An Investigation into Student and Employer Attitudes towards IT Conversion Courses for Careers Advisory Service, TCD

Alice Kavanagh

April 2013
CAREERS ADVISORY SERVICE
An Investigation into Student and Employer Attitudes towards IT Conversion Courses
April 2013

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DECLARATION

I declare that the work described in this dissertation has been carried out in full compliance with the ethical research requirements of the School of Computer Science and Statistics.

Signed: ______________________

Alice Kavanagh
3rd April 2013
ABSTRACT

The aim of this project was to investigate student attitudes towards the value of postgraduate conversion courses together with the views of employers. The project will focus on information technology conversion courses and the research was conducted on behalf of the Trinity Careers Advisory Services (CAS).

The findings of this study show that just under half of the students were aware of the conversion courses, but very few of them have applied to one. It was also discovered that employers have a good opinion of the courses and the majority would considering hiring a conversion course graduate.
PREFACE

The Careers Advisory Service operates within a fast-changing and client-centred work environment and is responsible for providing guidance to undergraduate and postgraduate students at the College. Almost 1300 students are seen on an individual basis each year in addition to those who attend workshops, class sessions and visit the careers information centre.

Although unemployment is hovering around the 15% mark, there are major skills shortages in a number of sectors notably in information technology. There are many conversion courses now available that allow graduates to update or convert their current skills and knowledge to a new area. These courses can be a good springboard into a Masters, a job or to another degree of a different discipline.

The Careers Advisory Services are interested in investigating the opinions of Trinity students of conversion courses. This project will look at how aware are students of trends in the various sectors of the economy. Specifically where they have an interest and aptitude for working with information technology but have not previously studied computer science in college, are they considering IT conversion programs at either Postgraduate Diploma or Master's level.

I would like to thank Sean Gannon of the Careers Advisory Services for all the continual help throughout this project.

Finally I would like to thank Myra O'Regan, the project supervisor for all her help and support during the year.
CAREERS ADVISORY SERVICE
An Investigation into Student and Employer Attitudes towards IT Conversion Courses

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References
1. INTRODUCTION AND SUMMARY

This chapter gives the background of the client and the project. It also includes the terms of reference for the project and a summary of the remaining chapters.

1.1 The Client

The client for the project is Mr. Sean Gannon, Director of the Trinity Careers Advisory Services (CAS). The Careers Advisory Services provides guidance to postgraduate and undergraduate students of Trinity College Dublin and also offers a communication channel between the college and the labour market.

1.2 The Project Background

Despite unemployment hovering around the 15% mark, there are major skills shortages in a number of sectors notably in information technology. Towards the end of 2010 the Irish Independent reported that Intel Ireland was on the short list for a project which would have created up to 200 hi-tech jobs, but was beaten by Romania, which offered a better supply of suitable graduates and what is believed to be a slightly more attractive financial package of tax and other breaks. Romania, which has been actively targeting the IT sector for jobs, announced a multi-million euro investment in a new Intel Software Development Centre. Sources said Ireland lost the jobs because it could not guarantee the supply of suitably qualified graduates with the relevant skills. Within the past few months, on a visit to the College, the Recruiting Manager for Microsoft in Ireland said that the company was only able to fill 40% of its technical vacancies with Irish graduates – the remainder being filled by graduates from Eastern Europe predominantly Poland and Romania. The ICT Action Plan is promoting conversion courses among students and has capped the fees for Information Technology courses at €2,750, to try and increase the domestic supply of skilled IT graduates. The Careers Advisory Services is interested in investigating students’ and employers’ attitudes towards conversion courses. This research could help the CAS better advertise IT conversion courses among students.

1.3 Final Terms of Reference

- Prepare a literature review of issues related to conversion courses and the gap in the Irish jobs market today for graduates with IT skills.
- Investigate students’ attitudes towards the value of conversion courses.
- Investigate employers’ attitudes towards the value of conversion courses.
1.4 Report Summary

- Chapter 2: Summarises the conclusions from the research and any recommendations.
- Chapter 3: Provides a literature review on the topic.
- Chapter 4: Outlines the methodology used in obtaining the data and information.
- Chapter 5: Examines the analysis of the findings from the study.
2. CONCLUSIONS AND RECOMMENDATIONS

This chapter will outline the main findings from the study and will provide some recommendations for the Careers Advisory Service (CAS) in relation to conversion courses.

2.1 Conclusions

- Of students surveyed, 45% have previously heard of conversion courses, but only 1% have previously applied to one. Only 4% of the companies surveyed were able to name a reputable conversion course, although 16% of them have previously hired from a conversion course. (See Section 5.2, pg. 16)

- When the student’s were asked about their plans for after graduation; 42% said they wanted to get a job, 28% said they would like to continue studying, 14% wanted to take some time out and 15% did not know their plans. (See Section 5.4, pg. 19)

- Of those seeking employment after graduation 39% received no job offers. The Accounting, Banking & Finance and Business, Consulting & Management were the most popular sectors students were targeting for graduate jobs. (See Section 5.4, pg. 21)

- When the companies were asked if they were experiencing difficulty hiring IT professionals, 51% answered yes. (See Section 5.4, pg. 22) Of all the students surveyed, which excluded those in IT related courses, 78% had never completed an IT module in university. (See Section 5.3, pg.17)

- When the companies were asked if they thought it was possible for someone to be converted to IT, 85% answered yes and 88% said they would consider hiring someone after completing an IT conversion course. (See Section 5.5, pg. 23)

- When the companies were asked if previous education and work experience would affect their decision to hire someone from a conversion course, 82% answered yes, with Engineering, Accounting & Finance and Business being the top three preferred backgrounds. (See Section 5.5, pg. 24)

- Only 4% of the students were aware that the fees for ICT conversion courses were capped at €2,750 by the government. Financial reasons were the second highest ranked barrier to entry for conversion courses by students. (See Section 5.3, pg. 15)

- Just over half (51%) of the students said they actively try to keep up to date with the trends in the job market, and of those students, 47% preferred reading publications by the CAS. (See Section 5.6, pg. 24)
2.2 Recommendations

• As students ranked financial reasons as the second most influential barrier to entry of a conversion course. It would be a positive step for the CAS to make students aware of the government’s efforts, through the ICT Action Plan, to reduce fees for ICT courses. (See Section 5.3, pg. 18)

• Students should be made more aware of conversion courses as an option after graduation, and that they could provide them with wider and greater job prospects, as 88% of companies would consider hiring a conversion course graduate. (See Section 5.5, pg. 23)

• CAS should update students on the difficulties companies are experiencing in hiring IT professionals, and therefore should encourage them to take some IT modules as part of their study. (See Section 5.4, pg. 21)

• The CAS should utilize their social media usage to give students more information about trends in the current job market and available conversion courses. (See Section 5.6, pg. 25)
3. LITERATURE REVIEW

This chapter will discuss and review the literature surrounding conversion courses to help gain a better understanding of the topic.

3.1 Introduction

Unemployment is currently hovering around 15% in Ireland but there are still some skills shortages in many sectors, including the Information Technology sector. Immigrants with the required skills are filling many of these vacancies within the IT sector. Under the ICT Action Plan, the government is currently trying to encourage more students to study computer science and IT to increase the domestic supply of skilled IT graduates, and conversion courses are being promoted among third level students as part of this plan.

3.2 What is a Conversion Course?

Conversion programmes are postgraduate courses, which enable students to move from one discipline to another where they have had no previous experience of the new area. Rather than the traditional three or four year full time degree program, the one year long conversion courses are more focused on the current needs of the market which is for a one year long course that is adaptable to people’s attendance patterns.

Conversion courses are relatively new, with many in their first or second year running here in Ireland. They can be found all across the country in universities such as University College Cork (UCC), National University of Ireland, Maynooth (NUIM), Dublin City University (DCU), University College Dublin (UCD), University of Limerick (UL), Dublin Institute of Technology (DIT), Trinity College Dublin (TCD), and National University of Ireland, Galway (NUIM).

The most popular conversion course is in education, which provides for the academic and professional requirements of primary school teaching, but they can be found in other disciplines such a law, psychology, medicine and information technology (IT).

Usually the minimum entry requirement for conversion courses is a degree, with some of the more competitive courses requiring a 2.1 degree. Some of them have particular entry requirements, for example, for the Graduate Diploma in Chemical Engineering in UL, a Bachelor degree in Science or Engineering is required. Most of the conversion courses are open to students from any discipline, and this is one of their biggest attractions. This literature review will focus on the Information Technology conversion courses for the purpose of this project.

Information Technology conversion courses accept graduates from any unrelated disciplines and also those with related experience who are looking to up skill. They are aimed at those who are interested in following a career in IT but whose primary qualifications lie in areas outside of IT. They attract a wide range of graduates from different disciplines including Arts, Engineering, Science and Education. They are in depth skills conversion courses that will
provide excellent grounding in IT, a sound theoretical foundation with practical exposure. Upon completion each graduate will be on the same level of competence as any Computer Science graduate (Expert Group on Future Skill Needs, 2012).

Of all the fields that conversion courses are available in, Information Technology is said to be one of the easiest fields to convert to (PostGradIreland, 2012). There are currently three conversion courses available in information technology; H.Dip in Information Technology (NUIM), Graduate Diploma in Information Technology (UCD), and Higher Diploma in Computer Science (UCD) which provide 768 places available countrywide.

Graduates of an IT conversion course have many options upon completion. The conversion courses already have a very good reputation amongst employers. In a recent survey done by Hays, 84% of the IT employers surveyed said they would hire someone from a conversion course. Many graduates of an IT conversion course follow careers in IT within the area that they originally studied in (Hays plc, 2012). They can also fast track to a masters degree, such as the MSc in Data Analytics (DIT).

The ICT Action Plan launched by the government in March 2012 is aimed at building the supply of high-level ICT skilled graduates. The first phase of this plan caps the fees for all ICT conversion course at €2,750 and made the provision of 700 free places on ICT graduate conversion programs. Last year ICT Ireland launched a fully funded Masters in Applied Software in DIT. The 2013 Budget gave €5 million from the National Training Fund to support the second phase of it, which is managed by the Higher Education Authority (HEA) on behalf of the Department of Education and Science. This second phase aims to produce an additional 2,000 ICT graduate level professionals in 2013. In relation to the skills gap, the ICT Action Plan aims for Ireland to have the highest percentage of computing graduates as a proportion of all third level graduates by 2018.

3.3 The IT Sector in Ireland

Throughout the 1990’s Ireland’s economy experienced a massive expansion, which was on the same level, and sometimes above, the growth of the East Asian ‘Tigers’. At the end of this period of large growth of the 1990’s, Ireland had one of the highest percentages of young adults in third level education out of all the EU countries (Wickham & Bruff, 2008). By 1999, 9.5% of all third level students were studying computer science. The software industry played a big part in the so-called “Celtic Tiger”. By the mid 1990’s Ireland was the second biggest software exporter in the world, and also produced over 50 percent of all the personal computer packages sold in Europe (O’Gorman et al, 1997). Even during the 2000’s, while the growth rate of Ireland was lower, it was still exceeding the EU average.

There are currently around 75,000 people employed in the IT sector across 8,000 companies. Since January 2011, over 80 IT jobs a-week have been announced. Hays reported that there are 5,000 job vacancies in IT in Ireland alone (Hays plc, 2012). Ireland was ranked as the top destination in the world by quality and value of investment in a recent global competitiveness report (Higher Education Authority, 2012).
The IT sector is one of the most international sectors in the Irish economy. Despite being in a recession, Ireland attracts many multinational companies for many reasons, including its low corporate tax rate. Currently ten of the top global ICT companies operate in Ireland and it has become a centre for many of the biggest ICT companies to open a franchise, for example Microsoft, Google and Intel.

In many industries in Ireland national associations are set up to monitor professional qualification standards within the industry, such as the Royal Institute of Architects Ireland (RIAI) and Chartered Accountants Ireland. The activities of a national association and all its members are governed by its Bye-Laws and by rules relating to professional and ethical conduct. While all university degrees are accredited, there is no such national association in the software industry. Large multinational companies like Microsoft and Oracle tend to set the professional standards.

3.4 Inward Migration

The current shortage of skills is partially due to the dwindling amount of indigenous graduates. The demand for places in computing courses in Ireland has been falling steadily to date. In 2010 acceptances into level 8 computing courses were down 20% from 2000. It has since increased by 29% in the last three years but the Irish education system is struggling to meet the needs of the software industry. The demand for skilled IT workers in Ireland has risen at the same time as the number of IT graduates in Ireland has fallen. As a result of this drop in skilled IT graduates, companies have turned to inward migration to fill these vacancies and currently 55% of all of Ireland’s IT jobs are currently filled using inward migration (Wickham & Bruff, 2008).

Until recently, the Irish immigration laws allowed for fast-track work visas to be issued to non-EU skilled labour immigrants in any employment paying more than €60,000 per year. A new immigrant employee could be in Ireland and working within two weeks of recruitment thanks to the current work visa and authorisation system. Migrants accounted for 16 percent of Ireland’s population in 2008 (Wickham & Bruff, 2008). These immigrants tend to be more skilled than our indigenous population. Looking at census data from 2002, 14 percent of Irish citizens had third level education while 34 percent of non-Irish citizens had third level education.

3.5 Re-Training

The issues previously stated with the current Irish education system should in theory not matter if a company was to provide sufficient training for its employees to keep their skills up to date and relevant. Unfortunately in this industry currently, many employers tend to purchase the new skills required, rather than create them with retraining which has led to a very high employee turnover rate in the software industry. Many contracts given to immigrant employees will be temporary; finishing once the project is over. This is a clear attraction for employers to ‘buy’ new skills (Wickham & Bruff, 2008).
The skill sets required for this industry have a very short life span and are very fluid. A person’s current software skills would be out of date within six years if they chose not up update them or re-skill. While the ICT skills have a short shelf life, its takes time to build them up and this can be quite costly.

Looking at it from the employers point of view, why would they spend money training their existing employees, when they can import new ones quickly with the required skills for the project. Another attraction for employers was that many of the people coming from abroad and seeking employment in Ireland were looking for lower level jobs, but were very qualified. This meant the employer was getting value for the money. The company would save on labour by two accounts, by hiring qualified people below their skill level, and reducing training costs.

3.6 Conclusion

Currently Ireland is using inward migration as a substitute for improving the education system and internal training, which means the symptoms of the skills shortage are being dealt with, but not the source of the problem. This shortage will be reproduced over time as a result. Conversion courses address this problem and will provide graduates with the necessary core ‘soft skills’ and also bring their skills up to a level that is equal to a graduate of a three-year computing degree.
4. METHODOLOGY

This chapter will outline the methods that were used to collect and analyse the data. An online questionnaire was chosen at the primary means of research to investigate students’ opinions of conversion courses. Interviews with a recruitment agency were used to compliment it and to gain a better understanding of attitudes towards IT conversion courses from an employer’s point of view.

4.1 Literature Review

A comprehensive literature review provided an overview of the role of conversion courses, and individually, Information Technology conversion courses. It gave an insight into the skills gap in the current job market and inward migration within the software engineering industry. The review provided the basis for the report and also guided the development of the online questionnaire.

4.2 Survey

Sample Survey

The aim of the research was to target those students that are considering their options for after graduation. For this reason it was decided that the survey would only be sent to final year students who are graduating in 2013, as it was thought they would be researching options for after graduation.

Health science students were excluded from the sample group also as they have a planned career path within their course and do not actively research employers. As this project is focusing on IT conversion courses it was decided to exclude any IT or computer science related courses, as they are not the target graduates for an IT conversion course.

Survey Objectives

- Where they have an aptitude for IT, are they considering a conversion course?
- Are interest and aptitude the only barriers to entry?
- What are the most popular courses under consideration?
- How aware are students of job opportunities in the various sectors, and how do they come by this knowledge? Are they targeting those sectors?

Drafting and Layout of the Questionnaire

Dillman (2000) suggests that when designing a survey or online questionnaire it is best to start with some introductory questions which are followed by the more detailed questions towards the end. This advice was followed when creating this online questionnaire. Dillman (2000) also suggests including all definitions, explanations and instructions exactly where they are needed. Throughout this online questionnaire all information and text were placed directly above the question they related to and all instructions were easy to understand so that the respondent did not need to re-read or flick back through questions. An online
questionnaire was chosen as the primary means of research as it could very easily be sent to the chosen sample of student with a high response rate.

In the online questionnaire, the question types varied. Radio and check boxes were used where appropriate, and when a list of possible answers was available they were listed vertically below the question. A “Progress Tracker” bar was also included, as the questionnaire was long to keep users informed about what section they were currently on and what sections remain. For most of the multiple-choice questions an ‘Other’ option was provided, and many questions were left open ended. This allowed for each participant to give their individual opinion and explain their choices. It was important to allow each respondent to provide an answer not supplied by the questionnaire.

**Questionnaire Topics**

All the questions on the questionnaire were designed around the clients’ requirements for the project and also by talking to a few final year BESS students. The questionnaire was then developed and piloted. The survey was divided into eight different topics.

**Introduction**

These first questions were used to get an understanding of the respondents’ knowledge in the area of conversion courses and also their experience with IT during university. In one question the respondents were able to give their opinion of their own IT skills. It also provided some information regarding the knowledge of capped fees for the IT conversion courses.

**Post-Graduation Plans**

In this section the students were asked about what their plans are for after graduation. They were given a choice of selecting a graduate job, a PhD, or a Masters. There was also an ‘Other’ field provided. Their choice in this question led them to different sections.

**Graduate Jobs**

In this section the students were asked how many graduate jobs they had already applied for, and what sectors they were targeting for jobs. They were then asked how many jobs they were offered as a result of these applications.

**Post-Graduate Study**

In this section the student was asked to provide information regarding their plans to continue studying after graduation. If they chose a Masters or PhD they were asked to give details of the courses and when they applied.

**Conversion Course Application**

In this section they were asked if they had ever previously applied to one before. If they selected yes, they were asked to give details of the course they had applied to and when.
Benefits and Drawbacks
In this section the students were provided with two lists of benefits and drawbacks of conversion courses. They were asked to label each one in order of most important to least important. In addition the section was used to establish what each student found important and attractive about these courses and also what would prevent them from applying.

Irish Job Market
This section was used to find out if these students were keeping up to date with Ireland’s job market currently, and if yes, how they were doing so. Improving their services is a strategic issue for the Careers Advisory Service, so this was an important part of the survey for the client.

Conclusion
Finally the students were asked about their gender, age, faculty and what course they are currently studying. It was in this section that they were given the opportunity to enter into the competition for the €50 One4All voucher by providing their name and college email address.

Questionnaire Implementation
An email was sent out from the Career Advisory Services to the chosen sample of students. A cover letter was sent with the survey, which gave all the details of the purpose of the survey and about the prize. All relevant information documents were attached, as per the ethics guidelines and it also contained a link to the survey. The email was given a two week response time, and a reminder email was sent after one week. It was also posted to the CAS home page, their Facebook profile and their Twitter feed. In order to encourage more responses, each participant was given the opportunity during the survey to enter into a draw to win a €50 One4All voucher. The survey was created using Survey Monkey which was accessed using a university licence.

4.3 Ethical Approval
It was necessary to obtain ethical approval from the School of Computer Science and Statistics Ethical Committee, Trinity College Dublin, to distribute the survey among final year students. An email was sent to the committee with all the relevant forms and supporting documentation (Participant Informed Consent Form, Appendix C, final draft of online questionnaire) for approval. Once the committee reviewed the documents, ethical approval was granted.

4.4 Interviews
Phone interviews were held with two employees of Hays Recruitment as a complementary method of data collection. A phone conversation was held with James Milligan and Stephen Flanagan. As a result of these interviews the raw data from a survey conducted by Hays on the attitudes of employers towards conversion courses was released to me to use as part of my project.
5 ANALYSIS

This chapter will provide results of the in-depth analysis of two online questionnaires. The first one is the survey created and sent to senior sophister students in Trinity, and the second is the survey created by Hays Recruitment sent one hundred and four companies in Ireland.

The aim of the student survey was to establish the level of awareness among students of conversion courses and attitudes towards IT conversion courses. The aim of the employer survey was to look at a range of company’s opinions of conversion courses and if they would consider hiring a graduate from an IT conversion course. This survey was conducted by Hays plc in February 2012.

5.1 Respondents Profile

The student survey was sent out to senior sophister students, excluding those studying Health Science or IT related courses. It was set with a two-week response time and a reminder was sent out after one week. The responses were analysed by the respondents’ age, gender and by the faculty of their course. There were almost twice more female than male respondents, with 65% selecting female as their gender (See Appendix D, Figure 1). Of those surveyed 80% were younger than 23, with the remaining all being in a bracket above 23 (See Appendix D, Figure 1). Figure 5.1.1 shows that over half of the respondents were studying in the Arts, Humanities and Social Science department, 26% were from the Engineering, Maths & Social Science faculty and 12% were from the Health Science Faculty. The course with the largest response was Business, Economics and Social Studies (BESS) with 56 respondents, accounting for 17% of the responses.

![Graph of Respondents by Faculty](image.png)

FIGURE 5.1.1 – Graph of Respondents by Faculty
For the purpose of their research Hays surveyed one hundred and four companies. All the companies were from a range of industries. The Information Technology industry had the largest portion of responses. The IT industry was selected by 30% of the companies, 15% of the companies were in Financial Services, and the rest were from the Public Service, Semi State, Telecoms or other (See Appendix D, Figure 3). The companies ranged in size from between 1-50 and 1000+ employees, which can be seen in Figure 5.1.2 below. There were a similar proportion of companies with 1-50, 100-250, 250-1000 and 1000+ employees (24%, 23%, 22% and 19% respectively) and only 12% of the companies had 50-100 employees.

![Bar chart showing company size distribution](image)

**FIGURE 5.1.2 – Graph of Employer Respondents by Company Size**

The rest of the data were analysed under the following categories:
- Awareness of Conversion Courses
- Perceived benefits and drawbacks of IT conversion courses
- Student’s Post Graduation Plans
- Validity of Conversion Courses
- Careers Advisory Service (CAS)

### 5.2 Awareness of Conversion Courses

This section aims to discover the level of awareness of conversion courses among students and employers. It examines the responses of those students that had previously heard of conversion courses in an effort to discover which faculty in Trinity has the highest level of awareness. It aims to discover how many companies have hired graduates of conversion courses, and which industry has hired the most.
Of all the students surveyed, just under half (45%) had previously heard of conversion courses (See Appendix D, Figure 4). Table 5.2.1 shows the percentage of students who were aware of them within each faculty.

<table>
<thead>
<tr>
<th>Arts, Humanities &amp; Social Science</th>
<th>Engineering, Maths &amp; Science</th>
<th>Health Science</th>
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<tr>
<td>54%</td>
<td>36%</td>
<td>20%</td>
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<tr>
<td>n=184</td>
<td>n=84</td>
<td>n=41</td>
</tr>
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</table>

TABLE 5.2.1 – Percentage of Students who were Aware of Conversion Courses by Faculty

Only three respondents (1%) had applied to a conversion course (See Appendix D, Figure 5). The conversion courses listed that these participants had applied to were the Post Graduate Diploma in Legal Studies in DIT and Higher Diploma in Psychology in UCD/TCD. Each application was sent in March 2013.

Every company was asked if they were able to name a reputable conversion course and only 4% of the companies surveyed were able to do so correctly (See Appendix D, Figure 6). Of all the companies, 16% had previously hired from a conversion course (See Appendix D, Figure 7). Looking at the positive responses within each industry, the Telecom companies had the highest proportion (57%) and only 10% of all the IT companies surveyed have hired from a conversion course, which can be seen in Figure 5.2.1 above. Caution should be taken interpreting the percentages due to small numbers in the sectors.
5.3 Perceived Benefits and Drawbacks of IT Conversion Courses

This section investigates the level of IT ability of the population of students and how they felt about their abilities. It also outlines the main benefits and drawbacks of IT conversion courses as ranked by the students.

The students were all asked whether they agreed or disagreed with four statements relating to their skills in IT. The results were rated on a five-point scale from 1 (least important) to 5 (most important), and can be seen in Figure 5.3.1 below. The statement “I would like to improve my skills in another area other than what I am currently studying” received the highest rating of 4.29.

“"I would like to improve my skills in IT" had the second highest average rating of 3.93. This shows that students are lacking in IT skills, with the majority (78%) having never completed an IT module in university (See Appendix D, Figure 8). The overall breakdown of students who have not completed an IT module by faculty can be seen in Table 5.3.1 below.

<table>
<thead>
<tr>
<th>Arts, Humanities &amp; Social Science</th>
<th>Engineering, Maths &amp; Science</th>
<th>Health Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>91%</td>
<td>44%</td>
<td>93%</td>
</tr>
<tr>
<td>n=184</td>
<td>n=84</td>
<td>n=41</td>
</tr>
</tbody>
</table>

TABLE 5.3.1 – Percentage of Students who have not Completed an IT Module
The students were given a list of possible barriers to entry to an IT conversion courses and were asked to rate them from least to most important, and the results were rated on a six-point scale from 1 (least important) to six (most important), which can be seen in Figure 5.3.2 below. As mentioned earlier over half (55%) of the students had never heard of conversion courses before and this was ranked as the most important barrier. The second highest rated was financial reasons, with the majority (96%) not being aware that the Graduate Skills Conversion Programme had capped the fees for ICT conversion courses at €2,750 (See Appendix D, Figure 9). Having no interest in IT was the third most important factor in not applying to an IT conversion course, with a rating of 3.5.

![Graph of Barriers to Entry of Conversion Courses](image)

The students were asked to rate a similar list of five attractive points regarding IT conversion courses in order of importance, and the results are rated on a five-point scale from 1 (least important) to five (most important). Providing more job prospects upon completion was ranked the most important (4.04), with 46% of the students ranking it as the most important factor. Gaining more IT skills was ranked the second highest (3.6), with having skills from two disciplines scoring 3.33 from 5. Having an interest in IT was ranked the second lowest factor (2.38), and continuing their studies was ranked the least important with a score of 2.13 from 5.
5.4 Students’ Post Graduation Plans

This section examines what students are planning to do after graduation. If they are looking for a job, the analysis examines what sectors of the job market they are targeting. If they plan to continue studying, the analysis aims to discover their preferences.

The students were asked what their plans were for next year and were given an option of four choices, one of which one was “I don't know yet”. The most popular choice was to get a job (42%), and second was to continue studying (28%), followed by to take some time out (14%), in which many mentioned travelling, and 15% said they still did not know their plans for next year. Table 5.4.1 below shows the breakdown of students’ plans for next year by faculty.

<table>
<thead>
<tr>
<th></th>
<th>Arts, Humanities &amp; Social Science</th>
<th>Engineering, Maths &amp; Science</th>
<th>Health Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continue Studying</td>
<td>24%</td>
<td>40%</td>
<td>7%</td>
</tr>
<tr>
<td>Get a Job</td>
<td>39%</td>
<td>35%</td>
<td>71%</td>
</tr>
<tr>
<td>Take Time Out</td>
<td>17%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>I don't know</td>
<td>17%</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>6%</td>
<td>2%</td>
</tr>
</tbody>
</table>

TABLE 5.4.1 – Students Plans for After Graduation by Faculty

Within each faculty, there was the largest proportion (40%) of students from the Engineering, Maths and Science faculty who chose to continue studying, and only 7% of Health Science students want to continue studying after graduation. All the students who chose ‘Undertake post graduate study’ were asked to specify the type of study by choosing from a list of either a PhD, Masters by Research, Taught Masters or Postgraduate Higher Diploma and were given an option of other to specify something else and the results can be been in Figure 5.4.1 below.
Within each faculty there was the largest proportion (17%) of students wanting to “Take Time Out” in the Arts, Humanities and Social Science faculty, and only 5% of students studying in the Health Science faculty want to take some time out. Of the students who said they were taking a year out, 7% specified travelling.

“Take time out and get a job unrelated to my field of study” [sic]

The Health Science faculty had the largest proportion of students looking for employment after graduation (69%), with Engineering, Maths and Science and Arts, Humanities and Social Science faculties having almost half that with 34% and 38% respectively (See Appendix D, Figure 10). Almost half, 45%, of the students applied for between one and three jobs, 32% applied for between four and six jobs and only 19% applied for seven or more (See Appendix D, Figure 11). Of those students who applied to 1-3 companies 68% received one or more job offer. The students who applied to between seven and nine companies had the highest rate of offers with 80% of them receiving one or more job offers (See Appendix D, Figure 12).
An alarming 39% did not receive any job offers, and 61% received one or more offers (See Appendix D, Figure 13). Figure 5.4.2 above shows the percentage of students within each faculty that received one or more job offers. The Health Science faculty had the highest rate of employment (75%), but over half (55%) of the Engineering, Maths & Science faculty did not receive any job offers.

Figure 5.4.3 shows the sectors that students are targeting for graduate jobs. Accounting, Banking & Finance and Business, Consulting & Management were equally the most popular choices of the students to apply to for a graduate position both getting 26%. IT & Information Services was the second highest choice, but fell short of the top two by 14%. A very large gap between the top two choices and the next highest can be seen here, much bigger than any other gap in this graph. As mentioned in Chapter Three there is a huge deficit in skilled IT professionals in Ireland’s current workforce.
Each company was asked if they are experiencing difficulty in recruiting IT professionals and 51% answered yes (See Appendix D, Figure 14).

“In general, the availability of skilled and suitable IT resources is low, despite the current unemployment levels.”

“Scarce resources of IT professionals in the country.” [sic]

Companies within the Telecoms industry are having the most difficulty with 86% answering yes, compared to companies within the Public Service industry where only 44% of the companies answered yes. Within the Information Technology industry, 74% of the companies said they were having difficulty hiring IT professionals (See Appendix D, Figure 15).

5.5 Validity of Conversion Courses

This section looks at if the overall aim of conversion courses is being validated by employers and if a student’s previous work experience and educational background would influence their decision to hire them after completion of an IT conversion course.
The aim of an IT conversion course is to take a graduate of an unrelated discipline and to give them an in depth understanding of IT of the same level as any graduate from a computer science degree. Each company was asked if they thought graduates who had completed non-technical degrees could be converted to work in the IT industry. Of the companies surveyed 85% said they thought that this was possible (See Appendix D, Figure 16). Three of the respondents who thought it was not possible had previously hired someone from a conversion course. Each company was given the chance to explain their answers to this question.

“Anyone that completes a degree in any discipline should have the intellectual capabilities to transfer to the IT industry.”

“I think that given the current economic climate people need to be flexible and expand their skills base.”

“If they have the ability it should be relatively easy to convert non-technical graduates to work in IT - I’ve worked with IT people who had degrees in Arts, Business, etc”[sic]

Following this question, the companies were all asked if they would consider hiring someone who has done a conversion course. The response was overwhelmingly positive with 88% saying they would consider hiring someone from a conversion course (See Appendix D, Figure 17). Only six companies answered no to this question. They were from financial services, semi state, construction, private health or “staffing” industry. Three out of the six reported having difficulty hiring IT professionals and one company, who had previously hired someone from a conversion course, in their explanation wrote:

“Have previously worked with graduates of such courses, they do not have a depth of knowledge to properly fill the role, they also lack motivation as it isn’t their choice of career. It is damaging to the IT industry in this country as it undermines the profession” [sic].

In the case of an IT conversion course, anyone with a degree from any unrelated discipline is allowed to apply. Every company was asked if someone’s previous work experience and education would affect whether they would hire them after they have completed a conversion course and 82% answered yes (See Appendix D, Figure 18). Figure 5.5.1 below shows the breakdown of preferred backgrounds as chosen by these employers. Engineering, Accounting and Finance and Business are the top three favourites.
5.6 Careers Advisory Service (CAS)

This section investigates whether students keep up to date with trends in the Irish job market, and will examine the positive responses to see what means is most popular among students.

When the students were asked if they keep up to date with trends in the job market, the results were split almost 50-50 with 51% answering yes to the question (See Appendix D, Figure 19). These students were asked to select by what means the do this from a list of three choices. The results are shown in Figure 5.6.1 below.

Reading The Irish Times or The Financial Times and also Trinity Careers Advisory Services publications were both clear favourites with 45% and 47% of the votes respectively. Only 2% of the students said they used reports by Forfas or HEA and 6% of the students used the open text box “other” for their answer and these answers were all similar giving details of using the internet to look up online job searches, company websites, gradireland and prospects. Listening to the news on the television or the radio was also mentioned in three responses.
By what means do you keep up to date with trends in the Irish Job Market?

- Irish / Financial Times: 45%
- TCD CAS Publications: 47%
- Other: 6%
- Forfas / HEA Reports: 2%

n = 329

FIGURE 5.6.1 – Graph of Mean by which Students Learn of Trends in Irish Job Market
APPENDICES
A ORIGINAL PROJECT OUTLINE

Client: Careers Advisory Service
Project: Assuming an aptitude for computing how open are students from the class of 2013 to undertaking an IT conversion course in order to gain employment?
Location: 7-9 South Leinster Street, TCD
Client Contact: Sean Gannon, Ext. 2556, sean.gannon@tcd.ie
School Contact: Eileen Drew

Client Background
The Careers Advisory Service operates within a fast-changing and client-centred work environment and is responsible for providing guidance to undergraduate and postgraduate students at the College. Almost 1300 students are seen on an individual basis each year in addition to those who attend workshops, class sessions and visit the careers information centre.

Facilities available to students include individual meetings, group guidance seminars and activities to aid the development of transferable skills, a full range of information on employers and postgraduate study, training seminars, vacancy information for final year and postgraduate students, psychometric assessment and computerised vocational guidance. The department also provides a specialised service – VACWORK, which aims to help Junior Sophister students to obtain career related work experience during their summer vacation.

While the Careers Advisory Service operates primarily for students it also offers an important two-way communication channel between the College and the labour market. Staff in the department are heavily involved in liaising with employers who visit Dublin.

Project Background
Despite unemployment hovering around the 15% mark, there are major skills shortages in a number of sectors notably in information technology. Towards the end of 2010 the Irish Independent reported that Intel Ireland was on the short list for a project which would have created up to 200 hi-tech jobs, but was beaten by Romania, which offered a better supply of suitable graduates and what is believed to be a slightly more attractive financial package of tax and other breaks. Romania, which has been actively targeting the IT sector for jobs, announced a multi-million euro investment in a new Intel Software Development Centre. Sources said Ireland lost the jobs because it could not guarantee the supply of suitably qualified graduates with the relevant skills. Within the past few months, on a visit to the College, the Recruiting Manager for Microsoft in Ireland said that the company was only able to fill 40% of its technical vacancies with Irish graduates – the remainder being filled by graduates from Eastern Europe predominantly Poland and Romania.

Client Requirement
How aware are students of job opportunities in the various sectors of the economy? How do they come by that knowledge? As part of their career planning are they targeting those sectors which are likely to have significant numbers of jobs?
Specifically, where they have an interest and aptitude for working with information technology but haven’t studied computing in College are they considering IT conversion programmes at either Postgraduate Diploma or Master’s level? Are interest and aptitude the only barriers to undertaking such courses or are there others? Which are the most popular courses under consideration?

**What is involved for the student?**
The project will involve a survey of selected final year and postgraduate students in relation to the questions raised above.

Improving our services to students is a strategic issue for the Careers Advisory Service and the final report should include specific recommendations as to how best we can publicise labour market information and, where appropriate, advise students of suitable conversion courses.

**Further Reading:**

- http://www.cpl.ie/blog/post/98227089/it-skills-shortage
- http://postgradireland.com/advice-and-funding/conversion-courses/conversion-courses
B INTERIM PROJECT REPORT

Management Science and Information System Studies

Project: Assuming an aptitude for computing how open are students from the class of 2013 to undertaking an IT conversion course in order to gain employment?

Client: Careers Advisory Service

Student: Alice Kavanagh

Supervisor: Myra O’Regan

Review and Background of Work to Date

The Careers Advisory Service operates within a fast-changing and client-centred work environment and is responsible for providing guidance to undergraduate and postgraduate students at the College. Almost 1300 students are seen on an individual basis each year in addition to those who attend workshops, class sessions and visit the careers information centre.

The Careers Advisory Services are interested in investigating the student’s in Trinity opinions on the conversion courses. Despite unemployment hovering around the 15% mark, there are major skills shortages in a number of sectors notably in information technology. This project will look at how aware are students of job opportunities in the various sectors of the economy? How do they come by that knowledge? As part of their career planning are they targeting those sectors, which are likely to have significant numbers of jobs?

Specifically where they have an interest and aptitude for working with information technology but haven’t previously studied computer science in college are they considering IT conversion programs at either Postgraduate Diploma or Master’s level? Are interest and aptitude the only barriers to undertaking such courses or are there others? Which are the most popular courses under consideration?

A decision was made that the best course of action to gather the information was to conduct a survey on the students of the class of 2013, excluding those undergoing degrees that are IT and computer science related and also health science. A focus group will also be held with a sample of students from a current conversion course class to get their opinions. Interviews will also be held with some of the top IT recruiters in Ireland to find out their view on graduates of a conversion course.

Terms of Reference

The aim of this project is to:
• Prepare a literature review of issues related to conversion courses and the gap in the Irish jobs market today for graduates with IT skills;
• Investigate students attitudes towards the value of conversion courses;
• Conduct interviews with employers on their views of conversion courses;

Further Work

• Finalize the survey to be completed by students and create it using Survey Monkey
• Finalize interview questions for Accenture and Microsoft.
• Organise focus group for NUIM IT conversion course students.
• Circulate survey to students in college.

Conclusion

In the current market there are a growing number of opportunities for employment for graduates in the IT sector. Currently there is very little awareness among students about conversion courses and there has been almost no investigation into their benefits and employment opportunities upon graduation. This study will investigate the attitudes of students and employers towards these courses.
C ONLINE QUESTIONNAIRE
The following email was sent to all senior sophister students, excluding any IT or health science related courses.

C.1 Cover Email

Dear Students,

My name is Alice Kavanagh and I am a Senior Sophister student of Management Science and Information System Studies (MSISS).

I am currently conducting a research project on Students and Employers attitudes towards Conversion Courses on behalf of the Careers Advisory Services of Trinity College Dublin.

I would be most grateful if you would assist me by completing a short online survey that will only take approximately 10 minutes to aid me in my research.

The survey can be accessed by clicking on the link below.

Link to survey: https://www.surveymonkey.com/s/WQ3NRHQ

Everyone who participates in the survey can be in with a chance to win a €50 One4All voucher.

The participant Information Leaflet is attached. If you require any further information about the study you can contact me by emailing kananaga@tcd.ie or contact my supervisor, Myra O'Regan (moregan@tcd.ie).

Many Thanks,

Alice Kavanagh
C.2 Online Questionnaire

FIGURE C.2.1 – Page 1 of Online Questionnaire: Information
Conversion programmes are postgraduate courses, which enable students to move from one discipline to another where they have had no previous experience of the new area. For example a course enabling a Science graduate to move to Business or an Arts graduate to move to Information Technology.

2. Have you heard of postgraduate conversion courses?
   - Yes
   - No

3. Have you ever completed a computing or IT related module in college?
   - Yes
   - No
   - Please specify

4. To what extent do you agree or disagree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would like to improve my skills in another area other than what I am currently studying</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I would like to improve my skills in IT (Information Technology)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I have a good aptitude for IT</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I have an interest in IT</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

The Graduate Skills Conversion Programme has capped the fees for ICT conversion courses at £2,750.

5. Had you heard of the capped fees for the IT conversion courses?
   - Yes
   - No

FIGURE C.2.2 – Page 2 of Online Questionnaire: Introduction
FIGURE C.2.3 – Page 3 of Online Questionnaire: Graduation

FIGURE C.2.4 – Page 4 of Online Questionnaire: Graduate Jobs
FIGURE C.2.5 – Page 5 of Online Questionnaire: Graduate Job Applications
FIGURE C.2.6 – Page 6 of Online Questionnaire: Conversion Course Application

FIGURE C.2.7 – Page 7 of Online Questionnaire: Conversion Course Application
FIGURE C.1.8 – Page 8 of Online Questionnaire: Post Graduate Study

FIGURE C.2.9 – Page 9 of Online Questionnaire: Details of Post Graduate Study
FIGURE C.2.10 – Page 10 of Online Questionnaire: Pro’s and Con’s
FIGURE C.2.11 – Page 11 of Online Questionnaire: Pro’s and Con’s
FIGURE C.2.12 – Page 12 of Online Questionnaire: Irish Job Market
FIGURE C.2.13 – Page 13 of Online Questionnaire
C.3 Hays Questionnaire

FIGURE C.3.1 – Page 1 Part 1 of Online Questionnaire
5. Do you think graduates who have completed non technical degrees could be converted to work in the IT industry?  

Please explain your answer

6. Have you hired anyone who has completed a conversion course?

7. Would you consider someone who has done a conversion course?

8. For what types of jobs would you consider hiring someone who has completed a conversion course?

- Testing
- Support
- Development
- Management

9. Can you name any conversion courses that in your opinion are reputable?

10. Would someone’s previous education and work experience affect whether you would hire them after they completed a conversion course?

11. If yes, from which of the following backgrounds would you consider hiring someone?

- Accounting and finance
- Engineering
- Media and marketing
- Architecture
- Languages
- Medicine
- Arts
- Law
- No third level education
- Business
- Manual labour
- Politics
- Construction
- Manufacturing
- Science

12. If you had the choice, would you consider implementing a similar re-training programme to that of Ericsson?

- Yes
- No
- Don’t know anything about it

FIGURE C.3.2 – Page 1 Part 2 of Online Questionnaire
D  ANALYSIS OF ONLINE QUESTIONNAIRE RESULTS

FIGURE D.1 – Graph of Student Respondents by Gender

FIGURE D.1 – Graph of Student Respondents by Age
FIGURE D.3 – Graph of Companies by Industry

FIGURE D.4 – Graph of Student’s Awareness of Conversion Courses
FIGURE D.5 – Graph of Students’ Applications to Conversion Courses

FIGURE D.6 – Graph of Companies who could Name a Reputable Conversion Course.
FIGURE D.7 – Graph of Companies who have Hired from a Conversion Course

FIGURE D.8 – Graph of Students who have Completed an IT Module in University
FIGURE D.9 – Graph of Students Awareness of the Capped Fees for IT Conversion Courses

FIGURE D.10 – Graph of Proportion of Students from each Faculty Looking for Employment After Graduation
FIGURE D.11 – Graph of Number of Job Applications Students Sent to Companies

FIGURE D.12 – Graph of Number of Students’ Job Offers Against Number of Job Applications
FIGURE D.13 – Graph of student’s job offers

FIGURE D.14 – Graph of Companies Experiencing Difficulty Hiring IT Professionals
FIGURE D.15 – Graph of Companies Experiencing Difficulty Hiring IT Professionals by Industry

FIGURE D.16 – Graph of whether Companies Think People can be Converted to Work in IT
FIGURE D.17 – Graph of whether Companies would Consider Hiring from a Conversion Course

FIGURE D.18 – Graph of whether Someone’s Previous Education and Work Experience would Affect a Company’s Decision to Hire Them
FIGURE D.19 – Graph of whether Students Keep up to date with Trends in the Irish Job Market
E SUBSETS OF QUESTIONNAIRE OPEN ENDED RESPONSES

E.1 Have you ever completed an IT module in college? If yes, please specify.

- Data handling
- Module on music-related programs (Auralia aural training software and Sibelius software)
- Integrated systems design
- Computer Engineering
- Pharmacology modelling and statistics.
- Stats
- C++
- Software Applications
- Algorithmic Entropy
- Computer Engineering 1 & 2, Computer Aided Design, Numerical Methods
- Studying Computer Engineering
- Programming for Engineers
- Computer labs for maths methods and data handling modules
- Radiation Therapy specific IT
- Microsoft Excel
- Java, Business IT, Computing
- Computer programming, Computer Aided Engineering etc.
- Statistics
- Programming
- Information systems
- Computer Engineering - C++ programming, XML engineering, Computer Vision, etc.
- Engineering 1st and 2nd year
- Digital Signal Processing, Software Engineering Project Module, Microprocessor Systems, ...
- Music Technology, certainly computing related
- Computational physics and molecular modelling practical experiments
- Programming
- Engineering
- JS module on C programming
- Programming (C++)
- As part of my engineering degree I took 2 computer programming courses (C++) as well as major projects based around use of C#, visual basic and matlab
- C programming
- UNIX module as part of Maths module
- Excel
- C, C++, matlab, arcgis, autocad, revit
- Introduction to Programming amongst others
- Computer Programming, Computer Aided Desing, Finite Element Analysis, Numerical Methods
- Statistics
- 1E3, 2E3, 3E2
• Yes a chemistry Fortran and Unix course. if it counts
• Statistics modules
• Basic C Programming
• Information Systems
• Software Applications, Java, Information Systems Studies
• Strategic information systems in third and fourth year BBS
• Data engineering
• Data Handling module
• Intro To Computers & Info Systems
• I study Computer and Electronic Engineering, so quite a few. Networks, Mircoprocessors, Control of Toy Buggy Project etc.
• Computer Programming for scientists
• I study computer engineering so loads
• Computer labs for maths methods and data handling
• Yes, as part of my physics course
• Econometrics
• Information Technology and Information Systems Third Year Course
• Information systems & Information Technology. 3rd year business module.
• Computational chemistry
• Powerpoint, Excell, computer programmes related to science. eg protein explorer
• Just basic courses in using a computer
• Basic use of C programming to create physics simulations
• Computer Engineering
• Data handling and statistics using computer programmes, Maths methods (excel)
• Computer based Statistics
• Yes, I think - did a course in JS on online/powerpoint presentation which involved the class being taught on MAC computers about its OS.
• Learnt how to use SPSS for statistics
• Introduction to Information Systems & Information Technology (1 Year split into the two modules)
• Computer/Electronic Engineering Student
• Social Computing
• MSISS
• GIS
• Excel
• Information Systems

E.2 What are you plans for after graduation?

• Do a makeup/beautician course
• Travel
• Travel
• Begin an undergraduate degree in Human Nutrition and Dietetics
• Take time out and get a job unrelated to my field of study
• Emigrate
• Study for FE1s. I have a training contract.
- Travel
- Do a course in something totally different
- Internship

**E.3 In what sector were the graduate jobs you applied for in?**
- Technology Consulting
- Social work

**E.4 Which of these are you considering? (PhD, Masters by Research, Taught Masters or Post Graduate Diploma)**
- Graduate Program in KPMG
- PGDE
- Diploma
- Graduate Medicine
- All of the above
- Graduate entry physiotherapy
- FE1’s in order to apply to Blackhall Place
- All three of the above: PhD, Masters by Research and Taught Masters

**E.5 Please give details of this PhD or Masters by Research below.**
- 18th Century Life in Connacht
- Geophysical research
- Research based geophysics course in the UK
- PGDE in Education to teach Biology to leaving cert level
- Diploma in Strategic Intervention
- PhD in Chemical Biology in Cambridge University
- CFD Research Masters
- I am applying for a PhD in the Music Department, not specifically IT related but incorporating music technology aspects.
- Oxide interfacial physics
- A variety of ones
- Geography
- Pharmacology
- On heat transfer and fluid mechanics in TCD
- PhD in natural science, pending successful application for funding
- Research Ph.D in Crann
- PhD in Microbiological related area
- MA in philosophy, then continuing on to do PhD
- PhD in immunology
- PhD in Classical Studies
- Computational Infection Biology program
- MSc. in Psychological Research, University of Edinburgh, PhD in Child & Youth Research, TCD & NUIG
- PhD in Photonics in Imperial College London (funding to be confirmed)
• PhD in Trinity in the Ocular Genetics Unit
• Don't really have solid details as of yet, but plan to undertake a PhD here in Trinity. In talks with potential PIs currently
• Architectural History
• Smurfit international business

E.6 What conversion courses have you applied for? Please give course name and university.

• Interactive Digital Media MSc, TCD
• Psychology H Dip in UCD and in Trinity College
• Post Grad Diploma in Law, DIT
• DCU - Masters in e-commerce

E.7 What is the main reason you didn’t apply for a conversion course in IT?

• The survey would not allow me to mark the ones I wanted!!
• I would like to get some real-world work experience
• Studying Computer Engineering
• I am already in an IT course
• I am an Electronic & Computer Engineering Student therefore IT is already important
• Going to apply for an Interactive Digital Media MA at Trinity College Dublin
• I don’t want to continue studying
• None of the above
• I had no idea what it was or that it existed.
• This is not the direction I see my career heading, however IT skills are useful in any discipline
• My course is in IT
• I want to do physics
• I had not thought about it
• I do not understand how to answer this section - I have not applied because I’m considering all options. I have a big interest in IT, but fear that I might lack the abilities to gain the skills.

E.8 Which of these benefits would attract you to a conversion course in IT?

• All similar level of importance

E.9 By what means do you try and keep up to date with the Irish job market?

• Generally take an interest whenever the topic is discussed on TV/Radio
• Internet
• Internet
• I don’t
• Internet
• Internet
• Online job availability
• Word of mouth (Radiotherapy is a small field) and through agency advertising.
• Websites
• News
• N
• Websites and other newspapers
• Other websites
• Watch the news on tv
• I try to but usually don't keep up, maybe once a month I'll check it out
• Online
• N/A
• Online searches
• Do random job searches/check certain companies job listings
• GradIreland and Hookhead reports
• Websites like Grad Ireland and Prospects
• I don't

E.10 What industry best describes the company you work for?

• FMCG
• Health Care
• Manufacturing
• Construction
• Private Manufacturing
• private education
• construction
• Consultancy
• Construction
• SERVICE
• Engineering
• shops
• construction - architecture
• Construction
• Multiple restaurants
• Manufacture Of Road Construction Materials
• Manufacturing
• Engineering and Construction Management
• Logistics
• MANUFACTURING
• Contract cleaning/facility management
• Retail
• Logistics
• Agricultural Engineering, Ltd family company.
• Hospitality
• Legal
• Manufacturing
• Civil Service - Government Department
• Staffing
• Advertising
• Accounting & Business Advisory
• Manufacturing
• Private healthcare
• Contact Center Services
• Advertising and public relations
• NGO
• Ocean Energy

E.11 Unemployment has reached an all time high for this generation. Are you having difficulty recruiting IT professionals?

• Not working in IT
• No Need for any
• Staff turnover is very low at the moment, so it's not an issue
• All young people seem to have the view that any country is better Ireland to secure their future. Comment is based on our location
• Skills shortage and high demand
• Not relevant to the provision of our services
• SAP specialists in particular
• We are not recruiting IT professionals, our company has a policy of only hiring IT professionals to the Head Office which is based outside of Ireland
• It is always time consuming sourcing appropriately qualified individuals with relevant specialist skills
• Very difficult to find people with good technical skills and good business focus, which is required for analytical work
• Very little respondents to adverts for Business and IT Project managers particularly. This may be due to talented candidates either not considering moving in the current environment or being persuaded to stay by current employers
• No because in his sector they are just not hiring at all.
• Requirement is principally for EMEA languages (Western Europe) Low level IT skills are secondary requirement. Contact centre environment.
• n/a
• People in a job and wanting to move sometimes have unrealistic expectations on salary. Those who have been out of work for some time will accept lower than what they were on previously.
• Hard to get the appropriate skills and demand
• Internal hiring freezes and increased restrictions are the main issue. However, considering the high level of unemployment when we do hire there are not as many applicants as one would expect.
• Difficulty getting the right skills
• Good availability of well experienced resources
• Good quality IT professionals appear reluctant to move jobs.
• Shortage of java skills
• Hard to find highly skilled IT employees
• We have a steady flow of CVs coming through salary scales are the issue
• We need not only the right technical skills which we find hard to find alone but also near native language skills in key European languages & the market for Irish nationals with these appears to be almost nil.
• In the past, we have found it difficult to recruit for suitable Java developers. We usually require developers to have specific industry experience, which can prove difficult to find.
• Can't find the right people
• Unavailability of suitably qualified and experienced applicants
• Finding the right caliber of candidate with the necessary skills and experience is still a challenge
• Skill mix of
• QA automation people are just hard to find
• Currently not recruiting.
• Not over dependent on IT
• We have no recruitment needs at this time in IT, however recently struggled to even secure an IT Student for work placement.
• We were recruiting an IT lecturer in a specific field but it took a while to find someone with the right skills and availability
• No need at present
• Currently use 3rd party as IT professionals
• ADEQUATELY STAFFED
• Outsourced
• No need for them right now
• No demand at present for new employees
• Why would I need it in construction
• We have a steady team of professionals & they can cope with what is thrown at them at present. Therefore we are not currently recruiting & as a consequence not experiencing difficulties.
• Adequate staff level in IT at the moment - former employees on short-time made full.
• Don’t need them
• We outsource our IT requirements.
• We are happy to train junior IT professionals, graduate level
• Our IT department and support is all based outside Ireland.
• In house training leading to in-house staff
• All very specialised, solid generalists are hard to find
• In general, the availability of skilled and suitable IT resources is low, despite the current unemployment levels.
• Scarce resources of IT professionals in the country
• Difficult to find the right mix of technical and interpersonal skills
• Large number of candidates available for positions we would have previously struggled to attract interest in
• We promote people for within the organisation as they have gained up to date training and experience from working within the technical support of our clients.
• I was co-opted onto a Committee because I have an understanding of social-media and websites, but not enough and more than my committee-colleagues.
• I don't need IT people presently but will in January 2013
• Moratorium on recruitment
• Market buoyant
• Working in IT infrastructure and support - no difficulties
• We recruit graduates with IT Qualifications to teach in our Further Education College and we have had no difficulty in attracting and recruiting candidates as we would have had in the early years of the previous decade.
• Does not apply to me
• We operate in a highly technical niche area and recruiting local talent is difficult.
• Hard to get person you want as they often receive multiple job offers at same time, then higher turnover of IT staff compared to other parts of our business
• We mainly hire form other EU countries as we cannot find Irish graduates with the appropriate qualifications and experience.
• For some niche skills
• Depends on skill-set - IPT and Citrix and SQL would be difficult to get.

E.12 Do you think graduates who have completed non technical degrees could be converted to work in the IT industry?

• Actually yes, but it depends on the individual and whether or not they have the ability and desire to learn technical skills
• Not everyone is suitable for IT
• The minimum requirement for us is that they would have a basic understanding of the fundamentals. Enablement on the social networks is not sufficient
• With additional training
• I think that given the current economic climate people need to be flexible and expand their skills base.
• It is the norm in our case
• I think that it depends on the person. If the person is interested in converting to work in IT and they have the ability to learn the necessary skills they could convert to work in the IT industry
• Certain roles require deep knowledge whereas others benefit from a broader knowledge base. We move people across disciplines.
• Generally lack of relevant education does not allow people to excel in their work, but there are exceptions
• Qualified yes - for more tech facing roles (sys admin, Business Analysts etc.) there would be a longer experience path required. This 'grounding' is, for me, a pre-requisite for senior/client-facing roles
• Two general skillsets; 1. development skills and 2. administration / maintenance skills (Network equipment Exchange, Web server, Desktop support etc). A primary technical degree is not a requirement to gain required skills in the second general skillset. These skills are for the most part addressed by industry standard certification and training programs.
• n/a
• We train non-IT graduates to become testers.
• Not every role within the IT Industry requires technical understanding. Furthermore, these skills if needed can be learned.
• However they would not be suitable for Software or other more complex areas straight from conversion courses, additional training/experience on the job is required
• Capable people with correct attitude can be successful. I have no issue with providing training/knowledge transfer to the right people.
• Most have some modules in IT. Not every grad has chosen the right degree.
• If they have the ability it should be relatively easy to convert non-technical graduates to work in IT - I've worked with IT people who had degrees in Arts, Business, etc
• Depends on the position level
• With the right training
• Takes time and money to do that though
• But very unlikely to be suitable for my needs.
• Yes, graduates have already demonstrated the discipline to complete a formal course. With training and job placement, there is no reason why they could not transfer into junior/starter ICT roles
• Degrees are a means to formalise ability. It shows that they have an ability to communicate and can apply themselves so yes I definitely would
• It's possible once the right training is given
• Assuming they have the drive yes. if not then no.
• Not sure of this. Would suspect that technical capability is very important.
• IT can be learned through conversion courses etc. Participants would need decent level of skills/knowledge of maths as part of the programme as well as the more technical IT skills
• Good structured training. Grads will pick up quickly.
• Anyone that completes a degree in any discipline should have the intellectual capabilities to transfer to the IT industry.
• A COMBINATION OF NON-TECHINAL DEGREES ALONG WITH IT DEGREE WOULD BE VERY BENEFICIAL
• As support team members, project managers
• No point if they are not interested. Their ability as individuals is the most important thing
• There should be cross-overs in work practices
• They should be taught through a series of modules, most jobs nowadays require advanced computer skills
• Why not, one does not get a degree that easily & certain skills required to attain a degree are transferable, & allow for cross over.
• IT covers all areas of the business and having an understanding of other areas would be a huge benefit in any IT role
• Some engineering and architectural personnel can migrate ti CAD IT support quite well in our experience.
• Its all based on logic
• All our staff came from some sort of technical degree, it shows they have a genuine interest for the role
• If they have the ability to complete non technical degrees then they should be capable of being re-trained.
• As a country we have to move towards what the market is looking for, with added value based employment.
• Sometimes IT professionals can find the people interaction side of roles uninteresting, a broader background of experience may overcome this.
• Any one who shows an inkling of intelligence can work in the IT industry.
• IT is considered one of the (few) growth areas. Not all positions within IT required a full-blown technical certification/qualification. There is always scope to adopt 'IT' services with non-technical skillsets.
• Once a suitable conversion course is completed and the candidate has reasonable expectations of the overall value of their experience and additional training.
• Yes if the interest is there but experience is very important for majority of roles.
• Have previously worked with graduates of such courses, they do not have a depth of knowledge to properly fill the role, they also lack motivation as it isn't their choice of career. It is damaging to the IT industry in this country as it undermines the profession.
• I do think that if someone is very interested in IT they can learn the basic skills very well.
• Yes, I think it would be naive and you could potential be rejecting a suitable candidate based on the bias of the person who previously worked in a different industry and to improve their job prospects has done a conversion course.
• Beginning at research and submissions level, the approach to non-technical degrees should be ameliorated and brought up to speed with digital advances. I think tech-modules should be widely available in non-tech degrees, including tutorials, seminars and submissions.
• Anybody can learn or improve their skillset if they are hungry enough. If courses are provided to meet the needs, fantastic.
• Experience can sometimes be enough for certain IT roles.
• Could have made a wrong choice at 3rd level but could have a natural aptitude for IT.
• Post Graduate courses (level9) are available in University of Limerick.
• Because of necessity.
• People can be retrained to be adaptable to new skills. We in Ireland are guilty of pigeon holing people when they could be much more flexible.
• We've already converted some.
• IT environment is constantly changing so if people want to pick up a new skill it can be done. Probably easier if they have a background in IT or have some programming skills.
• I do believe IT needs the back up of a technical qualification.
• Technical along with a business skill would be ideal. Technical graduates can be one dimensional and for example not have an appreciation for the business side of a software company. Graduates with technical & good interpersonal skills are in demand as over 70% of your time can be spent dealing with people.
• Realistically, no the length of time to train some up would be too substantial.
E.13 Can you name any conversion courses that are in your opinion reputable?

- No
- Sorry I cannot
- No
- Tallaght IT conversion course is good
- Not familiar
- No
- No
- NO
- Network +
- No
- No
- Griffith College
- no
- No
- Not sure of any
- ISA Skillnet
- Not offhand but a few years ago FAS ran a good conversions course.
- I am familiar with accountancy conversion courses, and computer science conversion courses
- No
- There were a number of FAS courses (I know, my primary degree was in Business Studies)
- No- dont know of them
- NO
- No
- IT Support in CIT has a good reputation
- No
- Not aware
- No
- Not overly familiar
- No
- No
- No
- No knowledge of these courses at this time.
- None known.
- na
- Not specifically
- Computer Conversion course in U.L.
- Unknown
- DCU had the best attempt at one
- No!
- I don't know
• Someone who has done a MS course
• UL Post Graduate Diplome in IT
• CCN, CCMP, Microsoft courses and Cisco certified courses.
• Software Testing Java programming Project management
• I don't know of any conversion courses
• MSC IT courses in University of Ulster
• Microsoft courses, Cisco courses
• No
REFERENCES


