills, they more than made up for in confidence and general attitudinal skills. Eastern European graduates were singled out for



having a better work ethic - one respondent contended that “Irish graduates have got lazy” with others making similar comments.

“The work ethic of foreign graduates is much better as they are over here to work hard and make some money. The Irish will sit back and moan that they are not doing the job they applied for”
(Production Manager in Pharmaceuticals)

There was a split between respondents regarding the flexibility of Irish graduates with regard to work, confidence and mobility issues. Some participants insisted that Irish graduates were over-confident and had unrealistic expectations of progression within the company; others considered that Irish graduates were “too nice” and “mild mannered”. One organisation recognised this expectation of progression and has modified their career progression path, making it more visible so as to keep graduates interested and committed to the firm.

The labour market is considered to have a major effect on the attitudinal skills of Irish graduates, as was mentioned by a number of respondents throughout the four skills sets. This is to say that respondents felt that it was a candidate market allowing for Irish graduates to be selective and that they will be guaranteed a job so they do not have to apply themselves as much as international graduates appear to do. Similarly, organisations felt that Irish graduates would not stick at a job if it did not agree with them in the first month and would just find a job elsewhere.

What can be done to improve Irish graduates’ attitudinal skills?

As has been the case for the previous three skills sets, a large number of responses stated that Irish graduates should do more work placements and sandwich years. Regarding confidence levels, it was suggested that courses should put graduates in more work relevant situations, for example, be made to defend their ideas to peers and course leaders. Other respondents mentioned that the presentation skills of Irish graduates could be improved and that career departments at universities have a key role in making graduates aware of industry realities and the required skills needed to succeed. Each of these issues were summarised by one respondent:

“In my experience, quite a few graduates are overly confident in their ability to use their education in a commercial setting. They lack the relevant ‘real life’ experience but seem to think that they can come into an organisation commanding very high salaries and feel they are justified in asking for it. Sometimes I get the impression that some graduates feel companies are ‘lucky’ to get them. Not always the case!”

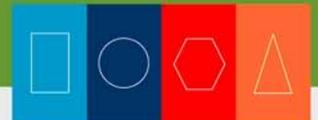
(HR Director in ICT Hardware)

Further Analysis

International comparisons

- Irish graduates compare favourably to UK graduates
- Irish graduates compare unfavourably to Eastern European graduates
- No major differences with German/Northern European Graduates

Looking further at the results to see if there are any differences that were not highlighted in the previous sections, we have applied a weighting system to the findings to take into account the higher and lower end of responses to each of the four skill sets. This scored the responses as follows



- Much better = 2
- Better = 1
- The Same = 0
- Poorer = -1
- Much Poorer = -2

Exhibit 18: Weighted Scores of Employers' Overall Perception of Irish Graduates

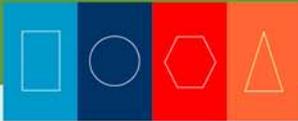
Scores	Domain Specific Theoretical Knowledge	Practical Skills	Soft/Generic Skills	Attitudinal Skills	Overall
Technician	-1	0	-1	-3	-5
Bachelor	4	-5	15	-18	-4
Post Grad	-4	-2	6	0	0
Total Score	-1	-7	20	-21	-9
Services	3	-3	3	-14	-11
ICT	1	0	10	0	11
PharmMedical	-1	-3	4	-4	-4
Eng&Manu	-4	-1	3	-3	-5
Total Score	-1	-7	20	-21	-9

If we consider the results following implementation of a scoring system we can see some interesting results. Overall, Irish graduates are considered poorer than their international counterparts with a final aggregate score of -9. Irish graduates compare most favourably in skill set three with a score of 20, however this is tempered by the negative scores across the other three skill sets, especially in attitudinal skills (-21). The domain specific knowledge of Irish graduates is fairly similar with a score of -1, but companies feel that their practical skills are poorer when compared to international graduates.

When the scored results are broken down into nationality groupings some major differences are highlighted.

Exhibit 19: Weighted Scores of Employers' Overall Perception of Irish Graduates When Compared to Eastern European Graduates

Eastern Europe (n=28)	Domain Specific Theoretical Knowledge	Practical Skills	Soft/Generic Skills	Attitudinal Skills	Overall
Technician	0	0	0	-1	-1
Bachelor	-7	-6	0	-11	-24
Post Grad	-3	-1	4	0	0



Total Score	-10	-7	4	-12	-25
Services	-5	-5	0	-7	-17
ICT	-2	0	4	-1	1
PharmMedical	0	-1	0	-2	-3
Eng&Manu	-3	-1	0	-2	-6
Total Score	-10	-7	4	-12	-25

Overall, Irish graduates do not appear to compare favourably to graduates from Eastern Europe with an aggregate score of -25. The positive score for Irish graduates in Skill set three could be attributed to the language barriers that have been discussed previously.

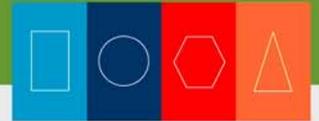
Exhibit 20: Weighted Scores of Employers' Overall Perception of Irish Graduates When Compared to UK Graduates

UK (n=39)	Domain Specific Theoretical Knowledge	Practical Skills	Soft/Generic Skills	Attitudinal Skills	Overall
Technician	0	0	-1	0	-1
Bachelor	5	1	7	2	15
Post Grad	0	0	0	-1	-1
Total Score	5	1	6	1	13
Services	3	1	2	1	7
ICT	0	-1	2	1	2
PharmMedical	1	0	0	-1	0
Eng&Manu	1	1	2	0	4
Total Score	5	1	6	1	13

When compared to graduates from the UK, Irish graduates are perceived to be slightly better overall across the skill sets.

Exhibit 21: Weighted Scores of Employers' Overall Perception of Irish Graduates When Compared to German/North European Graduates

Germany/North Europe (n=24)	Domain Specific Theoretical Knowledge	Practical Skills	Soft/Generic Skills	Attitudinal Skills	Overall
Technician	-1	0	0	-2	-3
Bachelor	2	0	7	-6	3
Post Grad	-1	-1	1	0	-1
Total Score	0	-1	8	-8	-1



Services	5	2	4	-5	6
ICT	0	0	0	0	0
PharmMedical	-2	-2	4	-1	-1
Eng&Manu	-3	-1	0	-2	-6
Total Score	0	-1	8	-8	-1

This final comparison suggests that, despite the differences in education systems discussed in section 0, Irish and German/North European graduates are, overall, perceived to be the same.

Needs for Graduates over the next ten years

The respondents were finally asked about their views as to the skill needs from graduates over the coming decade.

Possibly unsurprisingly, top of the list for respondents was the need for graduates to acquire more practical skills and experience of “real work situations” through placements, sandwich years and the introduction of more practical and technical courses. This would then enable graduates to start work from day one and not appear “green” when starting work.

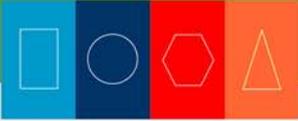
Linked with this is the need for courses to evolve, adapt and keep up to date with industry practices so graduates are given the latest knowledge and skill sets. There are examples from the respondents regarding course/department leaders from universities liaising with industry members to find out the latest and most relevant developments that could be translated to their course. Respondents also felt that career departments could do more to improve the interview skills and industry knowledge for graduates and make them more employable.

“The courses related to this industry [Pharmaceutical] could be better tailored so that graduates have more of an idea of what is involved and what they will be getting into. Only 20 out of 100 graduates actually work in the labs and this surprises them. They have good technical skills and knowledge, but their practical knowledge is lacking - they don’t know what is really involved in the manufacturing of pharmaceuticals. They are unprepared for the job role”.

(Production Manager in Pharmaceuticals)

There was a strong belief that Irish graduates would benefit from international placements and that their language skills could be improved upon. This is an important point as it was believed by a number of respondents that Irish graduates will struggle to work in the wider international context in the next few years, especially when dealing with the new accession states of Eastern Europe. Tied in with this point was the importance of teaching graduates more cross-cultural skills, making them more adaptable and increasing their international mobility.

A final important skill need that has emerged is to have a greater understanding of business and management. By this we mean the ability of graduates to understand where they fit into the business system and how they can affect it. Management skills relate to the need for graduates to be able to perform basic project management/finance techniques such as payback and ROI. It was considered in a number of responses through the survey that continuous assessment in courses helped develop these project management skills and enabled graduates to work to deadlines far more effectively.



6. Conclusions and recommendations

Conclusions

From the analysis a number of conclusions can be drawn on employer perceptions of Irish and non-Irish graduates:

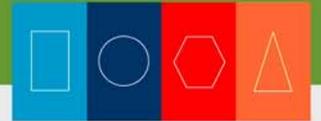
- There are relatively few differences in employer perceptions between Irish and non-Irish graduates when viewed overall.
- Irish graduates appear to compare favourably in “Soft/Generic” skills due, in part, to the language and cultural barriers faced by non-Irish graduates when they first enter employment in Ireland.
- However, Irish graduates fare worse in “Attitudinal” skills, with foreign graduates considered more eager and hungry in the working environment. Respondents believe that this can be attributed to the benign labour market in Ireland.
- There are indications that graduates from Eastern Europe are perceived as possibly better than Irish graduates in areas such as domain specific knowledge and attitudinal skills. This may be due to:
 - Longer periods in school and higher education.
 - High levels of unemployment in their home countries.
 - Well qualified Eastern Europeans being initially recruited to lower levels in companies due to language and cultural challenges.
 - The Eastern European graduates being considered are a self-selected highly motivated and mobile group.

However, these challenges were regarded as temporary by most employers and are being tackled by both companies and representative organisations.

Recommendations

Recommendations fall into two groups: those resulting directly from the survey - which could be characterised as the direct recommendations of the recruiters - and a second set which look behind these at some of the underlying factors.

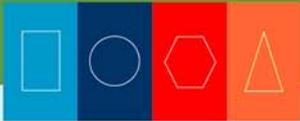
There is a strong recommendation from the recruiters for the **introduction of more placements in third-level courses in Ireland**. There is no doubt that these are highly valued. However, within the degree process there is inevitably a trade-off between time spent on placement and time spent acquiring knowledge. Here, placements address two issues - understanding of the workplace and the work ethos, and practical application of much more specific skills. In the former case, quite general work experience would be valuable and perhaps is not valued adequately by the graduates or recognised by the recruiters. Equally, formal placements have a much broader role in the development and operation of higher education/industry cooperation.



A second recommendation related to this is the need for **better communication to Irish students of the reality of the workplace** - which needs to be addressed by employers, and by higher education institutions. It relates both to curriculum design and careers guidance issues.

Thirdly, it was felt that Irish students needed to have **better management and business knowledge to understand their role in the workplace**. This factor relates to the issue of unrealistic expectations either of the type of work people would be doing, or of the short-term career prospects. Again, while concrete steps could be taken by Higher Education Institutions to include some of these issues in the curriculum, there is also an onus on the firms to ensure there is material and support available to assist students to prepare for the workplace.

Finally there was a recommendation that courses in Ireland should make more use of **continuous assessment to build team skills and confidence**. This does not imply a moving away from examinations with all the attendant complications in assessment, but rather a move towards more collaborative working and thus personal development.



Appendix A: Survey

A.1: Respondents, their companies, and recruitment patterns

Respondent Details

Gender	Male	Female	Response Total
	23	39	62

Nationality	
Ireland	42
United Kingdom	14
Germany	0
France	0
Scandinavia / Benelux	0
Spain / Italy / Greece	0
New Accession States / Eastern Europe / Russia	0
United States / Canada	1
South & Central America	0
Asia	1
Australasia	3
Response Total	61

Education	
Ireland	24
United Kingdom	6
Germany	0
France	0
Scandinavia / Benelux	0
Spain / Italy / Greece	0
New Accession States / Eastern Europe / Russia	0
United States / Canada	2
South & Central America	0
Asia	0
Australasia	3
Response Total	35



Years in post	
0 to 2	17
3 to 5	21
6 to 8	9
9 to 11	4
12+	3
Response Total	54

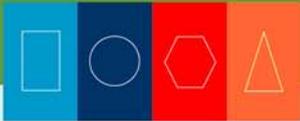
Indicate your present job area

	Analyst / Developer / Researcher	Operations / Production	Marketing Advertising Accountancy Business Support.	Human Resources	Coordination or Higher Management	Response Total
	2	8	8	39	5	62

Company Details

Sector of Activity	
Banking Insurance & Finance	16
Web Advertising & Business Services	4
Education & Health Services	1
Other Services	6
ICT - Software	9
ICT - Hardware	2
Pharmaceuticals	8
Medical technologies	2
Chemicals	0
Engineering & Other Manufacturing Industry	14
Response Total	62

Nationality of Parent Company	
Irish	10
US	27
British	10
German	6
Scandinavian	2
French	1
Asian	1
Other	3
Total Response	60



Employment in Ireland

	1 to 50 employees	51 to 500 employees	501 to 2000 employees	2000+ employees	Response Total
	4	26	11	1	42



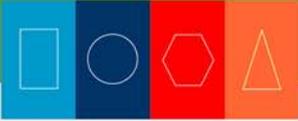
Recruitment Patterns

Which level do you recruit most commonly? (1 being the most common)					
	1	2	3	4	Response Average
Technician Level	5	8	6	3	2.32
Bachelor / First Degree	50	6	2	0	1.17
Masters Level / Post-Graduate Diploma	4	33	7	1	2.11
PhD	3	1	12	6	2.95
Total Respondents	62				

From what disciplines do you mostly recruit and which is most common? (1 being the most common)						
	1	2	3	4	N/A	Response Average
Science	15	15	5	6	0	2.05
Engineering	23	13	8	4	0	1.85
Business/Finance	23	8	4	2	0	1.59
Humanities & Social Sciences	0	7	6	6	2	2.95
Total Respondents	62					

What area do they mostly work in?	Response Total
Analyst / Developer / Researcher	37
Operations / Production	40
Marketing, Advertising, Accountancy, Other Business Sup	24
Coordination or Higher Management	6
Total Respondents	61

Please indicate from what discipline					
	Science	Engineering	Business/Finance	Humanities & Social Sciences	Response Total
Analyst / Developer / Researcher	13	11	15	1	40
Operations / Production	6	28	10	2	46
Marketing Advertising Accountancy Other Business Support.	4	0	23	0	27
Coordination or Higher Management	0	2	6	0	8

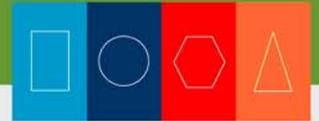


**Apart from Ireland, which countries / regions do you tend to recruit these graduates from?
(Please tick all that apply)**

	Response Total
UK	39
Germany	17
US	5
Eastern Europe	32
Asia	10
Other (please specify)	32
Total Respondents	62

**And which country do you recruit from most commonly?
(1 being the most common)**

	1	2	3	4	5	6	Response Avg
UK	27	7	2	1	0	0	1.38
Germany	5	3	3	3	0	0	2.29
US	1	1	2	1	1	0	3
Eastern Europe	17	9	2	3	0	0	1.71
Asia	3	4	1	0	1	0	2.11
Other	8	8	7	1	1	0	2.16



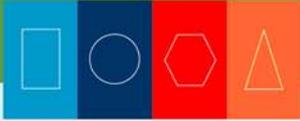
A.2: Recruitment and Sector Level Analysis Breakdown

Recruitment Level Analysis - Irish Graduates are...

	Much Better	Better	Same	Poorer	Much Poorer	Don't Know
Technician	0.0%	10.0%	37.5%	22.5%	0.0%	30.0%
Bachelor	2.7%	18.8%	54.8%	19.9%	2.7%	1.2%
Postgraduate	0.0%	19.2%	61.5%	19.2%	0.0%	0.0%

Sector Level Analysis - Irish Graduates are...

	Much Better	Better	Same	Poorer	Much Poorer	Don't Know
Services	1.1%	17.1%	54.3%	23.4%	4.0%	0.0%
ICT	5.9%	17.8%	54.5%	18.8%	0.0%	3.0%
Pharm/Medical	0.0%	16.9%	59.3%	20.3%	1.7%	1.7%
Eng&Manu	0.0%	17.2%	49.5%	18.3%	2.2%	12.9%



A.3: Skill Set Analysis Data

Skill Set 1 - Irish Graduates are...

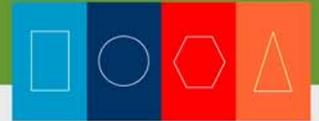
	Much Better	Better	Same	Poorer	Much Poorer
Technician	0.0%	20.0%	20.0%	30.0%	0.0%
Bachelor	4.7%	15.1%	61.6%	12.8%	3.5%
Postgraduate	0.0%	0.0%	69.2%	30.8%	0.0%
Services	2.3%	14.0%	60.5%	20.9%	4.7%
ICT	10.7%	3.6%	60.7%	21.4%	0.0%
PharmMedical	0.0%	13.3%	60.0%	20.0%	0.0%
Eng&Manu	0.0%	13.0%	52.2%	13.0%	8.7%

Skill Set 2 - Irish Graduates are...

	Much Better	Better	Same	Poorer	Much Poorer
Technician	0.0%	0.0%	70.0%	0.0%	0.0%
Bachelor	2.4%	12.9%	61.2%	21.2%	1.2%
Postgraduate	0.0%	0.0%	84.6%	15.4%	0.0%
Services	4.5%	9.1%	63.6%	20.5%	2.3%
ICT	0.0%	19.2%	57.7%	19.2%	0.0%
PharmMedical	0.0%	0.0%	80.0%	20.0%	0.0%
Eng&Manu	0.0%	8.7%	65.2%	13.0%	0.0%

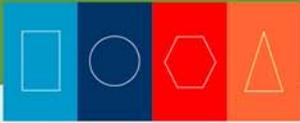
Skill Set 3 - Irish Graduates are...

	Much Better	Better	Same	Poorer	Much Poorer
Technician	0.0%	10.0%	40.0%	20.0%	0.0%
Bachelor	1.3%	35.4%	46.8%	13.9%	2.5%
Postgraduate	0.0%	46.2%	53.8%	0.0%	0.0%
Services	0.0%	29.5%	50.0%	18.2%	2.3%
ICT	4.8%	42.9%	47.6%	4.8%	0.0%
PharmMedical	0.0%	42.9%	50.0%	0.0%	7.1%
Eng&Manu	0.0%	30.4%	39.1%	17.4%	0.0%



Skill Set 4 - Irish Graduates are...

	Much Better	Better	Same	Poorer	Much Poorer
Technician	0.0%	10.0%	20.0%	40.0%	0.0%
Bachelor	2.3%	12.8%	48.8%	31.4%	3.5%
Postgraduate	0.0%	30.8%	38.5%	30.8%	0.0%
Services	0.0%	15.9%	43.2%	34.1%	6.8%
ICT	7.7%	11.5%	50.0%	26.9%	0.0%
PharmMedical	0.0%	13.3%	46.7%	40.0%	0.0%
Eng&Manu	0.0%	16.7%	41.7%	29.2%	0.0%



Appendix B: Questionnaire

Questions About Yourself

- 1 Gender
- 2 Nationality
- 3 Where did you take your first degree?
- 4 Indicate your present job area
- 5 Years in post
- 6 Company Name

Please provide the following information about your company

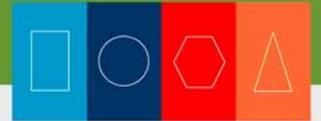
- 1 Sector
- 2 Nationality of parent company
- 3 Employment in Ireland
- 4 From which level of educational attainment do you recruit most commonly?
- 5 From what disciplines do you mostly recruit, and which is the most common?
- 6 What area do they mostly work in?
- 7 Please indicate from what discipline
- 8 Apart from Ireland, which countries / regions do you tend to recruit these graduates from?
- 9 And which country do you recruit from most commonly?

Skill Set Questions (Repeated for Each Skill Set)

- 1 In your opinion, compared to UK/US/DE/NE/EE/AI graduates, do Irish graduates perform - Much better, Better, Poorer, Much poorer, Don't know? (Your most common countries)
- 2 Can you think of any reasons for these differences?
- 3 (If worse) How do you think this could be changed to help Irish Higher Education to improve these Irish graduates' skill set?

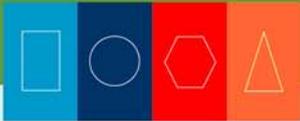
Final Question

How do you see the main competence /skill / knowledge needs of these graduates changing over the next decade? (Your most commonly recruited level of graduate)



Appendix C: Participant Organisations

ABS Production Wexford LTD
AIB
Allergan Pharmaceuticals Ireland
Allied Irish Bank (London Office)
Amann Industries Corp
Analogue Devices
Apple Ireland
Atkins Ireland
Balfour Beatty (Civil Engineering)
Bank of Ireland Group/Bank of Ireland Securities Service
Bisys Hedge Fund Services
Bristol-Myers Squibb
BT
Changing Worlds
Citco Fund Services (Dublin)
DEPFA Bank
Dresdner Kleinwort
Eaton Automotive
FDM Group
Fidelity Investments (Offshore IT)
Fortis Prime Fund Solutions
Glaxosmithkline Cork - Chemists
Goodrich Control Systems (N.I.)
Grant Thornton
Harmac Medical Products Ltd
Hay (Construction Division)
ICSA
Intel
Investors Fund Services (Ireland) Ltd
Investors Trust Europe
Iralco LTD
Kerry Group

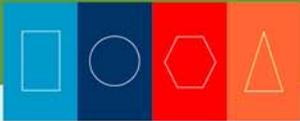


KPMG
LED Group
Leo Pharma
Lovells (Law)
Mellon Fund Administration
Merrill Lynch
Microsoft Ireland (European Operations)
Moore Stevens Caplin Meehan
Murex
Musgraves
O2 Ireland
PA Consulting
Pfizer
Quintiles
RCI Call Centre (Ireland) Ltd
Reuters
RSM Robson Rhodes
SAP
Schlumberger Oilfield Services
Science Recruitment Ireland
Servier (Ireland) Ltd
Siemens Business Support
Stryker
Symantec Ireland
TATA
Warwick Manufacturing Group



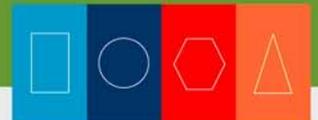
Appendix D: EGFSN Membership

Ms. Anne Heraty, CPL Resources PLC, Chairperson
Ms. Ruth Carmody, Assistant Secretary, Department of Education and Science
Ms. Anne Forde, Principal Officer, Department of Education and Science
Ms. Liz Carroll, Training and Development Manager, ISME
Mr. Enda Connolly, Divisional Manager, IDA Ireland
Mr. Fergal Costello, Head of IoT Designation, Higher Education Authority
Mr. Ned Costello, Chief Executive, Irish Universities Association
Mr. Brendan Ellison, Principal Officer, Department of Finance
Mr. Roger Fox, Director of Planning and Research, FÁS
Mr. David Hedigan, Manager, Sectoral Enterprise Development Policy, Enterprise Ireland
Mr. Gary Keegan, Director, Acumen
Mr. John Martin, Director for Employment, Labour & Social Affairs, OECD
Mr. Dermot Mulligan, Assistant Secretary, Department of Enterprise, Trade and Employment
Mr. Pat Hayden, Principal Officer, Department of Enterprise, Trade and Employment
Mr. Frank Mulvihill, President, Institute of Guidance Counsellors
Dr. Brendan Murphy, President, Cork Institute of Technology
Mr. Alan Nuzum, CEO, Skillnets
Ms. Aileen O'Donoghue, Director of Financial Services Ireland, IBEC
Mr. Peter Rigney, Industrial Officer, ICTU
Ms. Jacinta Stewart, Chief Executive, City of Dublin VEC
Mr. Martin Shanahan, Head of Human Capital and Labour Market Policy, Forfás (also Head of Secretariat)



Appendix E: Publications by the Expert Group on Future Skills Needs

Report	Date of Publication
The Future Skills and Research Needs of the International Financial Services Industry	December 2007
Monitoring Ireland's Skills Supply: Trends in Educational/Training Outputs	October 2007
Tomorrow's Skills: Towards a National Skills Strategy	March 2007
National Skills Bulletin 2006	December 2006
Future Skills Requirements of the International Digital Media Industry: Implications for Ireland	July 2006
Careers and Labour Market Information in Ireland	July 2006
Skills at Regional Level in Ireland	May 2006
SME Management Development in Ireland	May 2006
Monitoring Ireland's Skills Supply: Trends in Educational/Training Outputs	January 2006
Data Analysis of In-Employment Education and Training in Ireland	January 2006
National Skills Bulletin 2005	October 2005
Skills Needs in the Irish Economy: The Role of Migration	October 2005
Languages and Enterprise	May 2005
Skills Requirements of the Digital Content Industry in Ireland Phase I	February 2005
Innovate Market Sell	November 2004
The Supply and Demand for Researchers and Research Personnel	September 2004
Literature Review on Aspects of Training of those at Work in Ireland	June 2004
Financial Skills Monitoring Report	November 2003
Responding to Ireland's Growing Skills Needs - The Fourth Report of the Expert Group on Future Skills Needs	October 2003
The Demand and Supply of Skills in the Biotechnology Sector	September 2003
Skills Monitoring Report - Construction Industry 2003/10	July 2003
Benchmarking Education and Training for Economic	July 2003



Development in Ireland	
The Demand and Supply of Engineers and Engineering Technicians	June 2003
The Demand and Supply of Skills in the Food Processing Sector	April 2003
National Survey of Vacancies in the Private Non-Agricultural Sector 2001/2002	March 2003
National Survey of Vacancies in the Public Sector 2001/2002	March 2003
The Irish Labour Market: Prospects for 2002 and Beyond	January 2002
Labour Participation Rates of the over 55s in Ireland	December 2001
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