Institute for Public Policy Research

BUILDING THE WORKFORCE OF THE FUTURE

LEARNING FROM GROW WITH GOOGLE

Anna Round

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Grow with Google

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SUMMARY

Digitisation is transforming the nature of work, as well as many aspects of social and civic life. Digital skills are vital for individuals and national economies to prosper in a rapidly-changing world, benefiting from the opportunities of digital and remaining resilient to potential risks. More than 90 per cent of jobs in some categories now demand digital skills. Yet in 2016, just 56 per cent of Europeans had adequate digital skills for the world they live in, and 37 per cent of the workforce *lacked* adequate digital skills (European Commission figures).

Across the EU, levels of digital engagement vary considerably. 'Frontrunner' countries have high digital employment as well as commercial and social embedding. Some major economies which rely strongly on traditional industries have moderate levels of engagement, and a growing digital skills base. Countries which have faced economic challenges and high unemployment may be further behind, and there are also contrasts within countries; for example, rural areas, small businesses or marginalised communities may face greater barriers in adopting new technologies. Access to good digital skills development is essential to avoid a 'digital divide' between and within nations.

Governments, organisations such as the EU and the UN, and the private sector have responded to this challenge by developing policies and initiatives to build strong digital skills 'ecosystems' (for example, the EU's Digital Skills and Jobs Coalition). These are characterised by extensive partnership working, drawing together national and regional government, public sector bodies, civil society and business.

'Grow with Google' is one such project. It operates through national programmes matched closely to the contexts and needs of individual countries, developed and delivered in collaboration with a range of partners. Training is free, and is offered in a range of online, offline and blended formats to maximise reach and engagement. In particular, the programme helps SMBs to make the most of digital, and enables established workers to upskill for the changing world of work. It has reached over 3 million people through 32 programmes in 27 languages, and around 40 per cent of learners are women.

Programme evaluation shows substantial positive impacts for participants. Between 2015 and 2017, over 188,000 learners found a job or started their own business, and 32,000 businesses have taken on more staff. 505,000 businesses reported revenue and/or customer growth which they associate with their participation. Learner satisfaction is generally high, and most report outcomes such as behavioural change and enhanced confidence.

In this project we examined the development and approach of Grow with Google in six case study countries (Sweden, Germany, France, Spain, Italy and Nigeria) in order to identify key themes and learning to support ongoing good practice in growing a digital skills ecosystem. Our main recommendations are as follows.

1. **A societal objective for improving digital skills works best when it's coupled with specific aims for a community, sector or place.** A general aim of increasing digital skill levels across an economy is most likely to be achieved when it is embedded alongside aims that are highly tangible for local policymakers and potential training participants – and for particular sectors, communities, life moments, and/or places (in France, for example, Google works closely with regional government to match training to local policy priorities; in

highly-digitised Sweden, some training focusses in particular on SMBs and rural areas that have low digital engagement).

2. **As well as programme aims, programme delivery, format and content are more effective when tailored to local contexts and needs.** Rather than 'one size fits all' formats, programmes need to be designed for national contexts, and often work best when there is scope for further local 'tailoring', in content, format, and/or delivery approach (for example, in the development of a specialised option for unemployed people based on one of the MOOCs in the Spanish programme).
3. **Public/private partnerships, and partnerships between companies, government and civil society are powerful; these should be sought, facilitated, and nurtured over time.** In all of our case study countries, public/private partnerships are working well to add value to programmes. Their strengths include:
   - a high degree of programme *relevance* to policy across related areas, such as economic development and education
   - the 'reach' of government and access to learners, including those who might be hard to reach, such as low-skilled unemployed people
   - opportunities to work with innovators within government
   - access to the expertise that resides in public and civil society organisations
   - the trust that comes from working with highly recognisable and accountable bodies.
4. **Policymakers and designers of training programmes need to 'think differently' about digital, and its social and commercial place, to maximise access to training and increase diversity.** Successful programmes often challenge established assumptions about which people are 'natural' candidates for digital skills development, or about where digital belongs socially and sectorally (for example, engagement with unemployed people in Italy, Spain and Nigeria, and programmes that seek to break down gender stereotypes).
5. **Platform agnosticism is important in providing valid training and gaining buy-in.** This helped Grow with Google programmes gain trust, but it goes well beyond branding. Offering training in products and packages from right across the market means that learning is as current and relevant to participant needs as possible, and builds a base of *generic* skills that form a strong foundation for further learning.
6. **Changing a learning culture is more powerful than** just **offering physical products.** Initiatives based *primarily* on donations of hardware can be less sustainable than those which cast digital as being about learning, interaction and creativity located in individuals and communities.
7. **Skills forecasting is as important as providing 'just in time' skills for immediate use; facilitating reskilling and lifelong learning is as important as providing good training to meet current needs**. Governments and businesses need skills to help businesses improve their near-term outcomes, and workers to thrive in the current economy. But in a world undergoing rapid digital transformation, skills for tomorrow and a culture of 'upskilling' and lifelong learning are arguably just as important.
8. **Digital literacy, awareness and empowerment – including learning for a 'big data world' and for privacy and security online – are important for individuals and societies.** The potential downsides of digital are highly publicised, including online abuse, misleading information, and data abuse. A belief (tacit or explicit) that these are *inherent in digital*, rather than problems *that can be managed by informed tech users* could lead to disengagement and potentially leave the field open to abusers. Good education and learning opportunities

can help empower users to be safe, secure, responsible and critically aware online, and to make well-informed decisions about data.

9. **Networks are powerful drivers of learning, and training should seek to support – and to learn from – formal and informal learning networks**. Effectively managed – both operationally, and in terms of more complex issues such as power relationships and ownership – they can bring about change and become more than the sum of their parts, as demonstrated by several examples in this study.
10. **Impact studies conducted at a small geographical, demographic or sectoral scale may yield valuable insights into effective practice.** Measuring the impact of training programmes on *national* economies presents challenges of identifying a link between training and impact, or teasing out which elements of practice have had most impact. However, there may be valuable opportunities to explore effects at the local or sectoral level.

1. DIGITAL SKILLS PRIORITIES

1.1 INTRODUCTION: THE DIGITAL SKILLS CHALLENGE

The world is digitising. Jobs that even 10 years ago could be done by workers who had never touched a computer now demand digital skills. Some occupations have been transformed entirely, and jobs now exist that hadn't been thought of when the people doing them were born. Automation is portrayed as both a spectre and a saviour.

These changes will have major implications for national workforces and economies, as well as individual businesses and workers (World Economic Forum 2016). The evidence suggests that 'digital literacy will be required in the vast majority of jobs' (Berger and Frey 2016). Estimates suggest that in some employment categories around 90 per cent of jobs now need at least basic computer skills (European Commission 2014), although the extent and nature of change varies considerably between sectors and market positions. Digitisation will drive demand for skills, but skills are needed in the first place to help drive digitisation.

Even in developed economies, there is a shortage of digital skills in the labour market (OECD 2015a, European Commission 2016a), and "a large part of the workforce still has insufficient skills" (Curtarelli et al 2016). In 2016, this was around 70 million people; 37 per cent of EU workers were judged to lack adequate digital skills, and only 56 per cent to have digital skills fit for the world they live in (European Commission 2017b).

Education systems must adapt to prepare young people for the new world of work, but people already in employment also need opportunities to train and upskill. The latter needs collaboration between stakeholders; the actions of individuals and employers can only be effective when governments adopt policies to create an "enabling environment... to assist these efforts" (Schwab 2016).

Governments and international organisations have acted to meet the challenge. For example, the European Commission's Digital Skills and Jobs Coalition (European Commission 2017b) aims to mobilise key stakeholders – including member states, education providers, civil society, social partners and the private sector – to work together for digital upskilling. Member states are invited to develop national strategies and 'digital skills and jobs coalitions', forming in-country partnerships to facilitate effective and rapid change. The programme's core outcomes, to be achieved by 2020, are:

- training young people to fill vacant digital jobs
- upgrading compulsory education for the digital age, including teacher training
- supporting upskilling in the established workforce, including support for small and medium-sized enterprises (SMBs)
- raising awareness and harnessing investment.

Digital skills are also a key element of the UN's strategic development goals (SDGs). One of the targets underpinning these is "an ambitious goal to significantly increase access to information and communications technology and strive to provide universal and affordable access to the internet" (UN 2016).

This report examines one example of how business has responded. 'Grow with Google' is an international initiative that provides free online and offline training, tools, and in-person coaching to develop and enhance digital skills for individuals, businesses, and communities. It operates in Europe, Africa and America, through national programmes designed and delivered in collaboration with partners including governments, public sector bodies, civil society, and other businesses. These contribute substantially to the 'ecosystem' of digital skills provision by offering accessible, relevant and tailored learning opportunities, primarily to established workers and university students. In Europe, participants credit it with helping them to find a job or start an enterprise (over 188,000 people), or to grow their business (over 505,000 businesses) (Google 2018).

Here, we use six case studies and an overview of programme evaluation data to illustrate how Grow with Google works in different national contexts, cultures and digital needs to meet the digital challenge and achieve impact. In particular, we characterise the distinctive features of national programmes, and the approaches to partnership working. Our conclusions include a set of reflections and recommendations on what those concerned for the health of the digital skills ecosystem can learn from the experiences of this diverse, extensive and evolving programme.

1.2 DIGITAL SKILLS FOR 21ST CENTURY ECONOMIES AND SOCIETIES

Digital technologies are forecast to be a major driver of productivity, with successful economies depending on greater numbers of highly-skilled workers than has previously been the case (McKinsey 2017). In Europe, the creation of a digital single market is expected to add €415bn in annual GDP to the EU, with the most digitised countries seeing the greatest benefits. However, at present the pace of digitisation across Europe is insufficient to realise this (Alm et al 2016).

The possibility that a large proportion of the jobs now done by human beings will be automated is – very understandably – often portrayed as a threat to employment, for at least some substantial parts of the labour force and with serious social and political consequences.[1] Other analyses, however, suggest that rather than *destroying* jobs, automation and artificial intelligence (AI) will *change* both the mix of employment available and the nature of existing work. Some forecasts indicate that over time they will lead to net job *creation* (McKinsey 2017, Alm et al 2016), although there is less agreement over its scale and location (Curtarelli et al 2016).

But better digital skills must be part of the response to *any* increase in the presence of automation and AI. Countries that thrive will be those where workers have the skills for the 'new' jobs created, and training in those skills is easy to access (Folea 2018). This will be especially important for workers whose established job options are among the jobs automated, or rendered very different by automation. Otherwise technological change could have many negative consequences, and certain populations, sectors and places will be especially vulnerable. Jobs will be lost, and newly created work will go elsewhere (see Hilgenstock and Kóczán (2018).

The kinds of digital skills needed are also likely to change over time. Narrow technical skillsets may prove insufficient for many emerging jobs, and demand for higher levels of digital skills will rise. Skillsets that combine digital abilities with problem-solving, the ability to manage complex tasks, creativity and 'human' factors are likely to be especially important (Berger and Frey 2016). Conceptual awareness and 'contextual skills' such as cultural and ethical

1 For example, West 2018, Elliott 2018; see Roberts et al 2017 on potential economic implications.

awareness, self-direction, flexibility and lifelong learning are also important, in combination with digital competencies (van Laar et al 2017).

Digitisation goes beyond the commercial sphere. As well as digital commerce (banking, utilities, shopping), government and public services increasingly choose digital channels to engage with clients. Social media is embedded in many people's personal (and professional) lives, with interfaces that facilitate use without the need for deeper technological understanding. Users can enjoy the convenience and connectivity of digital, but without deeper knowledge may be vulnerable to fraud, abuse, or misinformation.

Many everyday users of digital technology may be only vaguely aware of the extent of their own digital presence: the vast quantity of data which is generated simply by living in the modern world. This raises complex questions of ownership, privacy and ethics. Digital skills are important for future employability, but also for life as an empowered and aware digital citizen. Without opportunities to develop such skills, the risk of a 'digital divide' – between digital haves and have-nots, between and within nations – is real (McGillivray et al 2017, Helsper and Van Deursen 2015, Chetty et al 2017).

And skills development will need to be lifelong. The digital age requires both a culture and a rich range of opportunities that support *ongoing* learning, where people can continually retrain and 'reskill' (OECD 2016). Accessible skills development throughout the career path is essential, and attitudes must change beyond a traditional view that most adults have finished any substantial engagement with education and training.

1.3 DIGITAL SKILLS DEVELOPMENT

Three main types of digital skillset are needed in contemporary society.

1. **Basic digital skills/digital skills for all**: Skills that enable people to play an active role in the digital society as 'digitally literate' and empowered individuals. This includes the skills to use everyday digital applications (including ecommerce and eGovernment), carry out basic internet searches, and be safe online.
2. **Digital skills for the general labour force**: In addition to basic skills, these skills are needed in most digitally enabled workplaces. This subset includes new skills for established workers in sectors which are adopting digital, and skills for seeking work in the digital economy. These general skills enable people in a vast range of roles to use the applications created by ICT specialists, without themselves having specialist expertise. They include data literacy (Ridsdale et al 2017) and the ability to solve problems and apply technologies creatively, rather than just to use specific packages and applications (Gekara et al 2017).
3. **Digital skills for ICT professionals**: The high level digital skills for ICT experts and leaders across all industry sectors. These include skills linked to developing new technologies, products and services.

Based on European Commission (2016a), Bacon and McKinnon (2017)

An EU study found that while demand for at least basic digital skills is very high for managerial, professional, technical and clerical support roles, it extends far further through the workforce than might be expected. For example, nearly half of workplaces surveyed considered that building staff needed this level of digital skill, over a third that plant and machine operatives could benefit, and over a quarter that it is necessary for staff in elementary roles (Curtarelli et al 2016).

For individuals, digital skills are *already* associated with better employment prospects. Across the OECD (and in particular the English-speaking world), people with better digital skills are more likely to participate in the labour force and on

average have higher earnings – even accounting for age, gender, education level and wider literacy and numeracy skills (OECD 2015b). To avoid a 'digital divide' opening up, governments must create environments where all members of society can gain and update digital skillsets.

The Grow with Google programmes contribute to each of the digital skill levels discussed above, although their main focus is on basic and general labour force skills and initial training often assumes no previous knowledge. Much of the content supports active engagement in the digital society, and helps non-experts become proficient professional users of digital technologies. Certain programmes either develop a higher level of specialist expertise or provide the first step towards further learning for professional use.

Many training opportunities are also targeted at businesses, primarily SMBs, to support economic growth, job creation, and the spread of digital activities within the economy. Others are designed to meet the specific needs of social groups who are at risk of digital exclusion or can benefit particularly from the opportunities of digital (for example, recent migrants, rural residents, unemployed young people).

Several studies examine evidenced good practice in digital skills development, and the Grow with Google programmes demonstrate many of the features identified. For example, they exemplify diverse and well-managed public-private partnerships; offer high quality context-specific learning; make extensive use of blended online and face-to-face formats; and demonstrate the scaleability of effective methods (Unesco 2017), as well as systems to update content continuously as technologies move on (OECD 2016).

A review for the European Commission makes the following recommendations for digital skills provision to promote *both* economic growth and social equality:

- raise awareness of digital technologies and the need for digital skills
- promote access to digital technologies
- expand the availability of digital skills through the education and training system
- promote access to training
- build multi-stakeholder partnerships based also on effective social dialogue to increase the availability of digital skills
- provide access to funding for digital technologies and digital skills development
- include digital skills in a wider skills strategy
- consider diversity and avoid the 'one-size fits all' approach
- reduce the digital divide.

Curtarelli et al (2014)

The Grow with Google programmes are congruent with these. In particular, their openness increases access to digital technology and training, potentially helping to reduce the digital divide. The avoidance of a 'one size fits all' approach, discussed below, is also important in their success. Digital is embedded in social and cultural life, and thus it makes sense to develop digital skills differently in different places.

1.4 DIGITAL SKILLS IN EUROPE[2]

Even within the EU, levels of digital skills vary considerably between different countries, as does engagement with digital technology by households, businesses and government. Countries where digital is firmly embedded in everyday life are

2 Five of our six case study countries are EU member states. A brief sketch of digital skills needs in the sixth, Nigeria, is given at the start of section 3.3 which presents the Nigerian case study.

at an advantage as changes to ways of working and the labour market become more widespread. Businesses will be better placed to adapt, and people who are comfortable with using digital in their daily lives are more likely to engage with digital 'upskilling'.

Analyses identify a small number of European countries as 'digital front runners', which are "relatively enthusiastic adopters of digital technology, and... ahead of peers in the use of robotics, machine learning and AI" (McKinsey 2017), as well as having high levels of innovation, ICT exporting, venture capital investment and digital infrastructure (Alm et al 2016). These nations are Belgium, Denmark, Estonia, Finland, Ireland, Luxembourg, the Netherlands, Norway and Sweden (McKinsey 2017, Alm et al 2016).

The data presented here gives a 'snapshot' of digital skills and engagement across the EU, and in our case study countries. It is not a comprehensive account, but it provides an overview of the diversity, and the specific situations in individual countries.

In the case studies chapter, we also draw on the Digital Economy and Society Index (DESI), which summarises indicators on digital performance for the 28 EU member states. These include digital inclusion and skills ('human capital') and the integration of digital technology in commerce and society, as well as connectivity, internet use, digital public services, and research and innovation (European Commission 2018a).

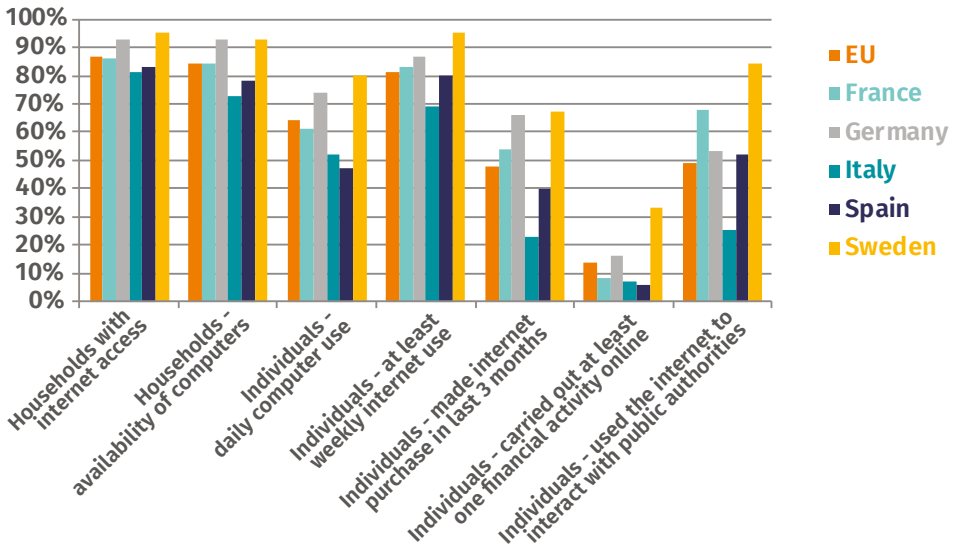
Digital in daily life

Findings across the EU were as follows.

- **Household access to the** internet **and to computers is fairly widespread, but regular use of either is lower.** 87 per cent of households have access to the internet and 84 have access to a computer, but 81 per cent of individuals use the internet at least weekly and 64 per cent use computers daily.
- **Fewer than half of EU residents use the internet regularly for financial or public service interactions.** 48 per cent regularly use the internet to make purchases, and 49 per cent to interact with public authorities. Just 14 per cent use it to carry out financial activities other than online banking (for example, buying insurance).
- Variations between countries are as follows.
    - In Sweden over 90 per cent of households have access to the internet and a computer, and over 80 per cent use these regularly. Swedes are strongly engaged with e-Government, but online purchasing and non-banking financial activities are less widespread, although still well ahead of other EU countries.
    - In France and Germany, internet and computer access is similar to that in Sweden, but regular use is slightly less common. Germany has higher rates of internet purchasing, while in France public service interactions are *more common* than across the EU.
    - Italy and Spain have lower rates of access to the internet and computers, and of regular internet or computer use. In Spain, fewer than 50 per cent of the population use computers daily, and in Italy fewer than 70 per cent of people use the internet every week. However around twice as many people in Spain as in Italy regularly make internet purchases or interact online with public authorities, suggesting considerably higher levels of digital engagement in the former country.

FIGURE 1.1: ENGAGEMENT WITH DIGITAL TECHNOLOGY VARIES CONSIDERABLY BETWEEN COUNTRIES IN THE EU

Rates of access to digital technology and of digital technology use, EU and case study countries



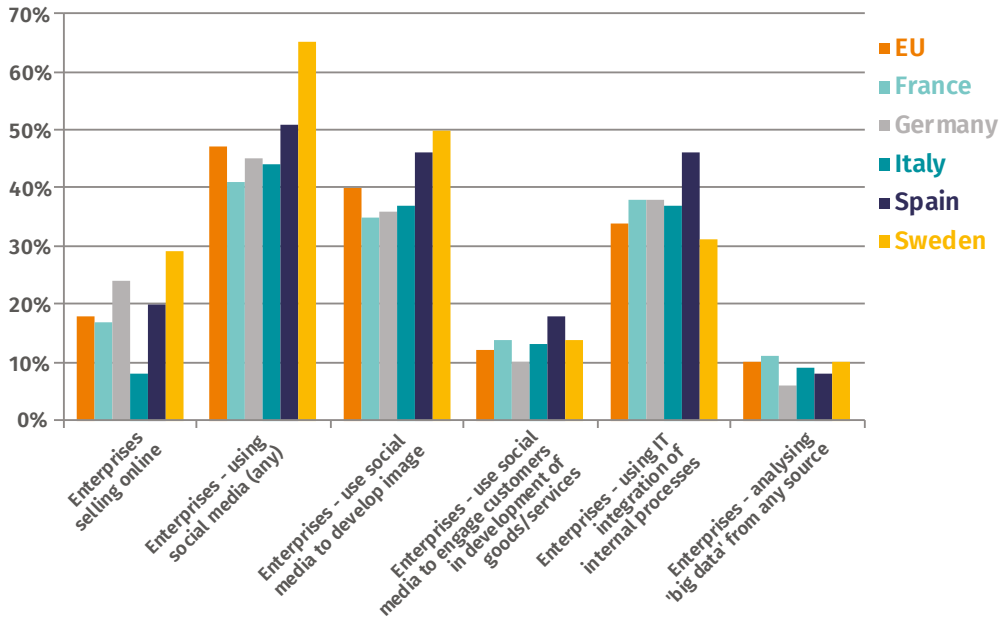
Source: Eurostat 2018d, 2018e, 2018f, 2018g, 2018h

Business engagement with digital technology

- **Across the EU most digital activities are adopted by fewer than half of businesses.** 47 per cent use social media, 34 per cent have used digital means to integrate business processes, and 18 per cent sell online. Just 10 per cent use 'big data' analysis of any kind.
- **The most common use of social media is to develop the image of a business** (40 per cent of enterprises). More innovative uses, such as engaging with customers in the development of products and services, are less common (12 per cent).
- Variations between countries are as follows.
  - 'Frontrunner' country Sweden is well ahead on some measures (such as the use of social media) but much closer to the average in other ways. Online sales are well above the EU average and 65 per cent of businesses use social media, but digital integration of business processes is *below* the EU rate.
  - France and Germany – once again – have rates of online sales, social media engagement, and 'big data' use which are around the EU average. Germany has the smallest percentage (6 per cent) of enterprises using big data of any case study country.
  - Spain has a slightly *above* average rate of digital engagement among its businesses on most measures. In particular, they make extensive use of IT integration and customer engagement through social media.
  - Online sales are very low in Italy, but in other areas the country is just below or around the EU average for business engagement with digital.

FIGURE 1.2: FEWER THAN 50 PER CENT OF BUSINESSES ACROSS THE EU ENGAGE WITH DIGITAL, AND VARIATIONS BETWEEN COUNTRIES ARE LARGE

Rates of engagement with digital technology, EU and case study countries



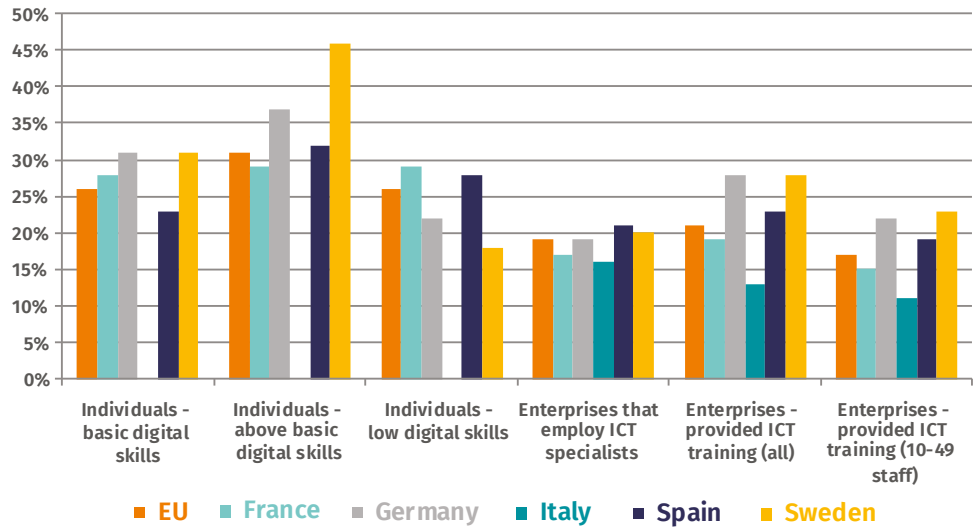
Source: Eurostat 2018i, 2018j, 2018k, 2018l, 2018m

Digital skills and the digital workforce

- Across the EU, **31 per cent of people have digital skills above the basic level**.
- However **over half of the adult population have basic or low digital skills** (26 per cent in each category).
- 19 per cent of businesses employ ICT specialists; this includes both companies in the ICT sector and businesses across the economy which use digital. 21 per cent of businesses provide training in ICT skills to their workers, but this is slightly less common among smaller businesses (17 per cent – figures for microbusinesses were not available).
- Variation between countries is as follows.
  - In Sweden, nearly half of the population (46 per cent) have 'above basic' digital skills, and just 18 per cent have low digital skills. However, around a third of the population have only basic skills.
  - Levels of digital skills are also above the EU average in Germany, and German companies are among the most likely to train their workers in ICT (28 per cent do so).
  - Levels of digital skills and training in France are in general around the EU average.
  - In Spain, both the proportion of the population with 'above basic' and 'low' digital skills are above the EU average (i.e. a basic level of skills is *less* common than having good skills or none at all). Spanish enterprises are slightly more likely than average to train their staff.
  - Italian companies are *less* likely to provide training for their staff (no figures on digital skills levels are available for Italy).

FIGURE 1.3: JUST UNDER ONE-THIRD OF THE EU WORKFORCE HAVE DIGITAL SKILLS ABOVE THE BASIC LEVEL, AND JUST OVER A QUARTER HAVE LOW LEVELS OF DIGITAL SKILLS

Digital skills and workforce, EU and case study countries



Source: Eurostat 2018n, 2018o, 2018p

These data provide an overview of the skills needs and the 'starting point' for digital upskilling in our case study countries. Sweden, the 'frontrunner', has high digital awareness and usage in the population, but overall skills levels and business engagement could go further. France and Germany sit at around the average point, but, as 'big' economies, they need to adapt to digital in order to maintain their advantage. And Spain and Italy clearly both face some challenges. The former has a strong base to build on, but also some issues around the spread of digital throughout the population. In the latter, engagement is relatively low; alongside some difficult economic circumstances over the past few years, there is work to do if Italy is to prosper in a rapidly changing international and technological environment.

1.5 GROW WITH GOOGLE TRAINING FORMATS: REACHING LEARNERS

Grow with Google programmes are offered in online, offline, and blended formats. All of these are used in our case study countries; national approaches are described in chapter 3. The brief overview here sets out the main features of each strand.

Online and blended training formats

Online learning offers the most scaleable, flexible and universal framework for digital skills development. It can be accessed by learners at any time and in any location, and they are free to learn at their own pace. Content is by its nature global, which brings an awareness of the world of digital beyond the learner's immediate needs – and thus can spark wider and longer-term learning.

The online formats are accessed by potential learners via a 'landing page'. In 14 countries, different pages are designed for SMBs and students; elsewhere only one page is available. Where programmes are marketed to a particular social group (for example, unemployed young people), the landing page is designed specifically for the target audience.

The landing page offers a range of topics, separated into shorter lessons. Learners can choose whether to use video tutorials or text-based materials, on a mobile or desktop device (audio options are currently in development).

At the end of each topic section, learners can participate in an activity to assess their learning. Passing the activity means that the learner gains a 'badge'. Those who complete all of the topics in an online programme sit a final assessment, and passing this earns a recognised certification of their attainment.

Online learning may be supplemented by offline workshops, mentoring, or 'deeper dive' study. These 'blended' formats are common in the case study countries. For example, Nigerian learners supplement their face-to-face workshops with self-study materials, while in several European countries online introductions form an introduction to skills which are then honed through group sessions or one-on-one mentoring. The value of an offer that combines the flexibility of online with the personalisation and peer learning elements of offline became clear in the course of the study.

Offline training formats

Overall, 68 per cent of all Digital Workshop trainings are offline, reaching 2.5 million people. As noted above, the online formats have many advantages but sometimes the best way to learn about the digital world is face-to-face. Digital formats facilitate but rarely substitute contacts between human beings, and offline training offers a number of advantage.

- Offline is the *only* way to reach some audiences – for example, people with limited digital engagement or infrastructure.
- Impact results are often higher; training may be more personalised and thus easier to apply, or engagement and commitment may have been stronger.
- Offline creates a clear 'entry point' to engage with partners and others.

The main offline formats include the following.

- Hubs: Permanent or semi-permanent Google premises, in prominent locations.
- 'Feet on the street': Google-trained coaches visit SMBs to deliver one-to-one training.
- Roadshows or tours: Events lasting 2–4 days in multiple cities across a country.
- Partnerships with Chambers of Commerce, education institutions or other organisations with an established network and wide reach.
- 'Train the trainer' approaches.
- The 'Google Bus': A temporary, mobile small-scale training centre.

The formats are used in the case study countries as shown below (some additional country-specific formats are also used, such as the 'Young Digitisers' model in Italy).

TABLE 1.1: GROW WITH GOOGLE OFFLINE FORMATS USED IN CASE STUDY COUNTRIES

	Google hubs	Feet on the street	Roadshows or tours	Partnerships	Google bus	Train the trainer
France	x*	x	x	x		
Germany	x		x	x		
Italy			x	x		
Nigeria		x	x	x		x
Spain	x		x	x	X	
Sweden	x			x		

Note: *Local digital hubs are planned in France
Source: Google

Hubs

Hubs need high investment but offer high impact; they are especially important in cities where corporations generally have a major presence and high visibility. As well as substantially raising brand awareness, hubs facilitate a high volume of training, and agile responses to diverse emerging needs. Much of this training can be delivered to small groups or even one-to-one. And hubs may become centres for informal networks which in turn offer opportunities for learning and development.

Feet on the street

The personal connection and 'rootedness' of coaches in local areas mean that this format yields strong impact and user satisfaction. Trainers learn from experience and can feed this back into their practice, as well as into programme organisation and content. Local business authorities and communities tend to be positive about the training offered, which leads to improved buy-in and awareness.

However, potential impact can be lost if trainees or businesses are left isolated and not connected to one another, without opportunities for further peer learning and networking. In addition, programmes can start to fly 'under the radar' and miss out on engagement with policymakers and opinion-formers. These issues are by no means insoluble. For example, 'blended' approaches (such as online networks for people who have learned face-to-face) can be established, and ongoing 'feet on the street' can be combined with awareness-raising roadshows or bus visits.

Roadshows and city tours

These offer the best balance between training impact and awareness-raising, offering high reach across diverse audiences. The 'splash' of a roadshow, and collaboration with local representatives in setting it up, brings good access to policymakers and opinion-formers as well as potential trainees. However, building long-term, scaleable relationships as a follow-up is more challenging. And because roadshows attract very diverse audiences, content must encompass a wide range of possible needs and interests - but therefore risks failing to meet advanced or specific demands.

Train the trainer

People with the interest and aptitude to train others in digital skills are enrolled in face-to-face learning and provided with materials and infrastructure to deliver programmes in a range of settings. This format can be highly engaging and impactful, where trainers feel a strong investment in and loyalty to the programme, even acting as role models or beacons. Depending on the location of training and ongoing support arrangements, however, the costs are potentially high.

Google bus

This format is currently used in the UK, and in Spain as part of the Activate programme. It is an engaging and innovative model which makes training highly accessible across different places – and potentially offers high impact in hyper-local areas, in terms both of visibility and behavioural change. However, its reach is inevitably limited, as is the scale of the training provided.

Partnerships

It is difficult to generalise across partnership approaches because these are as diverse as Google's in-country partners themselves. Major advantages include access to established networks and audiences (which helps to reach more trainees), and the opportunity to draw in the expertise of partners to enhance programme delivery and content. Working with a large network of high-coverage partners can also bring economies of scale, and breadth of impact.

Some Grow with Google programmes in different countries are entering a mature phase of development. The partnerships that underpin national frameworks are

often long-standing, with an extensive history of collaboration towards common goals and a deep knowledge of how to work effectively together. Experienced partners understand well what each brings to the relationship, and work effectively across organisational structures and cultures.

We found that while Google brings a strong *national* focus to core content and approach, this is often coupled with very local features in engagement and implementation. Often, these latter come through the activities of partners, such as Chambers of Commerce with broad and deep local networks, regional universities which serve specific communities, or networks of trainers and institutions. This makes sense in a digital world where technology facilitates global connections and also transforms lives in ways that are highly personal, driven by individual needs, desires, locations, creative potential and complex relationships.

The role of Google as a convenor also varies considerably between national contexts. For example, a 'hub and spoke' model operates in Italy, in which Google works with multiple partners but doesn't broker relationships between them. This may be because its principal Italian partners play that role to a large extent. By contrast, in Sweden Google acts as a bridge between its multiple partners, and their interactions with one another have now become a vital part of the programme and its ongoing evolution.

Contrasts between countries may also reflect the relative maturity of their digital ecosystems. Where these are less developed overall, Google – as a major global corporation – needs to play a stronger part in steering the training programme. However, in a highly digitised setting – such as Sweden – its role is more embedded, alongside other confident players.

1.6 METHODS USED IN THIS STUDY

The aim of this study was to provide an overview of the development and scope of 'Grow with Google' programmes in six case study countries, identifying key issues for digital skills development and focussing in particular on the role of partnership in effective provision. We used the following methods:

- a brief survey of international policy literature and key European datasets
- interviews with Google policy teams engaged in the Grow with Google programmes in the six case study countries
- some engagement where practical with partners in some of the case study countries, through verbal interviews or exchanges of written text.

In addition, we drew on data and analysis from the annual survey of Digital Workshop participants (see chapter 2 for more detail).

2. IMPACT OF GROW WITH GOOGLE

2.1 INTRODUCTION

An evaluation of the *online*[3] training provided through Grow with Google's Digital Workshop formats has been conducted since 2016.[4] This provides useful background for the case study countries where the main delivery format is online, or a substantial online presence is in place alongside offline approaches.

The survey examines characteristics of participants and their reasons for entering the programme. Questions explore their satisfaction with the programme, and participants also report on their perceptions of its impact on a range of measures including confidence, behavioural changes, and outcomes such as getting a job or business improvements. Questionnaires on satisfaction are administered immediately after the training is completed and participants complete impact evaluations fourteen weeks later.

The data here relate to people trained between September 2016 and September 2017, except where stated. Data on reasons for entering training and initial responses to training are based on responses by 47,083 participants. Data on impacts 14 weeks after completing training are based on responses from 10,372 participants.

2.2 WHO USES THE DIGITAL WORKSHOP TRAINING?

A segmentation exercise identified three main groups of Workshop learners.

1. **Small and medium-sized businesses (SMBs):** Self-employed people and small or medium-sized business owners, seeking skills to help grow their business or develop an entrepreneurial project – around **20 per cent**.
2. **Job seekers**: People who want to enhance their employability, to change jobs, or to develop an entrepreneurial project for a company that is not yet launched – around **46 per cent**.
3. **Knowledge seekers**: People who want to strengthen their general digital skills or learn about using Google tools – around **34 per cent**.

2.3 CHARACTERISTICS OF THE LEARNER SEGMENTS

The SMB group is late 30s-early 40s, well-educated and includes more men.

- **SMBs** are slightly older than the other groups (with an average age of 39). Two-thirds are men, and the majority have an undergraduate or higher degree. 85 per cent currently work in their own business.

3 Evaluations of Grow with Google's offline trainings are conducted in individual countries but collated data is not currently available. The wide variety of offline formats and settings that are developed in response to the contexts and needs of individual countries and places mean that it would be impractical to collect Europe-wide data for offline training that genuinely compares 'like with like'.

4 Analysis, interpretation and reporting of the data is by Google, based on an independent and ongoing survey by Ipsos that started in September 2016, carried out across Europe. All of the figures presented here are taken from Google's analysis; no primary quantitative data was analysed by the authors of this study. The figures used here are based on Google's analysis of data available to September 2017.

Only 27 per cent of JSs are unemployed; 41 per cent are working (this does not include self-employment) and 25 per cent are students.

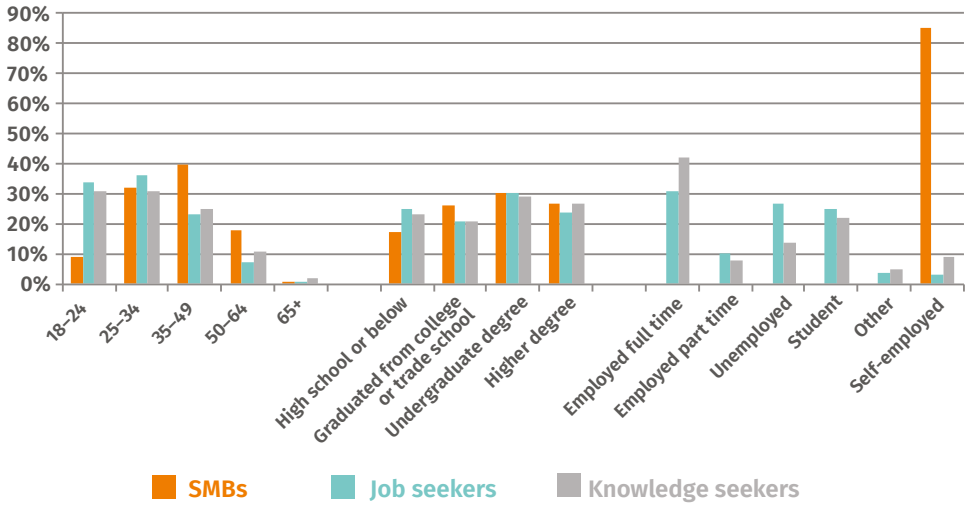
- **Job seekers** are more likely to be under 35; just over half (55 per cent) are men. The majority (54 per cent) have an undergraduate or higher degree, although 25 per cent have lower qualifications (many of these may be students). 31 per cent are employed full-time and 10 per cent work part-time and 25 per cent are students. Only 27 per cent are currently unemployed.

Knowledge seekers are similar demographically to job seekers, although more are older and self-employed.

- **Knowledge seekers** have a similar demographic profile to job seekers. Slightly more (47 per cent) are women, and a slightly higher proportion are aged 50 and above. 42 per cent are employed full time and 9 per cent are self-employed. 14 per cent are unemployed.

FIGURE 2.1: SMB PARTICIPANTS TEND TO BE A LITTLE OLDER THAN OTHER GROUPS, AND RELATIVELY FEW 'JOB SEEKERS' ARE ACTUALLY UNEMPLOYED WHEN THEY PARTICIPATE IN LEARNING

Demographic characteristics of participant groups (percentage)



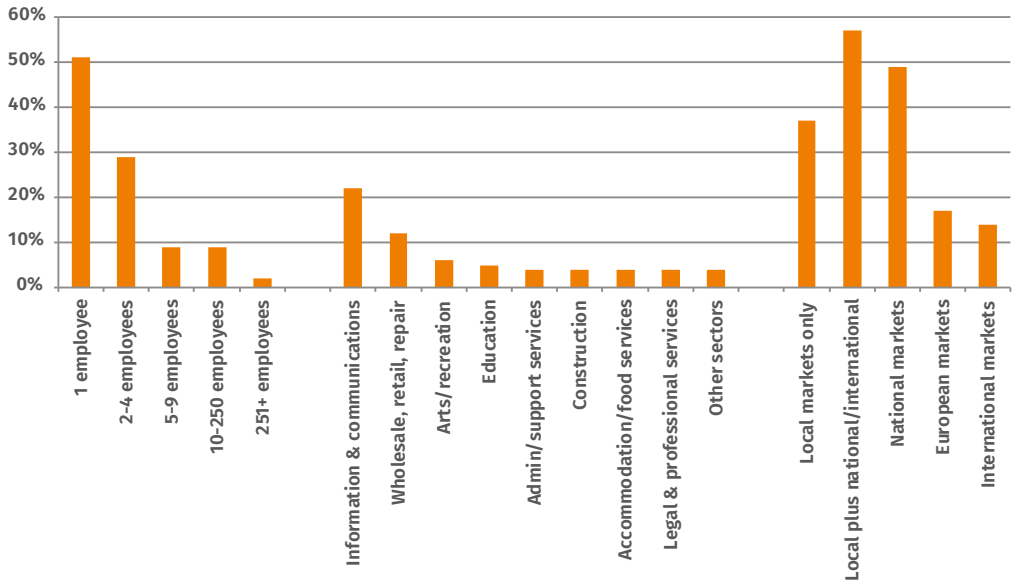
Source: Google analysis 2018

SMB participants mostly work in businesses with 1–4 employees, across a wide range of sectors. Few reach markets outside their home country.

SMB participants are concentrated at the 'microbusiness' end of the scale; 80 per cent work in companies with 4 employees or fewer. Just 20 per cent work in the 'information and communications' sector, while the rest come from a broad spectrum of the economy. A relatively small number currently trade outside their home country, and many focus on local markets.

FIGURE 2.2: MOST SMB PARTICIPANTS WORK IN VERY SMALL BUSINESSES, ACROSS A WIDE RANGE OF SECTORS

Characteristics of SMBs (percentage)



Source: Google analysis 2018

2.4 REASONS FOR ENTERING THE PROGRAMME

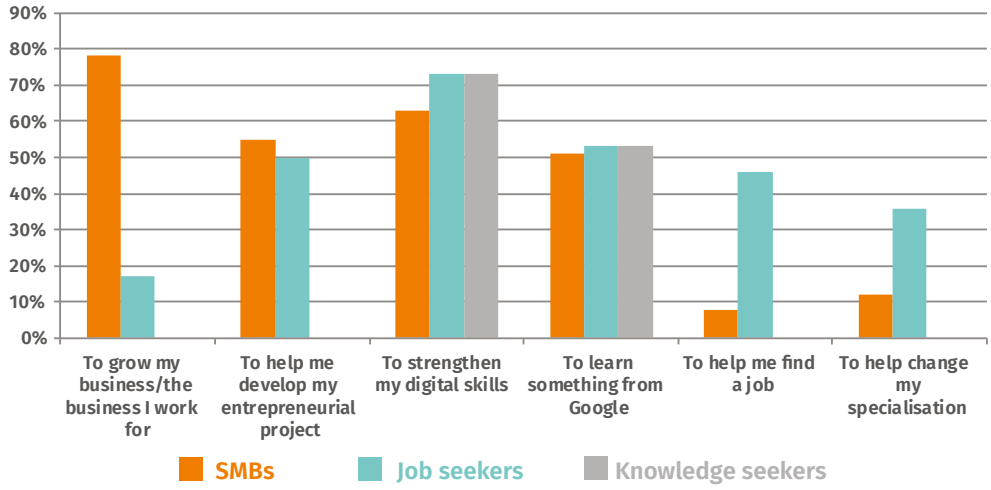
Most participants have multiple reasons for enrolling; enhancing digital skills is a key factor but only a minority feel that their current digital skills are lacking.

Most participants name more than three reasons for starting the programme, and around a third name between six and 10. Digital skills are seen as affecting a relatively wide range of factors in an individual's life and work.

For all groups, strengthening digital skills is a priority; between two-thirds and three-quarters name this reason for entering the programme. Learning specifically from *Google* is a motivator for just over half. Not surprisingly, job seekers prioritise reasons to do with enhancing employability, while boosting business growth is important for SMBs.

FIGURE 2.3: MOST DIGITAL WORKSHOP PARTICIPANTS ARE KEEN TO IMPROVE THEIR DIGITAL SKILLS; ENTREPRENEURSHIP IS IMPORTANT TO BOTH SMBS AND JOB SEEKERS

Reasons for entering Digital Workshop programmes, by participant group (percentage of participants)

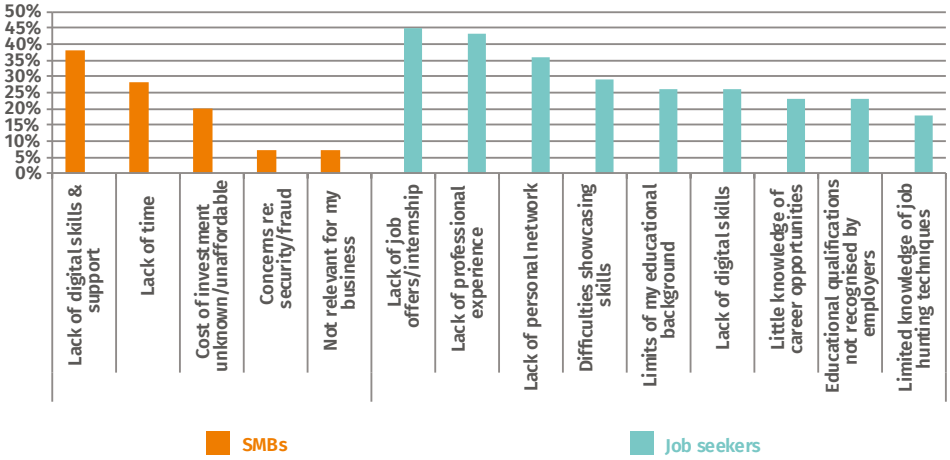


Source: Google analysis 2018

However, relatively few participants in any group name a *lack* of digital skills as a problem that they currently face (38 per cent of SMBs and 26 per cent of job seekers do so). It seems that these programmes are treated by many as a way to enhance digital skills, rather than remedy a gap. Of course, all of the participants surveyed have elected to study online and are sufficiently competent digital users to do so. A sample of offline participants might assess their current digital abilities less favourably.

FIGURE 2.4: RELATIVELY FEW JOBSEEKERS CITE A *LACK* OF DIGITAL SKILLS AS A REASON FOR ENTERING THE PROGRAMME; A LACK OF OPPORTUNITIES OR EXPERIENCE IS MORE IMPORTANT

Perceived issues prior to programme entry, SMBs and job seekers (percentage of participants)



Source: Google analysis 2018

2.5 SATISFACTION WITH THE PROGRAMME

Satisfaction with the programme is high, especially among participants who named between six and 10 reasons for signing up. The main area where satisfaction could be higher relates to 'in depth content', with participants in all groups seeking more advanced study and/or additional specific applications.

This data shows very high satisfaction with the programmes. Over half of SMB and job seeker participants are 'very satisfied', and over one-third are 'satisfied'.

Satisfaction is slightly lower among participants who state just one or two reasons for starting a programme, and highest for those who state between six and 10 reasons. This may indicate that people who seek a very specific outcome or area of learning may *either* find it harder to address this within a fairly general programme, *or* dislike having to complete a broader programme in order to access this one element.

Improved routing of learners to topics could help to raise satisfaction levels. However, close to 50 per cent of people who state between one and five reasons are *still* 'very satisfied', so this should be undertaken cautiously. At least some entrants with fairly narrow aims are entirely happy with their experience.

FIGURE 2.5: MOST PARTICIPANTS STATE MULTIPLE REASONS FOR ENTERING THE PROGRAMME, AND LEARNERS WHO CITE MORE REASONS TEND TO BE MORE SATISFIED

Percentage of participants in each segment who state each number of reasons for signing up, and percentage of participants stating each number of reasons who are 'very satisfied' (all segments)

Source: Google analysis 2018

A finer-grained exploration of satisfaction with different attributes of the programme shows that learners are generally *most* satisfied with features such as ease of navigation and understanding, quality of speakers, and the range of topics (satisfaction over 90 per cent) than with 'application' attributes such as how to implement actions in practice. One of the lower satisfaction ratings (still at 87 per cent) is for 'in-depth content'; a 'key driver' analysis found that this is the most important overall driver for satisfaction KPIs.

Qualitative comments indicate a desire for more advanced training, deep dives into specific applications, and more 'difficult topics'. The latter is especially marked among SMBs, perhaps reflecting the fact that most enter the training with at least some existing level of digital skill. Their demand for more advanced training may also relate to the relatively high rates of behaviour change reported by SMBs; having acted on the basis of the training, they are keen to learn and implement more.

FIGURE 2.6: SATISFACTION IS HIGH ACROSS PROGRAMME ATTRIBUTES: SLIGHTLY LOWER LEVELS ARE FOUND FOR 'IN DEPTH CONTENT' AND OPPORTUNITIES TO PUT LEARNING INTO PRACTICE, BUT OVER 70 PER CENT OF LEARNERS ARE STILL SATISFIED OR VERY SATISFIED

Satisfaction with programme attributes: percentage of SMBs and job seekers

Source: Google analysis 2018

2.6 BEHAVIOURAL CHANGE

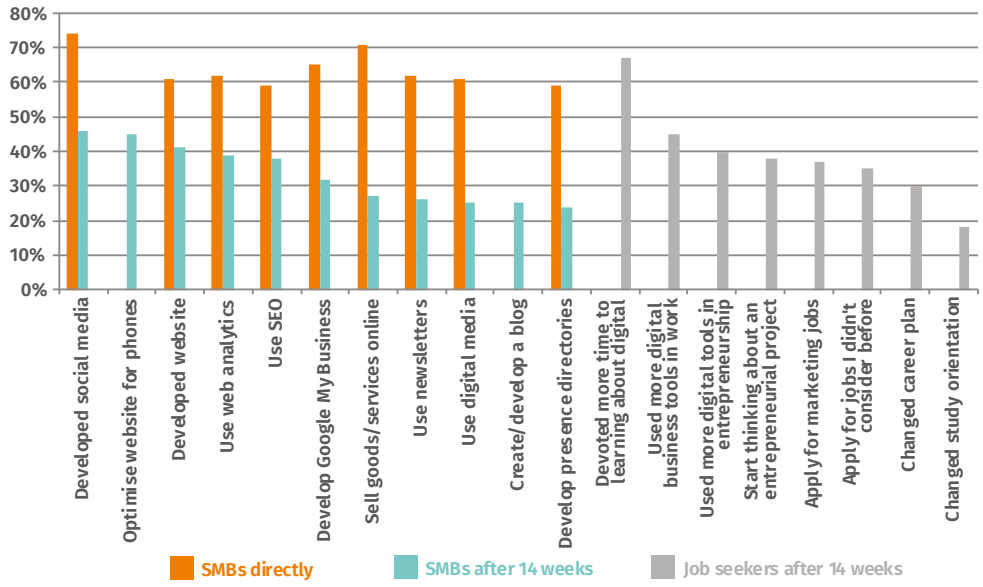
Around 40 per cent of participants have changed their behaviour in at least one way 14 weeks after programme completion. For SMBs, changes include greater use of social media, website development, and the use of web analytics and SEO. Job seekers are more likely to spend more time using digital across a range of activities, and also to broaden their horizons to include different kinds of job and/or entrepreneurship.

Perhaps unsurprisingly, the percentage of participants who state an intention to make a change *immediately* after the training is higher than the percentage who have actually done so 14 weeks later. Even so, at this latter stage around 40 per cent can identify at least one thing they have begun to do differently. Nearly half of SMBs make greater use of social media, while website content, SEO and web analytics are among the changes made by around 40 per cent. Most strikingly, 45 per cent are developing websites for mobile users – a change which was not among the top five mentioned immediately after training.

Just under half of job seekers start to use digital tools in their job search, and more than one-third are thinking differently about the search for work, considering different kinds of job, or entrepreneurship. The major change, however, is in the proportion who are now spending more of their time on digital.

FIGURE 2.7: 14 WEEKS AFTER TRAINING IS COMPLETED, OVER 40 PER CENT OF PARTICIPANTS ARE USING MORE DIGITAL IN THEIR WORK

Percentage of Digital Workshop participants reporting each impact directly and 14 weeks after initial training



Source: Google analysis 2018

2.7 IMPACTS

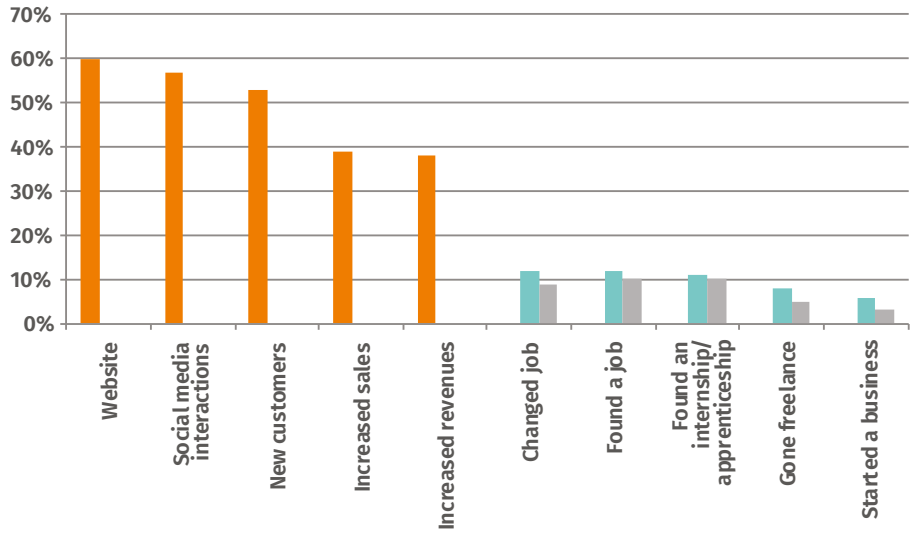
58 per cent of SMBs report at last one 'hard result' after 14 weeks, and around one-quarter have extended their range of products and services. Job seekers report lower levels of major impact; nevertheless, around 10 per cent have found a job, and the same proportion have changed job or entered an apprenticeship or internship. Some have already **started a business or gone freelance.**

The majority of participants report impacts on their behaviours and experiences. 58 per cent of SMBs identify at least one 'hard result' in business terms, such as new customers (53 per cent), increased sales or bookings, or increased profits. Around 60 per cent interact more with customers and 5 per cent hired more staff. Nearly all credit their programme participation for at least some of this change.

Just over 20 per cent of job seekers report that they have entered work (as employees, business owners or freelancers), and around a quarter report a career improvement. The lower rates of impact for individuals than for SMBs may reflect both the *personal* upheaval involved in making these changes, and the extent to which factors such as the job market are outside individual control (unlike a change in business practices).

FIGURE 2.8: 14 WEEKS AFTER COMPLETING TRAINING, THE MAJORITY OF SMBS REPORT SOME CONCRETE IMPACTS AS DO AROUND 10 PER CENT OF JOB SEEKERS AND KNOWLEDGE SEEKERS

Percentage of Digital Workshop participants reporting impact 14 weeks after initial training



Source: Google analysis 2018

The number of businesses that extend their range of products and services *or* their markets following the training is relatively low. This perhaps reflects the fairly short timescale of the survey. Nevertheless, 27 per cent of SMBs report that they are offering a wider range of goods and services to their clients. 17 per cent have opened up new national markets, and 9 per cent new international ones.

2.8 IMPACT ON CONFIDENCE

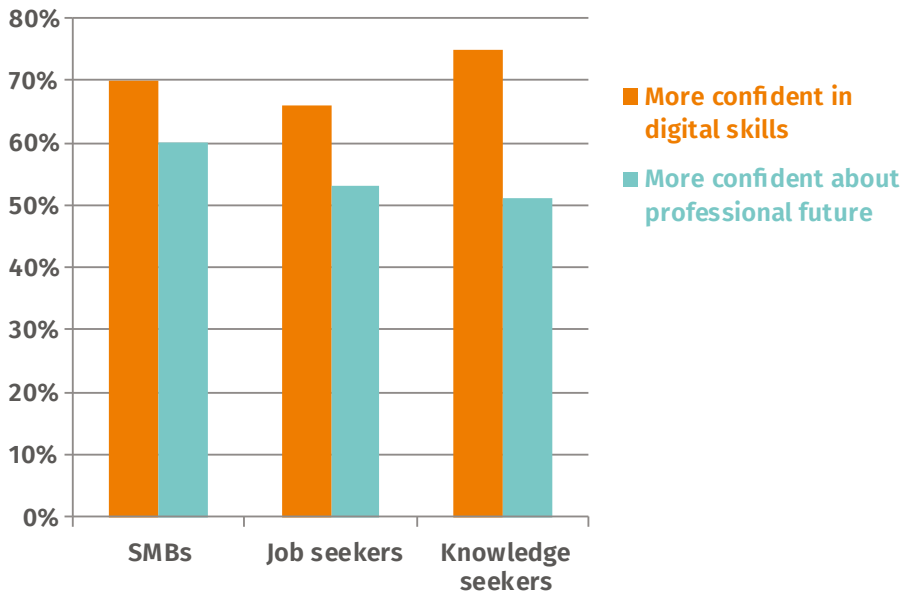
The vast majority of participants, particularly SMBs and knowledge seekers, feel more confident about their digital skills following the training. The increase in confidence about professional futures is smaller, but still over 50 per cent for all groups.

Programme participants are more likely to apply their learning in their own business or job search if they gain confidence as well as skills. An increase in confidence about levels of digital skills is reported by more than two thirds of all groups, with the highest rate among knowledge seekers.

Changes in confidence about one's professional future are also measured. These increases are more modest, perhaps because of the role of external factors (the labour market, the wider economy). Even so, more than half of knowledge seekers and job seekers report an increase, as do around 60 per cent of SMBs. Among job seekers, this may reflect greater awareness of approaches to job-seeking, or the sense of being a realistic candidate for a wider range of jobs.

FIGURE 2.9: LEARNERS EXPERIENCE AN INCREASE IN CONFIDENCE ABOUT THEIR DIGITAL SKILLS WHICH THEY ATTRIBUTE TO PROGRAMME PARTICIPATION

Impact on confidence, by participant group (percentage)



Source: Google analysis 2018

3.
COUNTRY CASE STUDIES

3.1 ITALY *(CRESCERE IN DIGITALE)*

Italy ranks 25th in the DESI scale, and is classified as a 'low performing' country for digital. Low skills levels are a major challenge, and this impacts on other developments, including take up of the country's improving digital infrastructure and public services. At present, the country does not have a comprehensive digital skill strategy (European Commission 2018b). The 'Coalizione per le Competenze Digitali', set up in 2015, has now ceased to exist and government initiatives to improve digital skills focus mainly on schools and formal education, leaving a 'shortage of strategic planning' to address the digital skills needs of those already in the workforce (European Commission 2017c).

In Italy, Grow with Google addresses the challenges of a national economy where awareness and use of digital are relatively low, and youth unemployment is high. The aim is not simply to increase skills levels, but to change the way businesses work. Creating *demand* for skills at the same time as growing the skills base needed a 'leap of faith'. This meant upskilling young people in search of work, and creating internships that guaranteed a job *and a digitising role* for several thousands of them. In time, greater digitisation and digital engagement should itself generate more employment in this field.

Overview

Crescere in Digitale addresses two key challenges in the Italian economy. Business use of digital technology and the internet is low, especially in SMBs.[5] And youth unemployment is high – at around 600,000 people under 25 in 2016, or around 35–40 per cent of the age cohort (Eurostat 2018a)[6]. In other words, there is important work to be done and many people in need of work.

The programme creates a bridge between these two challenges by training young unemployed people to become 'digitisers', and matching some of those who successfully complete the programme with internships in small businesses. It aims to break the 'vicious circle' in which a lack of digitisation dampens the economy and reduces employment prospects, but the skills to drive digitisation are scarce because established workers lack the time to train and unemployed people lack the resources.

Google's main partners in running the programme are the Italian Chamber of Commerce, 'Unioncamere'[7] (which also worked with Google on the earlier *Eccellenzein Digitale* initiative, see below) and the Italian Ministry of Labour and Social Policy. The latter provides a link to young job seekers, while the former engages with the businesses that need their newly-gained digital expertise.

5 SMEs – and in particular microbusinesses – make up an unusually high proportion of the Italian economy; microbusinesses account for 95.1 per cent of enterprises and 46 per cent of employment, compared to 93 per cent of businesses and 29.8 per cent of employment across the EU (European Commission 2017a).

6 The most recent figures put unemployment for people aged under 25 in Italy at 33.4 per cent in Q4 of 2017, compared to a rate of around 16 per cent for the EU as a whole (all data from Eurostat 2018a, seasonally adjusted figures).

7 Unioncamere is a public body established to bring together the Italian Chambers of Commerce, Industry, Agriculture and Crafts. It supports and represents businesses through regional chapters, and provides a voice for the business community (Unioncamere 2018).

Unemployed people aged under 30 are invited (via a government database) to participate in online training. The full programme lasts around 50 hours. Participants who complete this training can then join a brief 'face-to-face' course hosted by local Unioncamere offices, which prepares them to apply their learning in real-life business settings.

Participants who complete both of these stages are eligible to apply for one of 3,000 internships[8] in SMBs across Italy. These are funded by the programme (from government and EU sources) at no cost to the host businesses, and last for six months. The intern's job is to help the SMB build its digital activities. Interns are matched to host businesses by Unioncamere, and Google facilitates a supportive online community to facilitate ongoing learning and avoid isolation.

Background

Several 'Grow with Google' programmes have run in Italy, and *Crescere in Digitale* builds on learning from these, in particular *Eccellenze in Digitale*.

This initiative addressed the low take-up of digital technologies by Italy's small businesses, which results in a lack of efficiency and – crucially – a missed opportunity to grow markets nationally and overseas. *Eccellenze in Digitale* worked with SMBs in sectors that produced 'highly recognisable' items with the potential to sell internationally – for example, foods. 'Young digitisers' were trained and then matched with SMBs that could benefit from an improved online presence and greater digitisation. Google provided the training, while Unioncamere offices matched digitisers with local businesses.

The programme enjoyed considerable success and reached over 20,000 SMBs, many of whom reported substantial business benefits. Its proactive and face-to-face approach raised awareness of and engagement with digital, and encouraged companies to change their behaviours. Working one-to-one with an enthusiastic young colleague proved far more effective than simply being told about the need to get online and digitise.

Challenging the culture

Crescere in Digitale challenges established features of Italian business culture. One is the limited use of digital, especially outside the major cities and in the south of the country. Awareness among SMBs of the value of digital tools is generally low, and even where its importance is recognised, this often translates to out-of-date attitudes, or applications (for example, websites that have been not changed in twenty years, or basic publicity without vital features such as booking systems). As more people realise that digital is important, the challenge is to *embed* this knowledge in practice, and to ensure that it is seen as a dynamic issue. It's not enough to get a digital 'checkup' and then – as it were – check *out* of the whole thing once more. Digital needs to become everyday for small businesses.

The programme also challenges perceptions about *who* should engage in digital skills training. Historically, the unemployed might not have been considered a suitable target for learning that is viewed as scientific or advanced. However, *Crescere in Digitale*'s success demonstrates that this group can acquire and apply digital expertise.

Change over the longer term will need large-scale programmes that address upskilling and reskilling of established workers as well as new labour market entrants. As digital and online activities become more common in SMBs, demand for digital skills should rise and create the impetus for new and more extensive training programmes.

8 This will increase to 5,000.

PROGRAMME CONTENT

Programme content reflects these relatively low levels of digital awareness. It begins with a short overview of the digital economy and of work in this field, occupying two or three hours. Further sessions are more practical and specific, including digital marketing, creating a campaign online, web design and e-commerce.

Inevitably, the content will be augmented and updated over time, as general levels of digital awareness and skill rise, technology changes, and beneficiaries of the first iteration want to learn more. Current plans for updating include information about becoming a digital professional working in a dedicated agency, rather than a digital expert located in a different sector. This relates to a shift not only in business practices, but in the structure of the digital ecosystem. AI, innovation and skills to help SMBs use data more effectively will also be introduced. Learning materials and content are determined a scientific committee, convened by the government and composed primarily of academics and entrepreneurs with relevant and up-to-date expertise.

The content is described as 'ambitious', and a relatively high proportion of people who enrol do not complete the full 50 hours. The largest 'drop off' follows the initial two to three hour introduction, although some people do study further before withdrawing. Overall, just 10 per cent of those who enrol actually finish the programme.

Yet this is not seen as a problem: "The training is hard and we designed it to be hard". The option of using an initial selection was rejected in favour of allowing a high rate of early exit. After all, in the modern economy *everyone* can benefit from some level of digital skills and at least a basic appreciation of digital. Allowing people to complete a short bite of training provides this, and participants may elect to build more advanced skills at a later date. In addition, of course, some people leave the programme early because they get a job.

Partnership

The relationship with the principal partners, Unioncamere and the Italian government, facilitates engagement with a high proportion of the target groups (SMBs and young unemployed people). As public institutions, both have coverage which is close to universal. For example, the invitation to participate was extended to the vast majority of the relevant age cohort via the government database of unemployed people. This breadth is vital given the transformational aims of the programme. Public-private partnership has also been a source of mutual learning so that the culture and approach underpinning the programme reflects both commercial and public service values.

The partnership with government arose from a recognition that Google's aim of raising digital skills levels in the population and among SMBs could complement two government agendas; reducing youth unemployment, and encouraging entrepreneurship and innovation in SMBs – a field which has seen diverse policy initiatives following the 2008 financial crash and especially since 2016 (European Commission 2018a).

The partnership with Unioncamere has been important in building SMB engagement, both practically and in how it is perceived. This combines two strands of *trust*; the trust which SMBs place in Unioncamere as a public service organisation, and the trust in a brand with the reputation of Google. Partnering with a highly-recognisable brand like Google has opened new doors for Unioncamere. For example, they have been able to reach enterprises that previously had not engaged with them, but were drawn in through Google's reach and recognition.

Unioncamere also have a 'broad and deep' awareness of Italian businesses across the country and in specific locations. This brings crucial expertise to the project, such as the ability to match interns with businesses effectively and to identify the best ways to work with businesses in different locations and sectors. Because the organisation is 'on the ground' day to day, it is uniquely placed to understand the diverse needs of businesses and local economies. And as a national body it combines access to this fine-grained intelligence with both coverage and policy involvement on a national scale.

Various smaller-scale and often less formal partnerships also contribute to *Crescere in Digitale.* For example, Google has a good relationship with sector organisations, which benefit from the programme and help to disseminate it within their own networks. Academics make up many of the content authors and presenters, which has fostered an informal but important link with universities. The programme is promoted to young people through higher education institutions, and some go on to further study as a result. Relationships with trades unions are also strong, based on a mutual interest in reducing youth unemployment and boosting skills levels.

Identifying impact

Data collection and evaluation of impact are an important part of *Crescere in Digitale* and of the partnerships that support it. In particular, the online community for interns provides a source of valuable 'live' data about how people work and seek work in a relatively new and rapidly-changing digital economy. Finding ways to codify this and to share it with key partners – including the government and Unioncamere – helps to maximise the programme's long-term value to all partners.

The reach of the programme, as noted above, is considerable. Around 100,000 people *started* the online training, which was open to unemployed people aged under 30 at a period when between 595,000 and 512,000 people at the lower end of this age group were unemployed in Italy.[9] And demand among SMBs to have an intern located within their firm was also high.

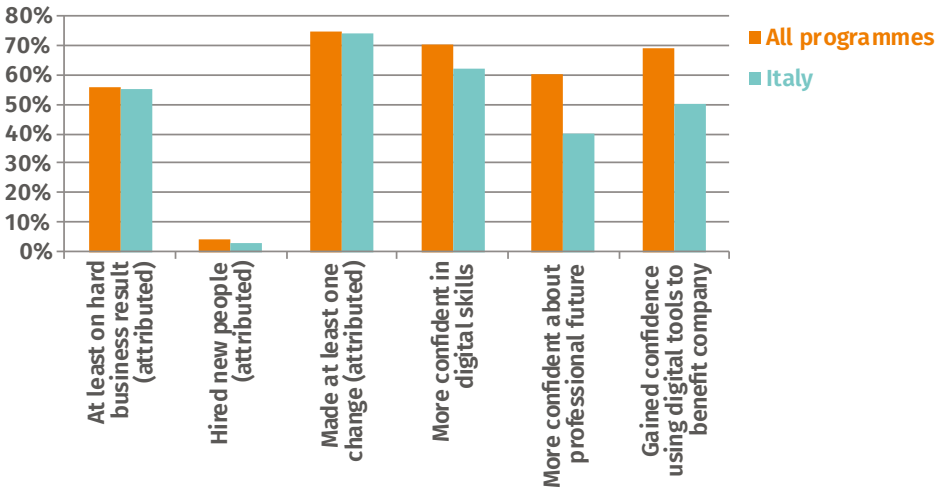
About 30 per cent of people who completed an internship as part of *Crescere in Digitale* are now employed, and there is ambition to increase this rate. However, doing so may be challenging in the short term. Many SMBs may not be in a position to hire a permanent member of staff, and some former interns may choose to move to a larger company or digital specialist, or into self-employment. This may change, in time, as digitisation brings financial gains to SMBs. Less than three years after the initiative began, however, it would be difficult to identify any such trend.

Italy's online programmes are included in the Digital Workshop survey (see above), and this shows a willingness among SMBs to embrace digital as a result of skills training. For example, over half of SMB participants attributed at least one 'hard business result' to their participation, and nearly three-quarters had made at least one change. In fact, the only area in which Italian SMB participants generally report *lower* levels of impact than people in other areas of Europe is in relation to their confidence levels.

9 Eurostat 2018a; figures available are for people aged under 25.

FIGURE 3.1

Digital workshop impacts for SMBs: Italy (percentage of participants)

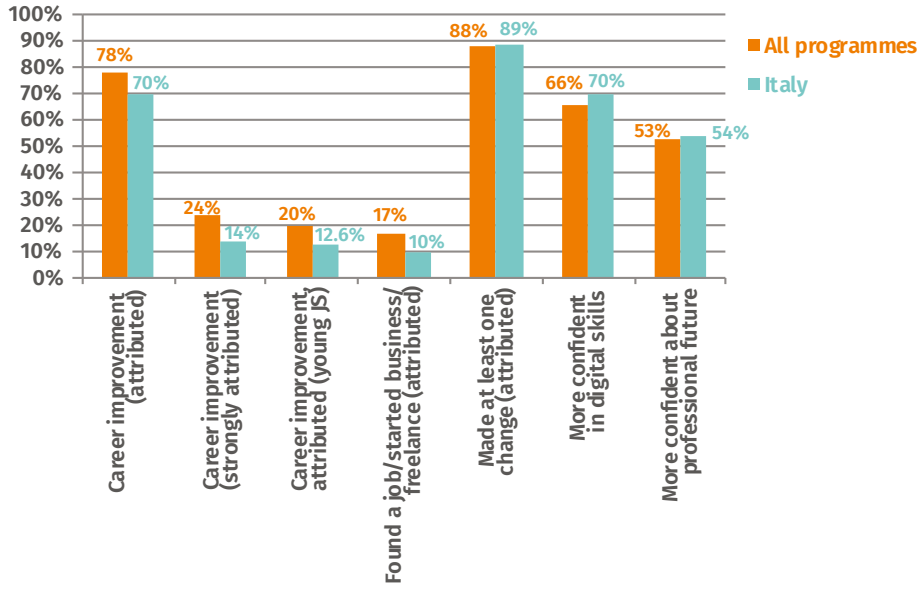


Source: Google analysis 2018

However, reported impacts on job seekers are generally *lower* than across Europe, *except* in relation to confidence – where they are higher. These patterns may reflect the context in which Italian learners follow the programmes, rather than the programmes themselves. Italian businesses have weathered tough economic conditions; GDP growth did not rise above 1 per cent between 2011 and 2016, and was 0.9 percentage points below the EU average in 2017 (see above). As a result, business confidence and actual job prospects may well be lower than in other parts of the continent. On the other hand, the incentive for businesses to innovate and change may be higher, as they seek to improve their fortunes in a challenging market.

FIGURE 3.2

Digital Workshop impacts for job seekers: Italy (percentage of participants)



Source: Google analysis 2018

These figures indicate that the programme has a strong immediate impact on participants, but its relatively open nature means that its *full* effects cannot yet be identified. Because of its innovative features and ambition to create structural and cultural changes, some of the desired outcomes are simply impossible to measure because they are as yet unknown – and unlikely to emerge over the relatively brief period for which *Crescere in Digitale* has run to date. This does not mean that these bold goals are not worth pursuing.

3.2 SPAIN (*GOOGLE ACTÍVATE*)

Spain ranks 10th in the DESI index, and is categorised as belonging to the 'medium performance' cluster of countries. However, despite recent improvements, its scores for 'human capital' remain slightly below the average, with a particular need for upskilling among established workers (European Commission 2018c).

Following elections in 2016, the incoming Spanish government established a new Ministry for Energy, Tourism and Digital Agenda (European Commission 2017d). This body has launched a consultation to develop an updated and more ambitious digital agenda, one pillar of which is improved digital skills. Key challenges identified include digital inclusion, upskilling, and digital entrepreneurship (European Commission 2018c).

Overview

Google Actívate is provided through a partnership between Google, the Spanish Ministry of Digital Agenda, five other partners including the EOI Business School (a public Foundation under the Ministry of Economy, Industry and Competitiveness), and 29 universities across Spain. The programme is co-funded by Google and the Spanish Government.

Its online platform offers massive open online courses (MOOCs)[10] in eight key topic areas for the digital economy. These are open to any Spanish-language learners, and are accessed throughout Spain and Spanish-speaking Latin America. About 72 per cent of participants choose this online option, while 28 per cent study offline through workshops and mentoring.

Among these eight courses is the Digital Transformation for Employment programme, which has three phases:

1. a 40-hour MOOC in 'digital transformation', fully open
2. for 400 young people registered with the government's Youth Guarantee Scheme,[11] the option of joining personalised tutorials (online and face-to-face)
3. for 160 young people, an offer of short-term employment where they can put their learning into practice.

A face-to-face option, offering the same content as the MOOC, is available through the programme's higher education partner institutions. This offers 40 hours of classes, which can be taken in various flexible formats at different locations. About 14 per cent of participants learn offline.

Background

Google Actívate is one of several Grow with Google programmes that currently run in Spain. Since its establishment in 2014, more than 1.2 million participants have enrolled in Spain, plus a further 2.3 million in Latin America. It was originally founded in response to a warning from the then European Commission president Jose Manuel Barroso, who called on Spain to address the possibility of high

10 A MOOC is an interactive online programme of learning offered to a worldwide audience with no selection process or fee. Study can usually be self-directed and flexible, and materials generally include video tutorials, text and interactive text, exercises and quizzes. Some MOOCs include a final certificated assessment.

11 This programme is partly funded by the EU.

vacancy levels in digital jobs alongside high unemployment, due to a lack of skills.[12] At the same time, business demand for digitally-skilled workers was rising while young people increasingly sought relevant training.

Universities were keen to meet this need, and their involvement facilitated the offline provision across the whole country. The MOOC format offers maximum accessibility, but some participants prefer face-to-face learning. The availability of both formats makes the programme more widely accessible.

Programme content

Programme content was initially developed through a collaboration between the education team at Google Spain and an external consultancy. 100 potential topics were identified and ranked, and those that emerged as the highest priorities formed the basis for the first set of eight MOOCs.

The criterion for inclusion of a topic is current or forecast market demand. Selection reflected both needs that were already evident, and areas where demand is increasing or is likely to increase. Google's position as a major international corporation facilitates an understanding of emerging trends.

The subjects currently available include digital marketing, cloud computing, e-commerce, web analytics, web and app development, personal productivity and entrepreneurship, as well as digital transformation for employment. This content will be continuously updated in response to emerging digital trends and market needs. Course materials are written by trainers who are industry or academic experts: "We find trainers by choosing who is the most specialist person in the topic ... that's our trainer".

Partnership

EOI, one of the *Google Actívate* partners, is Spain's oldest business school. It was founded in 1955 to train engineers and managers, with a specific aim of boosting employment in the economy, and also improving individual employability. As such, it has pioneered the development and delivery of e-learning and mobile learning, including high quality MOOCs.

It also has vast experience of using the business school model to support specific public and economic policy outcomes. For example, Digital Transformation for Employment aims to support access to employment for a target group (young people under 30), through better digital skills and the opportunity to join a growing digital economy. EOI's long-term role in national policy implementation means that it can create tailored programmes to meet both of these ends (employability and digitisation).

EOI is also an experienced partner with diverse organisations, again by the nature of its foundation and mission. For example, it has signed numerous agreements across Spain to co-finance and communicate EU programmes, and it is the intermediate body for supervising European funds and the EU's youth employment initiative for Spain (YEI). A background of many public-private partnerships has fostered a mature awareness of good practice in these.

Public sector partners also include two government bodies.

1. **Red.es:** This is a public corporate entity, part of the Ministry of Energy, Tourism and Digital Agenda. Its role is to develop programmes to stimulate digital innovation, entrepreneurship, training and SMB development through the use of ICTs. It also works to embed tech in public services and government, and to develop 'smart cities' and 'smart islands'. It also works to implement the digital agenda for Spain, and working for digital convergence in Europe (Red.es 2018).

12 European Commission press note: http://europa.eu/rapid/press-release_IP-13-182_en.htm

2. **Injuve:** An organisation within the Department of the Ministry of Health, Social Services and Equality, whose role is to promote equal opportunities and economic and civic participation for young (up to age 30) people in Spain. Injuve itself works in multiple partnerships with other ministries and with youth organisations in Local government (Injuve 2018).

In addition, Google works with 29 universities located in across Spain. These provide a physical presence, hosting offline courses in every region.

Identifying impact

The full three-phase Digital Transformation programme was attended by more than 3,000 people in 2017, 1,500 of whom were employed six months after completion. Overall around 41,000 people have found a job after completing a *Google Actívia* MOOC.

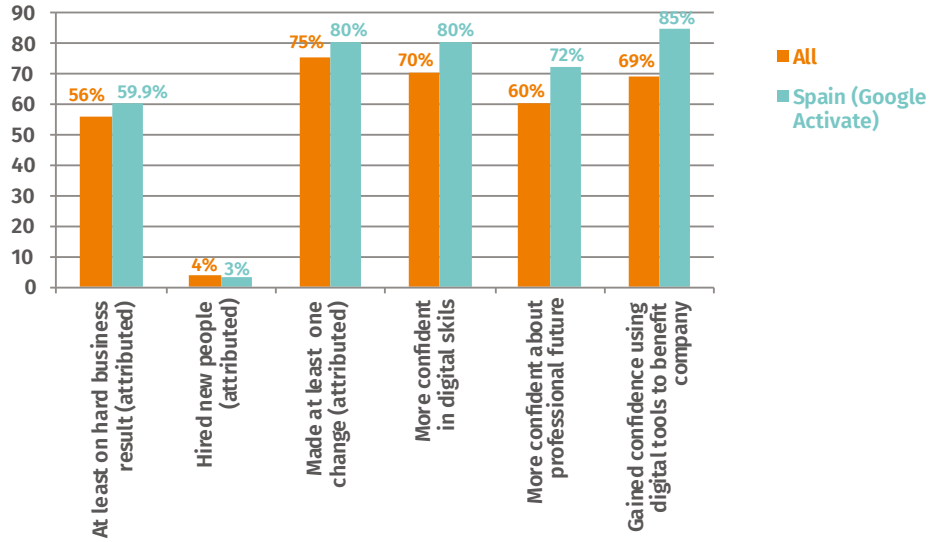
Qualitative feedback provides many case studies of former participants who have applied their learning to individual business contexts, for example expanding sales internationally, starting a business based on innovative products or services, or growing businesses well beyond their original size. Half its students state that they have applied for jobs that they would not have considered before, and seven out of 10 are contemplating becoming an entrepreneur, or have already started work on their own entrepreneurial project.

Data on the impacts of the online version of *Google Actívate* are collected in Google's regular survey (see above). These suggest that:

- impacts on SMBs are relatively *high*, compared to those for all countries, in relation to business practices and confidence
- SMB hiring associated with participation is relatively *low*
- the programmes have a fairly *strong* impact on job seekers' likelihood of finding work or entering self-employment or entrepreneurship, and higher than average impacts on job seeker confidence.

FIGURE 3.3

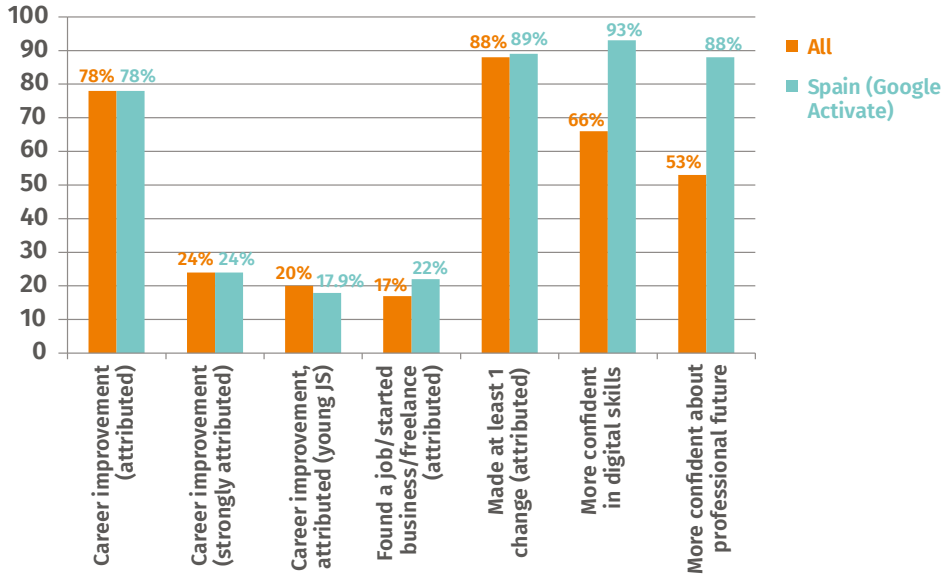
Impact of participation in Google Actívate on SMBs (percentage of participants)



Source: Google analysis 2018

FIGURE 3.4

Impact of participation in Google Activate on job seekers (percentage of participants)



Source: Google analysis 2018

3.3 NIGERIA (DIGITAL SKILLS FOR AFRICA)

Google's Digital Skills for Africa programme is open to anyone in Africa. The online programme has trained people in 29 countries, and the face-to-face programme is offered in 11 countries. It was initially launched with the stated aim of training one million young people in the region between April 2016 and March 2017. This was achieved within 10 months, with over half of those trainees resident in Nigeria. In July 2017, a new target was announced – to train *10 million* people by 2022. To date, more than 2 million learners have taken part. Aims include the creation of a 'level playing field' of digital skills and opportunities, as well as socioeconomic change through entrepreneurship.

In Nigeria, the programme had a specific aim of training unemployed young people and enhancing their employability for a global digital labour market. The country's population is expanding, and if the economy is to provide sufficient jobs, it must diversify beyond commodities and into tech. Yet this will not be practical unless digital skills levels rise very substantially. The programme is also linked to Nigeria's commitment to the United Nation's Sustainable Development Goals (SDGs) for 2030.

Overview

Nigeria has seen Africa's fastest growth in digital usage, in the context of extremely swift digitisation across the continent. Smartphone ownership in particular has increased substantially and SMBs have seized this opportunity; in 2013, SMBs contributed 25 per cent of Nigeria's GDP, making this the second largest segment after oil. However, youth unemployment remains high (at around 25 per cent), and too many young people risk missing out.

Participants in Google training in Nigeria can choose between online and face-to-face formats, but the former accounted for just 3 per cent of people trained in Sub-Saharan Africa as of 2017. The offline workshops typically consist

of four hours of training, covering four modules. This is supplemented by follow-up self-learning resources.

Sessions are led either by staff in partner organisations (mostly training companies), or individuals who have completed a course in digital training provided by Google. This 'train the trainer' model has facilitated extensive reach, with a strong national brand and locally-tailored delivery. This latter is appropriate for a country where digital knowledge and priorities vary widely between places.

The online 'one stop shop'[13] of materials offers 26 different topics, including introductions to online marketing and tools, analytics, SEO, marketing and profile raising, selling online, business strategy and data insights. These are taught through video and text tutorials, and participants who complete all the modules and pass an online assessment and earn a certificate of proficiency.

Offline sessions are delivered to small groups in a range of venues, using materials provided by Google. Potential trainers are selected through an introductory activity, and given extensive ongoing support while they work for the programme. Many trainers themselves become 'beacons', role models and exemplars for the transformation that can be effected through education.

High enrolment – and completion – means that the Nigerian programme has contributed substantially to meeting and surpassing the 'moonshot' goal of training one million people in a year. Partnerships with the national government and leaders of individual states were important in achieving this.

Background

The 'train the trainer' model was developed through testing out different approaches to find the most effective for the Nigerian context. Earlier training offered by Google included a targeted programme for business owners, but this enjoyed only limited success because participants often didn't have time to implement their new learning in their businesses. In a similar situation to the one in Italy, policymakers seized the opportunity to train young unemployed people in digital skills. As 'digitisers', these newly trained workers could help businesses to get online.

This process meant that Nigeria now had a group of enthusiastic and digitally-skilled young people who could themselves become trainers, and help to provide digital skills training on the scale needed to meet the one million target. This group formed the base for a new network of trained, connected and highly motivated trainers (currently around 300 people in Nigeria).

Building a network

Following initial training, Google maintains strong ongoing relationships with the trainers. Regular 'refresher' courses provide essential contact with the project team, and the opportunity to come together from across Nigeria and – more recently – Africa. These gatherings offer an opportunity to share learning, in an evolutionary process.

This active community of trainers provides valuable input into programme reviews, as well as a source of information about ongoing digital skills usage and needs. Over time, trainers become partners, providing feedback that helps the programme team to rethink approaches, content and products. Coverage is substantial, and in 2017 training took place in over 150 different locations across Africa every month.

13 https://learndigital.withgoogle.com/digitalskills/topic-library

Some trainers have developed an interest in public policy and now contribute to debates on digital issues such as regulation, consumer protection and business development. This supports the embedding of digital in the African economy and society, providing a voice of digital entrepreneurs from the bottom up.

Others have started their own private training businesses, going beyond the original programme. This helps to stimulate the training market and increases the overall provision of digital skills in the country's economy. It also supports local economies by creating employment (for example, by hiring other trainers or administrators) and spending money on venues, catering and so forth to support sessions.

Programme content

The Nigerian programme is different from European Grow with Google projects in the extent to which its content is developed differently according to where in the country it is delivered. This reflects local needs and levels of digital engagement, which are very diverse across Nigeria. For example, in Lagos, many people enter the programme with some knowledge of digital, while in other parts of the country simply raising awareness may be a priority. Local references and examples are also important in making the training relevant and engaging. Trainers contribute a great deal of this material.

A good understanding of the skills that people bring to the programme is important, especially because these vary so greatly. This is factored in to both materials and delivery. In practice, different versions of the training have emerged over time, including elements that can support the recruitment and learning of potential future trainers.

Partnerships

Partnerships with national and regional government have been crucial to recruiting and retaining on the scale seen in Nigeria; they have provided access on a vast scale to potential learners who can benefit from the programme and support its wider economic and social goals.

The relationship with the Nigerian government was forged through sustained engagement with senior representatives, in particular around the SDGs. The government established a National Framework for Private Sector Engagement (the 'Private Sector Advisory Group') to support the SDGs, bringing together key players including Google and other major corporations.

The Office of the Senior Special Assistant to the President on the SDGs became a champion for the initiative, and for its potential to help drive economic and social development. Demonstrating impact and presenting qualitative and quantitative data from ongoing programme evaluations helped to demonstrate the programme's value, and its congruence with government aims.

At the regional level, the team sought support from state governors, which again increased buy-in and participation. Governors also helped by donating practical infrastructure for the courses (venues, catering and transport from remoter areas).

Working with government demanded a shift of perception on the part of business, to see government as an enabler rather than a barrier. And an argument had to be made to government that the programme would create jobs and help to grow and modernise the economy. The part played by greater digital literacy in more general citizenship and economic inclusion was also a key consideration. Demonstrating value was essential, partly because in a developing country digital may *not* always be an obvious priority and its case needs to be made strongly and in context. The partnership with government, like that with the growing team of trainers, thrives on a "high quality ongoing dialogue".

Impacts

Ongoing surveys have been conducted from the start of the programme. This has allowed the team to identify success stories, and also to see how participation and outcomes develop over a period of years. The evaluation of Google's EU programmes has been extended to Nigeria. For learners who entered the programme between April 2016 and March 2017, this has identified some substantial impacts:

- 10 per cent of job seekers found work after the training, with 95 per cent attributing this to their participation
- 49 per cent of job seekers felt that the training helped them grow in their job
- 69 per cent of job seekers felt that more confident in their professional future
- 66 per cent of job seekers felt more confident in their digital skills.

Impacts on jobs, skills and the economy are also seen:

- 16 per cent of job seeker participants reported starting their own business after taking part
- 67 per cent of SMBs say their job situation has changed for the better
- 63 per cent reported taking on new responsibilities
- 93 per cent report that their overall confidence has improved
- 13 per cent of SMBs reported that they had hired more staff.

In the Nigerian case, the programme's role in shaping an emerging digital culture is also important. Raising levels of awareness and stimulating public debate and discussion of digital issues is an explicit aim, if not one that can easily be measured. For example, programme graduates should not only be skilled consumers and creators in the digital world, but should also help to determine the nature of behaviours and legislation on intellectual property, copyright, and online conduct. Digital understanding as well as digital facility is the ultimate goal.

3.4 GERMANY *(GOOGLE ZUKUNFTSWERKSTATT)*

Germany stands 14th in the DESI rankings, although it is 7th for digital skills. Companies of different sizes are adopting digital technology, and progress in this area is strong. Initiatives to embed digital skills in compulsory education are supported by the Conference of Education Ministers, which in 2016 adopted the 'Education in the Digital World' strategy. Digital is also embedded in the dual vocational training system (European Commission 2018d).

Germany was one of the first countries where Grow with Google was launched, and its multiple strands now form part of a mature digital skills ecosystem that is well-integrated with the country's policy priorities and devolved structures. The success of the German economy is well-known; unemployment is low and GDP growth since the 2008 financial crisis has been strong. However, the country relies heavily on traditional manufacturing and may *not* be well-prepared for the changes that come with greater digitisation of work (McKinsey 2017), practically or socially.

Overview: Economic and social priorities

The first Grow with Google programme in Germany was designed to boost exporting by SMBs, through training staff to use digital tools to extend their markets. In 2017, a goal was announced of training two million people; this was accompanied by extensive expansion of the programme and a host of new partnerships.

Today, the programme has shifted from the strong business focus of the original *Weltweit Wachsen* to the broader, more education-oriented *Google Zukunftswerkstatt*.[14]

14 The same German language programme is delivered in Austria and Switzerland, primarily through events; it is also available online.

This has multiple strands, reflecting its long-term and pervasive embedding in Germany. The country does not have one prominent and pressing issue in relation to digital skills that demands a single primary response. Rather sectoral, regional and specific issues are addressed through "hands on, bricks in the wall solutions".

Interviewees noted that Germany's *overall* economic strength may mean that the importance of digital for the future may be underappreciated, as are the potential consequences of failing to develop the country's stock of digital skills. The issue is firmly on the political agenda. Digitisation was discussed in the most recent German coalition agreement and is viewed in policy as a key instrument for future prosperity. But this sense of urgency may not be shared across the wider population.

Germany needs good digital skills to maintain its leading position as an economy and industrial hub. It is a wealthy country with a highly developed society, but needs to innovate for the digital age as it did to grow its prowess in traditional manufacturing. As one interviewee put it: "We don't have oil and gas and anything else in the earth... it is our brains that have got us where we are". The role of the programme is to help provide those brains with the right tools.

The 'digital divide' is another major concern, and open access to digital skills for potentially excluded groups is important (for example, people who are at risk of social exclusion, or of slipping down the income scale). The social groups and sectors who could be impacted negatively by automation are another important target. Integrating digital into Germany's well-developed vocational education system is a priority, as is effective retraining for people who are already in the workforce.

Content and formats

Germany has reasonably good levels of digital skills and engagement. Programme aims reflect the need to extend digital skills more widely through the population, and also to offer provision that is appropriate for people who *already* have good digital skills and awareness.

The programme offers a broad range of training in B2B and B2C applications, and is designed to support economic growth in the German context. Coding courses are offered at all levels, from primary school to adult education. These are informed by a focus on both technical proficiency and the ability to think creatively and solve problems using digital. Policymakers and educators are clear that the aim should be to enable learners to become creators as well as consumers of digital technologies.

The cultural place of digital is another important theme. A dedicated 'advertorial' magazine, *Aufbruch*, has been developed to promote the programme. As well as information about training opportunities, this discusses wider developments in digital business and culture. Training addresses digital and media literacy, to build understanding and empowerment among users of digital technology and encourage responsible digital citizenship.

Around 60 per cent of the training in Germany is offline, through extensive partner delivery, events and roadshows, pop-up training centres, and also three permanent hubs, in Hamburg, Berlin and Munich. This mix allows delivery through the format which is most likely to achieve coverage and engagement for the relevant content and/or audience. For example, training for schoolteachers is delivered mainly in roadshows, while more advanced training for engineers and expert marketers takes place at the permanent hubs in Munich and Hamburg, and EOY in Berlin. Some content is only available offline, where this offers substantial advantages (for example, design thinking, which benefits from an interpersonal setting). Also delivered offline are programmes where social interaction complements the learning, such as courses for minority and under-represented groups.

The permanent hubs were introduced partly because market research in Germany indicated that the market for online digital skills training is more or less saturated. Potential learners find it difficult to navigate a large and diffuse offer. On the other hand, face-to-face opportunities are relatively unusual, and are seen as adding more value; there is a demand and a need to be met. Participants welcome the opportunity to attend a physical location and work one-on-one or in small groups with a trainer. (The Digital Workshops impact survey found the *lowest* rates of satisfaction with 'in depth' coverage of online materials among German learners, which may reflect the same trend).

Partnership

Google works with multiple partners to make sure that different elements of the programme are informed by high quality and up-to-date knowledge. Partners are chosen for expertise in priority areas (for example, future work and 'automation proofing' the workforce). They must also have a national reputation and reach (as opposed to working largely in just a few Länder, or only one Land), but also an excellent network in local areas. Overall, around half of the people trained learn with a partner organisation.

Key partnerships include the following.

- Chambers of Commerce, national and regional; these are particularly important for engaging with vocational students and established workers.
- Third sector organisations with a strong social and policy focus. For example, Stiftung Lesen is a non-profit organisation which promotes literacy and education, working with libraries and other institutions across Germany. This helps to extend the reach of *Google Zukunftswerkstatt* and to integrate digital skills with other education. Coding classes for children are delivered in partnership with an organisation that specialises in working in schools. Embedding good digital education is a high priority, so partners who are involved in education and social action are vital.
- Universities and research bodies. For example, one collaboration is with staff at the Fraunhofer IAIS institute, on a project to train teachers and students in robotics and coding.
- A pilot partner with the media regulator in one Land, working on digital media literacy.

The diversity of content and partners means that partnership relationships are also highly varied; some have a formal contract, while others are less codified. The common feature is regular contact and opportunities to come together, to share learning and to learn from one another. This effectively creates an ecosystem within an ecosystem. Partners reach out to potential participants who are within their day-to-day networks, and integrate their *Google Zukunftswerkstatt* provision with the rest of their work.

This complex and heterogeneous approach is ideal for working within Germany's highly devolved political structure. Two key policy areas – economic development and education – are largely controlled at federal level. A flexible framework allows *Google Zukunftswerkstatt* to be tailored to the contexts and needs of individual Länder.

Challenges include working with very different timeframes, policy and practice cycles, and organisational cultures. Strong *personal* contacts, ongoing dialogue, and a trusted system of 'just in time' feedback allow the integration of strands and an agile approach.

Identifying impact

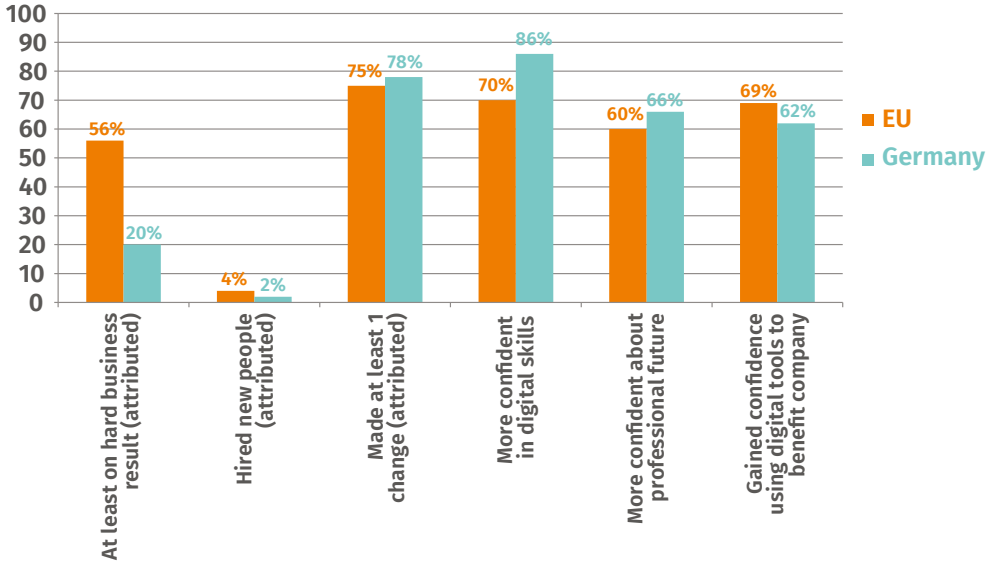
The data which are available for Germany are slightly limited in that they relate *only* to online training – which accounts for less than half of the work of *Google*

Zukunftswerkstatt. These indicate that the online provision is highly effective in building confidence among learners from the SMB and job seeker groups.

German learners, however, seem rather less likely to attribute career or business improvements to their participation in the programme. This could simply reflect the fact that online training is fairly basic, with participants seeking out the face-to-face formats for more advanced and impactful learning that may have stronger concrete impacts.

FIGURE 3.5

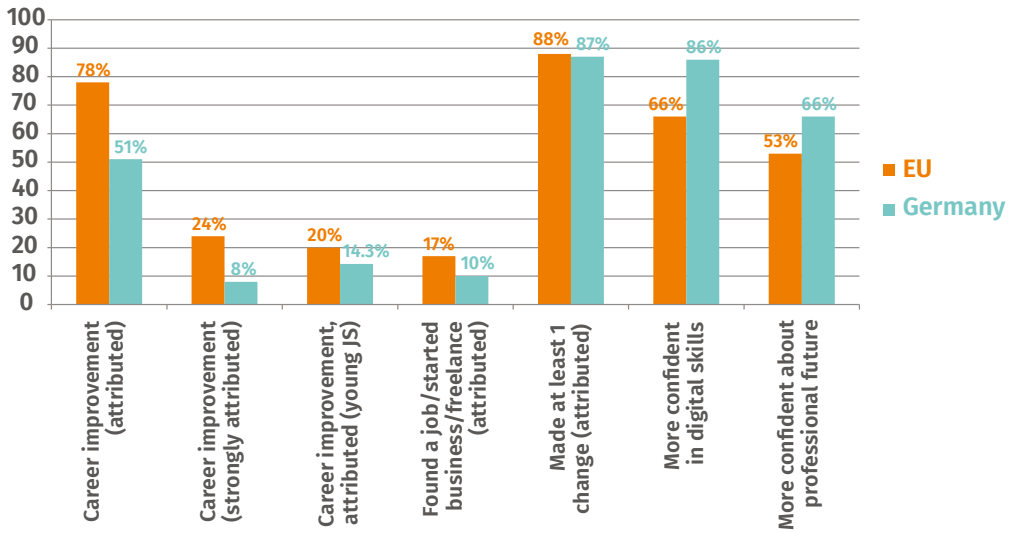
Digital Workshop impacts for SMBs: Germany (percentage of participants)



Source: Google analysis 2018

FIGURE 3.6

Digital Workshop impacts for job seekers: Germany (percentage of participants)



Source: Google analysis 2018

3.5 FRANCE *(ATELIERS NUMÉRIQUES)*

France ranks 18th in DESI, although its performance on digital skills is substantially better. This is boosted by high numbers of scientific and technical graduates, good basic skills levels and high internet usage. Despite this, French companies have relatively low levels of digital engagement. Vocational training is one pillar of a 'Grand Plan d'Investissement 2018–22' announced by the Macron government in September 2017, with the aim of transitioning the French economy to a new growth model through institutional reform and targeted investment (European Commission 2018e).

Overview

Since March 2018, all French programmes, addressing multiple needs and audiences, have run under the title *Ateliers Numériques.* The programme in France is characterised by a strong focus on geographical reach and local engagement. *Ateliers Numériques* includes the following trainings and formats.

- A city tour across France, including training designed for various different audiences. These include student and SMBs (corresponding to the earlier *Digital Active* and *Google pour les Pros* programmes).
- Permanent hubs in four cities, which offer training to individuals and SMBs six days a week. The first hub opens in Rennes (Brittany) in June 2018.

Grow with Google first launched in France in 2012, with a programme of training for SMBs. In 2016, the appeal of the programme beyond SMBs was recognised and – as in Germany – it was enlarged to include additional activities for students. In 2017 training in coding was introduced, as well as in digital literacy, online security, and safe use of the Internet.As in other countries with reasonably strong levels of digital, the French programme uses a range of online and offline methods. About 40 per cent of training is face to face, through roadshows, events held at Chambers of Commerce, short courses in Universities, and one-to-one coaching.

In total, since 2012, 230 000 people in France have been trained in digital skills.

The success of the geographically-located approach underpinned a decision to launch community hubs in 4 regions across France during 2018. The first was announced in January and will open in June in Rennes (the regional capital of Brittany). These hubs, staffed by teams of coaches and providing a wide range of training, will be run in partnership with local authorities and – crucially – with other public, civic and corporate partners. They will be *digital* hubs rather than *Google* hubs.

Content and formats

The content of the French programme is primarily concerned with digital business, including e-commerce, social media, and marketing. The focus is on digital skills to support a broad range of businesses and enhance employability.

However, the programme has expanded to address other critical issues. This is in part in response to high-profile public debates in France, and the importance of these to both citizens and government:

- critical awareness in the use and interpretation of digital media. Training includes how to differentiate genuine and fake news, responses to controversial content, and how to deal with hate speech and abuse online.
- digital literacy: for example, 'basic skills' sessions offer instruction on how to use the internet in everyday life for interactions with public services as well as social and commercial activities.

More advanced ICT skills to encourage digital creation are increasingly part of these programmes. Coding is foremost among these, in particular provision for children to

offer a strong foundation for working in the digital economy. Delivery of this training seeks to break down social barriers around digital, such as gender stereotyping.

Partnership

Partnership is at the heart of the French programmes: "Everything we do is working with partners". They are selected for their in-depth knowledge of the places and the social worlds with which the training needs to connect.

Partnerships are vital to engagement with different places and kinds of place. For example, in 2017 Google developed partnerships with 100 medium-sized cities in France, which aimed to train 70,000 people within the year. And as noted above, the local hubs will be organised around partnerships. The student programme relies on partnerships with 17 universities in different regions, while partnerships with Chambers of Commerce were established at the earliest phase of Grow with Google and continue to this day.

However, the most important partners are local political leaders, such as regional presidents and mayors. Civic leaders can provide an account of the main policy priorities and local economic and social needs for their area, and the regional offer is then tailored in line with these. They also provide a focal point for the diverse networks of partners.

Once a relationship with regional leadership is established, they can broker further relationships and collaborations, providing endorsement and directions. This also helps to build trust among trainees and potential partners; a combination of trust in local elected leaders as well as the Google brand is important in building engagement.

Identifying impact

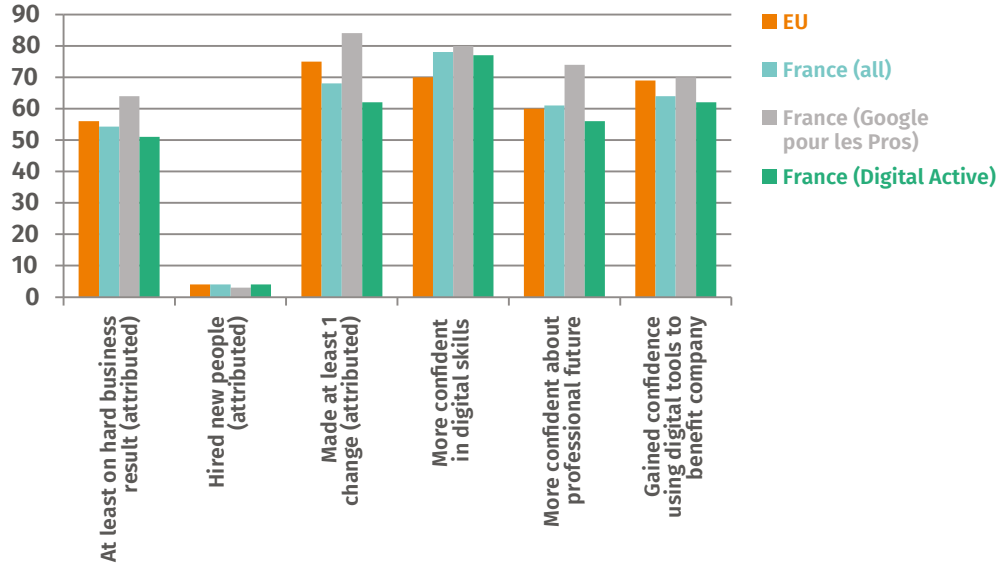
The planned regional hubs potentially offer a unique opportunity to track social and economic impact at the local level, and in a context which may be sufficiently fine-grained to identify relationships between training and outcomes. Tracking participants and collecting data will be a key task for these new institutions, and a potentially valuable source of information about their contribution to prosperity and employment. Forecasting and analysis will be a part of this work, eg identifying how this training has helped people to find employment. An account of impact is important both for internal planning and sustaining partner relationships.

French data[15] from the Digital Workshops impact survey suggests that the programme for SMBs (formerly 'Google pour les Pros') has a slightly *higher* than average rate of impact on SMBs in relation both to tangible results and changes, and confidence. The programme for students (formerly 'Digital Active'), by contrast, has impacts which are slightly *below* the overall EU rate (although still fairly substantial). Impacts for job seekers are generally in line with the EU average.

15 Note that the figures given here relate to online trainings only.

FIGURE 3.7

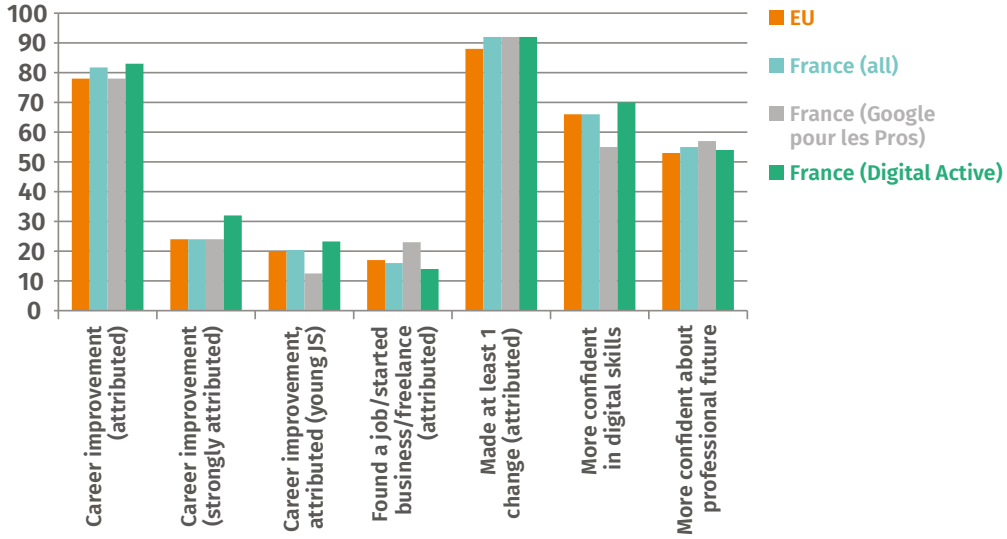
Digital Workshop impacts for SMBs: France (percentage of participants)



Source: Google analysis 2018

FIGURE 3.8

Digital Workshop impacts for job seekers: France (percentage of participants)



Source: Google analysis 2018

3.6 SWEDEN *(DIGITALAKADEMIN)*

Sweden is a 'digital frontrunner' within the EU, ranking 2nd in DESI. The government's current digital agenda dates back to 2011 and a new digitisation strategy (2017) addresses key issues including digital skills, access to fixed and mobile broadband and infrastructure, digital skills and data driven innovation (European Commission 2018f).

Awareness of tech is very strong, as is engagement. Factors such as excellent levels of English language proficiency and good outcomes from compulsory education (OECD 2015b) facilitate this.

Grow with Google's activities in Sweden are distinctive as a result. Priorities include meeting emerging needs that are articulated by partners, engaging with policy and research agendas, and making sure that digital and its advantages are shared equitably between different social groups, sectors and places.

Overview and background

The Swedish programme, *Digitalakademin,* originated from Google's aim to work with local partners who have a strong digital footprint and a good understanding of SMB needs. Initially the Swedish Bureau of Entrepreneurship was the main partner.[16]

It is characterised by multiple collaborations and activities in a framework that helps to bridge gaps and address key policy issues for a highly developed digital economy. Awareness of digital is high and businesses appreciate its importance; however there is sometimes a gap between knowing this and having the practical skills to action it, especially among SMBs. In response, the programme's approach is very 'hands on', focussing heavily on the application of digital skills and on making sure that *everyone* is digitally adept. About 58 per cent of delivery across the Nordic countries is offline, through workshops, roadshows, job matching, coaching, and 'deep dive' masterclasses.

Priorities include the following.

- **Policy and research:** A policy and research programme is run from the Stockholm hub, producing independent analysis and working with government and other opinion-formers to disseminate findings and recommendations. Google also conducts analysis to help define a digital strategy for Sweden through a series of expert working groups.
- **Bridging sectoral and social gaps***:* Some groups in Sweden notably lag the general levels of digital engagement, or face challenges in accessing digital learning. Examples include the following.
  - SMBs: Although Swedes are highly proficient digital users, this is not universally reflected in its business practices. Sweden is a net exporter of digital largely because many of its SMBs remain firmly 'analogue'; in particular local small businesses in fields such as production (food, crafts, etc.) and personal services. Many were *not* using digital effectively, and have benefited considerably from their learning. Around four-fifths of jobs in Sweden are in SMBs, so this is a key issue.
  - Non-urban places: Sweden's geography means that many programmes and corporate activities are very 'Stockholm-focussed'. The programme aims to build digital inclusion in potentially 'left behind' places, through locally-delivered, tailored training, and case studies of relevant digital transformations.
  - New migrants: Education helps this group to become 'digital citizens' and labour market participants in a highly digital culture.

16 This is a government-funded organisation that supports SMEs through local offices across Sweden.

Content and formats

Sweden's high levels of digital skill and engagement demand options to move from basic and mid-level skills to more advanced learning, including coding. The opportunity for progression builds on the strengths of Sweden's mature digital ecosystem. Examples include the following.

- Work with SMBs, delivered in partnership with the Bureau of Entrepreneurship in locations across Sweden. This partnership is important because it brings extensive geographical reach and marries Google's digital expertise with the Bureau's existing education programmes. It also builds on the Bureau's expertise in the Swedish business landscape.
- A programme of events offering four modules for businesses ('get going', 'sell more', 'visibility' and 'data). These are delivered through roadshows, and interest is high; over 23,000 people were trained in 200 events across Sweden. It is possible to tailor programmes to specific needs, allowing participants to choose between elements depending on their requirements.
- 4-hour workshops and 'tentpoles' to deliver specific content. These are organised in collaboration with regional authorities in different parts of Sweden.

There is one permanent hub (in Stockholm). This offers a wide range of learning, including courses in entrepreneurship and social skills, coding, digital skills for women, coding for girls, digital marketing, and other training delivered by various partners. In addition, it provides a social space, digital infrastructure such as WiFi, and a café. Thus it brings together like-minded people in an informal setting, with opportunities for peer learning.

Partnership

The relationship with partners in Sweden is distinctive because a key role for Google is responding to partner needs – which in turn help to shape the programme's direction of travel. High quality ongoing dialogue, in which partners are empowered to voice their priorities and requirements, is crucial. The programme team also seeks to forecast and resolve the issues encountered by companies (including SMBs).

Partnerships with government, local and central, are important. The policy projects described above are strengthened by learning gained through dialogue with partners, and this public/private partnership is itself sustained by good communication.

Many partners are chosen because of their capacity to 'anchor' programmes locally (i.e. geographically, or with a particular community). Partners with a strong presence and long history know how to engage with particular populations, and involve them in the programme. For example, engagement with students comes through partnerships with universities and the organisation student.org. Google works with companies in its 'trusted partners' programme on developing content, and also with NGOs whose mission aligns with the social aims of the programme. And national partners with a strong presence in local business communities are sought out.

PARTNERSHIP WITH THE SWEDISH PUBLIC EMPLOYMENT AGENCY

One important collaboration is with the Swedish Public Employment Agency. This arose from discussions that began at a Grow with Google event. As in the Italian case, digital skills were seen as an opportunity to train job seekers in an area where good jobs are available, while many SMBs were keen to hire in digital expertise to meet their needs.

This partnership works somewhat differently from the Italian one, partly because overall unemployment is much lower and there is not a need to stimulate digitisation and job creation through internships. In Sweden the programme was supported by a programme of online training and certification for digital coaches.

Existing programmes were tailored for this specific audience and included training in basic digital skills, e.g. safety online, creating a CV, and applying for jobs using the internet. Agency staff received training to help them apply their established skills in job matching to digital skills and roles. Key issues include building a legal foundation and a framework of cultural harmonisation and trust that make the programme sustainable over the long term.

In Sweden, partnership is active and highly networked. A twice-yearly gathering of partners is held in Stockholm, where the programme for the coming six months is presented along with information about emerging trends and insights from feedback. These events offer an opportunity for partners to share experiences and learning, and are organised on a large scale; for example, over 100 employees of the Public Employment Agency and all their digital coaches attend.

Because partnership is important in both practice and policy activities, it is carefully nurtured. The Grow with Google structures in Sweden have 'a lot of moving parts', which mean that they need rigorous and well-ordered processes to keep them current and effective. This includes:

- a yearly 'road map' of the whole programme and the roles of partners
- quarterly meetings where clear expectations are set
- a strong and transparent ongoing dialogue, including details of what either side is doing, the resources made available, and the balance of co-investment.

Identifying impact

Note: data for Sweden was not available via the Digital Workshops evaluation.

4. REFLECTIONS AND RECOMMENDATIONS

Grow with Google has a wide and expanding reach, and comments from participants[17] and partners alike are positive. As such, it represents a successful example of a programme that operates on a large scale to meet the digital skills needs of national economies and individuals within them, and forms part of a developing digital skills ecosystem at the national and international scale.

The case studies discussed above, and the interviews conducted for the project, identify a number of common themes and key issues. These offer useful learning for stakeholders engaged in building effective frameworks for digital skills development. Recommendations for governments, education and training providers, private sector partners and those seeking to collaborate for maximum impact are proposed in this chapter, along with some discussion of the rationale that underpins them.

Recommendations for individual countries or programmes are *not* offered, because these will – rightly – be developed in those highly local contexts.

1. A societal objective for improving digital skills works best when coupled with specific aims for a community, sector or place

A general aim of increasing digital skills levels and engagement across an economy is most likely to be achieved when it is embedded alongside aims that are highly tangible for both policymakers and potential training participants in a particular country – and within that, for particular sectors, communities, life moments and/or places (McGillivray et al 2017). This might include designing training content and formats to engage particular learners, reflecting their readiness and motivations to learn; targeting groups who are likely to be highly active inspreading digital skills within their locality, sector or community; and delivering content in the most accessible format.

Effective partnerships bring together goals that relate to the global digital economy with those of organisations whose mission and roots sit closer to the places where people will apply their digital skills. Interviewees discussed the importance of aligning aims both *broadly*, and at diverse points in programme development and delivery. This was sometimes framed in terms of partners bringing things to the relationship that 'solve one another's problems'. Partnerships work best when aims are aligned and complementary; this depends both on a strong *initial* discussion and a good ongoing dialogue, as well as partnerships which lever in strong local intelligence, understanding and networks. The option of updating materials and approaches in response to changing circumstances is important in making the most of this.

Policymakers at national and international level should work closely with local stakeholders to identify commonalities and align programme aims.

17 These are gathered in the comments returned as part of the evaluation survey.

2. As well as programme aims, programme delivery, format and content are more effective when tailored to local contexts and needs

The need for scaleability, and the global context of the internet, mean that much digital learning - especially online – is fairly place-neutral. This has some advantages, of course; the ability to use the same technology anywhere on the globe is one of the things that makes digital so powerful.

But what digital does, above all, is connect the local and personal to the global – and digital training is more effective when it does the same. To boost awareness and engagement, some training formats and even content need to be designed specifically for local contexts, including the market opportunity with which trainees can connect, regional policy priorities, and community needs. For example, Nigeria, with large variations in digital skills and resources, needs locally and regionally tailored programme content and delivery. In the advanced digital context of Sweden, tailored approaches are important in *spreading* digital more evenly. And in France, close integration with local policy makers, businesses, institutions and places helps to make programmes relevant and engaging.

Blended learning may be especially important in bringing together the broad and scaleable training formats with face-to-face activities that hone effective application on the one hand, and lively debate, discussion and creativity on the other. Alongside offline training, opportunities for trainees to work together and develop informal peer learning and relationships are part of this.

Designers of national training programmes should ensure that formats and frameworks accommodate tailoring in delivery and/or content to meet local needs, including the approaches proposed here. Local stakeholders including those involved in delivery should be empowered (and where appropriate trained) to support and facilitate this tailoring.

3. Public/private partnerships, and partnerships between companies, government and civil society are powerful; these should be sought, facilitated, and nurtured over time

International research into effective digital skills development shows that to create conditions where initial and ongoing learning will flourish, government, education and training institutions, and businesses need to work together (Fau and Moreau 2018).

Public-private partnerships are working well in all of the case study countries. Their advantages include the following.

- **Relevance:** Government makes and implements policy in key areas for digitisation and skills development (economic development and education, for instance). Working directly with the body responsible for these policies allows businesses and training providers to align their aims effectively.
- **The 'reach' of government:** Many government programmes aim for coverage of whole populations and groups within them. Working alongside public services means that digital upskilling can be disseminated effectively through public service networks. These also make it easier to access diverse groups of learners, including those who might otherwise be hard to reach (for example, low-skilled unemployed people). Partnerships with civil society organisations that work with potentially marginalised or excluded groups can have a similar function (Piercy 2016).
- **The developing nature of government:** Increasingly, national and local government work in innovative and entrepreneurial ways, using their reach and convening power to move 'ahead of the curve' and become an enabler of change (Mazzucato 2018). This makes them highly suitable partners for digital initiatives.

- **Expertise:** Government, its agencies, and public sector organisations provide a repository of expertise in numerous fields. The case study countries offer many examples of this; for example, EOI in Spain, Unioncamere in Italy, the Swedish Unemployment Bureau.
- **Trust:** Partnerships with public sector bodies help to win trust because these organisations are highly recognisable as service providers, and also bring a measure of democratic accountability.

Public/private partnerships also unite different cultural contexts and approaches to problem solving. One interviewee described how the combination of 'thinking commercially and thinking publicly' had been valuable.

This is especially important for digital, whose impacts and ramifications go well beyond one sector or type of job. Digital has impacts for the entire economy and labour market, as well as profound social effects. In this latter area some of the organisations with the greatest expertise and engagement are those in the public sector and civil society.

4. Policymakers and designers of training programmes need to 'think differently' about digital, and its social and commercial place, to maximise access to training and increase diversity

Several of the programmes involved a challenge to established ways of thinking about digital and where it 'belongs' socially and sectorally. For example programmes should seek to break down conventional view of who tech is for, encouraging participation by women and other groups not always considered 'natural' candidates for digital skills.

- "Some people aren't natural candidates for digital skills": *Crescere in Digitale* (Italy) challenges the preconception that unemployed people are unlikely to become digital experts and ambassadors; and in many countries Grow with Google programmes include initiatives that aim to increase participation by women and girls, challenging persistent stereotypes.
- "In countries with high digital engagement, business will digitise swiftly": In Sweden, a 'digital frontrunner' country, a surprisingly large number of businesses are *not* engaged in digital. This is associated with certain sectors and places.
- "Older people and established workers can't 'do' digital": Although the majority of Grow with Google participants are under 50, a substantial number are over this age, especially in the 'knowledge seeker' segment. Online and open provision may make it easier for them to make their initial engagement.
- "Successful economies can be relaxed about digital": Historically 'healthy' economies will need major adaptations to thrive in the digital future. For example, in Germany, the government recognises the importance of increasing digital skills rates but this has not yet been fully recognised in public discourse.

5. Platform agnosticism is important in providing valid training and gaining buy-in

The 'platform agnosticism' of Grow with Google programmes was mentioned in all our case studies as a key factor in building buy-in and trust. This was not at odds with the power of the Google brand in encouraging people to use the training, or assuring them of its quality and currency.

This goes well beyond branding, however. Platform agnosticism means that the training is as current and relevant to participant needs as possible, whether or not these are best met by a specific product. And by offering training across different platforms, programmes can help to build an understanding of underpinning

principles rather than particular packages; this helps to build a strong foundation for further learning.

6. Changing a learning culture is more powerful than *just* offering physical products

One theme that recurred in discussions was the relatively limited usefulness of initiatives that are based primarily on donations of physical goods (such as tablets) or infrastructure. These may have a helpful short-term impact and value as part of a wider initiative, but in isolation their longer-lasting impacts are less clear.

Partly this may reflect the limited lifespan of even the best hardware. However, it may also arise because this kind of project can be taken to imply that digital resides in objects rather than in people. Dynamic and partnership-based projects cast it instead as a property of learning, interaction and creativity that travels – and potentially grows – with individuals and communities.

A further problem with projects that depend on donations of *things* is that they could inadvertently create small-scale digital divides by separating the people or place where the donation is made from other parts of the community. Working with people to build skills for the digital devices they can access may offer a firmer basis for embedding an awareness of digital and its potential.

7. Skills forecasting is as important as providing 'just in time' skills for immediate use; facilitating reskilling and lifelong learning is as important as providing good training to meet current needs

Job seekers and small businesses need digital skills to improve their prospects in the short term, sometimes the very short term. The impacts identified within 14 weeks of completing the programme (see chapter 2) indicate that the programmes are getting this right, and providing skills that people can apply right away.

But for a world that is rapidly undergoing digital transformation, this base of digital learning needs to be augmented with skills for growth and employability in the medium and longer term. An organisation like Google is well-placed to make judgements about how the market will develop over time, and to support content planning accordingly.

It is also in a position to make, and support, the 'leaps of faith' involved. Such future-focussed actions demand time, reach and resources as well as market insight. In this research we found several 'leaps of faith' on different scales, where the economy isn't keeping up with policy needs. These initiatives may take time to bear fruit or be meaningfully evaluated – but if they are postponed until it they are obviously the right thing to do, it may be too late.

To make the most of programme design that is effectively updated to meet both short and long term needs, another key skill for the digital age must be embedded in training. This is the willingness to continue learning and seeking out opportunities to upskill and reskill, throughout the career path. Learners don't just need to learn; they need to learn how to learn as well.

Governments and employers should consider how to provide opportunities and incentives for reskilling and lifelong learning throughout the career, reflecting the needs of different industrial sectors and demographic groups. Compulsory education should develop an awareness among learners of the need for lifelong learning and adult learning providers should foster this in the content and format of programmes.

8. Digital literacy, awareness and empowerment – including learning for a 'big data world' and for privacy and security online – are important for individuals and societies

The potential downsides of digital – 'fake' news online, financial scams and fraud, trolling and abuse – are highly publicised, and the story of Cambridge Analytica has raised anxiety over how personal digital data is owned and used.

All of these bring the risk of 'techlash', if digital comes to be regarded as a primarily negative force. A belief (tacit or explicit) that these problems are *inherent in digital*, rather than *manageable by informed digital citizens*, could lead to disengagement and potentially leave the field open to abusers. This puts people at risk – among other things – of missing the social and economic opportunities of digital.

As digital becomes more pervasive, training can help empower users to be safe, responsible and critically aware online, and to make well-informed decisions about data; how they generate it, and how it is owned and used. Learning about privacy and security in the digital age is also important. Better knowledge and awareness could even help to foster better public debate and discussion, and demands for greater transparency and democracy in how the digital future is shaped (White 2017).

Another aspect of empowerment is the ability to become a digital creator rather than just a consumer (Livingstone 2017). This is increasingly prioritised in countries where levels of basic digital skills are reasonably good, and the skills ecosystem is maturing. Where 'creator' skills are spread as widely as possible this will help to avoid another kind of digital divide, between people who understand how digital is made and can shape its future themselves, and those who only have power to take the digital they're given.

9. Networks are powerful drivers of learning, and training should seek to support – and to learn from – formal and informal learning networks

Learning doesn't just happen in online and face-to-face sessions. Networks of learners, of trainers, and of policymakers can drive the sharing and creation of knowledge which in turn can help to shape future programmes and policies, or guide learners in applying their new skills. By fostering networks, formal and informal, training providers can help to make sure that training is more than the sum of its official parts.

Mature networks of learners, trainers and/or partners can grow into a source of innovation, debate, and ideas for policy. The online community of interns in *Crescere in Digitale* both supports their fledgling professional experiences, and provides data on learning and employment trajectories. The network of trainers in Nigeria has sparked further learning, policy discussions and new approaches. And the community of partners in Sweden has generated ideas for future partnerships and policy developments. A question for the future is how informal and unofficial networks based around the hubs will contribute to learning and possibly even to policy formation.

Effectively managed – both operationally, and in terms of more complex issues such as power relationships and ownership – networks can bring about change and become more than the sum of their parts.

10. Measuring impact may best be done at a small scale

Scope, scale and impact are important and the reach of all these programmes is impressive by any standards. For example, it seems that that over 10 per cent of unemployed young people in Italy have enrolled for the *Crescere in Digitale*

programme, and in Spain about 2 per cent of the population (1.2 million of 46.5 million) have taken part in the programmes there. For a programme that *isn't* part of compulsory education, this represents a high level of engagement; a university that enrolled students at this rate would be considered wildly (not to mention impractically) successful.

However, within a country's whole workforce the numbers are relatively small and the amount of 'noise' that can disrupt the impact of a programme on the national economy is great. People will sign up for training with an enormous range of reasons, motivations, and intentions, all of which will affect how they learn and subsequently use their learning. Some will find work or change jobs, and some will make a major impact on their current business. Others may wait a year or more to apply their learning; they may live in a place or work for an employer where digital transformation isn't easy, or welcome; they may use their new skills in civil society, without financial return; or they may plan on putting the training to work but life gets in the way. Without measurable economic impact, they may become better and more engaged digital citizens, who don't get scammed online or abuse people on social media, and who do engage digitally with local businesses and sign their children up for coding lessons. Such wider cultural change is hard to quantify but infinitely worthwhile.

None of these is a reason to abandon the idea of assessing impact, but it is worth considering how to set up fine-grained impact studies that are *long term* and *small scale.* For example, in Spain, an initiative to develop digital in clusters of businesses based in small towns had worked well, but was not scaleable – despite the possibility that it could have had a substantial impact on the local economy.

This latter presents an intriguing question over the demonstrable impact of digital skills training. It is very difficult to identify genuine impacts of 'mass' training across a population, industry or economy (as discussed above). However, at the level of a town or a small geographical area, a single company or a sector cluster, it might be easier to tease out the cumulative impact of the kinds of change described in the Digital Workshop evaluations. This would still be methodologically challenging, and complex statistical modelling would be needed to scale up findings to wider populations. Nevertheless, it may be worth conducting a small number of analyses of this kind. Programmes based in the new local hubs in France, or those associated with the Swedish roadshows could be good candidates, as could training run from the permanent hubs in Germany.

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