National Survey of Employers' Views of Irish Higher Education Outcomes

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Table of Contents

Executive summary

Key survey findings

Main findings

- Companies, while generally satisfied with the range of skills of graduates, had lower satisfaction levels of graduates' written communication, business awareness and entrepreneurship skills
- Over 75% of companies are confident about graduates having the right workplace and transferable skills and relevant subject or discipline knowledge
- However, employers are less confident about graduates having the 'right attitude'.

Figure 1: Supply of graduates in next 5-10 years

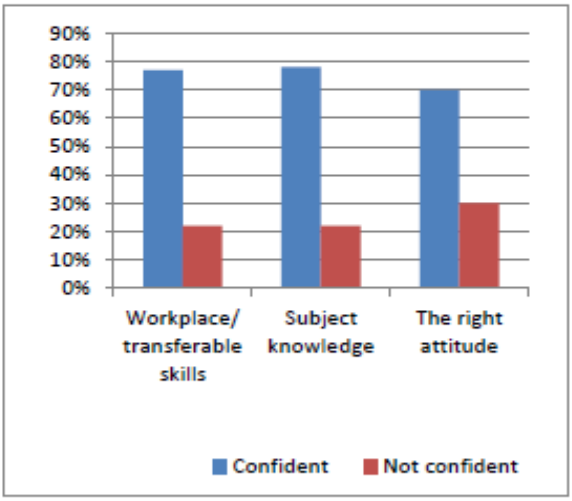
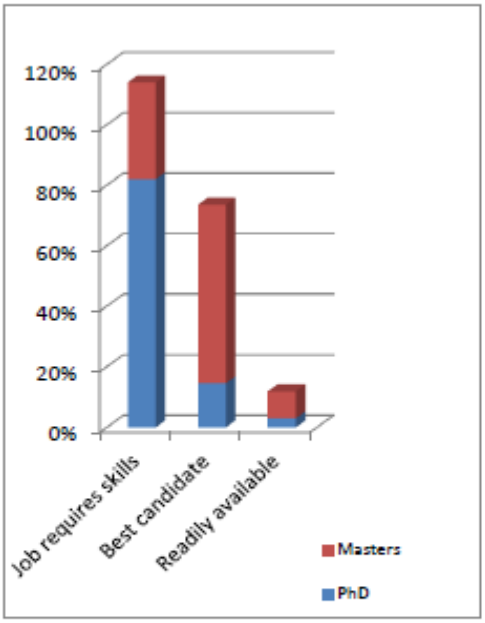


Figure 2: Recruitment of Masters and PhD graduates



Masters and PhD graduate recruitment

- Work experience, completion of specific courses and a 2.1 degree or above are the key entry standards for graduate applications
- The majority of PhD graduates were employed because the job required doctorate level skills or qualifications compared to less than a third of masters graduates.
- The majority of master's graduates were recruited not because the job particularly required their skills but because they were the best candidates for the job.
- A minority of masters and PhD graduates were recruited because graduates with these qualifications were readily available.

- More than 80% of companies who had recruited STEM graduates were satisfied with the calibre of graduates and felt the skills they were learning were relevant to industry.
- There was significantly less satisfaction with the speed at which course content changes were made to meet changing needs.
- Companies were asked to identify if they used any of a pre-set list of minimum entry standards for graduate applications. Slightly fewer than two out of five respondents used 'relevant work experience' as a minimum entry standard. Also used by around a third of respondents were 'completion of specific courses' or 'have or expect a 2.1 degree or above'

Figure 3: Satisfaction with STEM graduates

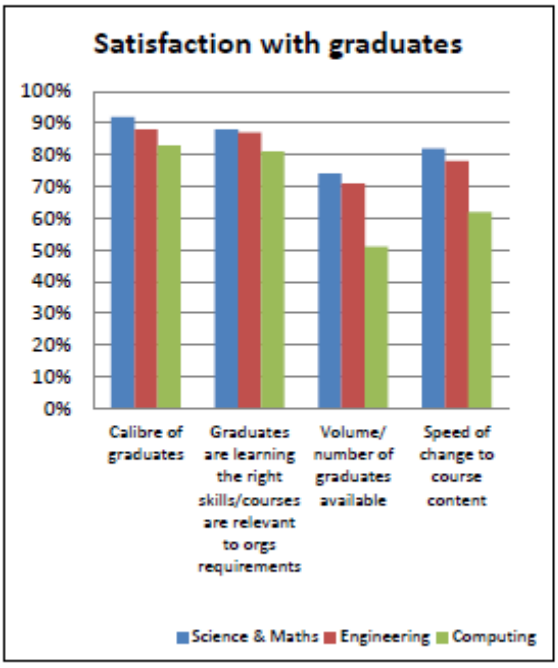
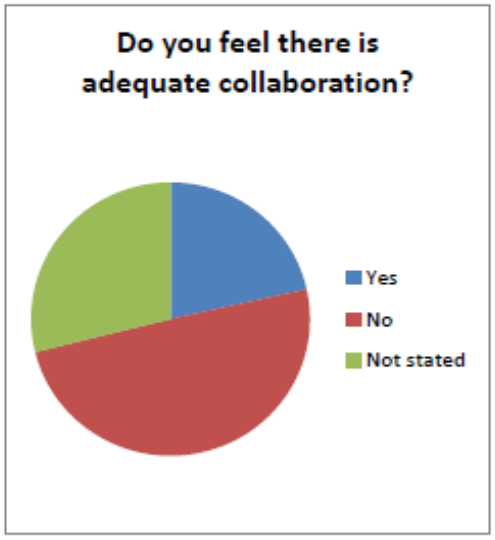


Figure 4: Engagement



Engagement between industry and higher education

- Half of the companies surveyed do not feel there is adequate engagement between industry and higher education
- Participating in work placement programmes and providing information for surveys or answering questions are seen as the most important areas to engage on generally and the area where most engagement occurred was with the careers services. Greater communication and involvement on both sides is seen as essential to change this.

Key recommendations from the pilot survey

Survey sample

This pilot study was successful and achieved its main objectives of developing and testing a robust survey instrument for the capture of data on employer attitudes on the outputs of higher education in Ireland. It generated a representative sample size of 402 companies which shows proportionality across various sectors, organisation size, ownership and location and which represented 12.8% of total employment. This compares well with similar international surveys (a 2011 Confederation of British Industry survey on higher education outcomes received usable responses from 566 companies, equivalent to 8.8% of all employees in the UK).

The concentrated structure of Irish business (460 companies account for one third of all private sector employees) makes it particularly important that larger companies respond. However over 45% of employees work in companies employing less than 50 staff and gathering the opinions of this very heterogeneous SME cohort poses particular challenges.

The pilot demonstrated the need to collect a larger numbers of responses in order to ensure that subcategories were adequately populated for more detailed analysis (e.g. by region or sector). For example, the survey steering group agreed that a long-term ambition for this survey could be the collection and analysis of data on a 'preferred institution' basis in order to provide anonymised benchmarking data to individual institutions. A much larger volume of respondents would be needed to do this effectively. Given that some individual career services carry out similar exercises, it may be possible to adapt this as a standard tool.

Confining usable responses in some categories to companies who had recruited graduates in the last two years proved to be unnecessarily restrictive. Therefore the steering group agreed that the scope should be extended in line with a recent European Commission survey (see below).

The public sector was not specifically targeted for the pilot (although 20 semi-state companies and six Government agencies did respond). Given that the public sector is traditionally a significant graduate recruiter, this gap should be addressed before the full survey is launched.

Recommendations:

- Increase sample size – higher numbers of companies are required for more detailed analysis (e.g. region, sector, preferred institution)
- Ensure maximum response from companies with 250+ employees
- Extend sample to companies who have recruited higher education graduates in the past five years and/or are planning to recruit such graduates in the next five years (in line with the 2010 European Commission survey on 'Employers' perception of graduate employability'.
- Develop a communications strategy and formal launch for the full survey (involving the Department of Education and Skills, education stakeholders and business organisations).
- Provide respondents with detailed report of findings as an acknowledgement their participation
- Invite a member of the Public Appointments Service to join the Steering Group in order to promote the survey to public sector recruiters
- Discuss the possibility of aligning the national survey with individual careers service surveys with the Association of Higher Education Careers Services

Survey instrument

Inevitably, the level of detail required by the survey has an impact on response rates. Companies already face significant administrative burdens. SMEs, in particular, struggle to complete large numbers of forms and surveys (many of which are a statutory requirement). The pilot questionnaire was lengthy, with 27 major questions. The requirement to collect data by graduate discipline and degree level presented a particular challenge in populating some datasets.

This was somewhat ameliorated by using the facility provided by the Dimensions software. The pilot questionnaire has also provided the group with empirical data which enables it to determine which questions were most robustly answered and which ones could be removed with minimal loss of data.

A number of survey responses contained 'test' answers which demonstrated that respondents examined the document prior to completion. An accompanying guide, which outlines the content of the questionnaire in advance, could help to improve the response rate.

Given the number of business organisations engaged in the process, it was impossible to personalise questionnaires (i.e. pre-populate company profile information). The use of a company identifier for a particular cohort (e.g. the 450 companies with more than 250 employees) would facilitate tracking and boost the response rate. It would also allow respondents to 'park' and then return to the questionnaire, as a survey of this complexity may require consultation with colleagues.

It would also be desirable to align some questions in the forthcoming National Student Survey to compare employers and student perceptions on a small range of issues

Recommendations:

- Reduce number of questions based on responses to pilot
- Exclude the question on preferred institution until a critical mass of respondents has been developed and the instrument is aligned with individual careers service surveys.
- Define core questions for reuse
- Ensure data collection software is capable of routing based on response
- Personalise questionnaires for companies with more than 250 employees
- Review the possibility of aligning question(s) with the National Student Survey
- Provide an explanatory document outlining the content of the questionnaire in advance

Qualitative research

The pilot survey provides data and some views that can be generalised from a sample of employers. However, given the granularity of information required and the diversity of issues, it would be worthwhile attempting to gain a deeper understanding of underlying reasons, motivations and context. The pilot provides a good opportunity to follow-up with qualitative research, in the first instance with companies who have expressed significant dissatisfaction with graduate suitability and higher education – business links, or to expand on comments expressed in reply to open-ended questions.

Recommendation:

- Follow-up telephone interviews/focus groups with respondents who have expressed significant dissatisfaction with graduate suitability and higher education – business links

Special modules

The use of a special module is a useful vehicle to gather views on a specific issue. Where relevant, respondents to the pilot were asked to provide their views on STEM graduates and modern language proficiency. In the event, this added to the complexity of the questionnaire and the group believes that future surveys should carry one special module (e.g. provision of flexible learning etc.)

Recommendation:

- Include one special module (e.g. provision of flexible learning opportunities, quality of STEM graduates etc.) in each survey

Timing and frequency

The review of similar one-off international and national surveys of employer perceptions of education outcomes reinforced the view that while they provide a useful 'snapshot', they tend to not provide very strong messages (unless there are serious problems). Therefore the steering group believes that it would be important to repeat the survey at regular intervals to track employer's perceptions on an on-going basis – a 'sentiment indicator'

The para-data collected by conducting the survey online has also allowed the researchers to see the start and end times of respondents, dates of effective reminders, participation peak and trough times in terms of completion, which will assist the steering group in timing and improving the ongoing suitability of the instrument.

Recommendation:

- Undertake quantitative survey with core questions every two to three years to build up a 'sentiment' indicator
- Do not undertake survey during summer or major holiday periods
- Undertake follow-up qualitative research in alternate years

Governance

The survey steering group was an effective vehicle for refining the research objectives and agreeing the broad research methodology. While it was unusually large for a project working group, it proved extremely useful in providing a broad range of technical expertise and a means to get views from the education and business stakeholders.

On an on-going basis, it will be important to provide greater clarity on who owns the data and how it is disseminated. To preserve the independence of the process, it may be most appropriate that these responsibilities should remain with the steering group itself.

Recommendation:

- Retain the National Employer Survey Steering Group with current terms of reference and as constituted (with the addition of a representative from the Public Appointments Service)
- Clarify who owns data, prepares the reports, analyses and manages the data and how findings are disseminated

Section 1

Introduction

Research background

The National Strategy for Higher Education to 2030 presents a vision of an higher education sector that can successfully meet the many social and economic challenges facing Ireland over the coming decades. It argues that strong engagement between higher education and enterprise has the potential to play a vital role in enhancing Ireland's economic competitiveness. The strategy argues that innovation must be the driving force behind such engagement: innovation in teaching, learning and research from higher education; and innovation in taking advantage of learning opportunities from the business community.

The Strategy suggests activities that could be progressed in business-academic partnerships range from knowledge transfer and the creation of joint research projects, to the development and provision of education and training for employees, and problem-solving and consulting services. Employer-academic partnership could also facilitate high-quality internships and work-placements for students and could be particularly useful as a way of enabling employer feedback on graduate employability and in facilitating employer input into curriculum design and development as well as course supply.

The Strategy recommends that a national survey of employers should be taken by the Higher Education Authority (HEA) on a regular basis and used as part of an assessment of quality outcomes for the system. This proposal provides an overview of the possible objectives, methodology, timescale, budget and final output for this survey

Research objectives

The survey is designed to provide authoritative information on the views on higher education outcomes of a broad range of businesses representing different sectors, ownership (multinational and indigenous) and company size. (The full research objectives are listed in Section 3.2)

Project steering group

A project steering group was created with representatives from the key education and business stakeholders. The employers and business interests were represented by IBEC, American Chamber of Commerce, Chambers Ireland, ISME, and the SFA; the higher education institutions represented by the Irish Universities Association, the Institutes of Technology in Ireland, Dublin Institute of Technology; career guidance professionals were represented by the Association of Higher Education Careers Services. In addition, the Skills and Labour Market Research Unit in FAS and the Higher Education Association provided their expertise and input.

The steering group members were:

- Brian Cotter, Commercial & Public Affairs Director, American Chamber of Commerce
- Seamus McEvoy, Chair, Association of Higher Education Careers Services
- Marion Courtney, Chambers of Commerce Ireland
- Ellen Hazelkorn, VP, Research, Dublin Institute of Technology
- Jasmina Behan, Senior Researcher, Skills and Labour Market Research Unit. FAS
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- Geraldine Anderson, Head of Research, IBEC
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- Liz Carroll, Head of Research, Irish Small and Medium Size Enterprises Association
- Lewis Purser, Director of Academic Affairs, Irish University Association
- Avine McNally, Assistant Director, Small Firms Association

The steering group were responsible for:

- Agreeing terms of reference
- Refining the research objectives
- Agreeing the broad research methodology
- Evaluating the results of the pilot survey
- Agreeing a dissemination strategy for the survey results.

Description of the project

The implementation of a National Employer Survey to be undertaken on a regular basis was identified as a priority deliverable of the National Strategy for Higher Education to 2030. This project has delivered a proposed framework for this survey and a pilot survey. The project scope included:

- Elicitation of requirements
- An assessment of
    - Existing national employer surveys used in other countries
    - Previous employer surveys conducted in Ireland (e.g. IBEC Education and Skills Survey (2010), Forfas/HEA Survey of Selected Multi-National Employers' Perceptions of Certain Graduates from Irish Higher Education (2007), GradIreland Graduate Salary and Graduate Recruitment Trends Survey (2011)
    - Existing infrastructure (tools and software) to deliver a proposed national survey
- Active engagement with stakeholders throughout the project duration
- Pilot testing and evaluation
- The development of a framework and set of tools, based on a robust pilot survey, that can be reused with a minimum of cost on a regular basis over a period of years

The key principles adopted by the steering group included:

- Full inclusion of business and higher education stakeholders from project initiation
- Leveraging of existing networks, groups, tools and infrastructure (e.g. HEA Statistics Section, IBEC Research Unit, FAS Skills and Labour Market Research Unit) to ensure existing expertise is exploited and to ensure maximum value for money
- Exploitation of best practice models nationally and internationally to avoid duplication and to ensure timely delivery of national strategy objectives.
- A framework and set of survey tools that can be reused cost effectively over a period of years

Relevance to meeting the objectives of the National Strategy for Higher Education

The proposal meets the objectives of the National Strategy for Higher Education by:

- Directly addressing and helping to deliver recommendation number 14 of the Strategy
- Providing a mechanism by which the effectiveness of implementation of other recommendations of the Strategy can be assessed
- Providing a mechanism to gather regular feedback from employers on their perceptions of graduate quality and the relevance of their skills to the labour market
- Tracking the above over time and identifying trends
- Providing a tool for quality improvement
- Strengthening engagement between higher engagement and enterprise
- Identifying the barriers to and opportunities for:
    - business academic partnerships
    - knowledge transfer and research commercialisation
    - availability of student internships and work-placements
    - relevance and quality of course supply and delivery
    - employer input to curriculum design and development

- Informing the systems and management approaches required to support lifelong learning
- Capturing employers' perspectives on business trends and their implications for labour market demand and supply.

Section 2

Literature Review

2.1 International examples and learning points

A number of research studies and surveys have been conducted in Ireland, the UK, the US, Australia and at a European level, to ascertain the skills which employers require of new graduates. The key pieces of research used to inform this study were:

- Australian Department of Education, Training and Youth Affairs (2000): "Employer Satisfaction with Graduate Skills: Research Report"
- CBI (2011), "Education and Skills Survey 2011. Building for growth: business priorities for education and skills."
- European Commission (2010), Flash Eurobarometer (No. 304), "Employers' perceptions of graduate employability."
- GradIreland (2011), Graduate Salary and Graduate Recruitment Trends Survey 2011
- 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
- IBEC (2010), Education and Skills Survey
- The Conference Board, Corporate Voices for Working Families, the Partnership for 21st Century Skills and the Society for Human Resource Management: "Are They Really Ready to Work? Employers' perspectives on the basic knowledge and applied skills of new entrants to the 21st century U.S. workforce"

All of the studies place an emphasis on three key points.

- Firstly, they seek to identify those skills which employers require.
- Secondly, they aim to highlight the extent to which graduates are in possession of these skills by monitoring employers' level of satisfaction with the standard of available graduates.
- Thirdly, they aim to identify ways in which the skills required by employers can be developed. This includes recommendations to inform education policy and strategies to develop better links between education and enterprise.

These studies in many cases combine qualitative and quantitative measures. The majority were conducted by means of a survey, either written or by telephone. Other methods used to collect the data included focus groups and face-to-face interviews. The profile of the respondents were senior executives representing small to large organisations and both public and private sector employers.

Research suggests that few businesses are able to precisely forecast skill requirements in the medium to long term. However most employers and managers have some knowledge of how things are changing at the present. Whether their sense of change is simply an extrapolation of the change that they have observed in the recent past or whether it involves genuine foresight based on business trends or the strategy of their own organisation does not necessarily matter. These surveys usually pick up the direction of change, if not its intensity

2.2 Focus

There were common themes across all of the surveys:

- **Supply and demand:** All of the surveys placed an emphasis on the skills demanded by employers and the degree to which these skills were readily available among graduates in the labour market. This was then broken down into skills requirements by sector/industry. The US reports focused on the readiness of graduates to enter the labour market and therefore heavily emphasised the link between education and labour market needs.
- **Skills:** The skills measured within the surveys included both basic numeracy and literacy skills and employability skills such as problem-solving, team-work and creativity. Foreign language capabilities and their importance to employers both now and in the future also featured heavily.
- **Education:** The level of education required in the labour market both now and in the future was measured in most of the surveys.
- **Skills developed:** All of the surveys measured skills developed by higher education institutions. The CBI report and the American Partnership for 21st Century Skills report also looked at secondary level education. The CBI report focused on basic skills at secondary level while the American report measured both basic and employability skills. The necessity for remedial and basic skills training was also measured in both of these reports.
- **'Drop-out rates':** The report from the Harvard Graduate School of Education emphasised the levels of incompletion of both high school and college education. The high 'drop-out' rates were considered to be an indicator that the current education system is not relevant to the labour market and does not equip students with the skills they will need in the workforce.

- **Work experience:** The European Commission survey measured how important employers consider work experience and experiences of studying abroad among graduates
- **Engagement:** The level of cooperation between educators and business was measured in the IBEC, European and British surveys. The British report examined the relationship between secondary and higher education institutions and business while IBEC and the European survey focused solely on higher education institutions. The number of businesses which offer internships was also measured.

(Summaries of the international studies can be found in Appendix 2)

Section 3

Research Methodology

3.1 Research Question

The brief for this project was to develop and test a survey instrument which would be reusable over time, robust; and pilot tested with the constituent population. This was quite a broad brief given the range of areas that could be covered and the varying views within the steering group regarding the level of granularity required and what would be of most value to higher education. However, there was also a strong consensus that the outcome of the instrument must provide clear data on key issues to underpin evidence-based policy.

3.2 Research objectives

The overall objectives of the survey were to ascertain, *inter alia*, employers' views on:

- Overall quality of graduates from Irish higher education institutions (HEIs)
- Challenges in filling graduate vacancies
- Factors considered when recruiting graduates
    - To include institution attended, degree result, employability skills, degree subject, foreign language capability, relevant work experience/business placement
- Basic skills
    - To include writing, numeracy and IT
- Development of employability skills
    - To include self-management, teamworking, business/customer awareness, problem-solving positive attitude to work, knowledge about chosen job/career, relevant work experience, international customer awareness.
- Language skills
- Business relevance of courses
- The number and quality of graduates in science, technology, engineering and maths (STEM)

- HEI - business collaboration on teaching and learning

  - To include internship opportunities

- HEI - business collaboration on research and innovation

- Provision of workforce training to employers

3.3 Process

A technical working group was created from within the steering group members to work specifically on the survey instrument development. This sub-group had representatives from the Skills Labour Market Research Unit in Fás, the Statistics Unit in the Higher Education Authority and the Research and Policy divisions in IBEC. This group was tasked with distilling the various requirements identified by the steering group into a viable tool.

As aforementioned, international best practice examples of surveys used for similar purposes in the higher education sphere were reviewed to ensure the group was using the most efficient and effective measures. In addition we developed new survey questions to suit the needs particular to the Irish situation. A number of iterations of the survey instrument were developed and the steering group reviewed and added or suggested changes at each stage. This led to what was deemed a suitably representative instrument.

Both within the technical working group and between the sub-group and the steering group, a number of issues were rigorously discussed. One of the earliest debates related to the collection of information on the types of graduates that had been recruited by employers. There was a request that graduates be identified by discipline and level so that cross tabulations would be possible when examining other aspects, such as graduate calibre, in greater detail. This format was added, despite reservations that this would be a complex question for respondents to answer and for analysis, given the strong requests of some members of the steering group.

Another important discussion centred around the parameters of what actually constituted a "graduate", as there were many varied definitions. It was necessary to be very clear as it was

important to determine at what point factors other than higher education experience start to shape the graduate's employability and performance.

Debate ranged around whether a graduate should be defined as somebody who:

- came straight from college;
- travelled for a year before employment;
- had held casual jobs while interviewing for their first "career" role;
- was a mature student with previous experience.

Similarly, debate emerged regarding the relative validity of the perception of employers who:

- only recruited graduates this year;
- only recruited graduates over the previous 2 years;
- had no recruitment in the previous two years but had hired graduates in other years.

Given that organisations have been forced to reduce graduate recruitment during the economic crisis, the decision on this issue would have a significant impact on response rates. In the event, it was decided to confine responses to organisations who had hired graduates in the previous two years. This may have been too restrictive.

There was also some discussion around the most suitable respondent within larger companies. For example, the perception of the head of HR might be slightly different from that of the CEO or the head of a technical function. It was agreed that the head of HR was the most suitable respondent. Further deliberations took place when examining the technical and employability skills that employers were asked to comment on. This list originally started with 48 items identified as essential skills, but this was deemed to be too long. With lengthy discussion this was reduced to 20 items under three key headings, knowledge and skills (e.g. fluency in a foreign language), work skills (e.g. communication or critical thinking) and attitude (e.g. taking responsibility).

Given the budget and time-constraints of this project, it was agreed that a web-based survey would be more effective than telephone interviews or a postal survey.

3.3.1 Survey instrument

The survey covered four key areas:

1. Company details – this section collects data regarding the respondent and the company demographics (size, sector, type of activity etc.)

2. Employment of graduates – this section examines the level of recruitment of graduates, what disciplines and levels of award, the preferred institution, the recruitment criteria and the challenges faced.

3. Satisfaction with graduate skills – this section looked at both technical and employability skills of graduates to examine their importance and employer satisfaction. Employers were also asked to propose the subject and skills gaps they expected in the next 5-10 years.

4. Business – Higher Education engagement – this final section examined employers' engagement with HEI's and what form it took (e.g. cooperation on curriculum design, provision of work placement opportunities etc).

In total there were 27 major questions, a mix of tick box, comment, satisfaction, importance and frequency questions. This was a very large survey and was only feasible to run through the use of a significant amount of routing which was made available through *Dimensions* the web based SPSS survey system used. As a result, based on their earlier answers to questions respondents could be directed to only questions relevant to their experiences with graduates or higher education institutions. In this way the survey was more manageable for survey participants.

The frequency with which this survey will be carried out has not yet been decided and clearly the value of it, especially certain sections, will not necessarily be immediately apparent following this pilot or in the next complete iteration, it assumes a value over time as data builds up and trends become evident.

3.3.2 Special modules

While at its core there is a full survey tool, the decision was made to build in flexibility around special modules which can be put in or taken out depending on the emphasis at a given point in time. For the pilot version, two special modules were included.

3.3.2.1 Science, Maths, Computing and Engineering

The first special module concerned Science, Maths, Computing and Engineering. If an employer identified that they had recruited a graduate in this area, they were routed to a set of extra questions to delve deeper into their satisfaction with these graduates.

3.3.2.2 Foreign Languages

Secondly, a special module was added on foreign languages which directed employers to further questions if they identified that fluency in a foreign language was of importance to them. The special module questions sought information on the main languages of interest, the level of proficiency required and the confidence the employer had towards filling these roles with graduates of Irish Higher Education Institutions.

At a later stage a decision could be made to drop these modules in favour of a more pressing focus that may emerge over time and can be featured in later iterations of the survey.

3.4 Data collection

A link to the online survey was sent to 3,130 IBEC member companies on July 3, 2012. Other business organisation representatives were also copied on the link and the accompanying text in order that they could contact their own members seeking participation. It is impossible to calculate the amount of cross-posting given that business organisations are unable to share their membership databases. IBEC contacted their potential respondents with four further reminders, on July 30, August 29, September 17 and October 11.

A number of phone calls were also made to some specific companies in order to generate responses. The survey was sent to the senior human resources director or manager in larger organisations and to either the senior human resources manager or CEO contacts in smaller organisations.

3.5 Data Analysis

In terms of data analysis, the data was reviewed and analysed thematically before subsequently formulating conclusions. Basic analysis was carried out on the data and cross tabulations were utilized where appropriate. In many cases the low number of responses in several subsets of data made this type of breakdown very difficult.

For open-ended comment answers, content analysis was undertaken to facilitate more detailed examination. In some cases the format of the actual data collected may need reviewing. Asking for the number of masters and PhD graduates against the criteria for their employment has meant some minor duplication in the figures. This, while not extreme, should be considered in later iterations of the survey. It may be worth considering a change to "yes/no" answers to this question, rather than numbers.

3.6 Learning points

Within the time constraints under which the survey was conducted, the authors were faced with a number of limitations. These will act as learning points for future iterations of the survey instrument and national employer survey process.

3.6.1 Timing of the study

Due to tender requirements and requests from agencies this study had specific time frames attached to its completion. Given the undertaking required and the number of stakeholders involved there was a lengthy process involved in getting the survey instrument designed. As a result the pilot test of the survey instrument took place between July and October 2012. The summer months are particularly difficult to achieve high respondent rates and required multiple reminders and promotion of the survey through employer networks. Significant numbers of "out of office" replies to initial emails and reminders were received. From September onwards the number of responses improved leading to the conclusion that carrying out the survey at a different time would improve responses.

3.6.2 Personalising of questionnaires

Due to the number of employer bodies engaged in the survey process, it was impossible to personalise the questionnaires to the respondent companies. As a result, it was difficult to identify usable responses which had timed out as company names were not held in the data file. Had each questionnaire had a personal identifier or company information already populated for the respondent, this would have enabled easier tracking and greater response rates.

A total of 402 companies were used in the datafile. This included 11 companies that responded via email to say that they had not recruited in the last two years. A total of 311 fully completed surveys were submitted via the link. A total of 80 questionnaires were used from the timed out responses. These were responses where the respondent had not submitted the survey formally but may have answered some questions. It was important therefore that any questionnaire used from the timed out responses was not a duplicate of any existing response. Therefore only responses where some identifying information was provided were pulled from the timed out file for use in the final datafile. Eighty responses in total were used from the timed out file, from a total of 625 timed out questionnaires. While many of the remaining 545 questionnaires may have been duplicates there is still a significant number of responses that were potentially missed due to non-personalisation, because we had no way of identifying their answers as unique (and therefore usable) unless they provided some identifying data to us. Personalisation would allow us to identify each individual questionnaire, enabling us to potentially use more of the data supplied in timed out, or alternatively to allow us to identify the companies providing some information asking them to further complete the questionnaire.

3.6.3 Overview document

A number of survey responses contained 'test' answers which demonstrated that respondents had examined the document prior to completion. An accompanying document which outlined the content of the questionnaire in advance, providing people with an awareness of what was on the questionnaire would be beneficial and reduce some waste.

3.6.4 Survey content and length

Due to the varied interests of stakeholders, there were significant demands for what should be covered in the survey. This resulted in a very lengthy questionnaire with 27 major questions which translated into over 1200 variables in the datafile making it more difficult to analyse.

It may be beneficial to re-examine the objectives of the survey and identify questions which should be retained on future questionnaires and which questions did not provide sufficient information to be retained in the future. Specifically, certain questions such as, preferred institution/graduate discipline/ foreign languages, did not provide representative information in subsets when the data was broken down by, for example, preferred institution or graduate discipline, the numbers were not sufficient to allow further analysis.

The length of the questionnaire may have been somewhat prohibitive as demonstrated by the number of individuals who did not complete the full survey. The average survey completion time was 27 minutes which is significant for an online questionnaire. It should be remembered that companies already face significant administrative burdens. SME's in particular, struggle to complete the ever-growing number of forms and surveys (many of which are a statutory requirement). However, the use of routing was helpful in making the survey as streamlined as was possible.

3.6.5 Launch and communication strategy

While each employer representative body sent out the survey with an explanatory email soliciting participation from their members, greater buy-in may have been achieved from formally launching the survey and explaining to employers where this information would assist the education and business communities alike.

In particular, the feedback from small employers and their representatives was that the lower response rate could have been improved through a campaign of communication that explained what the benefit of engaging in this process would be for the employer. Given the many demands on their time, prioritising this process would have to be strongly encouraged to be achieved.

Section 4

Research findings/Results

4.1 Respondent profile

The majority of respondents were involved in the recruitment process in their company. A total of 351 individuals, 87% of respondents, were engaged in recruitment within their own companies. The job titles of respondents ranged from CEO to HR Professional to professionals engaged in graduate recruitment within respondent companies. The majority of responses came from either CEO/Managing Directors or General Managers and from those engaged in the HR function of the respondent companies.

4.2 Company Profile

A total of 402 companies responded to the survey. A total of 144,510 employees were engaged by the respondent companies – there were 21 companies that did not provide information in relation to employee numbers. This survey coverage represents 12.8% of total employment in the country. A profile of respondents by company size, sector, principal activity, ownership and region is provided below.

Table 1: Respondents by company size

	Number	Percentage
Less than 50 employees	121	30.1
50 - 99 employees	62	15.4
100 - 249 employees	84	20.9
250 - 499 employees	45	11.2
Over 500 employees	69	17.2
Not stated	21	5.2
Total	402	100.0

Table 2: Respondents by ownership

	Number	Percentage
Irish owned	217	54.0
Foreign owned	175	43.5
Not stated	10	2.5
Total	402	100.0

Table 3: Respondent organisations by principal activity

	Number	Percentage
Unclassified	13	3.2
Food & Drink Manufacturing	17	4.2
Chemicals & Pharmaceuticals manufacturing	21	5.2
Medical devices manufacturing	26	6.5
Metals & engineering manufacturing	20	5.0
Electronics manufacturing	17	4.2
Other manufacturing	28	7.0
Retail	8	2.0
Wholesale distribution	44	10.9
Financial services	45	11.2
Education/training	20	5
Health & social sciences	30	7.5
Hotels, catering & leisure incl. bars/restaurants	22	5.5
Electronic services/ telecomms	38	9.5
Other services	53	13.2
Total	402	100

Table 4: Respondent organisations by sector

	Number	Percentage
Unclassified	13	3.2
High tech manufacturing	64	15.9
Manufacturing	65	16.2
Distribution (retail and	52	12.9
Financial services	45	11.2
Services	163	40.5
Total	402	100

Table 5: Respondent organisations by region

IBEC Region	Number (%) of companies
Dublin	193 (48%)
Cork	47 (12%)
West	34 (8%)
Midwest	39 (10%)
Southeast	22 (5%)
Northwest	9 (2%)
Northeast	8 (2%)
Wicklow	8 (2%)
Kildare	9 (2%)
Midlands	9 (2%)
Not stated	24 (6%)
Total	402 (100%)

Of the 402 companies that responded to the survey, 249 (62%) had recruited graduates in the past two years.

CSO figures (*Business in Ireland 2010*) were examined to see how representative the sample was in terms of company size. In Ireland, 98.5% of companies in Ireland have fewer than 50 employees and of the respondents to this survey 30% represented companies with less than 50 employees. The results from the CSO report and this survey report are compared below.

Table 6: Comparison of representation of number of organisations by size class

Size	CSO 2012	National Employer Survey
Less than 50 employees	98.5%	30.1%
50-249 employees	1.2%	36.3%
250+ employees	0.2%	28.4%

*5.2% of respondents failed to state their company size in this survey

While almost one third of respondent organisations have more than 250 employees, it would be worth considering expanding this cohort further given the level of graduate recruitment these organisations engage in.

Table 7: Number of employees engaged by size class

Size	CSO 2012
Less than 50 employees	50.3%
50-249 employees	18.8%
250+ employees	30.9%

The following analysis relates to those 249 companies that had recruited graduates in the past two years, except where otherwise indicated within the text of the document.

4.3 Graduates employed

4.3.1 Numbers of graduates employed by institution and discipline

Companies were asked to provide details of the numbers of graduates employed from Institutes of Technology, Universities or other Higher Education Institutions. Of the total numbers of graduates recruited by respondent companies, 851 recruits were from Institutes of Technology, 2,962 graduate recruits were from Universities in Ireland, and a total of 208 graduate recruits were from other higher

education institutions in the Republic of Ireland. This may be a function of the companies that responded to the survey and is not meant to provide a picture of employment trends in the economy overall. These figures may be somewhat underestimated as some 21 companies did not provide details of the number of graduates employed from each source above.

Companies were further asked to identify the disciplines from which their recruits had graduated. The largest proportion of respondents (46%) employed graduates from business and law. Around a third of those companies employing graduates recruited graduates from engineering disciplines (31%). Computing (21%) and Science and mathematics graduates were employed by around one in five respondent companies. Just over one in ten employed graduates from humanities and arts or the social sciences. Relatively few companies recruited graduates from construction (2%), Agriculture and veterinary (3%), Health and welfare (6%) or service (6%). The following table sets out the full details.

Table 8: Disciplines recruited from

	Number	Percentage
Humanities and Arts	31	12.4
Social Sciences	31	12.4
Business and law	114	45.8
Science and mathematics	50	20.1
Computing	53	21.3
Engineering	76	30.5
Construction	4	1.6
Agriculture and veterinary	8	3.2
Health and welfare	15	6.0
Services	14	5.6
Other	23	9.2
Total	249	100

Companies were next asked to identify the level of awards the graduates they had recruited held. The largest proportion of graduates held honours degrees and Masters level awards. However, within the discipline of science and maths, graduates were more likely to hold Masters or PhD level awards.

Table 9: Level of Awards of Graduates Recruited

	Total	Higher Cert (NFQ Level 6)	Ordinary Degree (NFQ Level 7)	Honours Degree (NFQ Level 8)	Higher/ Graduate Diploma (NFQ Level 8/9)	Masters (NFQ Level 9)	PhD (NFQ Level 10)
Humanities and Arts	31	-	4 (13%)	17 (55%)	6 (19%)	13 (42%)	6 (19%)
Social Sciences	31	-	5 (16%)	21 (68%)	7 (23%)	11 (36%)	5 (16%)
Business and law	114	4 (4%)	19 (17%)	75 (66%)	22 (19%)	45 (40%)	3 (3%)
Science and mathematics	50	4 (8%)	5 (10%)	36 (72%)	14 (28%)	23 (46%)	13 (26%)
Computing	53	3 (6%)	11 (21%)	38 (74%)	15 (28%)	22 (42%)	4 (8%)
Engineering	76	3 (4%)	12 (16%)	52 (68%)	17 (22%)	21 (28%)	7 (9%)
Construction	4	-	1 (25%)	4 (100%)	-	-	-
Agriculture and veterinary	8	-	1 (13%)	3 (38%)	3 (38%)	3 (38%)	2 (25%)
Health and welfare	15	-	2 (13%)	10 (67%)	4 (27%)	5 (33%)	2 (13%)
Services	14	4 (29%)	7 (50%)	7 (50%)	4 (29%)	1 (7%)	1 (7%)
Other	23	1 (4%)	5 (22%)	17 (74%)	3 (13%)	6 (26%)	1 (4%)
Total	249						

4.4 Masters and PhD Graduates

4.4.1 Masters Graduates

A total of 787 Masters graduates were recruited directly from Irish higher education institutions in the past two years. Less than a third (250) of these graduates were employed because the job required Masters level qualifications or skills. In 458 cases, Masters level skills were not required for the job but the candidate in possession of these skills was the best candidate for the job. In 69 cases, the job does not require skills at Masters level, but these graduates were readily available.

4.4.2 PhD Graduates

A total of 162 PhD graduates were recruited directly from Irish higher education institutions in the last two years. In the vast majority of cases, (135 graduates) PhD graduates were employed because the job required doctorate level skills or qualifications. In 24 cases, the job did not require PhD level skills but these candidates were the best candidates for the job. In five cases, the job does not require skills at PhD level, but these graduates were readily available.

4.5 Satisfaction of employers with graduates of STEM and related subjects

Companies were asked, if they had recruited graduates from (STEM) disciplines, what their satisfaction levels were with the graduates regarding four key areas: calibre of the graduate; that the graduates were learning the right skills/courses that are relevant to organisations requirements; the volume/number of graduates available; the speed at which course content is being adapted to meet changing business needs.

Table 10: Satisfaction with Science and Mathematics Graduates (N=50)

	Very satisfied	Quite satisfied	Dissatisfied	Very dissatisfied	Not stated
Satisfaction with the calibre of these graduates	25 (50%)	21 (42%)	1(2%)	-	3 (6%)
Satisfaction that graduates are learning the right skills/ courses are relevant to orgs requirements	15 (30%)	29 (58%)	3 (6%)	-	3 (6%)
Satisfaction with the volume/ number of graduates from these disciplines that are available	10 (20%)	27 (54%)	9 (18%)	1 (2%)	3 (6%)
Satisfaction with the speed at which course content is being adapted to meet changing business needs	4 (8%)	37 (74%)	6 (12%)	-	3 (6%)

Table 11: Satisfaction with Computing Graduates (N=53)

	Very satisfied	Quite satisfied	Dissatisfied	Very dissatisfied	Not stated
Satisfaction with the calibre of these graduates	23 (43%)	21 (40%)	4 (8%)	1 (2%)	4 (8%)
Satisfaction that graduates are learning the right skills/ courses are relevant to orgs requirements	14 (26%)	29 (55%)	6 (11%)	-	4 (8%)
Satisfaction with the volume/ number of graduates from these disciplines that are available	10 (19%)	17 (32%)	17 (32%)	5 (9%)	4 (8%)
Satisfaction with the speed at which course content is being adapted to meet changing business needs	8 (15%)	25 (47%)	15 (28%)	-	5 (9%)

Table 12: Satisfaction with Engineering Graduates (N=76)

	Very satisfied	Quite satisfied	Dissatisfied	Very dissatisfied	Not stated
Satisfaction with the calibre of these graduates	42 (55%)	25 (33%)	1 (1%)	-	8 (11%)
Satisfaction that graduates are learning the right skills/ courses are relevant to orgs requirements	22 (29%)	44 (58%)	2 (3%)	-	8 (11%)
Satisfaction with the volume/ number of graduates from these disciplines that are available	18 (24%)	36 (47%)	10 (13%)	4 (5%)	8 (11%)
Satisfaction with the speed at which course content is being adapted to meet changing business needs	11 (15%)	48 (63%)	8 (11%)	-	9 (12%)

Employers who had recruited graduates from STEM disciplines were satisfied with the calibre of graduates in each of the three disciplines, with science and maths the most positive and computing, the least. In addition, responses were positive when companies were asked if graduates were learning the right skills or taking the right courses. However, while still broadly positive, greater levels of dissatisfaction emerged when companies were asked about the volume of graduates available and this level of dissatisfaction increased further across all three disciplines when the speed of course content adaptation was examined.

In a later question, companies were asked how confident they were that in the next five to ten years there would be a supply of graduates with skills that would meet their needs in terms of the relevance of workplace/transferable skills, the relevance of subject or discipline knowledge and their attitude (see page 42 for full analysis). Overall respondents with graduates from all discipline types were confident of getting graduates with the relevant skills, subject or discipline knowledge and attitude. However, respondents with graduates from the traditional disciplines like humanities (33.3%), social sciences (29.2%) and business (30.5%) were less confident of recruiting graduates with the right attitude than were respondents with graduates from computing (21.7%), science and maths (17.8%) and engineering (25%).

Interestingly when this question was further analysed by discipline of the graduates recruited, 82% of organisations who recruited science and mathematics graduates were confident or very confident regarding skills availability. Respondents who recruited engineering graduates were similarly confident (81%) while slightly less confidence was reported by respondents with computing graduates with essentially one third not very confident that graduates with the relevant skills would be available to them in the next 5-10 years (see Appendix 3 for further details).

4.6 Graduates recruited from outside the Republic of Ireland

Just over one third (36%) of those companies that recruited graduates in the past two years recruited from non- Republic of Ireland higher education institutions. Of these 90 companies, some 59 indicated that they employed 142 graduates from Northern Irish Higher Education Institutions, while 67 companies indicated that they employed 238 graduates from farther afield.

The disciplines from which these graduates came, for the 90 companies that employed graduates from non-ROI institutions is detailed in the table below.

Table 13: Disciplines of Graduates of Non-ROI institutions (N=90)

	Number	Percentage
Humanities and Arts	9	10.0
Social Sciences	6	6.7
Business and law	27	30.0
Science and mathematics	19	21.1
Computing	17	18.9
Engineering	15	16.7
Construction	-	-
Agriculture and veterinary	-	-
Health and welfare	4	4.4
Services	4	4.4
Other	4*	4.4
Total	90	100.0

* In two companies actuaries were employed, in one accounting, and in one geology.

Companies were asked why they had chosen to recruit graduates from institutions outside of the Republic of Ireland and the responses are detailed in the table below.

While the numbers were small, it would seem that the proportion of computing (77%) and engineering (66%) graduates for which 'insufficient number of ROI candidates with the right skills' was relevant, was high.

Table 14: Why graduates of non- ROI institutions

	Total	Company promoting an international workforce	Insufficient number of ROI candidates with the right skills	Available ROI courses do not teach the necessary skills	Recruiting for specific language skills	Lack of interest from ROI candidates in these positions	Other
Humanities & Arts	9	6 (22%)	3 (33%)	-	1 (11%)	1 (11%)	3 (33%)
Social Sciences	6	2 (33%)	2 (33%)	-	2 (33%)	-	1 (17%)
Business & law	27	8 (30%)	6 (22%)	2 (7%)	5 (19%)	6 (22%)	7 (26%)
Science and mathematics	19	7 (37%)	6 (32%)	1 (5%)	3 (16%)	4 (21%)	5 (26%)
Computing	17	3 (18%)	13 (77%)	2 (12%)	4 (24%)	3 (18%)	3 (18%)
Engineering	15	1 (7%)	9 (60%)	3 (20%)	2 (13%)	4 (27%)	2 (13%)
Construction	-	-	-	-	-	-	-
Agriculture & veterinary	-	-	-	-	-	-	-
Health & welfare	4	1 (25%)	1 (25%)	-	-	-	2 (50%)
Services	4	3 (75%)	3 (75%)	2 (50%)	1 (25%)	2 (50%)	1 (25%)
Other	4	1 (25%)	2 (50%)	1 (25%)	1 (25%)	1 (25%)	1 (25%)
Total	90						

4.7 Preferred institutions

To identify whether companies had particular institutions which they preferred to recruit their graduates from they were asked to rank their top three institutions if they had a preference. The numbers of respondents to this question was quite small. Over a third (35%) of those that had recruited graduates in the last 2 years indicated that they had no preferred institutions from the point of view of recruitment. Additionally, around a quarter of respondents did not provide any information in relation to the relative attractiveness of the various institutions listed.

Subsequent analysis on the reasons for preferences for graduates from particular higher education institutions, while completed was deemed to be not representative due to the small number of cases involved. Findings in this area recorded very low numbers against each institution listed and as such they might be misleading.

4.8 Minimum entry standards

Companies were asked to identify if they used any of a pre-set list of minimum entry standards for graduate applications. Slightly fewer than two out of five respondents used 'relevant work experience' as a minimum entry standard. Also used by around a third of respondents were 'completion of specific courses' or 'have or expect a 2.1 degree or above'.

Table 15: Minimum entry standards for graduate applications

	Number	Percentage
Leaving certificate points	36	14.5
Completion of specific courses	83	33.3
Have or expect a 2.1 degree or above	81	32.5
Relevant work experience	96	38.6
Pass psychometric or other in-house selection process	48	19.3
Other	17	6.8
N=249		

4.9 Graduate skills

Respondents were asked to rate how important various graduate skills were to them.

Table 16: Importance of skills in graduates recruited in the past 2 years

	Very Important	Important	Un-important	Very un-important	Not applicable	Total
Knowledge & Skills						
Subject or discipline knowledge	108 (61%)	66 (37%)	3 (2%)	1 (1%)	-	178
Computing and information technology/ basic IT skills	97 (54%)	78 (44%)	3 (2%)	-	1 (1%)	179
Literacy	128 (72%)	47 (26%)	2 (1%)	1(1%)	-	178
Numeracy/processing and interpreting numerical data	103 (59%)	61 (35%)	9 (5%)	-	2 (1%)	175
Workplace Skills						
Communicating verbally appropriately and effectively	137 (77%)	41 (23%)	1 (1%)	-	-	179
Communicating in writing appropriately and effectively	110 (61%)	69 (38%)	1 (1%)	-	-	180
Ability to apply profes-sional and/or technical knowledge in the workplace	116 (65%)	60 (34%)	1 (1%)	1 (1%)	1 (1%)	179
Working effectively with others (e.g. team and interpersonal skills)	140 (78%)	38 (21%)	-	1 (1%)	-	179
Working effectively on their own (e.g. personal org., commitment & time management)	98 (55%)	77 (43%)	3 (2%)	-	1 (1%)	179
Concern for quality and detail	131 (74%)	43 (24%)	2 (1%)	1 (1%)	1 (1%)	178
Business acumen/ awareness	52 (29%)	99 (56%)	18 (10%)	1 (1%)	7 (4%)	177
Entrepreneurial skills	22 (13%)	45 (26%)	87 (49%)	6 (3%)	16 (9%)	176
Thinking critically and analytically	99 (55%)	73 (40%)	8 (4%)	1 (1%)	-	181
Leadership/leading others	43 (24%)	58 (32%)	61 (34%)	5 (3%)	12 (7%)	179
Attitude						
Self-motivation	108 (60%)	70 (39%)	2 (1%)	1 (1%)	-	181
Openness to change	97 (54%)	73 (41%)	7 (4%)	2 (1%)	1 (1%)	180
Taking responsibility	108 (60%)	66 (37%)	3 (2%)	2 (1%)	-	179
Ability to cope with work pressure	102 (56%)	73 (40%)	3 (2%)	2 (1%)	1 (1%)	181
Capacity to be flexible and adaptable	114 (64%)	61 (35%)	-	2 (1%)	-	177

An analysis by company size revealed very little variation. However the small amount of variance may be explained by factors other than size such as principal activity. For example, one in ten companies in the '100-249 employees' category indicated that numeracy/processing and interpreting numerical data was unimportant. While this is higher than in other size categories it would appear that the composition of this size cohort in terms of activity may have a greater impact than the size variation itself. Analysis revealed very little variation regarding the level of importance.

Further analysis by discipline of the graduate recruited by the respondent organisation found that there was not significant variation in the results. Therefore if a particular skill was seen as important for respondents who had recruited graduates from Humanities disciplines it was also likely to be important for those who had recruited from any other disciplines. In general, "entrepreneurial skills" and "leadership skills" were seen to be less important that other employability skills by respondents regardless of the discipline of their graduates.

Respondents were also asked how satisfied they were with the skills of graduates they had recruited in the past 2 years (Table 17). It is important to note that a large proportion of respondents (over a third) did not give any information in relation to the importance or their satisfaction with graduates skills.

Table 17: Satisfaction with skills of graduates recruited in the past 2 years

	Very Satisfied	Satisfied	Dissatisfied	Very dissatisfied	Not applicable	Not stated
Knowledge & Skills						
Subject or discipline knowledge	*42 (17%)*	*112 (45%)*	*7 (3%)*	*1 (-)*	*2 (1%)*	*85 (34%)*
Computing and information technology/basic IT skills	*45 (18%)*	*106 (43%)*	*9 (4%)*	*1 (-)*	*4 (2%)*	*84 (34%)*
Literacy	*51 (21%)*	*92 (37%)*	*18 (7%)*	*-*	*2 (1%)*	*86 (35%)*
Numeracy/processing and interpreting numerical data	*34 (14%)*	*107 (43%)*	*13 (5%)*	*-*	*6 (2%)*	*89 (36%)*
Workplace skills						
Communicating verbally appropriately and effectively	*33 (13%)*	*108 (43%)*	*21 (8%)*	*1 (-)*	*2 (1%)*	*84 (34%)*
Communicating in writing appropriately and effectively	*21 (8%)*	*104 (42%)*	*35 (14%)*	*1 (-)*	*2 (1%)*	*86 (35%)*
Ability to apply professional and/or technical knowledge in the workplace	*33 (13%)*	*116 (47%)*	*9 (4%)*	*1 (-)*	*3 (1%)*	*87 (35%)*
Working effectively with others (e.g. team and inter-personal skills)	*44 (18%)*	*112 (45%)*	*7 (3%)*	*-*	*2 (1%)*	*84 (34%)*
Working effectively on their own (e.g. personal organisa-tion, commitment and time management)	*30 (12%)*	*113 (45%)*	*17 (7%)*	*2 (1%)*	*1 (-)*	*86 (35%)*
Concern for quality and detail	*31 (12%)*	*114 (46%)*	*16 (6%)*	*-*	*3 (1%)*	*85 (34%)*
Business acumen/awareness	*19 (8%)*	*99 (40%)*	*29 (12%)*	*2 (1%)*	*11 (4%)*	*89 (36%)*
Entrepreneurial skills	*13 (5%)*	*87 (35%)*	*28 (11%)*	*1 (-)*	*32 (13%)*	*88 (35%)*
Thinking critically and analytically	*26 (10%)*	*106 (43%)*	*26 (10%)*	*3 (1%)*	*3 (1%)*	*85 (34%)*
Leadership/leading others	*15 (6%)*	*101 (41%)*	*22 (9%)*	*1 (-)*	*24 (10%)*	*86 (35%)*
Attitude						
Self-motivation	*31 (12%)*	*106 (43%)*	*21 (8%)*	*1 (-)*	*3 (1%)*	*87 (35%)*
Openness to change	*33 (13%)*	*114 (46%)*	*11 (4%)*	*1 (-)*	*4 (2%)*	*86 (35%)*
Taking responsibility	*30 (12%)*	*110 (44%)*	*18 (7%)*	*2 (1%)*	*2 (1%)*	*87 (35%)*
Ability to cope with work pressure	*28 (11%)*	*111 (45%)*	*14 (6%)*	*4 (2%)*	*5 (2%)*	*87 (35%)*
Capacity to be flexible and adaptable	*38 (15%)*	*107 (43%)*	*15 (6%)*	*-*	*3 (1%)*	*86 (35%)*

A high proportion of respondents had lower satisfaction levels with "communicating in writing appropriately and effectively" (14%), "business acumen/awareness" (13%) and "entrepreneurial skills" (11%). Of those respondents who had indicated that certain graduate skills were important or very important, 1 in 5 were dissatisfied with graduates "communicating in writing appropriately and effectively", a similar proportion (19%) were dissatisfied with "entrepreneurial skills", while 1 in 6 were dissatisfied with "business acumen/awareness". Additionally, 12% were dissatisfied with "self-motivation" and 1 in 10 with the skill "working effectively on their own".

4.10 Foreign languages

One of the special modules asked employers how important it was for them to recruit graduates who had foreign language skills. However, only a small number of respondents answered this question making meaningful analysis difficult. One in five (39 respondents) respondents considered having foreign language skills upon recruitment, important or very important among graduates. Fifty percent of respondents were satisfied with the foreign language skills of their graduates while the main languages identified as required in the organisation were French, German and Spanish with the majority (54%, 20 respondents) requiring a high degree of fluency in written and spoken word.

4.11 Supply of graduates – next 5-10 years

Companies were asked how confident they were that in the next five to ten years there would be a supply of graduates with skills that would meet their needs. There were somewhat positive results in all cases as at least seven out of ten employers felt the relevant knowledge, workplace or transferable skills and attitude would be available. However it is also a source of concern that 25-30% of companies are not confident.

However, when we examined these results by company size we found that while respondents are generally confident, a significant proportion of those were not very confident that the relevant workplace/transferable skills would be available – i.e. 1 in 4 of respondents from companies with less than 50 employees, 1 in 4 of respondents with 100-249 employees and 15% of respondents from organisations with over 500 employees. These trends continue also when looking at "relevant subject knowledge or discipline" and "the right attitude" (See Appendix 4 for more detail). There is not one size cohort lacking confidence, it is generalised across most companies. But to really examine this area at this level of granularity requires a greater volume of respondents.

Table 18: How confident are you that in the next 5 - 10 years there will be a supply of graduates with each of the following skills to meet the needs of your organisation?

	Very Confident	Confident	Not very confident	Not confident at all	Total
Relevant workplace/ transferable skills	22 (12%)	117 (65%)	38 (21%)	2 (1%)	179
Relevant subject or discipline knowledge	31 (17%)	111 (61%)	36 (20%)	3 (2%)	181
The right attitude	29 (16%)	99 (54%)	53 (29%)	1 (1%)	182

About a quarter of respondents in the High Tech Manufacturing sector are not very confident that there will be a supply of graduates with the requisite skills, subject or discipline knowledge and the right attitude available to meet the organisation needs. This is not at huge variance with other sectors, similar proportions would also apply in Services and Financial Services (see Table 19). However, broadly speaking, over 7 out of 10 respondents are confident or very confident that graduates with the requisite skills, knowledge and attitude will be available.

Table 19: Sectoral breakdown of confidence that in the next 5 - 10 years there will be a supply of graduates with each of the following skills to meet the needs of the organisation?

		Sector															
		Unclassified		High tech manu-facturing		Manufacturing		Distribution (retail and wholesale)		Financial services		Services		Total	
		Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %
Relevant workplace/ transferable skills	Very confident	0	.0%	4	11.4%	4	15.4%	3	18.8%	1	4.0%	10	13.0%	22	12.3%
	Confident	0	.0%	23	65.7%	19	73.1%	10	62.5%	19	76.0%	46	59.7%	117	65.4%
	Not very confident	0	.0%	8	22.9%	3	11.5%	3	18.8%	5	20.0%	19	24.7%	38	21.2%
	Completely lacking in confidence	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%
	Not confident at all	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	2	2.6%	2	1.1%
	Total	0	.0%	35	100.0%	26	100.0%	16	100.0%	25	100.0%	77	100.0%	179	100.0%
Relevant subject or discipline knowledge	Very confident	0	.0%	6	17.1%	6	23.1%	4	25.0%	2	7.7%	13	16.7%	31	17.1%
	Confident	0	.0%	22	62.9%	19	73.1%	9	56.3%	20	76.9%	41	52.6%	111	61.3%
	Not very confident	0	.0%	7	20.0%	1	3.8%	3	18.8%	4	15.4%	21	26.9%	36	19.9%
	Completely lacking in confidence	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%
	Not confident at all	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	3	3.8%	3	1.7%
	Total	0	.0%	35	100.0%	26	100.0%	16	100.0%	26	100.0%	78	100.0%	181	100.0%
The right attitude	Very confident	0	.0%	4	11.4%	5	19.2%	4	23.5%	2	7.7%	14	17.9%	29	15.9%
	Confident	0	.0%	22	62.9%	12	46.2%	10	58.8%	17	65.4%	38	48.7%	99	54.4%
	Not very confident	0	.0%	9	25.7%	9	34.6%	3	17.6%	7	26.9%	25	32.1%	53	29.1%
	Completely lacking in confidence	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%
	Not confident at all	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	1	1.3%	1	.5%
	Total	0	.0%	35	100.0%	26	100.0%	17	100.0%	26	100.0%	78	100.0%	182	100.0%

4.12 Business – Higher Education engagement

Companies were asked whether the various engagement activities were important to them and if they had engaged in that activity. The two most important items identified were participation in work placement and providing information to surveys or questions when required. The item getting least attention from companies was "engagement with Technology Transfer Offices" which 20% saw as unimportant/very unimportant and only 10% engaged in. Unsurprisingly the largest engagement between business and higher education occurred around the careers services where 54% of employers were fully engaged.

Table 20: How important is it that this occurs between your organisation and higher education institutions? N=402

	Very important	Important	Unimportant	Very unimportant	Total
Cooperation on curriculum design and study programmes	74 (26%)	147 (52%)	55 (19%)	8 (3%)	284
Collaboration on research and innovation	70 (25%)	135 (48%)	65 (23%)	12 (4%)	282
Recruitment of graduates	90 (32%)	137 (49%)	46 (17%)	6 (2%)	279
Joint business ventures with academic researchers	44 (16%)	110 (40%)	104 (37%)	20 (7%)	278
Work placement opportunities for students	106 (38%)	144 (51%)	27 (10%)	3 (1%)	280
Provision of workplace training and development to company employees	116 (42%)	126 (45%)	35 (13%)	2 (1%)	279

Table 21: How frequently does this occur between your organisation and higher education institutions? N=402

	Very frequently	Rather frequently	Occasionally	Never	Total
Cooperation on curriculum design and study programmes	9 (3%)	40 (15%)	102 (38%)	118 (44%)	269
Collaboration on research and innovation	15 (6%)	42 (16%)	105 (39%)	107 (40%)	269
Recruitment of graduates	35 (13%)	66 (25%)	115 (43%)	51 (19%)	267
Joint business ventures with academic researchers	10 (4%)	30 (11%)	84 (32%)	143 (54%)	267
Work placement opportunities for students	54 (20%)	93 (34%)	88 (32%)	38 (14%)	273
Provision of workplace training and development to company employees	42 (15%)	64 (24%)	100 (37%)	66 (24%)	272

Table 22: How important each of the following actions is and/or whether your organisation has engaged in this action?

	Engaged in action	Very important	Important	Un important	Very unimportant	Not stated or n/a
Participate in debates or seminars organised by higher education institutions	Yes N=95	18 (19%)	71 (75%)	6(96%)	-	-
	No N=174	6 (4%)	67 (39%)	47 (27%)	9 (5%)	45 (26%)
Structured discussions with course/ programme directors	Yes N=71	18 (25%)	48 (68%)	3 (4%)	-	2 (3%)
	No N=196	17 (9%)	96 (49%)	38 (19%)	5 (3%)	40 (20%)
Providing information when required e.g. answering surveys	Yes N=202	25 (12%)	149 (74%)	22 (11%)	2 (1%)	4 (2%)
	No N=68	1(2%)	44 (65%)	10 915%)	3 (4%)	10 (15%)
Engage with technology transfer offices/incubation offices	Yes N=37	7 (19%)	28 (76%)	1 (3%)	-	1 (3%)
	No N=218	8 (4%)	76 (35%)	72 (33%)	8 (4%)	54 (25%)
Cooperation with career services/ centres	Yes N=146	44 (30%)	92 (63%)	5 (3%)	2 (1%)	3 (2%)
	No N=119	4 (3%)	58 (49%)	29 (24%)	5 (4%)	23 (19%)
Personal discussion with presidents and/or management of higher education institutions	Yes N=68	23 (34%)	40 (59%)	4 (6%)	-	1 (2%)
	No N=194	6 (3%)	77 (40%)	61 (31%)	8 (4%)	42 (22%)
Participation in work placement programmes with higher education institutions	Yes N=165	65 (39%)	93 (56%)	3 (2%)	1 (1%)	3 (2%)
	No N=106	11 (10%)	48 (45%)	20 (19%)	4 (4%)	23 (22%)

4.13 Collaboration between industry and higher education

Employers were asked if they felt there was adequate industry and higher education collaboration. A resounding 50% of respondents said there was not.

Table 23: Do you feel that there is adequate collaboration between industry and higher education?

	Frequency	Percentage
Yes	85	21.1
No	200	49.8
Not stated	117	29.1
Total	402	100.0

When asked how collaboration could be improved a number of themes emerged which included:

- A need for greater communication between business and higher education and an openness to engage;
- A need to find a common ground from which to work from;
- A need for greater focus on work placement programmes;
- A need for industry to get more involved/greater partnership between industry and higher education going forward.

Further comments can be reviewed for all the open-ended questions in Appendix 5.

Appendix 1 - National Employer Survey Questionnaire

National survey of employers' views of Irish higher education outcomes

The National Employers Survey aims to provide authoritative information on the views of employers on the outcomes of higher education. This was a key recommendation of the 'National Strategy for Higher Education to 2030', published in 2011. The Strategy emphasised the importance of stronger engagement between higher education and enterprise in enhancing Ireland's economic competitiveness. This survey is being conducted to ascertain the views of employers on the recruitment of graduates, and should take around ***20 minutes*** *to complete. All information received will be treated in the strictest of confidence.*

SECTION ONE: COMPANY DETAILS

- Company name:
- Company address:
- Name of person completing questionnaire:
- Job title of person completing questionnaire:
- Email address:
- Number of full-time employees:
- Number of part-time employees:
- Principal activity of organisation/type of business activity _____
- Ownership (Irish owned/Foreign owned) _____
- Type of organisation (public, private, semi-state, Government agencies, civil service, NGO?) _____
- Are you responsible for/involved in recruitment process _____

SECTION TWO: EMPLOYMENT OF GRADUATES

Definition of graduate recruitment: An individual who has been recruited to the organisation directly or up to 24 months following the completion of a higher education course.

Unless otherwise stated the term graduate refers to a graduate of an Irish Higher Education Institution in the Republic of Ireland

1. Have you recruited graduates in the last two years?

☐ yes ☐ no

2. Approximately how many graduates have you recruited in the last 24 months, for each of the following institutions?

☐ Institutes of Technology (ROI) Number ____
☐ Universities (ROI) Number ____
☐ Other higher education institutions (ROI) Number ____
Please specify institution or institutions
……

3. From which disciplines did you recruit graduates from higher education institutions in the Republic of Ireland?

- ☐ **Humanities & Arts** (incl. Teacher Education, Languages, History, Philosophy)
- ☐ **Social Sciences** (incl. Psychology, Sociology, Economics, Journalism)
- ☐ **Business & Law** (incl. Marketing & Sales, Management, Accounting & Finance, Property Sales)
- ☐ **Science & Mathematics** (incl. Food Science, Environmental Science)
- ☐ **Computing** (incl. Software Engineering)
- ☐ **Engineering**
- ☐ **Construction**
- ☐ **Agriculture & Veterinary**
- ☐ **Health & Welfare** (incl. Nursing, Medical, Social Work)
- ☐ **Services** (incl. Hospitality, Tourism, Travel, Environmental Protection, Transport, Security)
- ☐ **Other** (*Please specify*): ☐

Please specify the level(s) of their award: *please tick (√) as relevant*

Field of study of the graduates' higher education qualification	Higher Cert (NFQ Level 6)	Ordinary Degree (NFQ Level 7)	Honours Degree (NFQ Level 8)	Higher/ Graduate Diploma (NFQ Level 8/9)	Masters (NFQ Level 9)	PhD (NFQ Level 10)
Humanities & Arts (incl. Teacher Education, Languages, History, Philosophy)						
Social Sciences (incl. Psychology, Sociology, Economics, Journalism)						
Business & Law (incl. Marketing & Sales, Management, Accounting & Finance, Property Sales)						
…….						

4. We would like you to rate your level of satisfaction regarding the following statements which relate specifically to graduates of Science & Maths, Computing, and Engineering**:**

Science & Maths	**Very satisfied**	**Quite Satisfied**	**Dissatisfied**	**Very Dissatisfied**
Satisfaction with the calibre of these graduates				
Satisfaction that graduates are learning the right skills/courses are relevant to your organisation's requirements				
Satisfaction with the volume/number of graduates from these disciplines that are available				
Satisfaction with the speed at which course content is being adapted to meet changing business needs				
Computing	**Very satisfied**	**Quite Satisfied**	**Dissatisfied**	**Very Dissatisfied**
Satisfaction with the calibre of these graduates				
Satisfaction that graduates are learning the right skills/courses are relevant to your organisation's requirements				
Satisfaction with the volume/number of graduates from these disciplines that are available				
Satisfaction with the speed at which course content is being adapted to meet changing business needs				
Engineering	**Very satisfied**	**Quite Satisfied**	**Dissatisfied**	**Very Dissatisfied**
Satisfaction with the calibre of these graduates				
Satisfaction that graduates are learning the right skills/courses are relevant to your organisation's requirements				
Satisfaction with the volume/number of graduates from these disciplines that are available				
Satisfaction with the speed at which course content is being adapted to meet changing business needs				

5.How many Masters graduates were recruited directly from Irish HEI's in the last 2 years ☐

6. How many of your Masters graduates were recruited because:

- the job requires Masters qualifications or skills ☐
- the job does not require graduates at this level but they were the best candidates for the job ☐
- the job does not require graduates at this level but they are readily available ☐
- Other (*Please specify):* _____ ☐

7.How many PhDs recruited directly from Irish HEI's in the last 2 years ☐

8.How many of your PhDs were recruited because:

- the job requires PhD qualifications or skills ☐
- the job does not require graduates at this level but they were the best candidates for the job ☐
- the job does not require graduates at this level but they are readily available ☐
- Other (*Please specify):* _____ ☐

9.Do you recruit graduates from non- Republic of Ireland higher education institutions?

☐ yes ☐ no

If yes, approximately how many graduates have you recruited in the last 24 months?

☐ Northern Ireland higher education institutions Number ☐

☐ Other non-ROI higher education institutions Number ☐

10.From which disciplines of Higher Education Institutions <u>outside of the ROI</u> did they graduate?

☐ **Humanities & Arts**
(incl. Teacher Education, Languages, History, Philosophy)

☐ **Social Sciences**
(incl. Psychology, Sociology, Economics, Journalism)

☐ **Business & Law**
(incl. Marketing & Sales, Management, Accounting & Finance, Property Sales)

☐ **Science & Mathematics**
(incl. Food Science, Environmental Science)

☐ **Computing**
(including Software Engineering)

- ☐ **Engineering**
- ☐ **Construction**
- ☐ **Agriculture & Veterinary**
- ☐ **Health & Welfare** (incl. Nursing, Medical, Social Work)
- ☐ **Services** (incl. Hospitality, Tourism, Travel, Environmental Protection, Transport, Security)
- ☐ **Other** (*Please specify*): _____

11.Why did you <u>NOT</u> fill these positions with graduates coming directly from institutions in the Republic of Ireland? Please tick all that apply.

	Company promoting an international workforce	**Insufficient number of ROI candidates with the right skills**	**Available ROI courses do not teach the necessary skills**	**Recruiting for specific language skills**	**Lack of interest from ROI candidates in these positions**	**Other:** *Specify____*
Humanities & Arts (incl. Teacher Education, Languages, History, Philosophy)						
Social Sciences (incl. Psychology, Sociology, Economics, Journalism)						
Business & Law (incl. Marketing & Sales, Management, Accounting & Finance, Property Sales)						
Science & Mathematics (incl. Food Science, Environmental Science)						
Computing (including Software Engineering)						
Engineerin						
Construction						
Agriculture & Veterinary						
Health & Welfare (incl. Nursing, Medical, Social Work)						

Services (incl. Hospitality, Tourism, Travel, Environmental Protection, Transport, Security)						
Other (*Please specify*):						

12.Please identify your top 3 preferred sources of graduates from the list below.

Institutes of Technology

- ☐ Athlone Institute of Technology
- ☐ Cork Institute of Technology
- ☐ Dundalk Institute of Technology
- ☐ Dublin Institute of Technology
- ☐ Dun Laoghaire Institute of Art, Design & Technology
- ☐ Galway-Mayo Institute of Technology
- ☐ Institute of Technology Blanchardstown
- ☐ Institute of Technology Carlow
- ☐ Institute of Technology Sligo
- ☐ Institute of Technology Tallaght
- ☐ Institute of Technology Tralee
- ☐ Letterkenny Institute of Technology
- ☐ Limerick Institute of Technology
- ☐ Waterford Institute of Technology

Universities

- ☐ Dublin City University
- ☐ National University of Ireland Galway
- ☐ National University of Ireland Maynooth
- ☐ Trinity College Dublin
- ☐ University College Cork
- ☐ University College Dublin
- ☐ University of Limerick

Private colleges

- ☐ Private college 1 ____
- ☐ Private college 2 ____
- ☐ Private college 3 ____

Other institutions

- ☐ Other institution 1 ____
- ☐ Other institution 2 ____
- ☐ Other institution 3 ____
- ☐ I do not have a preferred third-level institution which I recruit from

13.Why do you prefer graduates from the higher education institutions listed below? Please tick all that apply.

	[1]	[2]	[3]
The institutional reputation	☐	☐	☐
Relevant subject or discipline knowledge	☐	☐	☐
Quality of subject or discipline knowledge	☐	☐	☐
Quality of employability skills and attributes	☐	☐	☐
The institution produces high quality graduates	☐	☐	☐
Strong organisation links with institution	☐	☐	☐
Successful past experience of recruiting from this institution	☐	☐	☐
Geographical location of the institution	☐	☐	☐
Organisation consulted on course design	☐	☐	☐
Students participate in organisation work placement programmes	☐	☐	☐
Organisation and institution collaborate on joint research projects	☐	☐	☐
Other	☐	☐	☐
Please specify:	___	___	___

14.Does your organisation use any of the following minimum entry standards for graduate applications? *Please tick all that apply*

- ☐ Leaving certificate points
- ☐ Completion of specific courses
- ☐ Have or expect a 2.1 degree or above
- ☐ Relevant work experience
- ☐ Pass psychometric or other in-house selection processes (e.g. assessment centres)
- ☐ Other _____

15.What is the greatest challenge you face in filling your graduate vacancies?

_____

_____

_____

16.Please rank the 5 most important criteria your organisation takes into account when recruiting graduates? (with 1 being the most important)

Criteria that may be used	Criteria chosen (1-5)
Discipline or subject choice	☐
Institution attended	☐
Qualification result	☐
Employability skills (e.g. attitude, communication skills)	☐
Foreign language capability	☐
Extracurricular activities (e.g. student societies, sport)	☐
Relevant work experience pre-qualification	☐
Relevant work experience post-qualification	☐
Internship or placement as part of course	☐
Internship or placement in our organisation specifically	☐
Participated in Erasmus or studied abroad	☐
Interview performance	☐
Research topics or areas of interest	☐
Recommendations	☐
Volunteering	☐
Other:	☐

Please specify other criteria_____

SECTION THREE: SATISFACTION WITH IRISH HIGHER EDUCATION INSTITUTIONS' GRADUATE SKILLS

17.We would like you to rate each skill under two headings as follows:

(a) How **important** is it that graduates your organisation recruited in the past 2 years have these skills upon recruitment?
(b) How **satisfied** are you that graduates your organisation recruited in the past 2 years have these skills upon recruitment?

Employability skills	How important					How satisfied				
	Very Important	Important	Unimportant	Very unimportant	Not applicable	Very satisfied	Satisfied	Dissatisfied	Very dissatisfied	Not applicable
Knowledge and skills										
Subject or discipline knowledge										
Computing and information technology/Basic IT skills										
Literacy										
Numeracy/ Processing and interpreting numerical data										
Fluent in a foreign language										
Workplace skills										
Communicating verbally appropriately and effectively										
Communicating in writing appropriately and effectively										
Ability to apply professional and/or technical knowledge in the workplace										
Working effectively with others (e.g. team and interpersonal skills)										
Working effectively on their own (e.g. personal organisation, commitment and time management)										
Concern for quality and detail										

Business acumen/ awareness										
Entrepreneurial skills										
Thinking critically and analytically (e.g. problem solving and innovation)										
Leadership/Leading Others										
Attitude										
Self motivation										
Openness to change										
Taking responsibility										
Ability to cope with work pressure										
Capacity to be flexible and adaptable										

18. What are the main foreign languages you require in your organisation?

- ☐ French
- ☐ German
- ☐ Spanish
- ☐ Dutch
- ☐ Italian
- ☐ Chinese
- ☐ Japanese
- ☐ Other

19.What level of foreign language proficiency do you require?

- ☐ Basic e.g. social/conversational level
- ☐ Independent e.g. high degree of fluency in written/spoken language
- ☐ Fluency e.g. native speaker

20.

	Very confident	**Confident**	**Not very confident**	**Not confident at all**
Are you confident that you will be able to fill language vacancies from graduates of Irish HEI's today?				
Are you confident that you will be able to fill language vacancies from graduates of Irish HEI's in the next 5-10 years?				

21.How confident are you that in the next 5 - 10 years, there will be a supply of graduates with each of the following skills to meet the needs of your organisation?

	Very confident	Confident	Not very confident	Not confident at all
Relevant workplace/transferable skills	○	○	○	○
Relevant subject or discipline knowledge	○	○	○	○
The right attitude	○	○	○	○

22.Where do you think the subject/discipline gaps will be in the future, if any?

_____

_____

_____

SECTION FOUR: BUSINESS – HIGHER EDUCATION ENGAGEMENT

23.We would like you to rate each of the following statements under two headings by ticking the response which best reflects your organisations experience:

a. How **frequently** does this occur between your organisation and higher education institutions?
b. How **important** is it that this occurs between your organisation and higher education institutions?

	How frequently				How important			
	Very Frequently	Rather frequently	Occasionally	Never	Very Important	Important	Unimportant	Very unimportant
Cooperation on curriculum design and study programmes								
Collaboration on research and innovation								
Recruitment of graduates								
Joint business ventures with academic researchers								
Work placement opportunities for students								
Provision of workplace training and development to company employees								

24.Please indicate the importance of each of the following actions and/or whether your organisation has engaged in this action.

	How important					Engaged in this action	
	Very Important	Important	Unimportant	Very unimportant	Not applicable	Yes	No
Participate in debates or seminars organised by higher education institutions							
Structured discussions with course/programme directors							
Providing information when required e.g. answering surveys							
Engage with Technology Transfer Offices/incubation offices							
Cooperation with career services/centres							
Personal discussion with presidents and/or management of higher education institutions							
Participation in work placement programmes with higher education institutions							
Other _____							

25.Do you feel there is adequate collaboration between industry and higher education Yes/No

How could collaboration be improved? _____
_____
_____

Please indicate the main three institutions you collaborate with? _____
_____
_____

26.What, if anything, could higher education institutions do that could contribute to the development of your organisation? _____
_____
_____
_____

27.Any other comments in relation to your organisations experience in engaging with higher education? _____
_____
_____
_____

If you wish to give feedback on the survey instrument please click here ☐

Appendix 2

1. Employers' perceptions of graduate employability -European Commission

The targeted number of interviews across 27 member states varied depending on the size of the respective country. Overall, 7,036 companies were interviewed, between 30 August and 7 September 2010, using a fixed-line telephone methodology. Eligible respondents were chief human resource officers or chief executive officers. Of the companies surveyed, about three-quarters (76%) were medium-sized companies (with between 50 and 249 employees) and the rest (24%) were large companies with 250 employees or more. The largest share of companies included in the survey were active in the industry sector (36%), followed by the sectors of non-public services (23%) and public services (17%). About one in eight (12%) companies were active in the trade, accommodation and food services sector and the same proportion (12%) in the construction, transport and ICT sector.

Approximately two-thirds (68%) of employers participating in this study had recruited higher education graduates in the past five years and were planning to recruit such graduates in the next five years. More than a third (35%) of respondents estimated that more than a fifth of their employees were that type of a graduate. A large majority (89%) of employers – who had recruited higher education graduates in the past five years – agreed that these graduates had the skills required to work in their company. The proportion of employers who agreed with this proposition ranged from 65% in Lithuania to 98% in Sweden.

European Commission (2010), Flash Eurobarometer (No. 304), "Employers' perceptions of graduate employability." [ONLINE] available at http://ec.europa.eu/public_opinion/flash/fl_304_en.pdf

2. Employer Satisfaction with Graduate Skills: Research Report - Australian Department of Education, Training and Youth Affairs

ACNielsen Research conducted a two stage research project to establish the extent of employer satisfaction with the skills of new graduates entering the labour market, and areas of dissatisfaction. The first qualitative research stage consisted of 12 focus groups with employers and graduates, and six in-depth interviews with industry representatives.

The second quantitative stage consisted of a mail survey of employers who had recruited a new graduate in the last two years. They were recruited and screened by telephone before being mailed

a self-completion questionnaire. A total survey sample of 1105 employers was obtained on which this analysis based. A further 155 telephone interviews were also conducted with employers who had tried to recruit a graduate but who had been unsuccessful.

Overall, the performance of new graduates employed appeared to be reasonable, neither particularly low or high. The performance ratings given to new graduates employed, across the twenty five skills and attributes tested, ranged from 3.2 to 4.2 out of a possible 5.0.

Australian Department of Education, Training and Youth Affairs (2000): "Employer Satisfaction with Graduate Skills: Research Report" Available at http://www.dest.gov.au/archive/highered/eippubs/eip99-7/eip99_7pdf.pdf

3. Education and Skills Survey 2011. Confederation of British Industry

The survey was conducted in February 2011, with useable responses received from 566 employers, collectively employing some 2.2 million people, equivalent to 8.8% of all employees in the UK. Participant organisations were drawn from all sectors of the economy – spanning the public and private sectors – and are of all sizes, from very small firms to the organisations with workforces of more than 5,000 people.

The survey was completed by senior executives. In small and medium-sized companies, this tended to be the managing director, chief executive or chairman. In larger firms, it was the human resources director or equivalent.

The results were weighted using data from the Office for National Statistics to ensure they accurately reflected practices in all sectors of the economy. Public sector organisations made up about one in seven respondents (14%). Among private sector participants, manufacturing firms accounted for just over a fifth (22%) while those in construction and professional services each made up about a tenth of the sample.

CBI (2011), "Education and Skills Survey 2011. Building for growth: business priorities for education and skills." Available at www.cbi.org.uk

4. "Are They Really Ready to Work? Employers' perspectives on the basic knowledge and applied skills of new entrants to the 21st century U.S. workforce

During April and May 2006, The Conference Board, Corporate Voices for Working Families, the Partnership for 21st Century Skills, and the Society for Human Resource Management collected data through an in-depth survey. The survey was presented with the option to submit responses either online or on paper. Employer respondents were asked to rate the importance of 20 areas of basic knowledge and applied skills to the job success of new entrants to their U.S. workforces at each of three educational levels—high school diploma, two-year college or technical school diploma, or four-year college diploma. Three choices were provided to employer respondents for the level of importance for each of the skills: "not important," "important," and "very important."

Employer respondents were then asked to rate the readiness of each of these three groups of new entrants on each of the 20 skills. Three choices of readiness were provided to the employer respondents: "deficient," "adequate," and "excellent." The skills and content areas included on the survey were grouped into three classifications: Basic Knowledge, Applied Skills and Emerging Content Areas.

The classification and definitions of skills included in the survey instrument relied upon several sources. The Partnership consulted with both business and educational leaders in determining the basic knowledge, applied skills and life skills that are considered essential for success in the workplace. (See www.21stcenturyskills.org). The final list of applied skills included several core foundation competencies that are in use in some major Fortune 500 corporations.

Four hundred thirty-one employers, representing a combined workforce of over 2million U.S. based employees, responded to the survey (a response rate of 4.8 percent). The respondents' titles, industries, sizes and regional location of their companies were recorded. Titles of respondents ranged from CEO/President to HR specialist.

These respondents come from a wide range of industrial classifications with manufacturing being the largest (22.8 per cent). More than a tenth of the responses come from business and professional services (13.9 per cent).

The Conference Board, Corporate Voices for Working Families, the Partnership for 21st Century Skills and the Society for Human Resource Management: "Are They Really Ready to Work? Employers'

perspectives on the basic knowledge and applied skills of new entrants to the 21st century U.S. workforce" available at http://www.p21.org/storage/documents/FINAL_REPORT_PDF09-29-06.pdf

Irish studies

5. Graduate Salary & Graduate Recruitment Trends Survey 2011 – GradIreland

GradIreland is a partnership between the Association of Higher Education Careers Services in Ireland (AHECS) and GTI Ireland. AHECS is the professional association for careers services in higher education in Ireland, north and south. GTI Ireland is a division of GTI Media Ltd, the world's leading graduate careers publisher.

Some 79 leading graduate employers in the Republic of Ireland and Northern Ireland completed the survey in February and March 2011. The survey is designed to provide employers and careers advisers with current picture of the graduate market in Ireland, including:

- Starting salaries by region and sector for 2010/11
- Changes in graduate intake between 2010 and 2011
- The effect of education premiums on graduate salaries
- Attitudes and policies around work experience and internships
- Application and screening procedures
- Overview of graduate induction, training and development best practices
- Assessment of graduate skills for work.

This information is designed to help companies who are considering their HR strategy, payroll, budgeting and benchmarking their position in the market.

Further information: http://gradireland.com/irelands100

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

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,
-

The research was carried out by interviews: face to face and by telephone. Where people did not feel comfortable with discussing issues, the researchers 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.

The overall finding of the survey was that there were relatively few important differences in employer perceptions between Irish and non-Irish graduates. Irish graduates appeared to compare favourably in "Soft/Generic" skills, while foreign graduates were considered more eager and hungry in the working environment. Graduates from Eastern Europe were perceived as possibly better in domain specific knowledge and attitudinal skills.

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. Available at:

www.forfas.ie/media/egfsn071221_employers_survey_graduates.pdf

7. IBEC Education and Skills Survey (2010)

The IBEC Education and Skills Survey 2010 was conducted in June 2010, with useable responses received from 339 employers, collectively employing over 114,415 employees. The employers participating in the survey were drawn from all parts of the economy, Irish (54%) and foreign owned (46%)

organisations, unionised (45%) and non-unionised (55%), and all sizes, from small firms employing less than 50 employees (33%) to organisations employing workforces in excess of 500 people (14%).

Responses were received from across all sectors of the economy. The principal activity of organisations was re-classified into five different categories - 'high-tech manufacturing' (which includes electronic manufacturing, pharmachemical and medical devices organisations), 'other manufacturing', 'financial services', 'other services' (which included call centres, charitable organisations and membership organisations) and 'distribution' which includes retail and wholesale firms. The largest single grouping was 'other services' which contained 39.2% of all organisations in the survey

The focus of the survey was broader than higher education. It included measurement of time and expenditure invested in training as a percentage of payroll, key drivers for training and workforce skills. However, it also included specific sections on higher education and business-education links:

- The majority of respondents said they had no difficulty in recruiting suitable graduates from Irish higher education institutions (74.6%).
- Most of those employers who had difficulty in recruiting suitable graduates (25.4%) highlighted problems with the engineering-related disciplines in both universities (60.9%) and institutes of technology (70%)
- Employers were less satisfied with graduate's 'ability to work autonomously' expecting them to be better able to work on their own initiative, manage their time effectively and be responsible for themselves and their tasks.
- Attitudinal skills and an approach to work that suggests enthusiasm and willingness to learn and develop were also highlighted as areas for improvement.
- The survey suggests that employers are now expecting higher education institutions to embed generic or employability skills more fully into their curricula.
- 38% of respondents have informal or ad hoc college placement procedures in place in their organisations.

Available at: www.ibec.ie

Appendix 3

Discipline by confidence in availability of graduates in the next 5-10 years

		Humanities & Arts incl. Teacher Education, Languages, History, Philosophy		Social Sciences incl. Psychology, Sociology, Economics, Journalism		Business & Law (incl. Marketing & Sales, Management, Accounting & Finance, Property Sales)		Science & Mathematics (incl. Food Science, Environmental Science)		Computing (including Software Engineering)		Engineering		Construction		Agriculture & Veterinary		Health & Welfare(incl. Nursing, Medical, Social Work)		Services (incl. Hospitality, Tourism, Travel, Environmental Protection, Transport, Security)		Other	
		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
		Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %
Relevant workplace/transferable skills :	Very confident	2	8%	4	17%	11	12%	4	9%	5	11%	9	14%	1	25%	3	50%	1	9%	0	0%	1	6%
	Confident	18	69%	15	65%	60	65%	33	73%	25	56%	42	67%	2	50%	3	50%	7	64%	8	73%	12	71%
	Not very confident	6	23%	4	17%	21	23%	8	18%	14	31%	11	17%	1	25%	0	0%	2	18%	3	27%	4	24%
	Completely lacking in confidence	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
	Not confident at all	0	0%	0	0%	1	1%	0	0%	1	2%	1	2%	0	0%	0	0%	1	9%	0	0%	0	0%
	Total	26	100 %	23	100 %	93	100 %	45	100 %	45	100 %	63	100 %	4	100 %	6	100 %	11	100 %	11	100 %	17	100 %

		Humanities & Arts incl. Teacher Education, Languages, History, Philosophy		Social Sciences incl. Psychology, Sociology, Economics, Journalism		Business & Law (incl. Marketing & Sales, Management, Accounting & Finance, Property Sales)		Science & Mathematics (incl. Food Science, Environmental Science)		Computing (including Software Engineering)		Engineering		Construction		Agriculture & Veterinary		Health & Welfare(incl. Nursing, Medical, Social Work)		Services (incl. Hospitality, Tourism, Travel, Environmental Protection, Transport, Security)		Other	
		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
		Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %
Relevant subject or discipline knowledge :	Very confident	4	15%	7	29%	18	19%	9	20%	7	15%	12	19%	1	25%	4	67%	1	8%	1	9%	2	12%
	Confident	17	63%	14	58%	60	63%	27	60%	24	52%	40	63%	2	50%	2	33%	8	67%	5	45%	11	65%
	Not very confident	6	22%	3	13%	15	16%	9	20%	15	33%	11	17%	1	25%	0	0%	1	8%	5	45%	4	24%
	Completely lacking in confidence	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
	Not confident at all	0	0%	0	0%	2	2%	0	0%	0	0%	0	0%	0	0%	0	0%	2	17%	0	0%	0	0%
	Total	27	100 %	24	100 %	95	100 %	45	100 %	46	100 %	63	100 %	4	100 %	6	100 %	12	100 %	11	100 %	17	100 %

		Humanities & Arts incl. Teacher Education, Languages, History, Philosophy		Social Sciences incl. Psychology, Sociology, Economics, Journalism		Business & Law (incl. Marketing & Sales, Management, Accounting & Finance, Property Sales)		Science & Mathematics (incl. Food Science, Environmental Science)		Computing (including Software Engineering)		Engineering		Construction		Agriculture & Veterinary		Health & Welfare(incl. Nursing, Medical, Social Work)		Services (incl. Hospitality, Tourism, Travel, Environmental Protection, Transport, Security)		Other	
		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
		Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %
The right attitude :	Very confident	4	15%	6	25%	18	19%	7	16%	8	17%	14	22%	1	25%	3	50%	1	8%	1	9%	3	18%
	Confident	14	52%	11	46%	47	49%	30	67%	28	61%	34	53%	0	0%	2	33%	6	50%	4	36%	11	65%
	Not very confident	9	33%	7	29%	29	31%	8	18%	10	22%	16	25%	3	75%	1	17%	4	33%	6	55%	3	18%
	Completely lacking in confidence	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
	Not confident at all	0	0%	0	0%	1	1%	0	0%	0	0%	0	0%	0	0%	0	0%	1	8%	0	0%	0	0%
	Total	27	100 %	24	100 %	95	100 %	45	100 %	46	100 %	64	100 %	4	100 %	6	100 %	12	100 %	11	100 %	17	100 %

Appendix 4

Company size by confidence in availability of graduates in the next 5-10 years

		cosize											
		Less than 50 employees		50 - 99 employees		100 - 249 employees		250 - 499 employees		Over 500 employees		-9.00	
		Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %
Relevant workplace/ transferable skills	Very confident	3	7.5%	4	15.4%	8	15.4%	2	10.0%	5	12.8%	0	.0%
	Confident	27	67.5%	16	61.5%	29	55.8%	16	80.0%	27	69.2%	2	100.0%
	Not very confident	10	25.0%	6	23.1%	14	26.9%	2	10.0%	6	15.4%	0	.0%
	Completely lacking in confidence	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%
	Not confident at all	0	.0%	0	.0%	1	1.9%	0	.0%	1	2.6%	0	.0%
	Total	40	100.0%	26	100.0%	52	100.0%	20	100.0%	39	100.0%	2	100.0%
Relevant subject or discipline knowledge	Very confident	5	12.2%	4	15.4%	9	17.3%	4	20.0%	9	22.5%	0	.0%
	Confident	28	68.3%	18	69.2%	29	55.8%	11	55.0%	24	60.0%	1	50.0%
	Not very confident	7	17.1%	4	15.4%	12	23.1%	5	25.0%	7	17.5%	1	50.0%
	Completely lacking in confidence	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%
	Not confident at all	1	2.4%	0	.0%	2	3.8%	0	.0%	0	.0%	0	.0%
	Total	41	100.0%	26	100.0%	52	100.0%	20	100.0%	40	100.0%	2	100.0%
The right attitude	Very confident	5	11.9%	5	19.2%	8	15.4%	4	20.0%	7	17.5%	0	.0%
	Confident	26	61.9%	11	42.3%	26	50.0%	10	50.0%	24	60.0%	2	100.0%
	Not very confident	11	26.2%	10	38.5%	17	32.7%	6	30.0%	9	22.5%	0	.0%
	Completely lacking in confidence	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%
	Not confident at all	0	.0%	0	.0%	1	1.9%	0	.0%	0	.0%	0	.0%
	Total	42	100.0%	26	100.0%	52	100.0%	20	100.0%	40	100.0%	2	100.0%

		Total	
		Count	Column N %
Relevant workplace/ transferable skills	Very confident	22	12.3%
	Confident	117	65.4%
	Not very confident	38	21.2%
	Completely lacking in confidence	0	.0%
	Not confident at all	2	1.1%
	Total	179	100.0%
Relevant subject or discipline knowledge	Very confident	31	17.1%
	Confident	111	61.3%
	Not very confident	36	19.9%
	Completely lacking in confidence	0	.0%
	Not confident at all	3	1.7%
	Total	181	100.0%
The right attitude	Very confident	29	15.9%
	Confident	99	54.4%
	Not very confident	53	29.1%
	Completely lacking in confidence	0	.0%
	Not confident at all	1	.5%
	Total	182	100.0%

Appendix 5

Selected comments from the open—ended questions.

Question 15: ***What is the greatest challenge you face in filling your graduate vacancies?***

- A limited number of high quality applicants from various disciplines such as IT and Engineering.
- Access to graduates, meeting expectations of graduates i.e. salary, benefits, (unrealistic) and matching course work with skills required in work place
- advertising vacancy to appropriate target audience
- Applicant graduates from non job specification requirements applying.
- Attracting the calibre of IT graduates
- Attracting the high number of quality graduates that we require each year.
- Availability of graduates with required skills
- Availability of suitably qualified candidates
- Availability of students with Honours Maths and or top academics in Leaving Cert and University.
- Attitude of students
- Business (sales) acumen
- Candidate's flexibility to move around the UK & Ireland
- Combination of technical & communication skills.
- Combining experience with qualifications.
- Corporate approval on headcount
- Defined skills in the workplace including teaching skills, competencies and knowledge that are at the cutting edge of their discipline. Interpersonal and other skills including basic IT skills, attention to detail and an ability to be culturally sensitive to non-native speakers of English are requirements. An ability to assess the learning and developmental needs of students and offer them the requisite student support so that individual potential is realised.
- Difficulty is preferred location of candidates, and numbers of students coming from Radiography courses
- Engineering course design does not always cover Energy Management
- Ensuring we get the right fit for our culture.
- Enterprising spirit
- Finding graduates with the necessary skills as a lot of our positions and quite specialist.

- Finding candidates with specific qualifications
- Finding graduates that have relevant work experience in industry.
- Finding graduates with relevant skill set and experience and meeting unrealistically high expectations of graduates
- Finding graduates with the higher level of qualifications & work experience e.g.. Placement
- Finding graduates with work related skills
- Finding people who will work at part of a talented team.
- Finding people with a good work ethic.
- Finding students with strong academic ability and potential for consultancy roles
- Finding suitable graduates, willing to move to location. Also quality of graduates applying for roles is low
- Finding the correct skillset and work experience
- Finding the right graduates
- Finding students with the appropriate skill set
- Foreign language skills
- Generic career guidance offered in colleges and offered as optional. Would like to see a specific programme through to all college students-not necessarily thought by teachers but by experienced HR Professional s with industry experience.
- Getting an understanding of the course content and how relevant it is to our organisation's needs.
- Getting enough Technology grads as its a generic grad programme
- Getting graduates of a high enough quality who are interested in committing to a further 3 and a half year training programme and competing with Big Four firms for these candidates
- Getting Graduates with 'User Experience' knowledge.
- getting high level calibre of candidates with right skills
- Getting quality graduates who have good social skills and finances
- Getting the attention of the graduates and getting them to consider That there is greater potential for individual development in SME's
- Getting the right fit i.e. good academically and a good personal fit for the organisation.
- Good calibre candidates are hard to come by.
- Graduates do not always present themselves effectively when applying for roles e.g. poor grammar and spelling in applications, poor interview skills.
- Graduates have no work experience and need a lot of training before they can add value

- Graduates tend to lack commercial awareness
- Graduates who have qualification however who also display potential for progression in the organisation.
- Graduates with the ability to use their initiative and the ability to turn data into information
- Having graduates successfully complete the early stages of our screening process. We frequently screen out candidates who have poor spelling or grammar in their application forms. Graduates need to pay attention to the small details of the process. It is not enough just to come from a good University or have a strong CV. To remain in our recruitment process they need to succeed at all stages of assessment
- Identifying graduates with the ability and initiative to think creatively and to take time to learn the business from the ground up.
- Industry specific skills
- Lack of future graduates. Due to the property and construction sector downturn, the numbers applying for property related courses are few, which will lead to a dearth of graduates in 3/4 years' time - exactly when we will need them.
- Lack of strong academic background in engineering students. Not a lot interested in electronics. Niche area.
- Lack of work experience on the ground. Course content not applicable to the job. Tutors out of touch with sector changes
- Language skills German & French
- Large number of applicants for limited number of jobs.
- Level of Irish Language
- Lack of relevant college placement work experience.
- Looking for graduates at the right time of the year! Demand/vacancy doesn't always coincide with availability of graduates.
- Lot of competition in IT sector
- Low volume of high quality java graduates available plus tough competition from other firms also hiring
- Management of graduate expectations and bridging the gap between academia and industry
- Managing graduate expectations in relation to salary and what roles/tasks they feel they should be doing.
- Marine qualifications
- Matching the organisations requirements with a graduates knowledge and experience.
- No Front of House or Accommodation Supervisory Course in the colleges at present. Chef graduates are leaving the country when they graduate. Also not enough chefs graduating to meet the demands of the hospitality sector

- Obtaining appropriate applicant with maturity/eagerness to transition from college environment to a structured working environment. To date we have been extremely lucky with all our graduates.
- On technology side number of suitable applicants versus industry demand (very competitive)
- Our distance to Galway city with very poor public transport links to the plant.
- Positive attitude, Literacy and communication skills
- Qualifications, experience
- Quality of applicant with appropriate language and mobility skills. Also practical experience in industry ascertained during college years.
- Quality of graduates available
- Quantity and quality of candidates. High level of competition for good candidates.
- Receiving applications from and accessing high calibre graduates. We also face strong competition from UK law firms
- Relevance of course and attitude towards work when hired
- Relevance of degree course to type of work. Salary expectations.
- Shortage of candidates with relevant skills in certain disciplines.
- Skills in specialised areas
- Sometimes availability of suitable candidates in a particular subject is a problem: i.e. Irish and Home Economics
- Sometimes it can be the quality of the candidates
- Sourcing graduates with the right attitude and with realistic ambitions
- Sourcing Graduates in particular subject areas can be difficult
- Sourcing Graduates with fluency in foreign languages
- Sourcing PhD level candidates in specific fields
- Sourcing sufficient high calibre graduates for positions available.
- Sourcing suitable graduates
- Specific mining skills education for engineers not available in Irish institutions.
- Students with relevant work experience provided throughout college work placements in industry
- Sufficient availability of suitable good quality candidates in certain disciplines, i.e. general surgery, general medicine and radiography
- The availability of high quality calibre of candidates.

- The lack of good qualified mechanical engineers or civil engineers that have undertaken conversion courses to acquire a qualification in mechanical/ biomedical engineering

- Today the problem is too many graduates of similar calibre chasing too few jobs
- Too many applications and no matter what you put in the ad people from other disciplines applying.
- Trying to find people with focus, commercial understanding and responsibility.
- Unrealistic expectations of candidates.
- Variable calibre of candidates.
- We have to go to Northern Ireland to find good graduates to fill actuarial positions. It is difficult to hire graduates into IT roles as they do not have sufficient hands on experience. The JobBridge programme helps fill this gap by allowing a company give a graduate hands on experience for nine months to get the necessary training to be able to place them on a customer account.
- Will they hit the ground running.
- With regard to Irish applicants it is getting them past both the application form stage of the process and the ability tests stage of the process. Irish applicants do not perform well in these 2categories and it is painfully clear at the Assessment Centres that the UK graduates are much more prepared. Irish universities need to invest time and resources in preparing impending graduates for the marketplace vis a vis application form filling and completing numerical and verbal ability tests.

Question 22: ***Where do you think the subject/discipline gaps will be in the future, if any?***

- Actuarial, Finance, insurance and pensions knowledge
- An increase in student numbers in the social sciences will have a negative impact on the quality of the students we can recruit. Student placements are vital to enable students to gain practical work experience before graduation. Larger student numbers will impinge upon this in the long run.
- Business
- Business
- Chemistry / Science
- Comp Science graduates with problem solving and coding skills
- Compliance, Regulation, I.T., accounting, business strategy
- Computer science
- Computer Science
- Data Analytics
- electrical engineering
- Electromagnetic Engineers
- Electronic engineering
- Electronics
- Energy management skills
- Engineering
- Engineering, IT
- Experience
- Experience
- Finance System Experience (e.g. SAP), Language Skills
- Polymer Engineers, also difficulty in finding Quality Engineers, Techs
- Foreign business skills
- Healthcare
- ICT
- In addition to computing and languages, basic literacy and grammar remains an issue
- Inter/Intra Personal Skills
- International sales/marketing
- Interpersonal and customer care skills

- IT
- IT
- IT
- IT graduates are becoming a very scare commodity
- IT Skills
- IT skills in the classroom
- IT- needs more involvement from industry in course design
- IT, software engineering
- IT, Supply Chain
- IT
- Languages / IT / ambition
- Languages with engineering/science
- Languages, attitude, applying their knowledge
- Leadership
- Manufacturing Engineering
- Matching college expectations with work expectations
- Mathematical deficiencies and business abilities
- Mathematics, discipline
- Medical and nursing home trained graduates
- Medical device design, manufacturing, quality, injection moulding & tooling, assembly automation
- New technologies
- Numeracy
- Polymer Engineering
- Polymer/Moulding Technology
- Sales Skills
- Science
- Science
- Science
- Science
- Science, Language and Engineering
- Scientists at PhD level

- Specialised IT skills
- Technology
- Technology
- We have found in the past that graduates are not interested in working for Irish owned companies and are more interested in appointments with multi-nationals.
- While engineering knowledge may be sound, commercial/business acumen may be lacking.
- Working/Dealing with people

Question 25: ***How could collaboration between industry and higher education be improved?***

- More practical applications
- A more open and flexible approach within the education institutions to work on areas which may not at the outset appear to be high profile research opportunities
- By asking business leaders of successful organisations what a successful potential future leader looks like and then educating our youth to that calibre of employee
- More input from the commercial sector to course content. Co-op or sandwich placements for more courses
- Invitations to open days
- Specific resource employed in higher education institutes to drive collaboration
- Better and more timely information on number of expected graduates...this is usually available almost a year after graduation. Engage more with industry and be more flexible about new courses/technology
- Based on feedback from other colleagues, there should be more industry input into HE programmes with reciprocal work experience and research placements
- Joint industry / HE forums by region or business classification
- Education institutes could focus more on practical 'real life' skills which will be of value in the workplace, and foster a greater degree of commercial awareness & business acumen in students
- More industry input in curriculum design
- Round table discussions with industry experts and higher level academia once a year minimum would help.
- Better understanding of the role(s) of 3rd level education providers
- Work placements should feature highly in college courses. Some courses have begun this but it would be more beneficial if more courses gave students work experience as part of their degree.
- Have discussions in relation to the needs of industry and the skills/ knowledge gaps and how the HEI can address these gaps
- There should be a government body/agency working to improve collaboration
- Identify where industry see the gaps in skills etc. and tailor courses. More involvement from industry in course content. Individuals from Industry to lecture, provide mentorship etc.
- Exchange of information and innovation in developing practical experience for students
- There needs to be more of a centralised approach to access the grades instead of dealing with all the universities individually
- Closer links and networking groups similar to other networking groups such as ICT sector groups.
- More dialogue between industry and educators
- University and employer forums

- Increased engagement with industry about requirements/skills post graduation. Increased skills provided to students on gaining employment post qualification: interview skills, literacy skills, attitude to workplace etc.
- Businesses need to be interested in interacting with colleges. Providing support, work experience programmes etc.
- Annual forums with business leaders/leading employers to get feedback on skills required going forward and content for courses
- For there to be a requirement for those participating in certain educational programmes to take part in work placements and for this to be supported by Government
- More focused/targeted approach by local education institutions
- Could be improved through industry/skill specific meetings
- Engagement in terms of course preparation and renewed focus on the soft skills....teamwork, change management, flexibility and critical analysis
- More contact and on a regular basis. There is more business than academics so academics may have sufficient contact there is not enough the other way around
- More communication from colleges to employers
- Better review of skill needs of industry would ensure jobs are filled and would also ensure that students are employed upon leaving college
- HE Representatives spend more time visiting industry
- Better use of the social media and internet systems to enable greater access and then use of collaborative tools as well as increasing general awareness and information exchange
- Opportunity to include students in the intern programme could work well
- Stronger emphasis and recognition of work placements as part of the graduates overall grade
- College courses that more clearly favour less academic routes and more relevant work placement programmes that combine practical learning with theory
- Some institutes are employer focused, others are not
- Speak with employers directly and ask employers to speak directly to students
- Easier access to the Colleges and students
- The Colleges should be surveying the sector to determine their needs
- Building the bridge between academia and business
- More collaboration between business and colleges
- Better understanding of the skills gaps and needs for the future
- Some institutions are much more open to collaboration than others and with these institutions the collaboration is quite good
- Better communication and dialogue between employers and educators

- Greater volume of workplace internships.
- More involvement in course development, content and for industry people to help teach some of the softer skills, time management, project management etc. that help make people effective in the work place.
- Greater collaboration between industry and academia re realistic expectations of the real work world, salaries, commitment, work ethic, cv preparation etc.
- Through more access for employers to higher education and advice and guidelines on websites
- Industry has changed dramatically over the last number of years and the education industry has-n't really changed too much.
- Speaking to employers on an on going basis about course content.
- Companies should be invited more regularly to the institutions and lecturers should be involved more and collaborate closely with the careers office.
- Industry Sector forum meeting Higher Education providers to outline requirements for future
- Include placement programmes in industry throughout the educational cycle of students. As part of course curriculum ensure students build on their own experiences year on year with placements.
- Finding common ground and aligning agenda's within and across the universities.
- More input from employers about course content - continual update of courses to keep you to date with changing technology
- Greater proactivity with Recruiters and Business leaders on course design and business programmes to ensure there is a relevant fit in terms of content
- Regular meeting with business leaders
- HEI needs to be more proactive in engaging with industry and ensuring there is sufficient relevant work skill transfer to students
- Ask business for their view on what is actually happening in the workplace
- Regular updates between universities and employers re vacancies/graduates looking for jobs.
- Employers going into colleges lectures coming into the work place
- Universities could reach out to local organisations/businesses
- Forums to discuss industry requirements and how/if courses are structured to address these
- Increased links between Industry and Higher Education Institution regarding design of course syllabus, funding and work placements for students.
- It would be useful for Educators to visit organisations and see what they are doing and learn what is required. when they have done that they should go to China, India, Korea and learn what we are competing against. Then they will be able to educate the youth to have the skills to compete on the World market which is our market.
- Increased number of internships with industry, which would be funded by the state/university

- HEI need to ask Industry what type of skills they need and then collaborate accordingly. Science should be a must at secondary school level based on the amount of multinationals operating in that sector in Ireland.
- More interaction between both employers and institutions
- Higher Education authorities should be more pro-active in contacting Irish Companies with a view to getting graduates placed with them.
- Graduates need to be equipped with the skills employers require e.g. ECDL skills and the ability to adapt to a professional environment.
- Industry is changing very quickly to meet market needs. Academia need to see us as partners and work and meet say every 6 months to hear updates from both parties as to impending changes needs etc.
- Greater discussion between industry and colleges regarding the best way for education/training to meet the needs of industry which in turn will make graduates more attractive to employers
- Higher Education institutions should be pro-active in initiating opportunities to receive input from industry
- Rotation of faculty into and out of industry. Faculty should not be allowed to stay long term in the University without working in the industry where graduates are employed.
- Industry to be represented within the institutes
- Higher Education Authorities reaching out to Multinational Agencies finding out what they need, what strategic changes are ahead and redesigning a course to improve the employability of the students post graduation
- Higher Education institution should reach out more to companies and find out exactly what areas they have requirements in.
- Certain Industries/Companies can and do benefit from interaction with colleges and course directors. The academic experience should be better linked to the real work environment in order to ensure that we are producing graduates that are globally equipped to source employment and are best in class
- Better links fostered between both
- Greater consultation on making course content relevant to employers
- Degrees and courses relating to accounting could be improved to attain better exemptions in the professional exams. Also more practical work done on relevant computer programmes.
- Consulting with the industry practitioners more frequently
- More Structured Forums for exchange - More frequent visits from colleges to Industry
- Formal feedback system re quality of students presenting for interview etc.; Discussion on gaps identified by the practitioners
- The importance of the Credit Union sector for business graduates and other has been largely ignored by the Institutions, with the result that niche players, dominate the sector and have become the body that dictates the minimum competency requirements for persons entering the sector. Universities and others need to develop suitable courses for this sector.

- It needs to come both ways. There is probably a very high level of collaboration from large high tech companies with significant resources. It is more difficult for smaller businesses and those involved in less high tech areas. I would suggest that collaboration between colleges and business organisations could provide a conduit for those types of company.
- Business needs to be move open to taking on ideas and opportunities that graduates offer; colleges need to tailor courses to business needs and engage more with business particular with course design and work placements
- Higher Education institutions should asked employers how they see their needs and technologies changing. This should allow students to leave college and make a faster meaningful contribution rather and having to be trained on the job
- Companies need to buy into the process, SME not avail of process in my view.
- More knowledge sharing between both. Keep Companies included in research ideas. Utilise Companies success stories / technology / innovation ideas maybe.
- The academic world is not agile enough to deal with the changing landscape of the IT sector. There should be a module on IT courses that is designed by bring leading edge companies into the universities explaining the vision for IT within each sector.
- More communication between institutions and industry
- More engagement between Companies and Universities on real life problems that students could use as part of their study/experience. Especially where organisations cannot afford to bring in the expertise or consultants.
- Setting up an open forum where businesses can openly communicate with heads of colleges in actively finding out the requirements of industry and colleges been better able to provide a Curriculum which meets the needs of student and industry.
- Fairer point system - Going on interest in subjects rather than points.
- I think the institutions need to be more proactive in contacting organisations, particularly SME's rather than just the large multi-nationals
- State universities and higher education institutions operate in a vacuum and are not interested in providing their graduates with the necessary skills for work. There is no adequate testing of whether graduates are in the appropriate course of study or what the lightly outcome will be. Graduates of IT courses are studying programmes that were developed 10 years ago or more - instead of being at the forefront of developments in
- Languages are ignored and even an honours degree in a language does not indicate a C1 level of competence. Many language examinations even at degree level are assessed through the medium of English – this is quite common in the teaching of German in many of the 7 state universities - which is incomprehensible.
- Industry review of the relevance of course content.
- Speak with the companies to see what skills are required of students and what courses are needed to keep the Irish Hospitality Industry as one of the best in the world. Work with the colleges to attract new people into hospitality.
- Address the shortage of mechanical and science graduates - promoting maths in the Education system as is beginning to happen now --more PR to get students interested

- Improve communications to align the requirements of employers in a region and the content of courses provided in 3rd level institutions.
- Regional collaboration meetings
- Institutions should make contact with business to discuss the changing working environment
- Course design and practical applications
- Careers office need to take a more active role. At the moment they do not do enough to promote industry earlier in a degree and have limited knowledge of what is involved
- The points system will need to be reviewed in the light of new needs arising from candidate's access to university and of industry/business

Question 26: ***What, if anything, could higher education institutions do that could contribute to the development of your organisation?***

- Ask us what we need for the future
- Assessment of the needs of local businesses/industries to determine the skill gaps. Liaise with
- Business to understand requirements
- Assist with R&D, assist with gaps in skills-have partnership approach for evening courses etc.
- Assistance with academic references for candidates; better consultation on teaching skills that are relevant to my organisation
- Assist in marketing, Product development & business development.
- At present they are very supportive I could not see them doing any more
- Awareness of or inclusion of the technical data relating to our specific industry within the related disciplines in Engineering, Environmental etc.
- Be open to receiving feedback from the practitioners re the gaps identified in the students knowledge base; Be willing to provide academic references for the students who attended their college
- Better communications and seek to formalise collaboration
- Better connection with team responsible for developing the organisation.
- Collaborate and establish links with industry as potential recruiters for graduates and to provide facilities for industry to attract graduates.
- Collaborate in training and development programmes that will aid transfer of skills, qualifications and competences to the work situation.
- Collaborate on projects that require a theoretical and practical approach
- Communicate with us regularly to place students with us on placement
- Consultation in the first instance
- Continue to develop working relationships so that relevant projects can be identified and more joint working can be implemented
- Continue to provide high calibre graduates in the fields of Mechanical Engineering, Finance, Quality and HR
- Continue to provide high quality graduates with workplace focussed subject knowledge, Practical application/ experience and personal skills.
- Design and implement pilots which bridge the gap between academe and day to day reality of running a business.
- Develop stronger expertise in R&D innovation and build better pilot scale facilities plus offer Masters/PhD graduates for project activity
- Develop 1 or 2 year training courses to convert construction, architectural graduates etc. over to mechanical, mechatronics and Biomedical Engineering.

- Encourage learning not only in relation to passing exams but learning following graduation. The ability to engage appropriately with fellow workers, ability to lead, to change and to self-evaluate.
- Encourage more 2nd level students to do higher level math and help increase awareness of the variety of careers available in the IT industry.
- Encourage more students in to the Business faculties.
- Engage
- Engage more closely with us.
- Engage more frequently with us
- Engage with Agribusiness to see how they could work with us to engage with us on our needs
- Engage with us to discuss our current and future recruitment and skills needs and how we can address together.
- Ensure that the technical disciplines we need going forward are being catered for, engage with us to solicit our inputs and let us know what we can do to help - this does not have to be about money. It can be about sharing time, opinions, experience, tours etc.
- Ensure graduate have practical skill set that enable them to hit the ground running in a business environment
- Get better at understanding industry and more proactive on early collaboration on upcoming areas of RD&I.
- Get lecturers involved and collaborate with them as one entity.
- Get to know what we do
- Give companies more knowledge of graduate programs associate with each industry sector
- Give students a more accurate expectation of average work place i.e. salary benefits, initial position
- Graduate advisory capacity, to selected industries
- Greater communication on our skill requirements
- Greater focus on partnering initiatives
- Greater focus on work-practical skills. Interviewing, excel, phone manner, client rapport building.
- Greater understanding of local manufacturing needs, and improved Career Guidance consultation
- Have more electronic engineering students on their courses
- Have more practical work in the courses. Work with industry to understand what is required in this regard
- Help share best practice and future direction of areas of expertise
- Identify skills gaps in the market
- Improve communication with schools, main providers of third level candidates

- Improve IT skills of students/graduates
- improve on-line learning facilities and opportunities
- Include a semester of work placement for all courses so graduates leave college with some practical hands on experience.
- Increase education in Supply Chain Management, Logistics and International Trade. Invest more in ICT education
- Increase the no. of students graduating with programming skills, there is a high-drop out rate in IT courses, the reasons for this need to be analysed, e.g. is there too much focus on maths which are not required for most IT jobs?
- Increased awareness of industry needs and continuous syllabus review to ensure graduates are focusing on current industry requirements
- Invitations to seminars etc.
- Irish Institutions are working very hard with tighter budgets due to the current cutbacks. However, we would like them to convince graduates to stay in Ireland once they have completed their course. There is also a demand for a higher calibre of graduate from the Irish colleges especially in the area of Chefs
- It would be useful if students were to partake in a commercial business class. It would be useful for this class to be interactive and involve current economic and business news to create a strong commercial acumen
- Learn what we do and the skill sets that we need and try to encompass that into their programmes. We could provide useful project work that could be incorporated into course work.
- Link in more with smaller companies and not just the large companies
- Link us with graduates and help bring a continuous improvement mind set to the organisation
- Look for collaboration on course content to ensure it's relevant to what business needs are.
- Look more at course content from a practical application, theory is very important but how to adapt to industry is more important
- Make us aware of graduated that are seeking employment and would have a skill base suited to our industry
- Many students are not employer ready upon graduating. Suggest introducing an Employability Module
- Maybe information / research on energy efficiencies in particular to solar inverters.
- More engagement on course design
- More hand on experience for students within the course curriculum
- More involvement in the Marine Industry, in recognizing courses at degree level
- Online forum for research projects
- Partner with Business & Organisations
- Prepare candidates for transition from college to work environment

- Prepare students for the marketplace by equipping them with relevant and appropriate skills in addition to education, as mentioned previously.
- Pro-active review & partnership with industry on ongoing changes to subject disciplines
- Proactive access to resources and research. There is a whole industry in Software Testing and it is not taught at university level. Train graduates on what is relevant today and for the future.
- Provide access to trained graduates
- Provide courses or modules specifically relevant to business
- Provide Graduates with the right type of training through long term graduate programmes (1 year or more) that are structured and as cost neutral as possible
- Provide interns to the Life Long Learning college in [Company name]. Work with us on the development of incubation hubs for Craft Graduates and share management experience in regard to organisational and development management
- Provide more Golf Management Degree courses
- Provide more top quality graduates
- Provide work experience as part of the course
- Put more emphasis on on-the-job training, send graduates on internship for 6-12mths
- Research opportunity to develop better recovery & recycling processes; environmental research into
- Review skills gap and help in the recruitment of those roles with ex-students, together with the design of courses to help fill those gaps in the future.
- Run more courses which are relevant to our business e.g. Health & Safety
- Run technical writing courses
- Share research and invite us to meet graduating classes
- Site visits to see and learn what we do, the chemistry we use, the day to day work of their graduates, undergo a gap analysis between industry and their institute.
- Streamline the number of courses on offer, make them more understandable
- Supply skilled graduates who are language proficient, passionate about our industry and have a balance of technical and practical skills
- Support graduate recruitment in IT modules with course placements as part of design of modules
- Tailored courses to the current IT market
- Talk to leaders in the industry to reflect changing work experiences in the degree courses, keeping them relevant to today.
- Teach their students that text speak is not appropriate in the business world. We find graduates ill prepared for interview - inappropriately dressed / poor eye to eye contact / poor research about the employer etc.
- Understand our Organisation better. We've never had a HEI on site. They need to go out, visit the MNCs and feel the culture and experience. Get a better understanding of what we do.

- Understanding of business issues and future direction of business and business priorities
- Undertake case work, surveys, academic basis for advancement of financial services and ethical behaviour.
- Visit our company, understand what we do and be more involved in advertising for work placement and graduate recruitment.
- Work closer with the organisations.
- Work placements
- Work with us on areas of research and curriculum development
- Work with us to understand skill gaps that exist and provide certified training to training up folks.
- Workplace skills and customer service components in the programmes
- Yearly collaboration focusing on business demands, meet the business leaders to discuss gaps in graduate development.