**House of Commons Science and Technology Select Committee**

**Digital Skills inquiry – response from Barclays Bank PLC**

**About Barclays**

1. Barclays is an international financial services provider engaged in personal, corporate and investment banking, credit cards and wealth management with an extensive presence in Europe, the Americas, Africa and Asia. Barclays’ purpose is to help people achieve their ambitions – in the right way.
2. With 325 years of history and expertise in banking, Barclays operates in over 50 countries and employs over 130,000 people. Barclays moves, lends, invests and protects money for customers and clients worldwide.
3. For further information about Barclays, please visit our website [www.barclays.com](http://www.barclays.com/).

**Introduction**

1. Barclays welcomes the opportunity to respond to the Committee’s call for evidence. The digital revolution is transforming almost every aspect of society, from the way we shop to the way we choose to order a taxi, book a holiday or access healthcare services. There is wide recognition of the importance of ensuring the UK economy thrives in this new digital world, where consumers expect fast and easy access to goods and services. For its part, government has invested significant effort and resources into supporting this ambition, such as by championing the emergent ‘FinTech’ industry and by investing in broadband and associated digital infrastructure.
2. Whilst these are helpful and welcome initiatives, ensuring the UK economy makes optimal use of new digital capabilities and keeps pace with global competition will require more than an ongoing support for entrepreneurs and access to modern infrastructure. It will also require an unwavering focus on the foundation stone of the digital economy: skills. We need to equip the whole populace with the confidence and capability to exploit the possibilities that the digital revolution is and will continue creating.

**Where have efforts been focused to date?**

1. The case for early digital inclusion is well established with numerous studies demonstrating the economic, social and health benefits attained by getting people online and providing them with basic skills such as being able to use email and search the web. A range of UK business and political commentators are promoting the issue, whilst in Europe bridging the digital skills gap is a core goal of the European Commission’s Digital Agenda 2020. Similar initiatives also exist in the US and elsewhere.
2. The emphasis of these initiatives is often on reaching marginalised groups, from the global poor to the elderly, disabled and illiterate. International organisations such as the United Nations and World Economic Forum speak of digital inclusion mainly in a developing economy sense – connecting the ‘next billion’, for example, by ensuring broadband access for all. In Europe, the Commission’s approach has been to set up the Grand Coalition on Digital Jobs, a multi-stakeholder group aimed at encouraging youngsters to study Information and Communications Technology (ICT) and at re-skilling the unemployed.
3. Karen Price, CEO of the UK’s Tech Partnership (a network of employers working to increase the level of digital skills within the UK economy) asserts that UK efforts to date have focused on the extremes – either on encouraging more people to study high-tech subjects at the sharp end of the digital revolution, or on addressing digital exclusion – whilst there has been limited emphasis on those that already have basic digital literacy skills.
4. As the recent report by the House of Lords Select Committee on Digital Skills highlighted though, digital skills are not just something that one acquires once, like how to wire a plug or drive a car. They need constant updating to keep up with technology advances and a changing workplace.
5. That is why Barclays believes the conversation should shift to a more holistic approach to digital skills. We believe that digital progress should be viewed in broad terms including awareness levels, confidence with, experience and knowledge of ‘digital’, not just the narrow lens of formal qualifications. Also, whilst it is important that the vulnerable and digitally excluded in particular are not neglected, we also want to ensure the ‘forgotten middle’ – those who are unaware, too embarrassed and/or unconfident to seek help – progress with their digital learning.
6. Research in the Netherlands by the University of Twente in 2012 showed that the average employee loses nearly eight per cent of their productive time due to poor IT resources or inadequate digital skills[[1]](#footnote-1). It follows, therefore, that equipping the average Briton with improved digital capabilities and confidence would present a huge growth opportunity for the UK economy and help address the oft talked about ‘productivity puzzle’.
7. For Barclays, this is both a commercial imperative and a social responsibility that drives our activity in this area. The majority of the ‘forgotten middle’ are the employees and customers of large corporates like ourselves.

**Barclays’ approach**

1. The advance of digital in all aspects of life is a big and sometimes emotional shift for some people, who adapt to change at different speeds. Our own workforce (which we believe is broadly representative of the UK working population as a whole given we employ thousands of 16 to 70 year olds across the country) is a case in point: in 2012 we issued 10,000 tablet computers to our branch network to help improve the service we could offer to our customers. However, after a couple of months we discovered that only about 15 per cent of colleagues were using them. Of the remaining 85 per cent, some were unenthusiastic about changing the way they helped their customers, but the overwhelming majority were embarrassed that they could not operate what at the time was relatively new technology.
2. We realised that top-down training from head office was not going to overcome this emotional barrier, so our solution was to harness the skills of the digitally empowered 15 per cent. We asked them to ‘buddy up’ with less digitally confident colleagues and share their knowledge and expertise, and Barclays Digital Eagles was born.
3. We now have nearly 16,000 Digital Eagles operating across the country who help not only colleagues, but customers, businesses and the public at large. We offer training for free and focus it on building digital confidence generally, so whilst some people may benefit by learning how to bank and manage their finances through the internet, others will learn how to, for example, stay in touch with friends and family or access online TV.
4. We also offer specific ‘Tea and Teach’ sessions for more vulnerable groups – the elderly or disabled for example – to address hotspot issues such as fraud and scam awareness or how to book and cancel GP appointments online in order to reduce NHS call volumes. These are hosted by the Digital Eagles in partnership with experts including the police, trading standards, the NHS and Age UK.
5. In January 2015 we extended our digital skills activity to help young children (and their parents and grandparents) develop coding skills via Code Playground ([www.barclayscodeplayground.co.uk](file:///%5C%5CCUKPBCC1FIL8026%5CGov_Relations_and_Public_Policy%24%5CGovernment%20Relations%202015%20%28All%20content%20will%20be%20deleted%20in%202021%29%5CPolicy%20Coordination%20%26%20Engagement%5CConsultations%5CDigital%20Skills%20Gap%5Cwww.barclayscodeplayground.co.uk)), a simple and fun website which we introduce to them during the dozens of coding sessions we now run each month in branches around the country. Recently we teamed up with the Raspberry Pi Foundation team so that we can demonstrate the capabilities of their credit card sized computers to these kids, too.
6. For older children and adults we have developed a suite of digital training courses that are freely available to anyone and everyone in the UK. The Digital Driving License ([www.digitaldrivinglicence.barclays.co.uk](http://www.digitaldrivinglicence.barclays.co.uk)), or DDL, is an interactive learning experience with a growing list of modules (currently 34), endorsed by City & Guilds and designed by Digital Eagles and partner tech brands such as Microsoft and IBM. It was initially developed to up-skill Barclays employees on all things digital, but is now used by clients and partners as diverse as Unite the Union, the Royal Mail, Birmingham City Council and the Department for Work and Pensions to provide a basic understanding of issues such as cyber security, digital identity and cloud computing to their colleagues and members. The DDL is available online or as an app so that it is accessible to as many people as possible and at their convenience.
7. These digital focused initiatives are complemented by LifeSkills, our flagship skills programme which we established three years ago. The motivation behind LifeSkills was to raise the aspirations and confidence of young people moving into the world of work and create a strong talent pipeline for UK businesses. The programme was developed in partnership with teachers and is delivered in schools and online. It aims to give millions of young people the employability skills they will need in future, ranging from how to present themselves at an interview to effective use of social media, and brings together educators, businesses, young people and their parents to achieve this.
8. More than 50 hours of free employability learning are delivered through collaboration with our partners to children between the ages of 11 and 24 using a variety of different mediums, such as videos, quick fire activities and interactive online tools. LifeSkills also offers access to work experience, traineeship and apprenticeship opportunities with businesses across the UK.
9. To date, more than 1.8 million young people have participated in LifeSkills and over two thirds of secondary schools are registered partners. The Work Foundation recently assessed the impact of LifeSkills on those who have taken part online and found that 66 per cent felt more confident about their future, whilst 69 per cent felt more motivated to do better at school.

**2016 and beyond**

1. Whilst there is much great work happening across the public, private and voluntary sectors to help people and organisations go online, digital naivety and low confidence will remain a significant issue if we merely maintain current momentum in our opinion. The focus should now be on how to accelerate progress to making Britain more digitally savvy.
2. At Barclays, we are looking to be even bolder, more wide-ranging and inclusive in our activity in 2016. We want to improve the digital capability of all groups, demographics and abilities in the UK, so we will be looking to deepen engagement with our various skills initiatives by working more closely with partner organisations right across the country that are able to support a localised, and indeed more personalised, service.
3. In Salford, for example, we recently committed as part of our banking contract with the local council to deliver digital skills training to their colleagues and residents, as well as to help them digitise their operations, such as by using our cloud computing capabilities for the development of a ‘residents well-being portal’ containing medical and educational records.
4. What success we have achieved so far in the skills development space, both internally and externally, has been down to direct engagement, on their terms, of the people being taught. Not everyone learns at the same pace or responds to the same training format, so we must be flexible and responsive to individual requirements and provide a number of learning channels. This attitude to skills training is neither simple nor straightforward to achieve, but it can be done with the right focus and attention.
5. What our experience also shows is that that no organisation or institution can tackle the digital skills gap alone. Strong partnership across all sectors will be required. Government is naturally well placed to galvanise this collaborative behaviour and bring disparate activity across the economy together. We suggest it could be kick-started by the setting of an ambitious digital skills objective – a bold statement of intent that drives both public and private sector initiatives. Whilst we must ensure that the most needy are not left behind by the digital revolution, and growth sectors with the potential for disproportionately impacting the economy (such as Big Data analytics) should be considered specifically, a single target that captures and empowers the whole population would be a welcome, unifying goal.
6. Government policy should also be future looking. We see a tremendous opportunity to look beyond the current state of the digital revolution, which is principally ‘app’ based, to the next wave of innovation, which advancements in imaging, design and automation suggest is more likely to be ‘maker’ based. Barclays believe capturing the productivity benefit that being able to create prototypes locally in a matter of days could realise will require a whole new set of confidence and capabilities in the UK population, which is why we are looking to support it.
7. In November 2015 we opened the first of our Eagle Labs in Cambridge. The site is fitted out with digital fabrication machinery (such as 3-D printing machines and laser cutters) and available to the public at large to use, including for free one day a week, so that they can explore how computer science can advance invention. This year we will be exploring how we can build on our two existing Eagle Labs to bring these opportunities to local communities and entrepreneurs, and would be delighted to share our knowledge, experience and contact with other organisations interested in being involved in the ‘maker space’ movement.
8. In summary, we would call for future digital skills training to follow three principles:
	* National oversight and co-ordination between public, private and third sector, with the aim being to move all groups – the most vulnerable, the ‘forgotten middle’ and those with advanced digital skills – one step forward;
	* Local, tailored delivery by partner organisations; and
	* Continuous review and refresh of digital strategy so that it remains relevant and forward looking.
9. We have provided responses to the Committee’s specific questions below using expertise from within our Digital, HR, LifeSkills and other teams. If you have any questions at all about our response, please do not hesitate to contact me on 020 7116 7094 or tom.burton@barclays.com.

Tom Burton

Barclays Bank PLC

*Q1, Q7 and Q8: The extent to which there is a digital skills gap and whether the Government’s initiatives are appropriate and sufficient to fill the gap; the extent to which there is a digital divide and whether digital exclusion exists in the current workforce; and the financial impact of the lack of basic digital skills on the economy*

1. Barclays agrees that there is a structural, digital skills gap in the UK at present, which is supported by research published by a number of organisations. For example, a 2014 Ipsos-Mori survey for the BBC survey found that 10.5 million adults in the UK lacked basic digital skills, whilst 8.6 million adults (16 per cent of the population) remain non-users of the internet[[2]](#footnote-2).
2. The impact of this in the workplace is profound given that the vast majority of jobs now require ICT skills, whilst their development also promotes other employability skills such as creativity and the ability to collaborate, problem solve and e-learn. Research by O2 in 2013 showed that the UK would need 745,000 additional workers with digital skills to meet rising demand from employers and fuel the UK economy over the 2013-2017 period, and that failing to fill these job vacancies would cost the country between £1.6bn and £2.4bn per year[[3]](#footnote-3). The sense that these skills support individual empowerment is affirmed by Fujitsu’s research showing that two in three employees believe that new digital services make their jobs easier[[4]](#footnote-4).
3. Existing government initiatives to fill the digital skills gap are welcome but, as we have set out in our introductory remarks and response to later questions, we believe more needs to be done to ensure people are equipped with the right tools for the future economy.

*Q2: Further measures by Government needed to improve digital literacy*

1. We recently replied to a House of Commons Business, Innovation and Skills Committee inquiry into the digital economy where we identified the following ways in which Government could help promote digital skills:
2. Firstly, local authorities are in a key position to drive up digital literacy generally and awareness of the opportunities that the digital economy can offer. Barclays has been working with a number of them, offering access to our trained Digital Eagles and the use of our free education tool, Digital Driving Licence, to give their colleagues a baseline level of knowledge on digital topics that builds their confidence and awareness of digital business.
3. Several other private sector and academic organisations also have digital skills initiatives freely available to the public, such as the Open University’s FutureLearn platform, which the Government could help raise the profile of and connect to education authorities and Government departments.
4. Similarly, the regulator can play a role as facilitator. We note that Ofcom has responsibilities to promote media literacy, which it currently seeks to fulfil through publishing consumer research. We would encourage the Committee to explore with Government and with Ofcom how this responsibility could be supported beyond simply the undertaking of consumer research. Moreover, we would encourage a more forward looking interpretation of this responsibility to incorporate digital skills and literacy.
5. Also, Government could ensure that incentives for public and private sector providers of apprenticeships with a digital focus are in place. As part of the Trailblazer initiative, for example, Barclays designed an apprenticeship course (which includes digital courses and options for two degree level qualifications) and contributed a third of the costs towards the delivery of the programme. The Trailblazer model should be promoted more widely and could even be readily modified to prioritise apprenticeships with a digital focus rather than apprenticeships generically.
6. Lastly, local economic partnerships (LEPs) could be encouraged to prioritise and channel capital funding towards regional initiatives, which will improve digital literacy and ultimately help create and sustain digital jobs.

*Q3, Q4 and Q5: How well the current education system addresses the digital skills gap? What is being done to equip teachers in the classroom? The adequacy of the current ICT provision in schools.*

1. In 2014, England became the first country in the OECD to put computing on the national curriculum and teach children as young as five years old to code. These skills are an important part of the answer to how the UK will prepare the next generations for work and life after school.
2. However, whilst the new system provides the guidelines of what should be taught, it does not necessarily provide the resource and time amongst a busy curriculum to allow for this to be done successfully. Many schools in high free school meals (FSM) areas in particular do not have the means to invest in the required kit to keep the teaching of technology relevant, and more importantly to keep the attention and interest of their students (some of whom will be using more modern computing hardware at home) ahead of them making decisions about what subjects to progress to Key Stage 3 (KS3), KS4 and beyond.
3. This problem is exacerbated by the fact that many teachers lack the necessary tech skills and confidence to teach the revamped curriculum. For KS2 and below, teachers are generalists who specialise in one or two subjects, which rarely include ICT. KS3 and KS4 teachers’ computing experience is also limited, with many relying on what they have taught as part of the IT GCSE syllabus (which dates quickly) for their digital knowledge. In comparison, the overwhelming majority of English, Maths and Science teachers in secondary skills have a relevant qualification.
4. It is not surprising, therefore, that only half of ICT and computing teachers surveyed by Nesta in 2014 reported they were confident in their ability to teach the computing curriculum[[5]](#footnote-5). Further, a survey conducted by MyKindaCrowd in 2013 found that 54 per cent of all secondary school teachers believe their students know more about ICT and computing than they do[[6]](#footnote-6).
5. Teachers for all key stages need support to deepen their computing subject knowledge so they can not only teach, but stretch their students. Dedicated time for continual professional development should be recognised as essential for teachers in the same way it is for doctors and lawyers to continue practising. In part, this training could be done by replicating Barclays’ Digital Eagle model and encouraging teachers who are proficient with computers and digital equipment to help those who are less confident.
6. Industry has an important role to play, too. We cannot expect schools and colleges - or universities for that matter - to produce a workforce that is fit for purpose if employers do not help contribute to the shape of the curriculum and its delivery, for example by having employees share their knowledge and experience with pupils in schools.
7. The private sector can also help secondary school teachers with understanding what the needs of the future economy are and in explaining how the skills they are teaching will translate to jobs, which in turn will help bring their classes to life for their students.

*Q6: The work being done by universities and industry to ensure that the computing curriculum is relevant*

1. The Committee will be aware that the Government-commissioned Shadbolt review has been looking at the accreditation arrangements for computer science degrees to ensure that they are fit for the future.  Our view though is that there appears to be a supply issue in terms of high grade achieving students at A Level wanting to study ICT subjects as an undergraduate. There is also evidence that quality is starting to improve, however, partly as a result of better ICT provision in secondary education.
2. Nonetheless, the pipeline of high calibre computing graduates is still small, meaning that employers are struggling to find appropriate resource to meet their needs.  One issue is that some UK universities enrol more overseas students on computer science courses than UK nationals, but visa controls make it difficult for UK companies to attract and employ people from this talent pool once they graduate.
3. Fundamentally though, more degree and doctorate level students studying subjects such as computer science, artificial intelligence and machine learning are required overall, and it may be that incentives are required to make these courses (and other key STEM subjects) more attractive.
4. There is also an issue on the demand side in that some employers are asking for very specific technical requirements or computer languages, which cannot be addressed within a broad-based computing curriculum. Our experience is that it is important to look more generally at technical degree disciplines to identify relevant transferable skills. For example, physics and even linguistics graduates have proved successful at filling computer science roles in Barclays.
5. The logical solution to these demand and supply issues is for employers and academic institutions to work more closely in designing and delivering the content of computing and other ICT courses. Industry practitioners should be brought into the classroom to brief students, whilst academics should visit industry to keep up to date with new technology and encourage the two way flow of ideas between the private sector and universities.
6. Placements in industry in particular should be encouraged, not least because there is good evidence to show that students who undertake work experience opportunities are more likely to secure highly skilled graduate jobs. Individual tutors and lecturers often do not have a detailed knowledge or understanding of workplace challenges outside academia, so the learning and personal development gained by students through placements can be transformative. They receive the best of both worlds in fact as concepts taught in the classroom are brought to life in a commercial environment, consolidating learning and allowing challenge and insights to be shared. That is why we believe the recently introduced Degree Apprenticeships in digital and software fields are an exemplar model and more universities should be encouraged to participate.

*Q9: The extent of any unconscious bias in the digital/IT sector*

1. It is an unfortunate fact that the current digital economy workforce does not reflect the broad make-up of the country as a whole. The perception that tech is a ‘job for the boys’ is something that can only be broken down in time, and through leading by example – by providing role models and case studies, by showcasing women and people with similar socio-economic backgrounds doing well in the industry.
2. Role models do not need to be those who have achieved the highest levels of an organisation – young graduates and apprentices who are excelling, who young women and people from less affluent backgrounds can relate directly, can be effective, too. A common assumption is that a role model is someone who at the top of the tree, but more often than not it is someone on the next rung up from an individual – someone whom that individual has regular contact with and can realistically see themselves becoming.
3. This has been highlighted through the work Barclays has undertaken with over 750 KS3 girls through the IT Girls Allowed Initiative, which is part of Barclays contribution to the government’s ‘Your Life campaign’. These one day events exposed the girls to how we use tech in our organisation and helped dispel some common myths and prejudices about not only working in IT, but working in a bank where all roles increasingly require tech skills.
4. In terms of qualifications, tech is a practical subject which in some circumstances can be taught on the job. The perception that apprenticeships are not for the brightest in the class need to be broken down. Teachers should promote all post 16 pathways as equal, whilst schools should not be benchmarked by the number of university placements they attain. This will help overcome the ‘second rate’ stigma attached to some candidates with non-university qualifications and experience.
1. University of Twente, *Lost Productivity due to IT Problems and inadequate computer skills in the workplace, 2012* [↑](#footnote-ref-1)
2. BBC, *Media Literacy: Understanding Digital Capabilities*, 2014 [↑](#footnote-ref-2)
3. O2 and Development Economics, *The Future Digital Skills Needs of the UK Economy*, 2013 [↑](#footnote-ref-3)
4. Fujitsu, Digital Inside Out: Creating a digital-first Britain, 2015 [↑](#footnote-ref-4)
5. Tech UK, *We’re just not doing enough – Working together to meet the digital skills challenge,* 2015 [↑](#footnote-ref-5)
6. Computer Weekly, *Teachers unprepared for 2014 computing curriculum*, 2013 [↑](#footnote-ref-6)