

The evidence on which the **BIRMINGHAM BACCALAUREATE** will be built.

MAY 2013



YOUNG, SKILLED & READY: EDUCATING AN EMPLOYABLE GENERATION FOR BIRMINGHAM.

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FOREWORD



Gisela Stuart MP

Skills for Birmingham have carried out this research and they deserve to be congratulated on their work. The Report enables Birmingham to understand the skills it needs so when our local employers create jobs, our youngsters are equipped to take them up. We are the youngest city in Europe but have one of the highest levels of youth unemployment in the country. Our youth is a strength which could become a problem if we don't look to education and collaboration with employers

MPs and councillors are constantly told by employers of critical skills shortages. This report provides detailed analysis of the skills needed in key sectors of Birmingham's economy alongside practical advice on how we might bridge the skills gap through working closer with the world of work and the world of education.

These findings will directly influence the development of the Birmingham Baccalaureate, an award which builds on the English Baccalaureate as well as responding to local employer needs.

“IF WE GET THIS RIGHT, THEN THE YOUNG PEOPLE BORN IN BIRMINGHAM WILL HAVE THE SKILLS TO GET JOBS IN BIRMINGHAM.”

Gisela Stuart

Labour MP

Birmingham Edgbaston - Bartley Green, Harborne & Quinton

SKILLS FOR BIRMINGHAM

Skills for Birmingham was created by Rachel Maclean, a Director of Packt Publishing (which publishes books on computing, software and IT) in response to the Birmingham Baccalaureate concept.

As a Birmingham-based employer who has built a business, and created 40 jobs in the city, she knew how difficult it is to hire locally for the skills she needed particularly in the digital sector. From her extensive business contacts in Birmingham she knew that many other employers reported similar issues. Motivated to contribute to the Birmingham Baccalaureate, Rachel gained the backing of Packt's Board to fund the start-up phase of Skills for Birmingham, through CSR activity.

Jane Harris – a researcher and qualifications development professional with over 10 years' experience in the Education sector was hired by Packt Publishing to research employer skills needs in Birmingham.

Birmingham City Council has recently appointed Skills for Birmingham as the Key Delivery Partner for the Birmingham Baccalaureate.



PACKT PUBLISHING

Packt Publishing, pronounced Packed, published its first book, *Mastering phpMyAdmin for Effective MySQL Management*, in April 2004 and subsequently continued to specialise in publishing focused books on specific technologies and solutions.

Our books and publications share the experiences of IT professionals in adapting and customising today's systems, applications, and frameworks. Our solutions-based books give people the knowledge and power to customise the software and technologies they are using to get the job done.

Packt books are more specific and less general than the IT books available in the past. In April 2010 the Packt Enterprise brand was created. Since 2010, Packt Enterprise has seen tremendous growth and published 330+ books to date - with a focus on Oracle, Microsoft and IBM titles - the Enterprise brand is going from strength to strength, and is able to effectively delve more deeply into the world of Enterprise software. This specialisation allows a greater focus on, and better understanding of Enterprise technologies and the people who work with them.



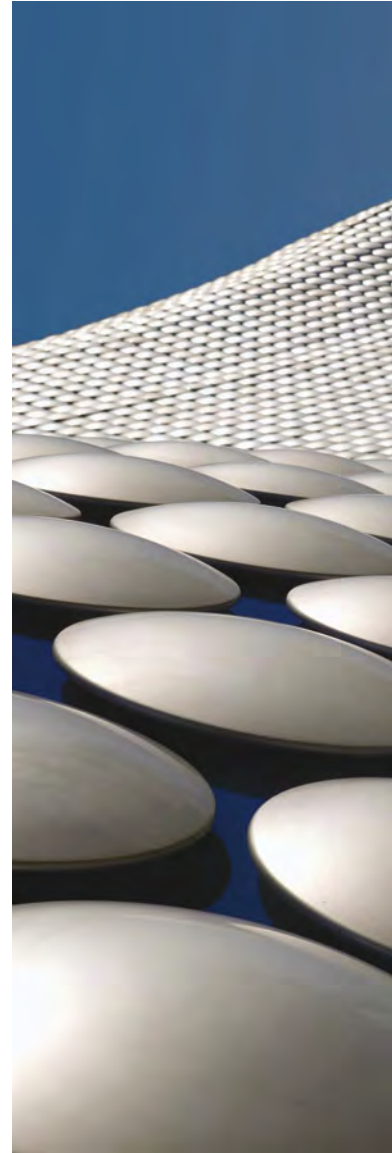
EXECUTIVE SUMMARY

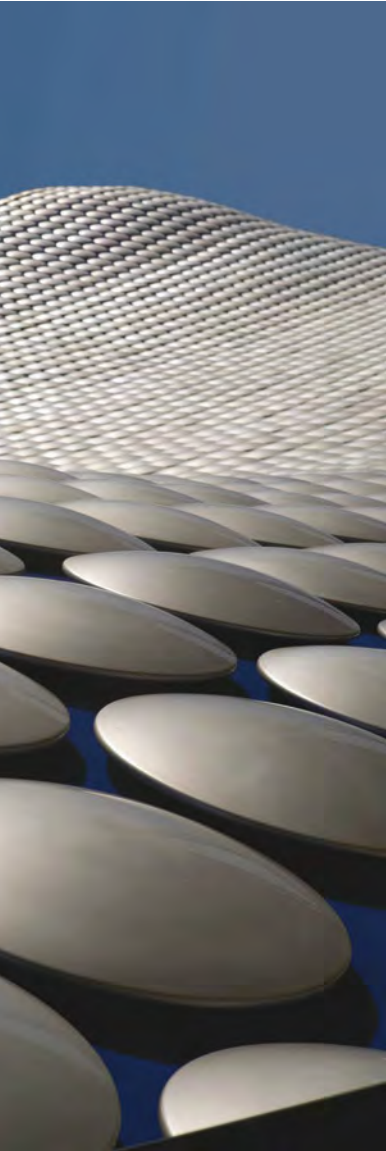
The Skills for Birmingham project was developed to research the skills needs of employers in Birmingham and the surrounding area. Funded by Packt Publishing (Birmingham's only book publishing business) as a CSR activity, the project was designed to provide evidence to inform the debate around how the city addresses the problem of high youth unemployment.

Birmingham is the youngest city in Europe, with much higher rates of youth unemployment than other UK cities (Birmingham City Council, 2012a). Local employers are not able to recruit for the job roles that they have, leading to a disconnect in the skills of Birmingham's young people and the available employment opportunities. Extensive analysis has taken place of skills needs at a strategic level, but little has been done with employers across the key economic sectors for Birmingham.

The research took the form of focus groups and interviews with nearly 50 local employers between January and March 2013. Employers were recruited to represent the key sectors for Birmingham; digital, engineering, life sciences, food and hospitality, and included a range of business sizes from micro and small businesses up to multi-national companies with thousands of employees.

The qualitative analysis showed strong agreement across sectors of the importance of the generic employability skills alongside sector specific skills, and the need to embed and signpost skills in the core school curriculum. There was also agreement that Birmingham's young people are seemingly unaware of the variety of job roles available in each of the city's sectors. Employers described their wish to be more involved with education and the fact that it was their responsibility to do so.





From the analysis, we make a series of recommendations.

We recommend that:

- 1) Where possible, the curriculum should be made relevant to the city's business needs by explicit links being made between the curriculum content and local employer skills needs and expertise. This is especially important for the STEM subjects, which may appear abstract and unimportant to young people.
- 2) Learners have the opportunity to use the key employability skills (as determined by CBI) throughout the curriculum. More opportunities should be given for project working to engender an understanding of responsibility.
- 3) A dissemination of the good practice happening where schools and businesses have made mutually beneficial links.
- 4) An employer/school online resource is created to put schools in contact with businesses that are looking to make partnerships.
- 5) Employers take the lead on supporting CEIAG by generating a series of 'sector guides' to provide young people with information about the key employment sectors in Birmingham, the employment opportunities available, and guidance on the skills and training they need to get there.
- 6) Employers work closely with schools to develop job application skills, including CV writing and interview practice.
- 7) An analysis of all the various skills initiatives in Birmingham and the GBSLEP is carried out to ensure that development work is connected across the city's stakeholders.
- 8) Local employers take note of the UKCES opportunities to utilise funding for education work.



INTRODUCTION

Birmingham is a thriving, multi-racial, international city at the economic heart of the West Midlands. It has a diverse population of close to a million people and is home to a strong tradition of enterprise, with world-class companies, centres of academic and industrial excellence and first class international sport and leisure facilities (Birmingham City Council 2005).

The United Kingdom's second city has a great deal to offer the people who live and work here. However, alongside the exciting and innovative developments of the city such as the new Enterprise Zones, the regeneration of New Street Station and the renewed opportunities available as a result of the recent introduction of the City Deal initiatives, the city struggles with a significant skills gap. The skills gap is having a damaging effect on our young people and on the businesses based here, which can struggle to recruit the workforce they need to develop and grow.

Statistics show that Birmingham has a youthful age profile with 22% of the population being children (0-15) and in contrast to the national and regional picture, there are more children than pensioners in Birmingham (Office of National Statistics, 2012). As well as a higher proportion of young people, these people are more likely to be unemployed than their peers in other UK cities. Birmingham has the highest unadjusted youth unemployment rate (23.1%) amongst the core cities - significantly above the core city average of 18.2%. Bristol and Leeds have the lowest youth unemployment rates (Birmingham City Council 2012a).



This is a bleak picture and one which stakeholders across the city including businesses, education providers, councillors and MPs are taking very seriously. However, it is not all bad news. There is already a wealth of good practice in the city where businesses and schools are working collaboratively to enrich the learner experience. Some of the work is through national initiatives (Business in the Community's 'Business Class' (BITC, 2012) and the CBI's 'Business in the Classroom' programme). Detailed case studies appear later in the report. Unfortunately, the good work is only happening in pockets of the city. We are not yet in a position where all schools in Birmingham are working closely with business enabling all our young people to access vital information on local careers and skills needs.

At a strategic level, extensive work has been carried out in the city to determine the best way of narrowing the skills gap. The Greater Birmingham and Solihull Local Enterprise Partnership is leading on areas of this work with their Strategy for Growth white paper (GBSLEP, 2012). The white paper proposes that in order ‘to create a globally competitive city region we propose a strategy which splits the economy into three ‘pillars’: Business, People and Place’. Under the people banner, the GBSLEP priorities are:

- Produce an LEP Skills Plan based on a detailed analysis of the local labour market and skills needs
- Recruit local industry champions for growth sectors and education who will be leaders of and catalysts for change
- Deliver Skills for Growth Compact, committing employers, colleges and schools to build a best-in-class skills service to link pupils and learners with real-world work opportunities

Following on from The Strategy for Growth white paper, the recently released LEP report ‘The Greater Birmingham Project: The Path To Local Growth’ (GBSLEP, 2013) details the LEP’s plans to improve the skills of Birmingham’s young people. The report states that the LEP would fund initiatives to support closer links between business and education providers from their funding pot.



The City council are also keenly aware of the need to address the skills gap in Birmingham as evidenced by the 2012 report from the Birmingham Economy & Jobs Overview and Scrutiny Committee, Closing the Skills Gap (BCC 2012b), where a range of witnesses (including 13 employers, academics and education providers) gave evidence to the committee on the problem. The report makes ten recommendations, one of which (recommendation 5) is especially pertinent to the Skills for Birmingham project:

R05 (b) That the City Council explores how careers advice can be made more Birmingham specific – informing people as to what our industries are, what opportunities are available and how are they accessed.

The Skills for Birmingham project’s findings will support two of the LEP’s aims; to identify the skills gaps and make better links between employers and schools. The report will also support the Birmingham Economy & Jobs Overview and Scrutiny Committee’s recommendation 5b.

This report details the findings from nine employer focus groups and four employer interviews. Overall, the picture is a positive one, with many local employers saying they want to work with schools to deliver better employability skills in a meaningful way.

'We contribute to schools in that we go in and talk to them about what the business is like. We've always wanted to have links... We also want to develop and on-going relationship with a school... We don't want to be a tick box.' Food employer 11

Indeed, they feel a responsibility to do so.

'In terms of what schools need, they need partnership with business. It is essential. The responsibility shouldn't fall solely on the school to teach customer services, communication. That should be all our responsibilities. How do we know the schools are doing it right? We are going to be critical as employers and demand standards.' Food employer 9



Based on the findings from the focus groups, Skills for Birmingham makes a series of eight recommendations at the end of this report. There are real opportunities available for making a difference to our young people. We believe that a change in the curriculum for all learners is the key to making our young people more work-ready.

There is a great deal of work to be done to ensure all young people in Birmingham have meaningful access to businesses. However, the will to achieve this is very much present from the employers who participated in the Skills for Birmingham project.

STUDY METHODOLOGY

The qualitative findings in this report are taken from a total of 9 focus groups with businesses based in and around Birmingham. In addition, interviews were carried out with four additional employers who were unable to attend the focus group dates. In total, 44 employers took part in the focus groups. Each focus group lasted 90 minutes and took place over a working lunch or breakfast. Interviews took place at a time and place of convenience for the employers. Interviews lasted no longer than 90 minutes. The focus groups ran throughout January and February 2013. Interviews took place in February and March 2013.

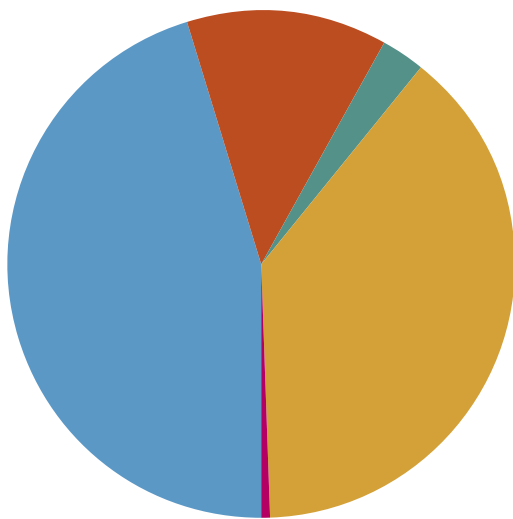
FOCUS GROUP DEMOGRAPHICS

In challenging economic times Birmingham is focusing on the areas in which it offers a competitive advantage by targeting those sectors for economic growth to benefit the city. Birmingham City Council is developing the key economic zones by supporting the private sector to accelerate business development. The council is doing this by easing the start-up process for new businesses and facilitating movement within the city for existing businesses (BCC, 2012c).

The focus groups recruited employers from four of the key employment sectors as represented by the economic zones:

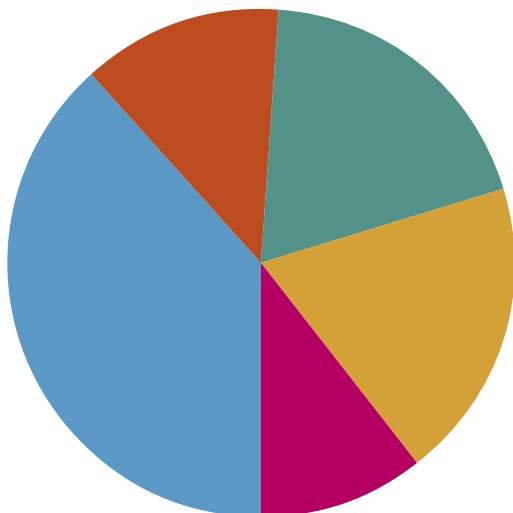
- Digital
- Life sciences
- Engineering
- Food and hospitality

There were three additional general focus groups enabling local employers across a range of other sectors to contribute. Sectors represented in the general groups included banking, insurance and legal, reflecting the professional services sector.



RELATIVE CONTRIBUTIONS OF SECTORS TO BIRMINGHAM'S ECONOMY:

- Food and hospitality
- Professional services ICT and Business Services
- Creative and Digital
- Advanced Engineering
- Life Sciences



PERCENTAGE OF EMPLOYERS BY SECTOR:

- Food and hospitality
- Professional services ICT and Business Services
- Creative and Digital
- Advanced Engineering
- Life Sciences

The focus groups contained employers from businesses of different sizes, from small start-up companies with only 5 employees and an annual turnover of less than £500,000 to companies with 39,000 employees in the UK with a turnover of over £50 million. We also spoke with a social enterprise. The range of employers was a key consideration when recruiting attendees as the groups needed to represent the diversity of businesses in and around the city.

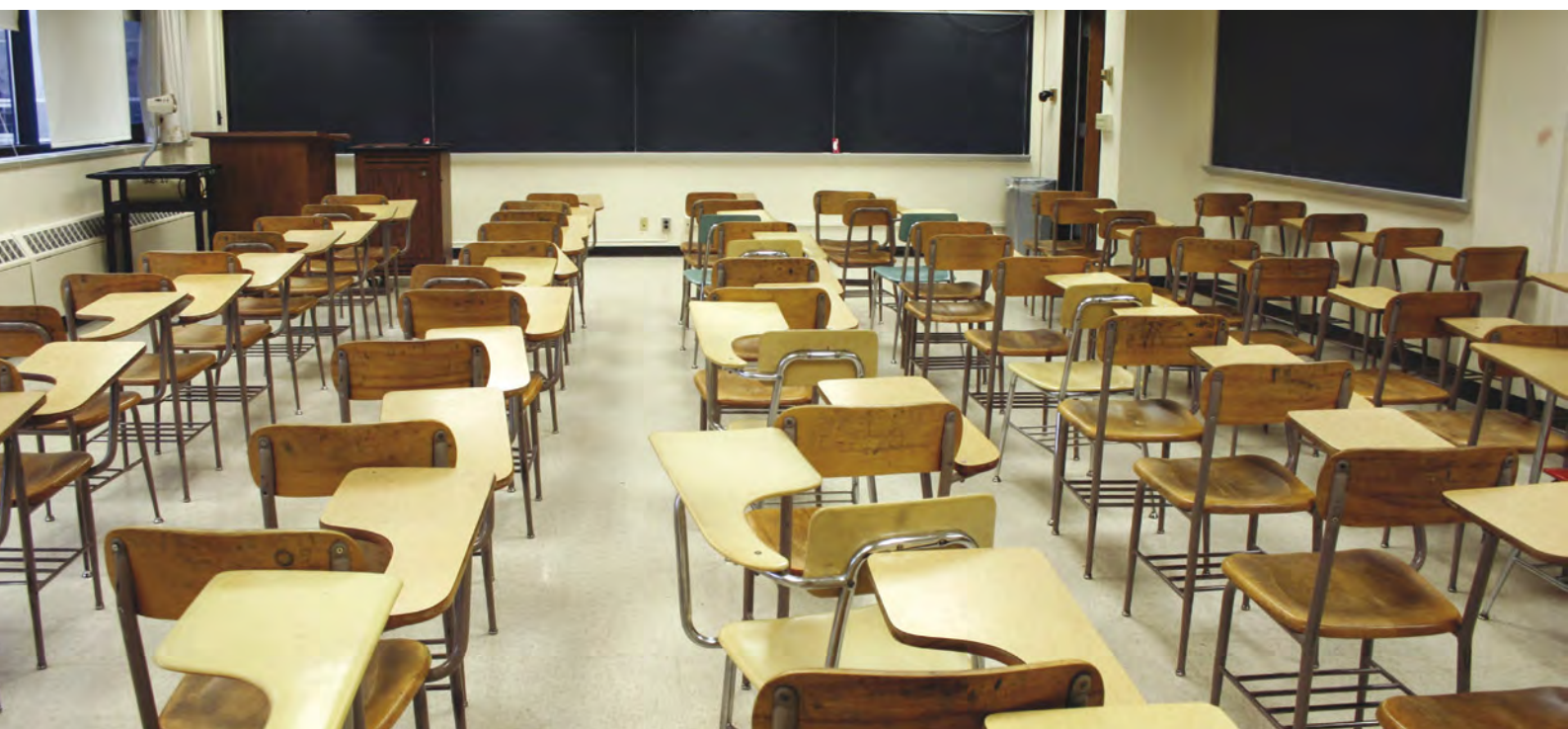
Employers were recruited by existing local business networks and contacts. We also ran a social media campaign alongside printed leaflets and a project website. Case study contributors were recruited through the focus groups and networking opportunities across the city and beyond.

The following section of the report details analysis of the employer responses by sector. Each section includes specific issues for the industry before the skills needs and, finally, what the sector would like to see in schools.

Analysis by sector is followed by scrutiny of the discussions about generic employability skills which were a prominent feature of all focus groups.

We know that there is a wealth of good practice happening in schools and with businesses across the city and beyond. The five case studies show examples of school and business partnerships.

The final section of the report is a series of recommendations for policy makers, education providers and businesses. Only a unified approach with significant input from all stakeholders will result in young people being able to respond effectively to the skills needs in our city.



THE DIGITAL SECTOR

The digital sector in Birmingham has a varied mix of companies, including global systems integrators and 1000s of smaller independent firms. Over 34,000 employees work in the sector in the city, a rise of 13 per cent since 2005. Not far from Birmingham, in Warwickshire, there are a number of world-leading computer games companies who look to recruit staff from the city.

People wanting to work in the sector have a wide range of opportunities available, from starting their own business at Birmingham Science Park to working for one of the large international companies based in the city. Eight employers from the digital sector gave their views.



KEY ISSUES FOR THE DIGITAL SECTOR

A different range of skills is needed depending on the size of the company where people choose to work.

Employees from companies of different sizes were recruited to focus groups in order to identify any differences in skills needs. There is significant variation in the types of needs of the businesses depending on their size.

'In big companies... you would be a code monkey where you are given a piece of paper and told to code. Then it is passed to the tester who says it doesn't work. Then it goes to a business analyst. It is a different environment in a small company where you have to utilise the resources more. We need developers who can code to also be business analysts and to understand concepts.' Digital employer 3

'As a start-up, you can't afford to micromanage. You need people who can work autonomously.' Digital employer 4

Employers were also keen to stress that while the sector specific skills are key to someone being a success in the industry, it is not just about those skills.

'The danger of the tech business is that you think it's just about 'can they code?' and 'can they develop?' but you still need them to understand, communicate, articulate and reflect'. *Digital employer 5*

Employers in SMEs or micro-businesses like the idea of apprentices but at level 3 (A level equivalent), it is too much for them to manage. Birmingham Science Park is home to a number of start-up businesses in the digital sector. These businesses would like to offer apprenticeships and, in some cases, have tried to do so. However, the cost and administration involved is seen as too much of a burden to some.

'We also looked at the apprenticeship scheme. The overheads for the admin were too much for us. Our business is to make money, not to educate'. *Digital employer 6*

'We had someone [an apprentice] come in at 18. The problem was delegation. The difference between someone who has coding and creative skills at undergrad level was so vast. After a week, there wasn't enough time to, 'babysit', an apprentice. Not wishing to sound disrespectful'. *Digital employer 1*

However, there are apprenticeship places in the larger employers' companies which are doing well.

'We had four work placements last year and all were offered a job after.' *Digital employer 2*

'My experience with my apprentice has opened my eyes. My apprentice is excellent.' *Digital employer 3*

Vacancies in the gaming sector are over-subscribed meaning that a degree is often put on job adverts, even though it is not always strictly necessary. Employers said they can be inundated with applications for their vacant positions. For those in smaller businesses, this has meant that a degree is used as a sifting mechanism. Employers are aware that this is not an ideal situation.

'There was a time when having a university degree was special. Now everyone has one. It's not special so you need a new differentiator.' *Digital employer 4*

'The two core people we have don't have a degree. The problem we have now is that most people do have a degree. So if I advertise a position and didn't put qualifications 'degree', we'd have hundreds of applicants. I have to put filters that go across the board to be equal opps and unfortunately, we are chucking out babies with the bathwater.' *Digital employer 6*

'R, my co-founder, only has GCSEs but there is nothing he can't get a computer to do.' *Digital employer 3*

'The majority of our employees do have a degree, but it isn't essential.' *Digital employer 2*

The problems with employers stating that applicants should have a degree are not unique to the digital industry. However, the sector, especially the gaming sub-sector has a particular problem with regards to the degree-level courses on offer.

Some of the HE courses available in gaming are not appropriate for industry

The gaming industry is one that is growing significantly and it attracts a great many people who wish to work in that field. As stated above, although a degree is not essential, the majority of people working in the industry will have one and many job adverts will request graduates only. Consequently, the gaming industry suffers from a proliferation of courses at higher education institutions which do not prepare people adequately for the job vacancies that are available. Employers see this as a real problem.

'It is difficult for them because in their head they want to do something and there is a never ending list of courses... Unfortunately, there are a lot of bad courses. We only advertise the courses accredited by Skillset.'

Digital employer 2

The problems with some courses range from the course content to the quality of the teaching and learning.

'Courses are set for 3 years, but the industry is moving more quickly... It's also the quality. For example, those on animation courses. Are they being taught proper anatomy? It is soul destroying for them if the demo they have created doesn't flow.' *Digital employer 2*



SECTOR SPECIFIC SKILLS NEEDED BY THE INDUSTRY

Employers were asked what sector-specific skills they want their employees to have. Interestingly, significant parts of the conversation focussed on the generic employability skills. An analysis of the generic skills is dealt with later in the report.

Programming skills

- Strong C++ coding skills and data structures
- The ability to rapidly familiarise yourself with existing code
- Good communication skills within a team
- A proactive attitude towards creating 'fun' from a design
- 3D maths and at least basic rendering skills
- Excellent problem solving skills
- Knowledge of optimisation strategies
- File manipulation skills

Using cross-platform libraries (SDK)

Maths and physics are needed across the full range of the digital sector. In maths, understanding logic and sequencing is particularly important. The examples below are specifically for someone in the games industry working as an AI programmer:

- Routing and navigation algorithms - this is of particular importance
- State machines and message passing
- Physics (to understand how the A.I. players interact with their environment)
- Optimisation strategies
- Graph and network theory
- Neural networks and genetic algorithms - theoretical and used little in games

General skills that would be of advantage in the digital workplace

- Ability to work with data
- People who have done more than what was expected as part of their school/college courses
- Strong demo work and portfolio
- Ability to write scripts and plug-ins
- Skills in texture creation, an acute understanding of particle systems and geometry effects (Gaming, visual effects artist)
- A good command of the traditional principles of animation and a keen eye for detail (Gaming, animator)
- Art skills including: a comprehensive understanding of scale, form, anatomy, movement, perspective and colour (Gaming, artistic design)
- Audio production, recording, editing and microphone techniques, skills with audio software, plug-ins, sound creation through location recording, foley and synthesis etc. (Gaming, audio designer)
- Sales and marketing skills

WHAT COULD BE DONE IN SCHOOLS?

Building websites

Employers all talked about the need for applicants to demonstrate their skills through examples of work. For one employer, this was the first thing he looked at.

'We ask for links to their own website. Before CV, before qualifications, before anything. Send us the link and we'll look at the coding.'

Digital employer 1

All employers agreed that giving young people the opportunity to build their own websites before they left school would benefit those who might wish to work in the industry. They also believe that website building is a transferable skill that would benefit people working in any sector.

Understanding of the sector and the range of courses at FE/HE

The concern about the range of courses available in computer science and gaming, and their market worth, was something employers believed schools could counteract. Employers think it is vital that people delivering careers guidance in schools advise young people that they must research the currency of the course they wish to follow. Young people should be encouraged to consult with employers and the sector skills council on whether their preferred course is one that is valued by employers in their chosen sector.

Encouraging work outside of school

Alongside the importance of attitude, employers in the digital sector talked of the importance of work done outside of the normal curriculum. This applied to all levels of education, from school through college and into Higher Education. Employers in the sector want people who go beyond what is the minimum. In a competitive industry, they want people who are differentiated from the crowd and the best way of doing this is to show that you are committed to the sector through extra-curricular activities and projects. As well as telling young people that employers are looking for examples of extra commitment, young people would benefit from schools providing more opportunities for additional activities. For example, through extra-curricular clubs and groups or activities during the school holidays.

Project work including commissioned briefs and deadlines

Employers in the digital sector discussed how their work was very much project based and they saw the splitting of the school day into subject areas as unhelpful. They think it is vital that young people are exposed to working in teams on a variety of projects as this is more how they work in the real world. Not only do employers value the integration of skills and attitudes which can only be addressed through projects, they also value the importance of working to deadlines and following commissioned briefs.

THE ENGINEERING SECTOR

Birmingham is the birthplace of the Industrial Revolution. Industry and engineering continue to play a significant role in the local economy today, generating over £12 billion each year. The city is world renowned in the Automotive and Aerospace sectors, with major employers Ricardo, Jaguar Land Rover, Kappa Group PLC and Veolia. Nearly 280,000 people are employed in manufacturing in the region and with the development of HS2 about to create thousands of new jobs in the West Midlands, the sector is growing and looking for new workers. Nine employers from the engineering sector contributed to the Skills for Birmingham project.



KEY ISSUES FOR THE ENGINEERING SECTOR

Employers from the engineering sector had a range of concerns about the future of their workforce which can be split into four broad categories. The employers are concerned about the availability of skilled staff in the region, the fact that the skilled staff they currently have are an ageing workforce who may not be easily replaced, a lack of opportunity for young people to work with materials and that the sector has suffered from negative coverage in recent press.

A final issue of concern for engineering employers was mirrored by employers across the full range of sectors we consulted; they are looking for people with a passion for the sector. People with enquiring minds who want to know how things work.

Availability of skilled staff in Birmingham

An issue mentioned by two engineering employers was that they have vacancies but these are very specialist roles. Not only do we not have the skills needed in Birmingham, we don't have them in the UK and employers are being forced to recruit from abroad.

'We struggle to find skills we need... There are not enough people in the UK and Europe to fill our current vacancies'. *Engineering employer 1*

Ageing workforce

Four separate employers mentioned that they had an ageing workforce and that it was vital to recruit younger employees to fill this void, with one stating that their business was specifically aimed to recruit younger people.

'When my current tool makers retire, I don't know where I will replace them. I have an 8 year window. I don't know what to do.' *Engineering employer 2*

'Our problem is that we have specialist skills which need to be taught on the job. We're an aged workforce and we have waited far too long to wake up to the fact that if we don't take new people on, the skills will be lost forever' *Engineering employer 3*

The need to encourage younger people into the sector is clear. Without greater numbers of young people in the sector, key skills for the sector and the city, for example, in the jewellery quarter, will be lost. It is possible that the lack of interest in the sector has been caused by the following two concerns about the sector.

Lack of opportunity for working with and understanding the properties of materials in schools

In the 21st century a great deal of work is done by, with or using computers, and engineering is no different. One employer surmised that 90% of work in their company was carried out using computers. However, all employers in the engineering focus groups stated that although employees would most likely be working on computers (for example, using CAD) to some extent, it was vital that they also had an understanding of the properties of the materials with which they were working. Without this, they argued, employees wouldn't be able to check that the computer was producing the correct result.

'People can be trained in any industry to use CAD but what it doesn't give you is an understanding of material properties and pressures. Under the car bonnet, exposed to salt, high temperatures, low temperatures, vibrations... CAD might tell us it looks good and is cheap, but CAD won't say how salt would affect it, how vibration would affect it. A good mechanical engineer will understand the factors they need to consider when designing something for the environment in which it will operate.' *Engineering employer 1*

'You can't do it all on a computer. You need to be able to apply tools correctly.' *Engineering employer 4*

'They need access to mills and lathes. All core workshop stuff. They come [to the apprenticeship] knowing a bit about what they need.' *Engineering employer 1*

Perception of the sector

Employers in the engineering sector are all rightly proud of the work that they do and the importance of the sector to the regional economy. However, they expressed concern that their sector had suffered in a number of ways as a result of its media image. The media has often said that UK manufacturing is dead or dying and that roles will be lost by companies moving abroad. This has led to fewer people wanting to work in the sector as they feel there won't be opportunities for them.

'Engineering has had such a bad press; people haven't been choosing the industry' Engineering Employer 1

'There has been bad press. Until three years ago, I wondered what the future for manufacturing in the UK would be.' Engineering employer 4

'People round here thought engineering was dead. There was a lot of negativity. Schools didn't understand engineering jobs and this is an issue.' Engineering employer 5

If we are to increase the number of young people going into engineering, we will need to work hard to counter the perception of negativity around the sector. Fortunately, recent developments at JLR and the corresponding national and local media coverage have shown that the local industry is growing again and that there are more employment opportunities to be had. This increase in activity is in large and small companies.

SPECIFIC ENGINEERING SKILLS

When asked to name the top three skills needs that their business has at the present time, engineering and manufacturing colleagues gave a range of responses; many included generic employability skills. An analysis of the generic skills is dealt with later in the report.

The sector specific skills that local employers in the engineering and manufacturing sector need right now are:

- Someone who has studied the STEM subjects, particularly mathematics and physics
- Software and electronics engineering,
- Process engineering – 'being able to look at a plant and make it better'
- Electronic hardware design within electromechanical systems
- Embedded software design
- Grinding skills
- A knowledge of the engineering sector
- An understanding of the properties of different materials
- Enamelling
- Engraving
- Die sinking

Some of the skills are high-level skills that are most suited to graduates and even then, extensive post-graduate training is sometimes required. However, employers were concerned that not enough of our young people will become engineering graduates unless something is done to increase their understanding of the sector and the opportunities it offers.

WHAT ENGINEERING EMPLOYERS SAY IS NEEDED IN SCHOOLS

During the discussions, it became clear that some of the skills that engineering employers seek for their employees could not be taught in a traditional school environment. However, employers were all agreed that there were things that schools could do to help the sector to recruit its employees of the future.

'Do I think high-level engineering skills can be taught in schools? No. Do I think children can be lined up to move in this direction if they have aptitude? Yes.' *Engineering employer 2*

Employers were keen that young people know that the STEM subjects are needed for engineering.

'Without maths and a love of numbers, you'd struggle. Algebra for equations and calculus for analysis is vital'. *Engineering employer 1*

Employers wanted more opportunities for young people to learn about the properties of different materials. Furthermore, they hoped that learning about materials would take both practical and theoretical forms. Employers want young people to understand materials through science lessons but also to have the chance to work with tools and to feel how materials work in more practical design and technology classes. Birmingham is home to the Aston University Engineering Academy in the city, where:

'Mathematics and science will be applied to the engineering curriculum making the learning 'real' and relevant. Engineering learning is based around a series of real industrial problems facilitated by industrial partners and will offer a range of personalised progression routes'. *AUEA website*

This model shows that learners aged 14+ can learn engineering skills through the core curriculum and in a relevant, problem-solving fashion. Engineering employers would like this approach to be available for all learners, not only those who secure a place at Aston University Engineering Academy.

One way to get more accessible engineering learning in the curriculum is to appeal to learner interests and to help them realise the role engineering has played in those interests.

'The trick is making it relevant. Pitch it at a level which is understandable for a 15 year old and make it relevant to something they are passionate about. For example, how does their Xbox work?' *Engineering employer 1*

Employers would also like schools to work with business to help improve the image of engineering as a career. Employers could support this through more links between local engineering businesses and schools, enabling real engineers to meet real learners and tell them about the opportunities available in the industry as a whole and, more specifically, in the Birmingham area.

FOOD AND HOSPITALITY

The food and hospitality sector in our region has a turnover of £14bn and supports more than 59,000 employees. A long history of food and drink production has built a tried and tested infrastructure. The University of Birmingham and Birmingham College of Food are renowned internationally for their expertise in food. Major food and hospitality employers in the region include Kraft/Cadbury, Mitchells and Butler, and the Hyatt. Eighteen employers from the food and hospitality sector contributed to the project.



KEY ISSUES FOR BIRMINGHAM FOOD AND HOSPITALITY

Hard work and long hours

The food and hospitality sector is often hard work and long hours, especially for those starting at the bottom of the ladder. Employers were keen that young people had an understanding of what the sector demands from employees at the lower levels but to also realise that there are opportunities for development once skills have been learned.

‘They need to realise what the industry is about and the commitment you have to make. It is a lifestyle, not a job. When I was younger, I socialised with work colleagues. If you want to get up the ladder, you need to sacrifice a lot.’
Food employer 1

‘It would be good if young people know about the expectations. If you want to get to management... you need to work hard to get there.’ *Food employer 2*

‘Hospitality still has the stigma of being low-paid for long hours. Sometimes they are working 80 hours [a week].’ *Food employer 3*

Employers were keen to express that there are opportunities for development, progress and significant salary rewards in the sector but that these can only be reached after a period of working in lesser, perhaps unenjoyable and seemingly unimportant roles and working up the ladder.

'You and I know people can earn 40, 50, 60 thousand pounds if they go up the ladder.' *Food employer 5*

'I started in the kitchen and so did our MD' *Food employer 6*

Roles are viewed as a 'stop gap' until people start their real job, or as a route for less academic learners'

A further concern raised by several of the employers from this sector is the perception of the industry as a stop-gap or for people who do not excel academically. The 'stop-gap' perception is having negative consequences as it leads to high staff turnover and a less committed and arguably less professional workforce.

'With most restaurants, it [front of house] is seen as menial work.' *Food employer 5*

'In this industry we have lots of people who view it as a stop-gap job.' *Food employer 7*

'We want people to see catering as a sector to stay in rather than as a stepping stone.' *Food employer 9*

Employers recognised that they are partly to blame for the negative way in which their industry is viewed. Several employers spoke of how they are already making changes to help bring a cultural shift so that working in the food and hospitality sector is seen more as a career.

'We used to be 'have you got a black pair of trousers? I've got a white shirt so you can start tonight and I'll show you how to carry a plate.' That is not the right way for us to work' *Food employer 6*

'I think we have been guilty of creating that. I've been guilty. We'll just fill the positions with casual staff. Then that becomes the norm and businesses get filled with people who are only casual staff and we say this doesn't matter'. *Food employer 8*

Concerns were raised about the industry being seen as something for people who haven't excelled academically. Employers place some blame at the feet of careers advisors who have previously channelled young people into the sector without giving them a full understanding of what the sector requires. This then leads to a negative experience for the employee and the employer.

'They are directed to things which aren't necessarily right for them and they find themselves in the wrong sector.' *Food employer 9*

'One 'fell' into catering. If someone wants to do something we can tell them things... If they don't want to be there it is like banging your head against a brick wall... We need people who want to be in it otherwise they won't be good.' *Food employer 8*

Furthermore, whilst the sector can and does provide employment opportunities for those who have a passion for food but perhaps not for academic subjects at school, people who want to rise to the top need academic skills as well.

'What makes me cross is that careers advice for people who didn't do very well academically was to go into catering. But people need to know that if you want to get on and be a top chef, you need business acumen too.'

Food employer 1

We live in a convenience society; the industry is changing as a great deal of food is now manufactured in factories and served as 'ready meals'.

The food industry, along with the rest of society, has changed drastically as a result of our move to a convenience society. Many establishments which cater for large numbers of people buy in their food, rather than make it on site.

'A lot of hotels are taking our basic sauces. The whole movement over the last 10 years has been for convenience. I've made a business from making Indian food easier.' *Food Employer 5*

'I buy in 30,000kg of curry sauce a year because it is popular. We buy the sauce because of the volume. I don't have the number of staff I would need to stand and make it properly.' *Food employer 1*

With this move to food being cooked and bought in in large volumes has come higher instances of machinery in food manufacture than ever before and with this, fewer roles for people.

'Many factories do what we do on a larger scale without using any chefs at all' *Food employer 5*

'Very little is done by people. It is highly automated. 2 or 3 people running the equipment.' *Food employer 2*

An understanding of the changing nature of the food industry will be important for any young person who views the sector as their potential employers.

Experts in Asian cooking have traditionally come from overseas. Need a more local workforce.

Birmingham is famous for its Asian cooking traditions with the likes of the Balti Triangle and a large number of Asian restaurants across the city. Employers in this niche of the food sector are having difficulty in recruiting local staff for their restaurants due to the highly specialist nature of the work. Changes to visa laws have exacerbated the problem.

'Looking for a tandoori chef, it would be almost impossible to find someone off the street to make a naan.' *Food employer 10*

'For me there is a skills shortage in the Asian sector. The majority of our recruitment has been through India and Dubai... I couldn't take a Western chef with an interest in Indian cooking because he couldn't communicate with other colleagues. In 3-5 years there will be a vacuum of chefs of the quality we need.' *Food employer 5*

SPECIFIC SKILLS NEEDED BY THE SECTOR

Employers were asked what sector-specific skills they want their employees to have. Significant parts of the conversation focussed on the generic employability skills. An analysis of the generic skills is dealt with later in the report.

The food and hospitality specific skills/knowledge needs of our local employers are:

- Food science
- Awareness of where food comes from
- How to make basic sauces and dishes
- Chopping techniques
- Knowledge of different dietary requirements
- Asian cookery skills and knowledge
- Understanding of correct equipment to use for specific tasks
- Basic food hygiene for both front and back of house staff
- Organisational skills
- Customer service skills
- Excel and use of spread sheets
- Precision level approach to work
- Visio-spatial awareness and mental arithmetic to estimate number of pallets in food distribution
- Basic spelling

WHAT SCHOOLS CAN DO

Employers were enthusiastic about the role that schools could play in preparing young people for a career in the food sector. The draft National curriculum for 2014 onwards states:

The National Curriculum for design and technology aims to ensure that all pupils understand food and nutrition and have opportunities to learn to cook. (DfE, 2013)

Therefore young people should have the opportunity to develop some of the practical skills needed for working in the food sector. An understanding of food including the variety of foods available in our culture, where food comes, how it is distributed and how it is processed would be invaluable to young people looking to work in the industry.

Guidance on how to make basic sauces and dishes would be welcomed by employers who said they would then be willing to train employees to create the dishes and sauces in the specific ways of each establishment. Employers were not looking for employees who knew how to do everything, but they do want people with basic skills.

Basic chopping skills could be difficult to deliver in schools due to Health and Safety concerns with working with knives but these are the core skills that employers need. It is vital that a way is found to manage this issue. Employers want young people to have had practical experience of working with food.

'It's not just watching Mary Berry make a cake. It's about going into a kitchen and actually experiencing it. Actually doing it yourself.' Food Employer 8

Section 2) Findings from the sectors

Food science and the importance of food hygiene are critical to employers in the sector. One employer suggested that learners should all complete a food hygiene certificate before leaving school, as this is fundamental to anyone wishing to work in the industry whether front or back of house.

An understanding of customer service was seen as key to working in the hospitality sector. Employers recognised that a full understanding of customer service could only realistically be gained by working in an environment where it is critical. However, there are examples of ‘food challenge’ projects running in the city and when such projects are delivered in schools, more emphasis needs to be placed on the customer service element of the event, not only on what is happening in the kitchen.



While recognising that people in the food industry need practical skills, an understanding of the industry’s breadth and how the industry has changed due to convenience foods is something employers would like their future employees to have. Too narrow a focus on the types of role available in the industry has led to young people not being aware of roles outside of chef and waiter.

There are roles in food storage and distribution, food testing, food design and hundreds of other areas all looking to recruit. Young people need a greater understanding of the sector and they are best placed to get this from employers and their school working in partnership.

Birmingham is home to a number of high achievers in the food industry. Employers suggested that schools should work with businesses to identify local role models who can give guidance to young people on the industry and to share their success. We have chefs in the city with Michelin stars that have featured in Master Chef and we have world-class catering facilities at UCB. It is important that as many young people as possible have access to people who could be role models in the hope that they will inspire the future workforce for the sector.

LIFE SCIENCES, HEALTH AND SOCIAL CARE

500 medical research companies across the region provide world standard research excellence in medical technologies and life sciences. Life sciences contribute £180m to the Birmingham economy. There are 233 firms in the city, a 45% increase since 2005 with 1,600 people employed in the sector.

The life sciences can be defined either narrowly (meaning medical research) or more broadly (meaning anyone working in the medical and care professions.) The Skills for Birmingham project recruited employers from research and the wider definition of the life sciences in order to present balanced skills needs.



KEY ISSUES FOR THE SECTOR AT PRESENT

Lack of understanding of the sector

Young people don't have a true understanding of what it is like to work in science laboratories. Young people do not get to experience what it would be like to work in a laboratory for a range of reasons. Firstly, health and safety can mean that people under 18 are unable to participate in much of the work that happens in laboratories.

'One of the problems we have with work experience is the amount they can actually do in labs because of health and safety considerations. In the medical lab, there are biologically hazardous things and chemically hazardous things so they can only really stand and watch rather than gain hands on experience.'

Life sciences employer 1

'In science, it never works like the TV programmes.'

Life Sciences employer 1

'It might be that people in the 5th form are thinking about time in a laboratory but didn't quite know what it would be... I had experience because it is whilst doing this that you get a feel for what you want to do'. *Life sciences employer 2*

People working in life sciences research need to adapt their ways of working. High-level researchers need to work in teams and support each other. Some researchers who have been used to leading their own projects can find collaboration with colleagues more difficult.

'We want someone who is happy to provide a service to other people... Sometimes this can be hard to find as people who have had their own projects aren't always happy to be supporting other people.' *Life sciences employer 1*

'We don't want our staff to remain static. We want them to learn new skills and techniques. This is good for the individual but it is also good for the institute as we are getting the high-end skills we need'. *Life sciences employer 2*

NHS jobs all suffer from churn

There are 25,000 jobs in the NHS in Birmingham, all in the public sector, and an additional 5000 jobs in private sector care homes but people working in hospitals don't stay in roles for very long.

'Hospitals suffer from churn at every level.' *Life sciences employer 3*

Maintaining staff in hospitals would help to build professionalism within the lower levels of staff and would also benefit the negative image of certain roles within hospitals, for example, cleaning staff.

Negative perception of the care industry

The care industry suffers from a negative image. It is seen as a low-skilled, low-paid occupation and one therefore that is not viewed as attractive to young people. Employers are aware of the negative image of their sector and are keen to work to address this.

'If you look at where the jobs are in the Midlands, there are lots of vacancies but we can't get engagement. It's not started at education level. As in, [young people are not told] these are the opportunities'. *Life sciences employer 4*

'People think that people who go into the care sector are those who don't do well at school but we need people with good numeracy and literacy. They are writing down reports of things that happened during the day and if that's not right, it is people's well-being that is at stake.' *Life sciences employer 5*

'There is a barrier to part of our business around safeguarding and vulnerable people. But that is only one tiny part. What we feel is that it is a perception issue that we need to address.' *Life sciences employer 4*

Care-work needs empathy

People working in the care sector need to empathise with the person they are caring for. Employers are keenly aware that their sector will be growing drastically over the coming years as people live longer, which presents a range of considerations for the work force.

'The sector is growing exponentially, particularly around caring for older persons. But also in terms of mental health and learning disabilities. People are surviving longer with serious difficulties. It is a requirement in terms of the changes in society.' *Life sciences employer 4*

'It is difficult when you have to deliver personal care and you can't know how you'd feel about doing it until you are there. And you can either do it, or you can't. Some people think personal care means taking people to the shops and doing nice things. But sometimes it is the very basics of human needs.'
Life sciences employer 5

SKILLS NEEDED FOR THE LIFE SCIENCES, HEALTH AND CARE SECTOR

Research sector skills:

- Confidence in making and working with molar solutions
- Percentage solutions
- Familiarity with basic laboratory equipment such as Gilson pipettes, measuring cylinders, microscopes, imaging equipment
- Working with tissues: Identifying tissues, sections of tissues, staining tissues
- Patience as science developments are slow-moving

Care sector skills:

- Empathy
- Understanding of the sector and the range of job opportunities available
- Customer service and hospitality

WHAT THE SECTOR'S EMPLOYERS SAY IS NEEDED IN SCHOOLS

During the discussions, it became clear that some of the skills that employers from the life sciences seek for their employees could not be taught in a traditional school environment. However, employers were all agreed that there were things that schools could do to help the sector to recruit its employees of the future.

Employers were keen that learners should have the opportunity to develop the basic, practical skills used in a laboratory. Specifically, laboratory experts want to ensure young people can work with molar solutions as this is a fundamental part of lab work and something that does not need expensive equipment. These skills are often tested at job interviews for laboratory technicians, so the earlier young people become confident in carrying out tasks with molar solutions, the more opportunities will be available to them. Working with solutions requires strong mental arithmetic skills to ensure the right concentration levels are used. The employers were keen that young people should know that they would need to use mental arithmetic often if working in a laboratory.

A further laboratory requirement that schools could assist young people to learn is the skill of being organised. It is vital that researchers in laboratories are organised with the correct equipment and materials. If they are not, then costly experiments can go wrong.

Section 2) Findings from the sectors

‘We want to train them to be systematic and organised as well. A lot of problems with experiments in labs can be caused by a lack of organisation. Not planning and not preparing before they start... Mistakes in labs can be very costly as I found out just the other day. Somebody missed something out of a solution he was making up and it was £500 down the drain.’

Life sciences employer 1

Like other sectors, both the researchers and care providers in the life sciences were keen that young people gain a better understanding of the sector and the opportunities available within it. In particular, employers were keen to say that even though some of the top scientist roles can require years of postgraduate study, there are a significant number of roles in the medical sector available at lower levels.

‘There are a wide range of jobs available in hospitals. There are lots of opportunities at Level 2 [Equivalent to GCSE level].’ *Life sciences employer 3*

Employers also expressed a need to grab the interest of young people who are the top level scientists of our future. It was felt that sign-posting specific areas within the STEM curriculum subjects which are the embryonic skills used by the city’s ground-breaking researchers is a way to encourage take-up of STEM subjects. We should do this by making links between what is happening in the classroom and the world-leading work that is happening in our area.

For those young people who may wish to be scientists, employers were keen to make young people aware that science is an international field.

‘The days of scientists working in isolation are gone now. You are now part of a team from around the world. They are citizens of the world, these scientists. They travel all over the world collaborating with scientists working elsewhere.’

Life sciences employer 1



GENERAL INDUSTRY SECTORS

Although 15 employers attended the general focus groups, ten of those were from our target sectors so their responses have been analysed in the sector-specific sections of this report. Of the five remaining employers, we had representatives from insurance, banking, legal and the professional services sectors. An interview was carried out with an employer from the professional services taking the number of employers in this group to six.



KEY ISSUES FOR THE SECTORS

Image of the sectors

Employers from banking and insurance discussed the problems they have had with their image. For insurance, the problem is that young people (and even the general population of all ages) don't understand the industry.

'My particular aim is to get young people more interested in moving into insurance and to change their perception of what insurance actually is. It's not just a nodding dog and a meerkat. As an industry, we're looked at badly. We take your money and don't give you anything back'. General employer 5

Banking has suffered too as a result of the economic crisis, although there is little evidence that people are put off applying for roles in the sector due to the financial awards that are available. In addition, young people may not be aware of the true number of banking employment opportunities available in the area; there are 10,000 midlands-based roles in a single company alone.

Level of entry to the sector

Three employers from the general sector expressed concern that their industries might be viewed as suitable for graduates only, whereas in reality there are some junior positions available as well as school and college leaver programmes enabling young people to earn and learn.

'If they come to us straight from school, we still want them to study with us and take their exams. People can come to work, learn and earn all at the same time and come out with letters after their name.' *General employer 5*

'Our School and College Leaver Programmes are designed to give you options in starting a career. We believe that if you're bright, ambitious, full of ideas, and aren't afraid of hard work, you can have a great career here.'
General employer 6

Young people need to be made aware of the opportunities available to them which don't require degrees, especially as university education begins to become unaffordable for large numbers of young people.

SKILLS NEEDED BY THESE SECTORS

No sector-specific skills were mentioned as requirements for employers in the general group. Indeed there was a view that general skills were more useful.

'We need people to study hard and get skills. But the flip side is people sitting there thinking they won't be in the career long-term. It is a mixed message. We need people to have transferable skills. Most people have skills that can be applied to a different job.' *General employer 3*

However, all emphasised the need for academic qualifications at level 2 (GCSE level). Generic skills mentioned by employers were:

- STEM subjects
- Numeracy and literacy
- Communication
- Commercial astuteness
- IT skills
- General administration skills
- People who want to continue studying while working

A more detailed analysis of the generic skills requirements is provided in the following section of the report.

What employers from the sectors in the general groups want in schools

Employers from the sectors in the general group were mainly to do with the generic employability skills. However, the need to make learning relevant was discussed.

'[Learning] needs to link to real life. Maths for example, could be linked to mobile phone tariffs. A letter in English could be a cover letter for a job.'
General employer 3

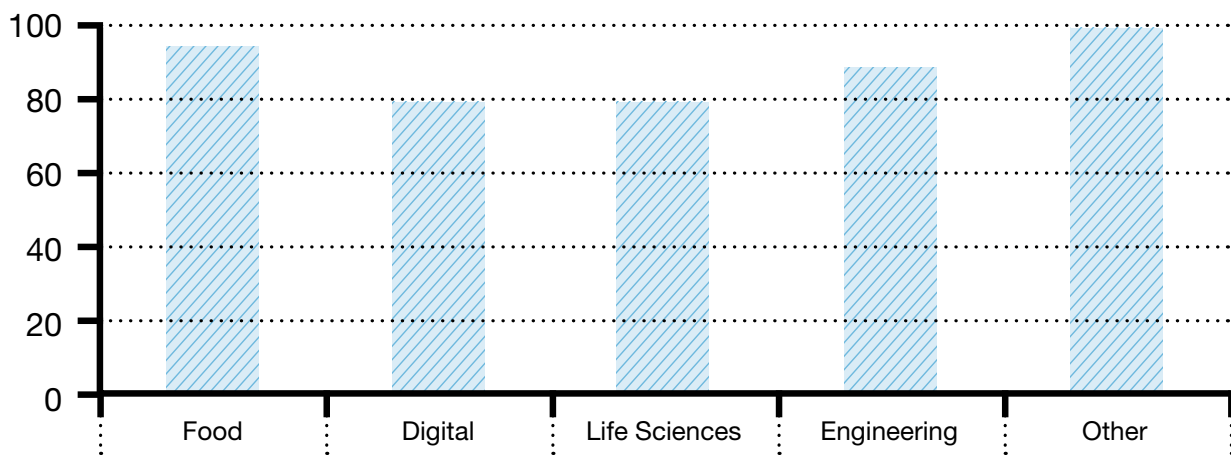
Two employers from the sectors in the general group spoke of the need for schools to track what happens to learners when they leave school as they believe this is one way to ensure employability is taken more seriously.

'It's not about what happens to the pupils after they leave school. It is job done. The government needs to change the dynamics around that. I've had conversations with a head who said to me that 100% of pupils were in further education or employment after three months. As soon as they are measured on that, they will think more about what happens to their young people next.'
General employer 1

GENERIC EMPLOYABILITY SKILLS

Although the focus groups were deliberately designed around the Birmingham economic zones, nearly all the employers (41) across all sectors continually referred back to generic employability skills as being key for their business. In each sector significantly more employers said they did value the generic skills than said they didn't.

PERCENTAGE OF EMPLOYERS WANTING GENERIC EMPLOYABILITY SKILLS:



Attitude, discipline and teamwork

Attitude was mentioned by employers across all sectors. In total, just under a third of all employers (13) specifically mentioned the importance of attitude for their recruitment. The need for young people to have the right attitude for work in the sector was emphasised repeatedly.

'It's all about developing an attitude to behaviours in the workplace... Turning up to work on time, meeting deadlines, doing things in a structured way. Those behaviours and mental attitudes you can't get out of a text book, you need to practice. And how can you get to do that?' *Food employer 11*

'Where we come across good people, we take them on... We gave them jobs even though we didn't have a job to give them... When we found the people with the attitude we wanted, we had to employ them. It is so rare to find the attitude.' *Engineering employer 2*

'Attitude and empathy. It's about understanding what you are going into' *Life sciences employer 5*

'We say recruit for attitude, train for skill.' *Digital employer 2*

It is vital, therefore that young people are informed of the sort of attitude needed for work. Specifically, employers were keen for employees who would be responsible for their own actions in the workplace and realise the importance of working as a team and the responsibility it brings.

‘One of the conversations I’ve had with many young people is trying to get across that the difference between work and school or college is that it’s voluntary. We need to make them realise that. If they don’t want to get out of bed then hundreds of other people want their job’. *General employer 1*

‘It is critical as other people depend on you. If you don’t do your homework, no one depends on you. In the workplace, someone depends on you doing your bit right.’ *Food employer 11*

‘[You need] a respect for your own time and that of others.’ *Digital employer 1*

‘If he doesn’t know, he will research. Students aren’t taught how to go off and do their own things. They need to be taught this.’ *Digital employer 3*

‘We have strong values in our business and what we are also trying to do is say that it isn’t just about what you do, it’s also about how you act, how you behave and to show what is acceptable and unacceptable behaviour.’
Food employer 12

‘The willingness to work and to take responsibility. We want people to take on a task and see it through.’ *General employer 4*

Employers suggested that there should be more project work in schools as a way to show young people a greater sense of responsibility, and to reflect working conditions where employees are often required to use a range of skills across a single task.

‘Yes, exams are important but I’ve never set an exam in the workplace. I’ve set projects and tasks. More of this in the curriculum would be right.’
Digital employer 5

‘If kids had a project so they could build something. They have the time to build a product, then at interview that could say ‘I’ve launched this.’’
Digital employer 4

Numeracy and literacy

Numeracy and literacy skills came up across the range of sectors. Almost half of our employers (21) mentioned numeracy and literacy specifically. Applied numeracy and literacy skills are what employers require, rather than understanding of abstract mathematical concepts which may only be applicable to certain sectors. Employers want learners who are able to apply these skills in real-life situations.

‘I went to a maths class and they had split the class into different groups. Each group had a market stall selling jeans. They were deciding the mark-up etc... Maths needs to link to real life.’ *General employer 3*

‘A basic level of maths. You need to be able to tell whether you’ve got 20 cases on or 10 cases on. Or whether you have just put 5 packs in or 10 packs in... Just basic spelling. If we didn’t spell Africa or Italy properly on a label, we’d have a whole product recall.’ *Food employer 11*

'You need to be able to spell, otherwise you will make something very expensive with the wrong name. You need to be able to measure and you need to be able to count the right number [of items].' *Engineering employer 3*

'On the committee we decided to find out what people are looking for. They want English and maths which is very straightforward. The third one is common sense. We don't need [industry specific skills]. What we need is people who are ready to learn.' *General employer 5*

Communication skills

Communication skills also came up across a range of sectors, mentioned by just under two thirds of our employers (27). It was especially important in the food and hospitality sector, where communication with customers is vital to business success.

'We want people in customer-facing roles to have good customer service skills or at least speak to people in that way customers would appreciate'.
Food employer 12

'They can't talk to fellow employees in the way they talk to their friends at the bus stop.' *General employer 1*

But communication is also vital at all levels in the financial and professional services.

'Communication skills fall under a broad banner. We have to have people who can present themselves well, can build rapport easily, who are credible with senior people. Some basic, obvious things. For example, answering the phones correctly. It's from being able to answer the phone correctly to having a conversation with the CEO of a multi-million pound business.' *General employer 2*

APPLYING FOR JOBS

Employers were asked about their recruitment processes so that we can tell young people what employers want. Alongside this, we asked about their selection procedures and interview methods.

CVs

Although one employer said that they didn't need to advertise vacancies as they had a waiting list of people wanting to join the company, all other employers relied on a CV or application form as the very first stage of the recruitment process. The need for young people to write strong CVs was clearly apparent as employers talked of problems with CVs which had failed to pass the test.

One particular issue mentioned on numerous occasions was the importance of appropriate personal email addresses. Employers are put off by applicants with unprofessional email addresses or voicemail jingles. Both of these things give an impression of an applicant so it is important for young people to choose carefully.

Top five CV recommendations from employers:

1) Check your cv carefully

‘Attention to detail is important. CVs not being spell-checked is a bugbear. To me, the CV is the first thing a company gets. It is important to get it right.’
Food employer 7

‘People cut and paste their CV and leave another company name at the top and then wonder why they didn’t get [the role].’ *Engineering employer 5*

‘It’s amazing how much you can tell about someone from their CV. For me, a CV is like understanding a brief. You need to address client needs. This is one of our core skills and the CV can show they haven’t got it.’ *Digital employer 6*

2) Research the company

‘A school leaver needs to carefully research the company. If a CV is going to the HR department, it needs to tick boxes’. *Food employer 7*

‘We also like people who know about the energy industry. Do they know what we do?’ *Engineering employer 5*

3) Include what you have done outside of school

‘We also look at the softer skills. People who have done volunteering, people who have done Duke of Edinburgh, led the football team, prefects, whatever. These things are important because we need a differentiator.’
Engineering employer 5

‘If they are new to the job market and they don’t have experience, it is important that they do other things in their spare time as it shows character.’
Life sciences employer 5

4) Stand out from the crowd

‘They all say the same stuff, all downloaded from the internet. They need to find the one thing that will help them to stand out’ *Engineering employer 2*

‘I would weed out the ones that look like they have been written from a script.’
Engineering employer 3

‘One person found the job on the website [rather than through an agency]. The same person has tried to contact me via linked in. Straight away, that person who is left-field on the shortlist has made the shortlist because she has been noticed.’
General employer 3

5) Include evidence of things you have done

‘Some of them have been a list of attributes without any evidence of why they are good at things. They need to provide real life examples of what they have done. Anything could do.’ *General employer 3*

Interviews

Almost all of the employers (43) use interviews when recruiting. These interviews may be on the telephone, face to face with a single person or with a panel. While employers recognised that young people may be nervous, their view was that performing well at interview is important when deciding who they recruit.

Employers are looking for people who are well presented.

'I look at their personal presentation. I was always told that you should look smart for an interview. We don't expect them to turn up in a suit and tie, but I expect a certain look. Especially to work in our kitchen.' *Food employer 13*

'We have to have people who present themselves well.' *General employer 2*

Many employers use competency-based interviews so young people must be primed to talk about a range of things they have done and show how they demonstrate specific competencies.

'We have 8 competencies we look for. We look at communication, teamwork and commercial awareness. We ask certain questions to extract the skills from the applicants.' *General employer 4*

Examples given for evidencing competencies don't need to be things that have been done in school or mainstream education. In fact, employers said they often look for what people have done in their own time to demonstrate commitment to the sector.

'[For school leavers] We ask about their spare time, hobbies and school projects. Are those of an engineering nature? Have they generally got an interest?' *Engineering employer 1*

'I would expect someone of 18 coming out of A levels to have had at least 3 summer jobs. First one at 16 then at 17 and 18. Three contracts. That's what I look for. What have you done in the summers?' *Digital employer 3*

'We want people with a hunger to go into the industry... We asked one guy who we eventually hired what he liked to do in his spare time and he said he just liked to code.' *Digital employer 1*

'I want to know, did they still have time to tinker? And to do stuff in their own time? This shows commitment to me'. *Digital employer 3*

Five employers stated that they use (or are intending to use) behaviours as a key recruiting tool. Young people, therefore, need to think carefully about ways in which they can demonstrate having the behaviours employers want.

'We always ask at interview around the values of the organisation. We recruit as much for values as technical competencies.' *Life Sciences employer 4*

'We have strong values in our business and what we are trying to do is say that it isn't just about what you do. It's also about how you act and how you behave and to show what is acceptable and what is not acceptable behaviour.' *Food employer 12*

‘As a company, we are moving towards recruiting for behaviours rather than skills. We are in pilot stage at the moment... We will assess against 8 behaviours. We can teach people to pull a pint or change a keg. We can’t teach the passion to give a guest fantastic service.’ *Food employer 13*

‘If you don’t fit the culture and your personality isn’t right for the business, you wouldn’t go onto the next interview no matter how good you were at the job.’
Food employer 6

Skills test

Just over half of our employers (27) said that applicants would be required to perform a skills test as part of their recruitment process. The nature of the skills tests ranged from carrying out calculations to demonstrating sector specific skills via a practical.

‘We have put tests into our interviews now. We ask them to calculate something. At the end of the interview, we give them a little paper with calculations on.’
Life sciences employer 1

‘When we have an interview for a chef we give them five or six basic tests: poach an egg, chop an onion, peel a tomato.’ *Food employer 13*

‘Always an interview, always a task.’ *General employer 4*

‘If it is a customer facing role, we would do a case study or a role play scenario.’
Life sciences employer 4

Other recruitment processes in use across the city are:

- Portfolios
- SWOT analyses
- Assessed factory tours
- Psychometric testing

Employers were keen to stress that young people should be aware of all the different recruitment processes they may come across when looking for work in the city. One employer even suggested that psychometric tests could be used in schools to help guide learners into careers which may suit their personality and interests.

‘Why don’t they use psychometrics? Not to silo people but to raise awareness of their strengths and weaknesses for personal development.’ *Food employer 11*

While recruiting for focus groups it became apparent that there is existing good practice in the city and nationally where businesses and schools have formed strong and mutually beneficial links. The following section of the report contains five case studies that demonstrate how education and business can work together.

CASE STUDIES

The following case studies provide examples of the best practice in employer/school engagement.

CADBURY TASTE OF WORK

The Taste of Work programme is a work-related learning curriculum-led initiative working in Primary, Secondary and Further Education.

The aim of the programme is to inspire the next generation of scientists, engineers and manufacturers who may want to work at Bournville one day.

The programme focuses on a range of employability areas but the following case study is an example of work in the engineering sector. Taste of Work is a 6-week programme which was originally developed by the Cadbury Foundation to support the Engineering 14-19 Diploma programme.

Although the diplomas are no longer delivered, the programme continues. The programme is run by volunteer employees including apprentices.

A maximum of 15 students per group go into the factory. Initially, they are given a briefing about the factory and they are then taken on a tour. Working in teams, the students are tasked with solving a real problem in the factory. As well as the students coming into the factory, the Taste of Work employees also visit the students at school. Once a solution to the problem has been identified, the students present their work to a panel. Some of these solutions have been so effective that they have been implemented in the factories.

Having taken part in the Taste of Work scheme, some young people go back to the company for work experience. At the sister factory in Sheffield, some young people have gone from the Taste of Work scheme to a work experience place to an apprenticeship.

There is also a version of Taste of Work in the primary phase which involves pupils enjoying an interactive workshop to give them a better idea about enterprise and the many different types of jobs there are at the company's Bournville plant. After the presentation, the primary pupils are asked to design a new product and create a campaign with which to launch it. During the day, the children learn new concepts like profit making; they also develop essential team building and employability skills. There is a FE Taste of Work model as well. Post -16 students have been looking at the company to understand automation and business structure to support their business courses at level 3.

In addition to these areas, there has been the development of a programme to support those students at risk of being NEET at age 16, the establishment of STEM career events to support students making informed choices about their options, and establishment of new pathways Post 16. The project has already been awarded the Food and Drink Federation Silver Award for Education and was a finalist in the IGD Award.

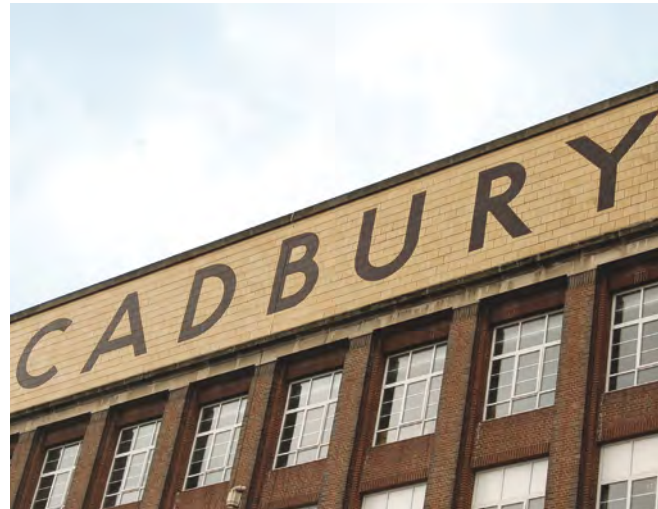




Photo courtesy of: <http://www.flickr.com/photos/ell-r-brown>

KPMG

KPMG is one of the world's top professional services firms. KPMG offers Audit, Tax and Advisory services to thousands of clients, from some of the largest multinationals and best-known brands to public bodies and entrepreneurs. The Birmingham office of KPMG works with schools across the local area in a variety of ways.

KPMG has designed an innovative six-year programme that gives young people the opportunity to join its Audit team, gain an accounting degree, and become fully qualified Chartered Accountants with the Institute of Chartered Accountants in England and Wales (ICAEW) or the Institute of Chartered Accountants of Scotland (ICAS). KPMG pay all tuition and university accommodation fees and learners on the programme also earn a starting salary of around £20,000 (in London).

There is a second school and college leaver programme in Risk Consulting where young people work closely with skilled professionals and experience a varied and challenging range of risk related projects. As they gain more experience, learners get involved in more complex, specialist work. There are two routes to choose from in Risk Consulting: the Accountancy Programme and the Technology Programme.

Alongside these school leaver recruitment programmes, KPMG also has partnership with five local schools (as part of 100 nationally) which they work with across a period of time. The partnership work can involve a range of activities including:

- Working with year 13 students who have not applied to go to university to ensure that they receive support and guidance to remove any NEETs
- Confidence building in vulnerable students in key stage 3
- Girls intervention group
- Boys intervention group
- Careers weeks at KS5 including CV writing, job application forms, cover letters, overview of apprenticeship schemes
- Dragon's Den events at KPMG offices
- Work experience placements

HEALTHTEC

HealthTec in Tamworth is based at the TORC Centre, a purpose built facility designed to deliver high-quality vocational education across a range of sectors.

HealthTec is a partnership developed between the NHS, and schools and colleges and delivers a range of Health and Social care qualifications and enrichment opportunities to young people in the area.



The original aims of HealthTec were to make STEM learning more attractive by making it relevant to real-life situations and to inform learners about the employment opportunities in the NHS. HealthTec works with a variety of schools/colleges and other educational establishments from across the West Midlands. HealthTec also works with disillusioned learners to re-engage them with learning so they have skills which allow them to enter the workforce.

HealthTec enthuses young people about science, develops their understanding of their own health and well-being, and promotes the notion of active citizenship in relation to the use and development of clinical and social services. As there are career opportunities in almost every occupational and professional area across the wider workforce, HealthTec aims to make young people's learning relevant to the world of work in our sector, and to support and promote excellent careers advice and guidance about the tremendous range of opportunities available. There are 300 different roles in the NHS, many of which are unknown by young people. HealthTec brings health and education together to create practical opportunities for children, educators, health services, employers and whole communities.

HealthTec provides a fresh environment and a different way of learning whereby students can acquire health knowledge and skills. Not just from books in traditional classrooms, but through vivid simulations and by meeting with 'champions' from the real working world. HealthTec successfully replicates real life situations in health and social care settings - like an older person's living room; the back of an ambulance; an A&E bay; a typical family home; a ward cubicle; a rehabilitation assessment bay; a modern diagnostic and treatment centre; and other facilities involved in both Primary and Secondary Care. HealthTec aims to keep science - particularly where it relates to healthcare and social care - interesting and relevant to young people.

The centre in Tamworth works with learners from the 5 high schools across the town. Learners attend for one day a week to study for their vocational qualifications. This approach also teaches learners the softer skills of team work and communication as they are often working with people they do not know.

MANSELL - MATHS IN CONSTRUCTION



Mansell, a leading construction company based in Stourbridge, focuses on constructing sustainable communities - places where people live, work, learn, meet, travel, have fun and are cared for. Mansell is a Balfour Beatty company that enjoys engaging with students, teachers and neighbouring communities to make the construction experience positive, exciting and educational.

During construction projects at education providers, Mansell integrates with the school or college through classroom-based and practical skills sessions that support the curriculum as well as events such as safety and careers talks. Education Liaison Officers' role is to integrate our construction activity with the needs and wishes of the school and its curriculum. Mansell work under the motto "what can we do for you?" rather than "this is what we do". Alongside specific projects, Mansell offer careers advice and guidance and promote the great variety of secure and fulfilling opportunities available in the world of construction.

Objective: To submit a Design & Build Tender Bid for a Construction project
With a specific focus on mathematics, this is a role-play event where the pupils [in teams of 5 or 6] role-play construction professionals within a construction company.

Teams of 5 or 6 students of mixed ability are given roles [Designer, Environmentalist, Planner, Construction Manager, Estimator, and Quantity Surveyor] for the duration of the project. Throughout the challenge the pupils are set tasks within their company and they present their ideas to peers at the end of the challenge. Maths is covered within the enterprise event under volume, cash flow, budget and planning.

Students need to carry out a variety of tasks to complete the challenge:

- Creating a company name, logo and mission statement
- Designing the layout of the building with environmental considerations
- Pricing the construction
- Take-off quantities from drawings using scale rules
- Producing a programme with percentages and progress curve
- Producing a Cash flow forecast, preliminary costs, overheads and profit forecast
- Calculating areas and volumes (using factors)
- How to set out 90 degree angle using a tape and 3 pegs (Pythagoras)
- Preparing Site management arrangements (site layout)
- Preparing and making a Presentation

Each team comprises the following roles:

Designer - Architect/engineer, Environmentalist, and Planner (will need to use time and sequence - graphs, %'s), Construction Manager, Estimator (Pricing/ calculations/areas), Quantity Surveyor (volumes/Cash Flow/finance).

The experience runs for a full day with young people carrying out the tender submission in the morning and then preparing for and delivering a presentation in the afternoon. In effect, the teams are going through the same process that Mansell do when bidding for contracts.

WILLIS INSURANCE

Willis, a global insurance broker, has 22 UK offices with many more across the world. The Ipswich office, a significant employer in its region employing more than 1,100 staff, has taken a proactive approach to engagement with education.

Willis has an Education Partners programme working with 10 local schools and colleges and also has links with the local university.

Willis staff visit the education partners and work with students, and staff members offer a range of support and collaboration opportunities linked to academic requirements. Willis is committed to helping young people understand the insurance industry in all its complexities, dispelling the perception that the industry is dull and uninspiring! As well as a structured annual school-leaver programme, examples of the types of activities Willis contribute to schools are:

- **Presentations and Interactive Modules** introducing the world of Risk, Willis and the Financial Services Sector
- **Work Experience & Internship Placements:** Designed to provide a valuable insight into a large global business
- **The benefits of developing Modern Foreign Language skills** and how these are used in the work place
- **Employability Skills:** Demonstrating to students how they can create an outstanding CV and opportunities to participate in mock interviews via workshops and student networking events
- **Visits to the Willis Ipswich office** for suitably interested students to obtain an insight into the work place and business operations
- **Business Mentoring for a small group of students,** especially targeting those nearing completion of their academic studies
- **Supporting Careers Events and Open Evenings:** Often involving junior recruits who can act as role models and inspire current students
- **The Willis Ipswich offices recruit 25-30 junior positions each year:** 50% of job candidates and joiners are sourced via Willis' Education Partners.

A key driver of Willis' success has been the collaboration and working relationships developed with Education Partner head teachers and department heads. This has also led to knowledge sharing amongst the Education Partner representatives.

One example of the above arose when an education partner's Head of Maths decided to teach areas of the GCSE maths curriculum through the context of risk to make the students' learning more relevant to the workplace. Willis provided an insight into the way that maths and numbers are used in the work place by involving their Marine Claims, Global Carrier Management and Procurement departments.

More generically, Willis offers structured work experience programmes and internships. Both of these include CV writing support to ensure the placement is adequately reflected on the young person's CV, as well as visits to the office which allow young people to experience an office environment. This enhances young people's employability for the future.

From all of their education work, Willis in Ipswich has recognised that parents are a key stakeholder group in their engagement. Consequently, Willis is involved in careers events and options evenings at schools, providing an opportunity to meet with parents as well as learners.

SMALL HEATH SCHOOL – A SCHOOL'S PERSPECTIVE

Small Heath School believes that the relationship between education and industry is vitally important to the development of young people during their school career.

In 2010 OFSTED described Small Heath School as:

'...an outstanding school... Academic progress is exceptionally good because of the consistency of high quality teaching and innovative approaches to the curriculum... The huge range of links with business and industry, organised by a full-time manager, is a fundamental part of the school's curriculum, which weaves work-related learning into all years and subjects. This gives great relevance to students' learning and allows them to develop and practise their skills in real-life situations.'

Having been a member of the Chamber of Commerce for 20 years, the school is also a member of the CBI and has membership of the Institute of Directors, because there is a belief that it is vital to make a contribution to the development of the workforce of tomorrow through the development of relationships with business partners, to find out their recruitment needs and how they can be addressed.

The school views partnerships as a "two way street" and our aim is to support partners, confident in the knowledge that our children will benefit by experiencing life in the real working world whilst understanding the relationship between the curriculum and work. We believe in making learning real. If children understand why they are learning what they are learning, they will be more motivated to learn.

At Small Heath School we have a Work Related Learning leader, with no teaching commitment, whose role is to identify potential partnerships and develop the relationship between the partner and the area of curriculum identified as being suitable for the work. This person is a member of the Regional Council of the CBI and a member of the Institute of Directors.

The CBI, in its publication "Time Well Spent", highlighted the importance of the development of employability skills in young people. These are: Team Working, Communication, Problem Solving, Application of IT, Numeracy, Self-Management and Business and Customer Awareness.

The school has developed an award scheme, based on these skills, which having been piloted by Year 7 pupils through the Creative Minds Curriculum is now being rolled out across the school. Every child will have the opportunity to identify their skills and to be rewarded for their efforts. It also has the support of the CBI. The school was also heavily involved in the development of the CBI's initiative "Business in the Classroom", which is based on Small Heath's way of working with its partners.

There is a commitment across the school, in all subject areas, to the development of work related skills. It gives a purpose to learning, as there is a recognition that teaching to exam results and league tables will not necessarily produce young people who can make a contribution to the world of work. Too many young people leave school and university without these vital skills. Small Heath School has found another way. The exam results aren't bad either! (71% gained 5 or more A* - C; 61% gained 5 or more A* - C including Maths & English)

RECOMMENDATIONS

This analysis demonstrates that:

- 1) Employers are not always able to recruit local, appropriately skilled workers to their vacancies, even though Birmingham has a diverse and young population. The city's employers want to recruit local people for their jobs but above this, they want the best people for the jobs.
- 2) Employers believe young people have little understanding of the variety of job roles available in each of the city's key employment sectors.
- 3) Employers value generic employability skills alongside sector specific skill, even more so at entry level jobs.
- 4) While there are examples of good practise there is significant work to be done to ensure that all learners have the opportunity to work with businesses and develop employability skills while at school.
- 5) Employers believe that the skills they require could either be delivered or sign-posted within the current school curriculum.
- 6) Employers are keen to work with schools in a meaningful way but they need support and guidance on how best to do this.

Local government is keen for young people to leave Birmingham's schools adequately prepared for the city's employment opportunities. At a time when schools are ranked on league table points which do not reflect employability skills, and are becoming more independent from the local authority than ever before, a way to incentivise employer engagement needs to be sympathetic to the current policy and accountability environment.

Equally, we can be clear that the status quo is not working and is not providing all learners with the opportunities they need. Consequently, our recommendations offer ways to increase learners' understanding of local employment opportunities and how best to access these and also ways to facilitate employer engagement in education.

The core curriculum

Evidence from the focus groups showed that employers believe young people are unaware of the range of employment opportunities available to them in key economic sectors in the city. Therefore, we recommend:

- 1) Where possible, the curriculum should be made relevant to the city's business needs by explicit links being made between the curriculum content and local employer skills needs and expertise. This is especially important for the STEM subjects, which may appear abstract and unimportant to young people.
- 2) Learners have the opportunity to use the key employability skills (as determined by CBI) throughout the curriculum. More opportunities should be given for project working to engender an understanding of responsibility.

Links between schools and employers

Employers recognised that schools would not be able to deliver all of the things that they would like delivered. Furthermore, they recognised that it was their responsibility to work with schools and education providers to tell young people what they need to get a local job. The interest from local employers in wanting to work with schools should be capitalised on. Therefore, we recommend:

- 3) A dissemination of the good practice happening where schools and businesses have made mutually beneficial links.
- 4) An employer/school online resource is created to put schools in contact with businesses that are looking to make partnerships.
- 5) Employers take the lead on supporting CEIAG by generating a series of 'sector guides' to provide young people with information about the key employment sectors in Birmingham, the employment opportunities available, and guidance on the skills and training they need to get there.
- 6) Employers work closely with schools to develop job application skills including CV writing and interview practice.

Wider policy recommendations

Extensive work is taking place in Birmingham and the surrounding area to ensure that the skills gap is closed. In addition, there is a national drive for businesses and employers to be more involved in education. Therefore we recommend that:

- 7) An analysis of all the various skills initiatives in Birmingham and the GBSLEP is carried out to ensure that development work is connected across the city's stakeholders.
- 8) Local employers take note of the UKCES opportunities to utilise funding for education work.

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EMPLOYER CONTRIBUTORS

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iwaz
Droplet
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Mansell Plc
HS2
National Grid
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Balti Triangle association
Shabab restaurant
Aston Villa FC
Mitchells and Butler
The Kitchen School
Simpsons restaurant
ITIHAAS
The Belfry
Hogarth's
University of Birmingham
Catering
MWW exotic fruit suppliers

UCB
Cadbury/Kraft/MDLZ
Midland Heart
University of Birmingham
School of Life Sciences
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