



# Using skills excellence to build back better

Edited by Stephen Exley



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# Foreword

**Dr Neil Bentley-Gockmann OBE**  
CEO, WorldSkills UK

WorldSkills UK exists to improve the quality of apprenticeships and technical education for the benefit of all young people and employers. We stand for excellence in skills which we promote through our decades-long experience of international skills competitions, developing training methodologies which hone young people's technical and mindset skills to the highest level. We are now developing innovative and exciting ways to share this knowledge throughout the skills sector to push for higher standards in technical education and apprenticeships so that many more young people can benefit throughout the UK.



**“It is not just about qualifications, it’s about allowing young people to fulfil their potential, be innovative, confident and successful.”**

As a small organisation we can only do this by working with our amazing partners in education, governments and industry. And in this publication, I’m delighted to say that we invited some of our closest partners to give us their take on what excellence in skills means. The range of answers in this collection of essays and case studies speaks volumes about how and why high standards in technical education are important. It is not just about qualifications, it’s about allowing young people to fulfil their poten-

tial, be innovative, confident and successful, it’s about building prestige in our technical education systems and it’s about giving UK firms the skills they need to boost their productivity, compete for new business and investment, create new jobs and ultimately raise standards of living.

Current thoughts are understandably on the immediate next steps of surviving the pandemic. But we will be selling our young people short if we don’t also focus on the longer-term agenda of championing higher quality training standards. I know from my experience of international skills competitions over the last five years that other countries recognise the economic value of having a high-quality technical education system much more than we have historically done in UK, and if we don’t start embedding excellence in skills now we risk falling further and further behind.

By working with our valued partners we are developing new ways to do this. For example, through our new Centre of Excellence in partnership with NCFE we are working in-depth with college leaders to pass on the key elements of our world-class training methodology to educators with a direct benefit to some 40,000 young people. And we are developing a suite of digital resources so that educators and young people can access insights on curriculum innovation and high-performance mindset developed from our competitions experience. These innovations will enable us to reach many more young people to help them achieve their potential and start their journey towards successful careers. And I hope with new partners in the future we can reach even more.

I would like to thank all the contributors to this publication, who have given so much meaning to skills excellence and who continue to be valued partners of WorldSkills UK as we adapt and find new ways of inspiring and developing young people. They have also given us plenty to think about in terms of how we can evolve in our role to support all parts of skills systems across the UK to mainstream excellence, which we will give thought to and respond as soon as we can.

Above all, I hope this publication gives real meaning to the phrase 'skills excellence'. To me it means having more ambition for our young people, it means having more prestige for our colleges and apprenticeship providers and it means more and higher quality skills to help boost industry, attract international investment and build back better. ■





# Foreword

**Gillian Keegan MP**

Minister for Apprenticeships and Skills

The UK along with the rest of the world is currently navigating unprecedented challenges as a result of the COVID-19 pandemic. The way we live our lives has changed dramatically and the pandemic has shone the spotlight on the pipeline of skills this country needs to enable us to recover from COVID-19. Our skills systems need to be ready for the labour market challenges and able to support a productive economy, fit for the future, and underpinned by world-leading technical and higher education provision.



The National Skills Fund, announced at the start of this parliament, signals a strong focus in policy towards strengthening post-16 provision in this country. This exciting new policy will look to transform and reenergise the adult training landscape. Likewise, apprenticeships will be key to the skills-led recovery from COVID-19, especially for young people. That is why we are helping employers of all sizes, through our incentive payments, to take on new apprentices this year. It is also critical that people get the right advice to support their careers choice and that is why the Chancellor's package of measures to boost skills and support the labour market to recover includes funding to help more people receive advice from the National Careers Service.

Now more than ever, investment in skills is vital to boost productivity and drive social mobility, which means that more of us will need to retrain

at different points throughout our lives. Education and skills are vital in giving people the opportunity to upskill and reskill to progress into higher-wage employment. The essays in this publication echo the ambition set out by this government to ensure our post-16 education system enables young people and adults to gain the skills required for success and to help the economy.

WorldSkills UK and its partners continue to promote technical education and apprenticeships and inspire more young people to consider these as

prestigious career routes. The creation of the WorldSkills UK Centre of Excellence, which will mainstream international excellence, is something I welcome and would encourage more of. The centre demonstrates the types of innovative approaches that are possible across the sector to achieve better outcomes in skills provision in this country and should serve as a rallying call to us all of what can be achieved together.

We all need to join WorldSkills UK in promoting this message. The national and international networks forged through the global benchmarking of technical skills excellence, offers the UK an opportunity to showcase our technical provision globally whilst also bringing back world-class standards into our own national skills systems.

WorldSkills UK's unique capacity to inspire and to connect helps bring into our technical education system a brand prestige which, though historically lacking, is so deeply deserved. ■

# Introduction

**Stephen Exley** is a freelance writer, Director of External Affairs at Villiers Park Educational Trust and former Further Education Editor at Tes

If the turbulent months of 2020 have taught us anything, it is that nothing can be taken for granted. Employers and skills providers alike have been forced to rip up their business plans at short notice, as the world adapts to the 'new normal' of life in a pandemic. WorldSkills UK has not escaped unscathed with UK skills competitions cancelled, the flagship LIVE event moved online and EuroSkills Graz 2020 postponed indefinitely.

In a year dominated by a virus which doctors are still only beginning to understand, planning and strategy have by necessity been tempered by the need for agility and resilience. Schools and colleges have been forced to move teaching online and redesign their campuses. Supermarkets have had to overhaul their supply processes and pivot towards online shopping. Restaurants have ripped up their menus and rotas to cater for a far smaller, socially distanced clientele.

Given the uncertainty about what the future holds, there is a temptation to focus on the here and now, and react to the situation as it evolves to ensure that immediate needs are met, rather than thinking longer term. This would be a mistake. While building capacity to respond to expected and unexpected changes is essential, this does not mean we should lose track of the bigger picture



– namely, the challenges we already faced before COVID-19, and what comes afterwards. While the pandemic has unearthed social inequalities, it did not create them. Levels of adult participation in learning are at a record low, and inequalities between higher and lower skilled workers become ever clearer. Economic and technological changes on the horizon mean that, as the CBI's recent research with McKinsey demonstrates, up to 90% of the workforce will need reskilling by 2030. And the UK is already playing

catch up, with productivity levels lagging behind those of its main competitors.

In terms of education policy, the scenario unfolding before our eyes necessitates serious investment in the skills of the nation. A long-term strategy informed – but not skewed – by the pandemic is essential if we are going to, in the words of the Prime Minister, “build back better”. And if our island outside of the EU is to compete with other developed nations, our skills must attain international standards of excellence. This is by no means a wildly ambitious pipe dream. WorldSkills' international standards are already in place and having a transformative impact – and not just in the leading lights at the top of the international medal table but here in the UK, as this fascinating collection of essays makes clear.

## The quest for excellence

In 2017 **Anne Milton** became the first serving apprenticeship and skills minister to visit an international skills competition overseas. In her essay, she reflects on her experience of attending WorldSkills Abu Dhabi, what she learned from witnessing world-class skills first-hand, and how this has shaped her views as to what the country must do to improve skills levels. **Dr Susan James Relly** goes on to explore this in the light of her extensive research into WorldSkills and its impact. Her conclusion? While some of the infrastructure and support for skills competitions is having an impact on the wider system, there are plenty of improvements which are still needed. As the employer-provider behind several winners of Medallions of Excellence, **Toyota Manufacturing UK** offers a useful case study as to how WorldSkills standards can be successfully embedded within a large business to drive up standards and performance.

Technical training, of course, is only part of the picture.

An essential part of achieving any kind of success is excellence in leadership.

**David Gallagher** reflects on how, when used carefully, vulnerability and self-doubt can be positive traits in a leader – and why we need to think differently about what ‘success’ means if we are to give more people a chance to reach their potential. And what better example of transformational success than that enjoyed by Russia in WorldSkills competitions, having gone from 41<sup>st</sup> place in 2013 to second place on home soil in 2019?

**Ekaterina Loshkareva** explains how this was not just achieved by focussing on competitions, but through using learnings from WorldSkills as the basis for overhauling the country’s entire skills system. As a companion to this remarkable story, **BAE Systems** provides a case study of how participation in skills competitions also benefits businesses, providing a springboard for competitors’

future careers and – in this case – underpinning its corporate approach to skills development.

At the intersection between employers’ skills needs and national policy lies the Institute for Apprenticeships and Technical Education. In her essay, **Jennifer Coupland** explains what the organisation has been doing to support employers’ delivery of skills excellence through the pandemic, and outlines its bold plans for ensuring gold-standard apprenticeships and T Levels will continue to raise standards. While the skills agenda is most readily associated with the further education sector, **Professor Mehmet Karamanoglu** explains

that embedding WorldSkills benchmarks into teaching practice can be transformative in a higher education setting too. He recounts the beginning of the relationship between Middlesex University and WorldSkills UK, and explains the crucial role this has played in its curriculum development.

The importance of pushing the boundaries of skills development to new frontiers is also explored in the case study of **Coca-Cola European Partners**, which explains how inclusion and

diversity have been embedded into its skills development to bring a new set of voices and perspective to the multinational corporation. Finally, the CBI’s **Matthew Fell** examines the troubled context for adult education in the UK and calls for “a partnership of the century between business, government, the education sector and individuals to level-up opportunity across the UK”.

Exactly what the coming months and years have in store for us, both economically and politically, is far from clear. But achieving skills excellence in the UK is an absolute must. We know where we need to go – and this collection of essays and case studies offers insight into how we can get there. ■

“WorldSkills standards can be successfully embedded within a large business to drive up standards and performance.”



# Experiencing excellence

**Anne Milton** was Minister for Apprenticeships and Skills from 2017 to 2019, and MP for Guildford from 2005 to 2019

Over the years there have been many ministers visiting the NEC to see the WorldSkills UK LIVE national finals. But when I attended WorldSkills Abu Dhabi 2017, I was the first minister who had the privilege of witnessing WorldSkills on foreign soil. It was an experience like no other, and one I will never forget.

I stepped off the plane in Abu Dhabi not knowing what to expect. The Abu Dhabi heat was intense in more ways than one, as the WorldSkills UK team readied themselves for the performance of their lives. I was met by the amazing WorldSkills staff who did everything in their power to make us feel



welcome, made sure that we had everything that we needed and delivered us to our hotel.

The next morning it was straight off to the competition venue and there I entered a different world. It was quite extraordinary. There were three things that will always stick in my mind. First, the sheer size of it – huge, enormous hangars housing young competitors from around the world. Second, the intensity of the competition. You can feel the power of it as soon as you walk into the competition area. Whether you're watching the participants in stonemasonry, landscape gardening or CAD, you can feel the pressure. Third, the total focus. We refer to WorldSkills as the 'Skills Olympics', but if you're an Olympic sprinter it's over in seconds. Not so for these young people. Their events last for three or four days. I was left in complete awe of them for keeping up that level of concentration over such a long period, far away from home and with the added pressure of knowing that every one of us wanted them to do well.

I remember seeing the beautiful work of the florists and the beauticians, the jewellery makers with their strikingly intricate work, and the stonemasons who were hidden away inside a polythene shielded cube to contain the dust. When you see the standard of the work these competitors are being asked to carry out, and the sheer diversity of skills on display, it's hugely impressive. Which ever area of the competition I looked at, I was left with a new-found appreciation that those taking part were skilled in a way that I had not thought possible.

For the young people in the contest, there is only a chest-high barrier between them and their competitors. And competition is fierce

with some other countries (they will remain nameless!) trying to put off the other competitors by videoing them and poking their cameras over the barriers. If you add to that the intense scrutiny they are being subjected to from the thousands of spectators milling around, it's a competition in a goldfish bowl. WorldSkills UK and the other national organisations do a great job in making sure the participants receive all the support they need to get them mentally prepared for the challenges of taking part in competition at that level. But the undertaking by the competitors is just huge. The conditions they have to cope with – at the same time as they are carrying out exceptionally precise, skilled work – are quite extraordinary.

**“When you see the standard of the work these competitors are being asked to carry out, and the sheer diversity of skills on display, it's hugely impressive.”**

### **Learning from the experts**

Whilst the competition continues over several days, WorldSkills also hosts a conference for government ministers, policymakers, thought leaders and experts from across the globe. For me, as a relatively new minister at the time, it was great to hear what other countries were doing. It was a fantastic opportunity to hear from many experts from around the

world, both in the main sessions, roundtables and in bilateral meetings.

It is traditional in this country to cite Germany as the gold standard for how to do technical education. There are certainly many aspects of the German system which are good. But we shouldn't just try and emulate one country. What I learned was that there are many other countries, in Eastern Europe for example, which are doing some excellent work on technical education. I had a really interesting chat with the minister from Singapore about why

their system was so successful. Also, it was encouraging to hear from the ministers from Abu Dhabi who were acutely aware that, for countries to be successful, they don't just need to get academic education right, they need young people with skills.

As well as the conference offering an opportunity for me to learn about other skills systems, ministers from other countries were equally interested in what the UK was doing. It was a pleasure to be asked to speak and there was a lot of interest in our apprenticeship reforms and the introduction of T Levels. Discussing how apprenticeships work in different parts of the world is always useful. These conversations hardened my views about the importance of the off-the-job training element of apprenticeships. Some businesses in the UK were unhappy about our requirement that 20% of an apprenticeship should consist of

off-the-job training. But what I discovered was that this minimum requirement is lower than those in place in almost every other country. This confirmed my view that there should be no weakening on this requirement if we were to have the world-class apprenticeships our young people deserve.

It was great to also meet the families of the competitors, as well as some of the previous medal winners, and hear what they had gone on to achieve after competing in WorldSkills. I met one young man who was approached off the back of his performance in international competition by a businessman who offered to pay him £100,000 a year to move to Australia and then, after three years, to set him up in business back in the UK. What an opportunity! And it just goes to show that simply competing at this level, an elite international level, opens so many doors.





## Holding the ring on excellence

What is clear to me is that WorldSkills UK holds the ring on excellence. It knows better than anyone else what excellence in skills looks like. It leads the way on best practice because it must achieve exceptionally high standards in order for Team UK to win medals when competing against the strongest nations from across the globe.

In the UK we have got some of the most skilled young people in the world, who are taught by experts whose knowledge is second to none. But all too often they don't get the recognition they deserve. We've always struggled with the difference between how academic education and skills education are perceived by the public. Too many people still see skills as being second best; if you're not good enough academically, you go into a skills-based occupation. That is not the case and that perception must change. Academic and skills education need to be operating on a level playing field.

I can say from my own experience that skills competitions showcase young people with exceptional talents. So why do so few people know about them? Let me be honest: I was elected to Parliament in 2005, and it wasn't until I became apprenticeships and skills minister 12 years later than I first heard about WorldSkills. And it's a problem that goes beyond skills competitions. Many MPs have limited understanding of further education generally. We have to correct that. There are some promising signs that the government is waking up to the importance of skills. It was left with little choice: it seems sadly inevitable that, as the economic impact of the COVID-19 pandemic becomes more pronounced, thousands of people will lose their jobs in the coming months.

Further education can offer a solution. As the Prime Minister put it back in September: "We're transforming the foundations of the skills system so that everyone has the chance to train



and retrain.” We have the perfect opportunity to raise the profile of skills education in general – and WorldSkills must be central to this. The country needs to realise that white-collar jobs are not necessarily superior to jobs which involve a multiplicity of skills. And this realisation has to start in Westminster. A lot of people at senior levels of government and the civil service have benefitted from a university education, and I have no doubt that in the past that has had an impact on policymaking, because that is what they know and understand.

**“We have the perfect opportunity to raise the profile of skills education in general – and WorldSkills must be central to this.”**

So how can we raise the esteem in which technical education is held? The answer, in my view, is straightforward: it comes down to money. What you value most, you invest most in. Further education has long been underfunded; adult education in particular has dropped even further behind. This cannot be allowed to continue. People take notice when you back your words with money. However many millions are getting pumped into the latest initiative for most people, these numbers are meaningless. What matters is the relative spending: how much is further education getting in relation to schools and higher education? Only by significantly increasing our investment in skills can we achieve parity of esteem.

How this funding is spent – and who these decisions are made by – is also critical. Without doubt some of the money that goes to FE could be devolved to local authorities and combined mayoral authorities. When we devolved the Adult Education Budget to some regions of England, it was fascinating to see how different areas were starting to use the

budget. And devolving the Adult Education Budget was an important step. Not only were the local authorities doing very different things with the money, but they were also taking decisions that central government would have found it very hard to make. It was an opportunity for them address the skills shortages in their local areas, which they understand better than anyone. They are very well placed to make those decisions.

## **Going mainstream**

One area in which I would like to see WorldSkills UK and the combined authorities collaborate would be in promoting skills for adults. WorldSkills UK is a way of demonstrating what young people under the age of 25 can achieve. WorldSkills UK's next challenge could be to demonstrate what adults can achieve through running skills competitions for adults over 25. WorldSkills UK is the arbiter of excellence in standards of technical education, and we need to mainstream it – to people of all ages.

Alongside this, we must not forget the role of pre-16 education in preparing young people for the world of work. One of the saddest things that stuck with me from my ministerial time in office was hearing time and time again about businesses' experiences of hiring school leavers who were not work-ready. By the age of 16, you should be able to go for an interview and give a good account of yourself. This is a fundamental skill. You must be able to speak to people, turn up on time, dress in an appropriate way and so be able to give yourself the best chance of getting the job. Teaching these basic life skills is vital. English and maths skills are also essential. A minister from Singapore I met in Abu Dhabi was clear that one of the pillars of their successful technical and vocational education system was high standards in English and maths. This is something we haven't yet got right in England. We want young people to achieve a strong standard in both subjects, but the GCSE resits policy can lead to young people repeatedly sitting exams and repeatedly failing which can have a very detrimental impact on their confidence and self-esteem. Functional skills qualifications



help with this but we need to continue to strive to find a better way of getting young people to develop and improve.

Much of the preparation of young people for international skills competitions involves building confidence and self-belief. But not only does international success transform the lives of the competitors, it can also play a major role in the narrative of a nation's approach to skills and technical education. Team UK does very well in the medal tables in WorldSkills and EuroSkills competitions, consistently placing the UK in and around the top 10. As a nation, we punch well above our weight for every pound spent. And if the government is serious about its stated ambitions, what better way to represent this than bidding to host the WorldSkills competition on UK soil?

Prior to the pandemic-related disruption, the question of whether the UK should bid to host the competition was being considered by the

Government in consultation with WorldSkills UK. I am 100% behind the bid – and if we are going to bid to host WorldSkills, we must do this on a large scale. It needs 100% government backing, it needs to be big and it needs make a statement about how we value skills in this country. Thinking back to Abu Dhabi, the gala dinner took place on the start line of the Grand Prix circuit – it truly doesn't get much better than that and says much about the value Abu Dhabi placed on the competition. Last year, Kazan upped the ante by having Russian president Vladimir Putin address 50,000 attendees inside a packed football stadium. And WorldSkills Shanghai promises to be even more spectacular. If the UK is prepared to back a bid and rally behind it, just think what a message this would send to the country and the world about the importance and value of skills to the UK economy. This is a chance we simply cannot afford to miss. ■





# Understanding excellence

**Dr Susan James Relly** is Director of SKOPE, and Associate Head (Education) for Social Sciences at the University of Oxford

A skilled workforce is the backbone of any society and economy. The pandemic of 2020 has highlighted the importance of robust skills formation systems as workers have deployed knowledge and skills rapidly to deal with the medical, social, and economic situation working towards recovery. Moreover,

this pandemic has wrought many changes to our lives, some positive and many others negative. In particular, young people have fared worse than most. Their learning, whether through work, college, university or school, has been greatly impacted. All the while, the UK economy has been hit badly;

opportunities in the labour market that once were there are no more.

It is tempting to think that COVID-19 is the root cause of many of these problems but in actuality the pandemic has only highlighted long-standing challenges in our technical education system. These include, but are not limited to:

1. A problem of prestige – a lack of general understanding of the purpose of technical and vocational education.
2. Structural inefficiencies – constant reforms and changes have eaten away at resources, funding and qualifications in technical education.
3. Teaching and teacher education in technical education – a lack of understanding around issues of demand, development, supply and deployment in further education.

Underpinning these challenges are two threads: quality and standards. They run through all the issues surrounding delivery of a high-quality professional and technical education system. Recent research has shown that critical to successful vocational education and training systems are the way the education and training workforce is structured and supported, the kinds and levels of CPD available, and the expectations of ‘teaching excellence’ that are embedded in the system (James Relly, 2019). However, technical and vocational education and training systems in countries the world over are facing a number of difficulties.

The importance given to these issues varies significantly across countries, political persuasions and economic circumstances. Some of these systems even conceptualise excellence within their TVET systems. As a consequence, there are many lessons to be learned in how various countries are developing innovative strategies, nurturing and resourcing these education and training systems, encouraging workforce development and dealing with structural and operational challenges. Through understanding the experiences of, and gaining insights from, the way that other countries are pioneering ideas and developing the skills of

their technical education workforce, lessons can be learnt for the UK.

## What the research says

And yet there is a strong UK evidence base for how a world-class skills system can be built across the four nations. WorldSkills UK has for a long time been at the forefront of promoting, fostering and delivering quality and standards in the UK’s technical education system through the active promotion of policy based on high-quality research. To that end, they sponsored a suite of projects to understand better how vocational excellence is developed. Given the recent government and policy emphasis on technical education’s role in (re)building a skills-led recovery and improving standards, it is timely to revisit the key findings from the research to understand not only how far we have come but how far there is still to go.

“...there is a strong UK evidence base for how a world-class skills system can be built across the four nations.”

What follows is a synthesis from seven research projects, including the one mentioned above, conducted on various elements and aspects of WorldSkills. The WorldSkills competition is recognised by many as the pinnacle of excellence in TVET. These competitions provide a benchmark for high performance and an objective way to assess vocational excellence. They also provide an opportunity to research the various dimensions of vocational excellence.



The Developing and Understanding Vocational Excellence (DuVE) research began as a legacy project after London hosted the WorldSkills international competition in 2011. The DuVE suite of six projects consisted of:

- **Project 1:** Modelling the characteristics of vocational excellence
- **Project 2:** Learning environments to develop vocational excellence
- **Project 3:** Benefits of developing vocational excellence<sup>1</sup>
- **Project 4:** FE college participation in skills competitions: costs and benefits
- **Project 5:** WorldSkills contestants and entrepreneurship
- **Project 6:** Training managers: benefits and barriers to WorldSkills UK participation<sup>2</sup>

Each of these projects helped to address the following over-arching questions:

- What are the characteristics of individuals who excel?
- What kinds of support enable the development of high-level vocational skills?
- How can vocational education be structured to aim not just for minimum standards, but for high achievement that reflects world-class standards?
- Can broader societal and organisational benefits to developing vocational excellence be identified?

<sup>1</sup> Projects 1, 2 and 3 build upon the MoVE research conducted at WSC London 2011.

<sup>2</sup> Projects 4, 5, and 6 began in October 2013 and were conducted through the 2014/2015 competition cycle.



This suite of projects provided an actual research base to increase theoretical and practical understanding of vocational knowledge and skills development. It allowed for an understanding of what does and does not work, and provided a platform for practical application of the research findings, for example, in terms of creating high-quality workplace learning provision or ensuring the benefits of WorldSkills competitions were more widely understood. The young people competing in WorldSkills competitions are inspiring and much can be learned. These studies provided a research baseline for future research development and some of the findings have been built upon, for example in the report, *Good people in a flawed system: the challenges of mainstreaming excellence in technical education*. However, it is often beneficial to revisit the lessons learned, identifying gaps that still need addressing. In this respect it is timely to reflect on the findings from the DuVE research to ensure that we truly are 'building back better'. In considering the research findings, three key areas seem pertinent for discussion: capacity building; infrastructure and support; and world class standards.

## Capacity building

WorldSkills competitions involve many stakeholders. Their participation and involvement contribute to the capacity building of the wider TVET system. Individuals develop vocational skill and knowledge in the workplace, school and/or college through the direct and indirect guidance of more experienced people; they are part of a community of practice influencing each other and the systems or communities of which they are a member. It is the attributes, attitudes and values of individuals and their interactions with others and with their environments that underpin the development of vocational excellence in these systems. Students, competitors, teachers and training managers sit at the heart of these learning communities. It is imperative that further education teachers and employers are provided with the resources – be it through continuing professional development, training or resources (both physical and financial) – so that capacity can be built

**“Facilitating knowledge exchange between colleges regarding different ways of being involved in competitions is imperative.”**

into a system. It is this way an enduring system can be built; one that is not plagued with under-funding, difficulties in recruitment and a lack of supply pipeline of enthusiastic young people for the teaching workforce.

## Infrastructure and support

The level of investment in Team UK is significant in terms of time and finances. This investment provides results. Achieving these results stems from the involvement of people from all elements of the community. While the DuVE research showed that some aspects of the infrastructure and support still needed development, there were many areas where the infrastructure and support around skills competitions was having an impact on the wider system. For instance, many colleges have in-house competitions embedded in the curriculum. Some participate in local, regional and national competitions, and competitions are now an aspect of the Ofsted Common Inspection Framework. And yet, there is still some way to go before the infrastructure and support needed to deliver a world-class technical education system is in place.

The research showed that while skills competitions are an active element in a number of colleges, they are still not widely known across the whole further education sector, or indeed more widely outside the sector. This needs to change. Facilitating knowledge exchange between colleges regarding different ways



of being involved in competitions is imperative. The WorldSkills ambassador network is helping to facilitate this process. Another key aspect is facilitating knowledge exchange between colleges to learn how other colleges fund their participation. This exchange would be particularly valuable to colleges just embarking on more competition engagement, as this challenge is one all colleges face regardless of their relative levels of involvement.

## World-class standards

The vocational route is often compared to higher education, the so-called 'golden route', in terms of parity of esteem. WorldSkills competitions show this comparison to be a red herring: young people competing on the world stage need no comparators. The vocational arena and the route from which these competitors have developed their knowledge and skill provided a solid base from which to progress to Team UK. There is much good practice evident with some learning providers using the world-class standards derived from the WorldSkills competitions, and the knowledge and skill of the training managers who were based in those colleges, private training providers or higher education institutions being deployed in curriculum development and CPD. This sharing of knowledge offered positive experiences for students and staff alike through encouraging curriculum development that incorporated WorldSkills standards.

Many benefits of participating in skills competitions, from local through to international, were identified in the research projects. Importantly, skills competitions have the potential to contribute to improving the attractiveness of TVET by raising awareness about vocational occupations and helping young people understand that the vocational route can lead to a rewarding career.

## Conclusions

'Building back better' was important before the pandemic, with ever-increasing job losses and rising youth unemployment. Now, it is even more imperative if government's calls for a skills-led recovery are to amount to anything. Investment is necessary, as one training manager interviewed for the *Good people in a flawed system* research succinctly stated:

*"Yeah, [the Olympics] used to be a complete joke in the seventies and the eighties and you occasionally got one or two medallists, and then what happened? They started putting money into it, they started investing in it and they realised the importance of sports and how it can benefit the whole country, and if they realised the same thing with training and competitions and things like that, you never know, they might start putting the money in there."*

It is often an academic's fear that their research will live its life gaining dust on a shelf. It is pleasing to see that many of the recommendations from the DuVE and 'Good people' research have been considered. We can see this in the formation of the Centre of Excellence through WorldSkills UK and NCFE, a project designed to bring together expertise in curriculum development and global skills systems to develop excellence into mainstream education. It is investment of this kind that is necessary, built from a solid research base, that brings the UK closer to developing a world-class technical education system. ■



# *Case study:* Toyota Manufacturing UK

**TOYOTA**  
MANUFACTURING UK

Toyota Manufacturing UK has plenty of experience of what excellence on the world stage looks like. It has celebrated numerous successes for Team UK in international WorldSkills competitions in the mechatronics category since 2015. Andy Smith and Robyn Clarke were the first representatives from the firm to achieve Medallions of Excellence in WorldSkills Sao Paulo 2015. Apprentices Sam Hiller and Tom Revell then brought home a

bronze medal from EuroSkills Gothenburg 2016 followed by a Medallion of Excellence from WorldSkills Abu Dhabi 2017. And the duo of Danny Slater and Jack Dakin repeated the feat, claiming a Medallion of Excellence in Kazan 2019.

Toyota's involvement with WorldSkills came about after it was challenged by its parent company to demonstrate premium quality





and premium skill, in order to stand out from its competitors in the automotive industry. The company felt easily able to demonstrate premium quality through its products. The problem of how to demonstrate skills excellence, however, was more complex. What was it about Toyota's workforce that set it apart from others in the industry? Toyota realised that it could demonstrate the excellence of its workforce by pitching them against the rest of the world in competitions. But the relationship has had far deeper consequences on Toyota's business, including the development of the apprenticeship trailblazer and future developments of qualifications for the industry.

In 2013 Toyota started a benchmarking exercise to gauge the skills of its current workforce against the best in the UK. The level 3 apprenticeship is the core currency of skills development but Toyota wanted something more. The benchmarking exercise identified gaps in skills,

which were marked as quick remedy areas, and skills closure began with a programme of development.

Next, Toyota's senior specialist attended skills competitions to identify further skills gaps between the best in the company and the best in the UK. The firm spent six months on improving its skills levels in areas such as work accuracy and speed improvement, until it was confident that its workforce was as good as the best in the UK. Having proved it could compete nationally, the senior specialist then looked at the standards of international skills competitions to raise the bar even higher. Japanese colleagues were involved, to make sure that the highest global standards were being applied. Using the competition framework, further skills were integrated into the apprenticeship framework. Once this was complete, Toyota then felt confident to enter international competition. The rest is history.

Competition training now takes place alongside the training of apprentices, at a workstation placed right in the middle of an open plan work area.

### Culture shift

There has also been a marked shift in workplace culture. Competition training now takes place alongside the training of apprentices, at a workstation placed right in the middle of an open plan work area. All the apprentices can see what the competitors are doing and there is continuous dialogue between the competitors and the rest of the apprentices. Everything



the competitors are doing is needed on the shop floor; competitions are driven by and for the business. Because of their involvement in WorldSkills competitions, the two competitors from 2015 are now working in design and have graduated with a foundation degree.

## The standards of the test project in international competitions and the quality within the marking schemes have fed back into raising quality within the apprenticeship framework.

Competitions enhance standards in apprenticeships by setting extra challenges. This mirrors what UK businesses need to do in order to thrive in a domestic and global economy. The businesses that are complacent are least likely to succeed, those that set themselves challenges are more likely to succeed.

The standards of the test project in international competitions and the quality within the marking schemes have fed back into raising quality within the apprenticeship framework. This could be trained elsewhere but Toyota wants to learn it from the best in the world. Competitors have done pressure testing in Japan and elsewhere. The managing director of Toyota UK came to Sao Paulo to support the mechatronics team, creating a buzz within the company. The senior specialist travelled the world with the competitors in order to bring back standards of excellence into the company.

Toyota's experience informed the development the mechatronics apprenticeship trailblazer. Toyota's Andrew Parsons was

vice-chair of the trailblazer steering group and brought his experience of how the company had accelerated skills development and standards into the trailblazer process. It is clear that both WorldSkills and the apprenticeship trailblazer have influenced the other, resulting in a high-quality product. The WorldSkills project is at level 6. The apprenticeship is at level 3. The emerging foundation degree is at level 4. Practice and standards have been transmitted between all levels, and it is clear from the number of similarities that WorldSkills standards have influenced the content of the apprenticeship.

An example would be that, in competition, points will be awarded for conducting work in an environmentally professional manner, respecting others' workspace. This requires a high level of self-motivation and management as well as specific skills in restoring the work area. Within the apprenticeship, this is translated into a risk of a minus point if litter is scattered in the area and the apprentice being expected to apply occupational behaviours such as a quality focus, adaptability, self-motivation and commitment.

The company's apprenticeship manager puts increased applications for apprenticeships down to the raised profile since taking part in WorldSkills. Everything done in competitions is done for the business, it is not seen as an 'add on'. ■

## The company's apprenticeship manager puts increased applications for apprenticeships down to the raised profile since taking part in WorldSkills.



# Excellence and leadership

**David Gallagher** is CEO of NCFE

Upon being asked if I would write an article on excellence in technical education, it initially got me thinking: “What can I possibly say about it? I’m not a teacher or an academic. Yes, I’m a leader in education, but surely others are better placed than me?” After those momentary thoughts of self-doubt,

my thinking turned to: “Ok, so what do I know about? Where can I add value? Have I ever been up close and personal to excellence? And from this, what can I share that might help others?” And that’s when the kernel of an idea for this essay came to me. Excellence and leadership.

Don't be put off: this wasn't a self-indulgent and self-congratulatory moment of believing that my leadership was, or is, excellent. I'm still very much in the early stages of that particular journey! It was on the basis that I've benefitted massively from working with, listening to and learning from truly exceptional leaders throughout my career.

And here, I suppose, is the first lesson in how leadership can stifle excellence. Ego. We've all got one. And yours can squash others. I know mine has at times. Manage yours as best you can, and ask others to help. I literally ask that colleagues tell me when they think my lofty organisational altitude is starving my brain of the oxygen necessary to maintain an appropriate level of groundedness. Also be careful of false modesty: its disingenuous nature can make people queasy and uneasy.

My experience has taught me that, for excellence to prevail, a culture of excellence is required. And, as I've always thought that it's true what they say about culture 'coming from the top' of an organisation, what better topic than excellence and leadership? These initial musings got me to thinking about experiences that had shaped my views on leadership. My mind was drawn towards two contrasting yet reconcilable mindsets that I believe that leaders need to carefully balance in their endeavours to engender excellence: self-efficacy and self-doubt.

### The odd couple – part one

In 2017, I was a little surprised to find myself at a rather swanky London venue for the Chartered Management Institute's President's Dinner. Not bad for a boy from 'Boro (Middlesbrough, for you non-football fans!) without a degree, I remember thinking to myself. The event was memorable. First, I found myself standing 10 yards away from HRH Prince Philip as he gave one of his final addresses before

retiring from public life. Second, listening to Sir Charlie Mayfield's after-dinner speech completely changed my perspective on leadership, as well as on something that holds so many back in achieving their life's ambitions – self-doubt. I'll come back to this after exploring the other half of these oddly related outlooks.

Long before I knew what the term self-efficacy meant, I knew what self-efficacy meant. I vividly remember my dad saying to me before many a football game when I was young: "If

you think you're going to lose, you'll lose", with that good old reverse psychology style that many a parent adopts. At the same sort of time in my life I seemed to be learning the art of visioning, without really knowing that I was doing it. Like many kids, I'd imagine myself smashing in a goal in a Wembley final or beating my brothers and sisters at Monopoly or winning the 100m race on sports day. In fact, as I think back, I must have spent an inordinate amount of time thinking about winning something. Anything, in fact. I feel that I was incredibly

fortunate to be born with the mindset that I could positively affect my future, although nurturing parents and merciless siblings certainly played their part too.

Looking back, I can now see so many environmental ingredients that played a part in my self-efficacy. Seeing what excellence looked like in so many situations. Playing and learning both with and without pressure. Learning how to lose. Winning and craving more. Positive, confident role models around me. People who would take the time to listen, to explain and to guide. Feedback, both reassuring and, at times, brutally harsh. Knocks, falls, trips and slips, but nearly always knowing that I was safe in my surroundings.

Ironically, it was while I was at the peak of my sporting excellence (which was more of a big hill than an Everest, I might add) when

**"My experience has taught me that, for excellence to prevail, a culture of excellence is required."**

I was surrounded by outstanding individuals within a successful football team (as measured by the win, draw, lose columns) that my confidence and self-efficacy fell to an all-time low. To this day, I've never fully put my finger on why this was. Maybe it was the belief that so many others were much better than me. Maybe it was the feeling that some of the team didn't have my back. Maybe distractions at home and school played their part. Plus, I'm sure that my rubbish diet didn't help. Maybe it was all of the above.

Towards the end of this experience I'd completely given up on my footballing dream. The visioning went at around the same time. Dreams of obtaining a level of excellence in anything I did faded into obscurity. I get the sense that this happens to most people at different stages of their lives and maybe many times over. Dreams are forgotten and not always replaced. Without dreams, there isn't a picture of a better future. And that's why I think it's crucial that leaders and, coincidentally, educators help people to dream. Even more importantly, help those dreams to be realised.

Whatever the reasons for the decline of my belief in a better future, the experience later taught me that excellence could be hard to understand, hard to obtain and – arguably – even harder to sustain. When I look back at what cultivated or compromised my self-efficacy when I was young, it seems just as pertinent now in business and in leadership.

### The odd couple – part two

So, back to self-doubt and my night with Sir Charlie and the King (well, sort of. It sounds better). Most of my career, I'd heard leaders and those who I looked up to say things like: "Believe in yourself", "You can do it" and "Have

no doubts". This built on my childhood of hearing: "Be strong", "Get up, run it off" and "Get over it". Confidence was strength. Without supreme confidence and strength, surely becoming a high achiever was out of reach? As Mr Mayfield's speech unfolded, it completely blew my mind. The secret ingredient in his success? You guessed it. Self-doubt. Just the right amount of self-doubt. My instant scepticism was quickly replaced by a feeling that what I was about to hear would change my world

view. And in the process, I'd get to understand myself that little bit better. Of course, by this time I understood that a healthy dose of self-awareness never goes amiss in the pursuit of excellence, so, I fully tuned in.

Sir Charlie went on to describe how, for as long as he could recall, he'd always had a little self-doubt. Was he good enough? Was he well prepared enough? Would others be better? What if he got it wrong? But, contrary to the popularly held belief, this had played a key role in enabling his incredible success, not inhibiting it. Interestingly, he also said that for most of his career he'd felt that he needed to hide this self-doubt. How many do the same, to their detriment, I wonder. He went on to elaborate about how he'd used his doubts

to improve and achieve. To focus his preparations. To push himself to work harder. To think ahead. To better himself. What he didn't say, but the impression I got, was that it had also helped to keep him humble and keep his feet on the ground. A leadership characteristic that, in my view, can help to distinguish the great from the good. Unlike so many who simply ignore or mask their self-doubt, Sir Charlie Mayfield had turned this oh-so-common 'flaw' into a performance-enhancing strength. Genius!

**"Without dreams, there isn't a picture of a better future. And that's why I think it's crucial that leaders and, coincidentally, educators help people to dream."**





This speech was an epiphany for me in more ways than one. As I reflected on this line of thinking over the following days it helped me start to feel at ease with my doubts. I allowed them to surface in my mind and I suppose I started to make peace with them. I started to see that openness to being vulnerable just makes you more human. And leaders need to be more human. I started to think about how self-efficacy and self-doubt were both crucial characteristics of great leadership and how I could go about finding the right balance between these rather contradictory characteristics. I thought about embracing strength *and* weakness. I thought about me a bit and I believe that I became more self-aware in the process. I thought about others and how their self-limiting beliefs were likely to be holding them back from fulfilling their potential. What a waste. I started thinking about what I could do about it.

### **Better yourself**

Let me take you back even further. It's the year 2000 and the name is Eric Moussambani Malonga. Now there's a name I bet you'll

struggle to place. But if you were of an age to remember the summer Olympics of 2000, you might just remember the nickname "Eric the Eel". In a nutshell, Eric won brief international fame due to an extremely unlikely victory. Having never previously seen an Olympic-sized swimming pool prior to his heat of the 100m freestyle, Eric won his heat. Admittedly, it was after both his competitors were disqualified due to false starts, but it doesn't take away any of the romance of the story. Unfortunately, Moussambani's time was too slow to advance to the next round, but he did set a new personal best and an Equatoguinean national record in the process. In doing so he also won the admiration and adoration of millions of people from across the world. His courage, tenacity and sense of joy in participating were truly inspiring.

Whilst most of us simply love a good underdog story, this isn't the point of this heart-warming reminiscence. It's about excellence. It's about the importance of access to 'striving for excellence' opportunities for everyone, whatever their starting point. Because that can be the spark that ignites the ambitions of countless

others who don't realise that it's for them too. It's about recognising that the achievement of a 'personal best' could and should be more meaningful than taking home the gold. It's about taking inspiration from those brave people who are willing to 'give it a go' when the odds are so heavily stacked against them. And we need more inspiration in our leadership, for our educators and in our education system as a whole right now. It's about calling out that whilst our traditional means of assessing excellence, in this instance a medal, can be hugely motivating and entirely appropriate, it's not the only way in which excellence should be measured and recognised. Success can be subjective. Achievement is deeply personal. In the words of the late, great educationalist Sir Ken Robinson, we should, "recognise people's individuality, recognise the great diversity and depth of people's talents, recognise that people are full of boundless possibilities".

**"recognise people's individuality, recognise the great diversity and depth of people's talents, recognise that people are full of boundless possibilities."**

On examining Eric's endeavours, I found enlightenment for excellence in education. And these words are for leaders, educators and learners alike: when you get an opportunity to excel, take it. And enjoy it. You might feel out of place, but you can almost guarantee others do too, so save the blushes. The reality is that you've probably earned the chance, so make the most of it. It's also important to remember that your most "worthy rival" (as Simon Sinek would describe it) might just be

yourself. In a world where there are too many destructive, divisive and rivalrous games, shifting the focus from outdoing others to outdoing yourself could liberate you from losing. It can free you from false applause for your rivals and bring back humanity to competition. Just maybe, finding camaraderie with your competitor – whether in sport, business or life – can help to bridge many of the divides that we see in the world today. So, choose yourself as your benchmark. Then better yourself. Every day, if you can. A better you makes a better world.

## Art and soul

So, what does all this mean for leading excellence? I'll start in the abstract and work towards something more actionable. If management is the science, then leadership is the art and culture is the soul. If you want a culture of excellence, you've got to understand and nurture all three. First, management: standards, benchmarks, targets, measures, data, processes, formulas... These things are of crucial importance in establishing what success looks like and knowing when you've got there, in codifying and quantifying excellence. Trust the science! But don't live under the illusion that science alone will create exceptional results.

When reflecting on leadership, the words of the famous business and leadership guru Peter Drucker seem most relevant: "Leadership is lifting a person's vision to high sights, the raising of a person's performance to a higher standard, the building of a personality beyond its normal limitations."

A vision is a picture of a better future. And who doesn't want that? "Beyond normal limitations": isn't that why we're in education in the first place. Drucker speaks to a higher cause. Have you got sight of yours? Purpose, vision, values and beliefs are not just a suite of management speak tags, they truly are the characteristics that need clarity and cultivation for a culture of excellence to flourish. Within them I find my inspiration and my cause – excellence in education for everyone. If you haven't done so already, hopefully these words will help you to find your cause too. ■





# Establishing excellence

**Ekaterina Loshkareva** is R&D Director and a member of the Supervisory Board of WorldSkills Russia

When Russia joined WorldSkills in 2012, it marked the start of a long journey. We will celebrate the 10-year anniversary of this milestone in the development of skills development in Russia by hosting EuroSkills 2022 in

St Petersburg. WorldSkills has been one of the major tools we have used to shape the skills development system in Russia. At its heart are its global standards of excellence and assessment methodology.



Russia's first international competition after joining WorldSkills was Leipzig 2013. At the time, our authorities and decision-makers were quite sure of the excellence of TVET and skills development systems in Russia – and were rather surprised when the country ended up in 41st place out of 52 teams in the final medal table. This shock result proved to be the impetus for a complete overhaul of Russia's skills system.

The first step was the establishment of regional competitions. This created competitiveness, not only between students but between regions as well. It gave an incentive for regional authorities to invest to ensure they could perform strongly at a regional and, ultimately, national level. The initial set of results, however, was not promising. At the Agency of Strategic Initiative, we created a spreadsheet to capture how well the different regions had performed. Depending on how many participants in each region achieved WorldSkills standards, the cells were coloured green (for the best performers), yellow or red (for the weakest). The results weren't pretty: the document became known as the "bloody table" because of the amount of red on it. However, it proved to be a fair assessment of our starting point. From that moment onwards, our primary target was to engage all regions of Russia in a process of continual improvement.

The second target was to involve industry. This is one of the core elements in TVET development, so our task was to bring the biggest employers into the movement, get them interested and secure their support. To achieve this, we created WorldSkills Hi-Tech, a new competition between businesses. When it launched in 2014, there were 160 competitors and 141 experts across 11 different skill areas. By 2019 this had expanded to 738 competitors, 670 experts and 48 skills.

Today WorldSkills Russia has more than 180 partner companies. It was important for us to get the support of employers. Industry, of course, is one of the main beneficiaries: the better skilled the employees, the stronger the performance of the employer. Later, WorldSkills Hi-Tech gave a birth to corporate and sector-specific competitions in fields such as digital, agro, logistics etc. The whole process is supervised by the Industrial Council made up of HR directors.

**"...the heart of one of the fundamental pillars of the WorldSkills movement: the importance of the expert trainer."**

### **Embedding changes**

We haven't just focused on adults already in work, though. In 2014 we launched the WorldSkills Juniors project. We suggested that schoolchildren not only watch the competitions but compete, try different skills for themselves and see how it works.

The next important step was bidding to host WorldSkills 2019. For us this wasn't simply about hosting an international event; on our

journey towards achieving excellence, we were determined to use the event as an instrument for development and a milestone for the structural changes that were already in train.

In the same year, we launched our Future Skills project to explore the key global trends and changes in the world of work, along with the implications for skills education. These findings led to the creation of WorldSkills Kazan's Future Skills zone, which hosted competitions in emerging, hi-tech skill areas not yet included in the main WorldSkills contest. These cutting-edge skills were also incorporated into new and updated education programmes in Russia. It is crucially important that Future Skills is a full-cycle process: starting from foresight and research, being embedded into competitions it leads to the changes in the educational process.

2017 also saw the launch of a few more projects that became essential for WorldSkills Russia and the whole Russian TVET system. The first was a launch of the 'demonstration exam', a method for independently assessing a learner's skills in accordance with WorldSkills standards. In Russian TVET colleges, it is the final exam in a programme of study. The project was piloted in 244 educational institutions across 26 regions. In total, 13,999 students were assessed using the demonstrational exam; only 17% of them met the WorldSkills Russia standards. Thanks to government funding for training and infrastructure, the number of students who carried out demonstration exams in 2019 more than trebled to over 50,000, spread across 1,265 separate TVET institutions. This time, the proportion who met the WorldSkills standards had doubled to 34%.

Another important project in 2016 was the retraining of 750 masters of vocational training in line with a new framework put in place by the Russian Ministry of Labour. This goes to the heart of one of the fundamental pillars of the WorldSkills movement: the importance of the expert trainer. In our system, this person is in charge not only of competitors' training and assessment, but also serves as an ambassador for skills development and promotion of high standards in both the workplace and the classroom.

In 2017 WorldSkills Russia Academy was established to provide professional training for experts, teachers and trainers. Another initiative launched around this time was WorldSkills Russia's university league. After witnessing the impact of WorldSkills in Russian TVET, we decided to see if it could have a similarly beneficial impact on the higher education sector. Between 2017 and 2019, 7,835 students from 167 universities participated in 257 competitions (either internal or between institutions) across 51 skill areas. Some universities also started to implement WorldSkills standards into their teaching, including the demonstration exam.

## The skills of the wise

But we did not stop with university students. In 2018 we launched the "Skills of the Wise"

# 13,999

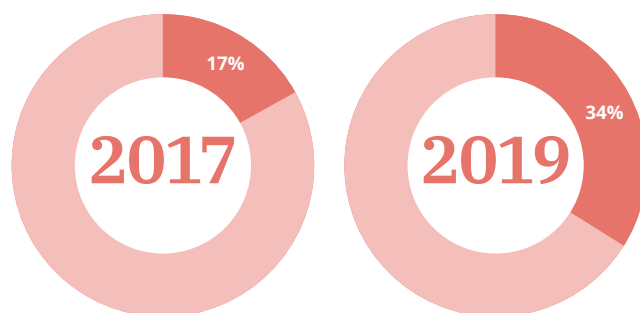
The number of students who carried out demonstration exams in 2017

# >50,000

The number of students who carried out demonstration exams in 2019

# 1,265

The number of separate TVET institutions the students were spread across (in 2019)



Proportion of students who met the WorldSkills standards

competitions for the over-50s. The first final attracted more than 130 competitors. The project expanded the following year when WorldSkills Russia began to operate the federal programme of vocational training, working with 25,000 pre-retirement citizens (workers within five years of retirement age).

Through implementing and mainstreaming the best international and domestic training practices, WorldSkills Russia has been able to achieve significant changes in the country's skills system. Today WorldSkills competitions are held at all age groups, from schoolchildren up to workers without any age restrictions. Each year 40,000 students take part – with the support of 31,000 trained experts. These wholesale changes have had a marked impact. Today, 59% of schoolchildren move into vocational education, compared to 42% in 2013. New skills specifications for competitions and demonstration exams are being developed

with industry partners, including both large employers and start-ups. As a result, there are now more than 200 skills in WorldSkills Russia's portfolio.

More than 1.5 million people have attended competitions – including, crucially, parents, who influence the education choice and career development of their children. Demonstration exams have been introduced into the state final certification procedure in vocational educational organisations, in accordance with an order of the President of the Russian Federation, becoming an essential part of the education system in the process. More than 700 enterprises participate in organising and conducting the demonstration exam, and recognise the results. Over 14,000 WorldSkills experts and 60,000 demonstration exam experts have been trained in the WorldSkills Russia Academy and continue to advocate for its standards of excellence in schools, colleges and workplaces.



And it's impossible to overlook the impact of WorldSkills Kazan 2019: 270,000 spectators. Coverage seen by over a billion people across the globe. Over 1,200 conference participants, including 43 participants of the Ministers Summit. These numbers tell us, our stakeholders and the rest of the world that we must be doing something right. And the competition has left a legacy, with 1.3 billion rubles (£12.9 million) of equipment purchased for competitions later being transferred to TVET institutions.

In addition to this, it was important for WorldSkills Russia to become a WorldSkills Capacity Building Centre. This provides us with the opportunity to make an active contribution to the global skills development agenda by implementing different projects with other members and sharing our experience. Without doubt, WorldSkills Kazan 2019 helped us transform skills development in Russia.

In 2020, 600 companies that have been involved in WorldSkills Russia projects were surveyed, in order to ascertain the impact of WorldSkills standards on industry. The results were impressive: 86% of respondents expressed their satisfaction with the results of their cooperation with WorldSkills. Companies are implementing standards in their business processes and training, delegating their employees to participate in demonstration exams as experts or tutors, and participating in the competitions. The most frequently cited impact of WorldSkills mentioned by the participants was in human resources: the development of soft skills, the opportunity for a more qualitative staff selection, a reduction in retraining costs and an increase in employees' motivation. Of the employers with first-hand competition experience, more than 80% said that participation increased the productivity of employees, while 74% found the same outcome from the demonstration exam.

## The next level

On February 14th 2020, WorldSkills Russia was reestablished as the Skills Development Agency (WorldSkills Russia), by the order of the government of the Russian Federation. This new



“One of the primary goals of the new agency is to ensure Russia has 3 million professionals meeting at least one international WorldSkills standard by 2030.”

status raised the profile of the organisation and increased its scope of activities. One of the primary goals of the new agency is to ensure Russia has 3 million professionals meeting at least one international WorldSkills standard by 2030. In addition to the existing portfolio of WorldSkills Russia, the agency has taken on a number of new areas of responsibility. These include: careers education; developing a new working culture to improve workplace productivity; supporting social mobility; developing professional and expert communities; research and development; and preparation for the introduction of future skills. Russia's Ministry for Higher Education and Science has become an important stakeholder. This development also reflects the importance of skills training, not only in TVET institutions but in higher education.

Like countries across the globe, Russia has been seriously affected by the COVID-19 crisis. Lots of jobs have been lost. WorldSkills Russia has been tasked with retraining 110,000 suffered from COVID-19 and it is planned to prolong and enlarge this programme for 2021. The pandemic has also hit the organisation's training and competitions, as competitors and experts have been forced to adapt to self-isolation and activities being moved online. Russia's national finals, which took place in September, utilised a new hybrid format

combining online technologies and traditional on-site activities. More than 3,000 competitors carried out their assigned tasks in centres all over Russia. These centres were equipped with 10,650 webcams, to allow supervisors to monitor competitors' progress and for assessments to be carried out remotely.

Ensuring the competition could take place successfully was arguably WorldSkills Russia's greatest challenge to date. However, it became the biggest one, not only in terms of the quantity of skills, competitors and experts involved, but also in terms of attendance (albeit virtual): 300,000 daily views over the course of the competition, and more than 3,000 attendees for the virtual conference programme.

110,000

The number of people WorldSkills Russia has been tasked with retraining for the workplace

>3,000

The number competitors taking part in Russia's national finals utilising a new hybrid online/onsite format

10,650

The number of webcams allowing supervisors to monitor progress and carry out assessments remotely

We believe in constantly pushing ourselves and adapting to changing situations. What a challenge it posed for our experts who, despite in some cases being physically present at the competition venue, still had to monitor proceedings remotely. We believe that lessons learned from this year will stand us in good stead for our next milestone, EuroSkills 2022 in St Petersburg. As always, we are ready to expand our work into new areas, set new goals and involve new people and communities, as we continue to move forwards in pursuit of excellence. ■



## *Case study:* **BAE Systems**

### **BAE SYSTEMS**

BAE Systems is a defence, aerospace and security company employing more than 34,000 people across the UK. The organisation views apprenticeships as essential to meeting current and future skills needs and in particular addressing STEM skills shortages in the UK, particularly in areas such as nuclear engineering, systems engineering and project management. High-quality teaching enables BAE Systems to achieve excellence and meet

industry and professional body standards, as well as to confirm competence and Suitably Qualified and Experienced Personnel (SQEP) status that is increasingly important in the defence sector.

Our apprenticeship pipeline is also crucial as we build a more diverse and inclusive company, which in turn makes us a more productive and competitive organisation. One of the

# One of the many advantages of apprenticeships is their **flexibility** to suit the learner.

many advantages of apprenticeships is their flexibility to suit the learner, and we now offer over 50 different standards. Over the past five years there's been a clear growth in higher and degree apprenticeships, which now represent around a third of our annual intake.

The requirement for apprenticeships is captured through a robust business planning process to ensure we match apprentice training output with the roles and skills required by the business through our strategic workforce planning. We also validate the value of our programme by measuring the return on investment our apprenticeships deliver; each of our employees delivers a full return on investment by the end of their first year in work after training.

Our commitment to apprenticeships is signposted by the fact that, despite the challenges of the COVID-19 pandemic, we are recruiting a record number of apprentices which will take us to over 2,300 in training. Apprentices represent around 7% of our UK workforce, and we have a very high completion rate of 93%. Training is incredibly important to us – we have a dedicated in-house training team and have invested over £50 million in new training

We are proud that our **investment** in skills **is reflected** in the excellent results achieved.

academies alone, providing dedicated learning spaces for apprenticeships ranging from the level 3 engineering technician apprenticeship to the systems engineering Master's apprenticeship at level 7.

We are proud that our investment in skills is reflected in the excellent results achieved. Our apprenticeship programme is rated outstanding by Ofsted, and around half of our degree apprentices graduate with first class degrees. Beyond formal delivery of the apprenticeship standard, we aim to provide an enriching and supportive experience for our learners – whether that's skills competitions such as WorldSkills and the Apprentice Innovation Challenge or Outward Bound and STEM Ambassador activities.

WorldSkills competitions give our apprentices a chance to showcase their skills and strive to improve them, competing with and learning from the best in the world. We're proud of their accomplishments and the trainers who support them to these standards of excellence, and see a wider benefit when they bring

## >34,000

The number of BAE Systems employees across the UK

## 2,300

The number of apprentices in training

## 93%

The completion rate of apprenticeships

## £50million

The amount invested in new training academies

their learning back into the business. Abigail Stansfield, an apprentice in our air sector who was selected to represent the UK at EuroSkills, reflects on how WorldSkills has complemented her learning:

*“Being a part of WorldSkills UK has helped my skills progress massively. It has improved my CNC milling, giving me the ability to work at a higher and faster standard at BAE Systems than I could before. Furthermore, **my personal skills have been developed further which has made me the confident person I am today.**”*

At BAE Systems behaviours are important, and participation in WorldSkills competitions encourages and helps our apprentices to develop the right behaviours, which will support them throughout the competition and prove an excellent basis for the rest of their careers.

## A changing model

With the introduction of apprenticeship standards, our model has changed from using traditional assessors to skills coaches, who manage apprentice performance and development in a more agile, tailored manner whilst providing comprehensive pastoral support. Each apprentice has a dedicated skills coach from their first day up until they complete their end point assessment, meaning they're uniquely placed to deliver a programme of guided discovery covering behaviours, business skills and applying their academic knowledge. Alongside the support of line managers, mentors and peers, this gives our apprentices the very best start to their careers.

The pace of technological change is faster than ever, and the digital transformation of Industry 4.0 has informed our investment in new academies and additional training for our apprentices. Apprentices are encouraged to experiment and explore the potential of these technologies in a safe environment, with access to collaborative robotics, intelligent

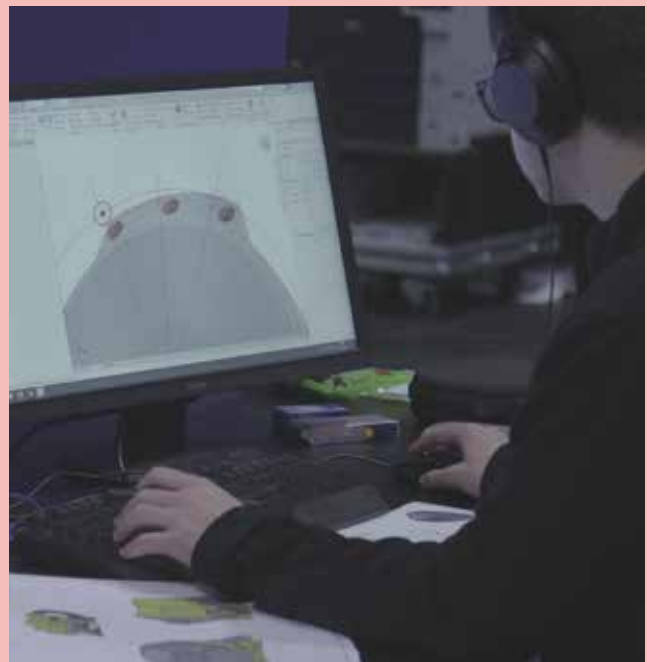




workstations, 3D printing technologies and digital twinning. BAE Systems operates at the leading edge of technology, and so it is vital for our apprentices to learn, operate and innovate in these environments. It provides us with the talent pipeline we need and gives our apprentices the best start to their careers.

In order to match these game-changing technological advances we have partnered with leaders in our sector to design and deliver new industry standards. This has resulted in over 20 new apprenticeship standards, covering key knowledge, skills and behaviours, transferable across our broader sector. Fundamental to this has been the introduction of 'behaviours', which emphasise the importance of how best to apply knowledge and skills to work effectively and collaboratively with others. The apprenticeship standards were developed in partnership with SMEs, ensuring they meet the needs of companies throughout the supply chain and across the UK.

Overseas customers  
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and skills models  
to strengthen local  
industrial capability.



Apprenticeships are also increasingly important for BAE Systems in its overseas bids and development programmes. Overseas customers recognise the enormous economic value in skills development for young people in their countries, and we have a track record of utilising our UK apprenticeship and skills models to strengthen local industrial capability. In Australia, as well as delivering a world-leading maritime platform, our Hunter Class programme has provided a bridge for us to share learning from our UK programmes to create and enhance capability in Australia, including investment in a new digital shipyard and associated skillsets.

The pandemic has created new challenges across society, and we were able to respond quickly and creatively to ensure there was no break in our apprentices' learning. This must continue if we are to guarantee the best experience for our learners, and we continue to learn, adapt and leverage technology to remain resilient during uncertain times. At BAE Systems, through our commitment to high standards of teaching and excellence in technical skills, we are creating a workforce ready to meet tomorrow's challenges. Our future apprentices will have the digital and behavioural skills to respond with agility and innovation, ensuring the success of our company and of UK plc. ■



# Striving for excellence

**Jennifer Coupland** is CEO of the Institute for Apprenticeships and Technical Education

The question of how to deliver high standards in the skills system has featured in UK public policy debates for a long time. The question's persistence speaks to certain intractable obstacles to success, but also to the sustained interest in initiatives that seek to upskill the British workforce, increase productivity and improve social mobility.

As if these issues were not critical enough to the future of our economy already, their importance has been rendered even more critical by the pandemic. At a strategic level, COVID-19 has brought underlying challenges in our economy sharply into focus. The fact that we were so reliant on other countries to manufacture PPE at pace revealed that we haven't sufficiently maintained our manufacturing

base. We have thrived in recent times via an economy dominated by service industries and COVID-19 has raised the question of whether that is the right long-term model for success. The country has also been buoyed by the outstanding contribution of our key workers in a range of sectors – health, social care, teaching, policing, transport and utilities, to name a few – which has demonstrated just how essential vocational skills are to the continued functioning of our society, and in many quarters this has raised questions about whether we are sufficiently valuing and incentivising access to these careers.

The pandemic has undoubtedly played havoc with the global economy, but we should not forget that many systemic challenges pre-date the pandemic. Many parts of the country are stuck in a low skill, low productivity equilibrium, attitudes to migration are changing and sectors that could rely on cheap labour from overseas can no longer do so and climate change is forcing a rethink in many sectors about the means and aims of production. All this is forcing us to address, finally, the big question of how the skills system should contribute to resolving these challenges.

Alongside others in the education sector, we have been forced to reckon with adjustments to our own policies and working practices. Lockdown and the move to remote working has created profound consequences for the thousands of learners and providers that we serve. Most notably, COVID-19 has forced a rethink on the delivery of end point assessments, an essential component of quality assurance in the apprenticeship programme. Nearly 600 employer-designed apprenticeships have been approved for delivery and over 300 of these are at levels 2 and 3. Thousands of employers have been pivotal to these achievements, providing crucial input at our trailblazer groups and route panels. For many of these apprenticeships, it became immediately apparent that social distancing measures would inhibit organisations' ability to conduct the crucial assessments. We would have to find a new way of allowing providers to establish whether a learner had developed the requisite skills to enter the workforce.

## Building in flexibilities

We were determined to act quickly, and we did just that. Since the lockdown began in March, the institute has offered around 120 'flexibilities' for end-point assessments. We safeguarded the quality benchmarks required for a learner to pass and succeed, but also allowed for the necessary adjustments to prevent the apprenticeship programme from grinding to a halt. We have committed to maintaining these flexibilities until the new year, providing learners, further education settings and providers with the confidence to conduct safe and rigorous assessments, regardless of any possible bumps that may lie in the road ahead. We'll be reviewing these flexibilities and building in improved approaches for good, where they've developed. We'll also be keeping a weather eye on infection rates before reverting to the pre-pandemic approach.

**“The fact that the majority of our trailblazers have actively continued to develop their apprenticeships during lockdown is an illustration of the value they place on having apprenticeships available to deliver future occupational competence.”**





More positively, employer engagement throughout the pandemic has been superb. The fact that the majority of our trailblazers have actively continued to develop their apprenticeships during lockdown is an illustration of the value they place on having apprenticeships available to deliver future occupational competence. We firmly believe this to be the case even if, right now, employers are unable to take on apprentices in pre-COVID numbers. Working with government, employers and our colleagues in the skills system to address this challenge will be the institute's focus for the coming years. Given this, I want to address the products that we believe will contribute to putting the country on track to delivering high standards in skills, starting with the introduction of T Levels from Autumn 2020.

We have every confidence that T Levels will provide a significant contribution to meeting the skills needs of many sectors across the UK economy. With some 70 years since A Levels became the foundation of 16-19 education,

the introduction of T Levels provides a new opportunity to establish a prestigious technical qualification. Alongside apprenticeships, they will enable young people to develop a strong skills and knowledge base to secure skilled employment, higher level apprenticeships or enter higher education.

The institute's employer-led focus is at the heart of the T Level programme, with employer panels responsible for the development of the initial content through to approval of the final qualifications. The employer thread has been critical to these new reforms, ensuring that the skills and knowledge required by industry, at every level, is built into T Levels leading to young people being able to enter the world of work and contribute to UK productivity from the very start of their careers.

Following the government's publication of the Skills Plan in 2016, the institute has established an efficient project-based approach to developing the qualifications. Roll-out of the 24 T Levels will take place across colleges and schools in England from 2020 to 2023. To ensure a clear focus on quality, the roll-out has been staged allowing for the first three T Levels to be adopted initially by a small number of colleges and schools. Each year the number of T Levels will increase along with the number of providers until we reach steady state in 2023 with 24 T Levels available throughout England. T Levels will also help the post-COVID economic recovery. They have been designed to plug lasting gaps in our skills base, but also those that could be exacerbated by COVID or Britain's exit from the European Union. To improve our resilience on all fronts, we need more homegrown expertise in key sectors. Employers' ability to hire T-Level graduates who already have a good degree of competence in the occupation means that they will not need to invest so much to train up their new recruits. This will prove important as revenue is likely to be suppressed for the foreseeable future, with training budgets tight as the economy recovers. Ultimately, T Levels will allow more students to make the most of their potential and to transition to interesting and well-paid employment in sectors that the UK economy relies on.





## Meeting employers' needs

The benefits that T Levels can bring for employers will also complement the ongoing transformation of the apprenticeships system. As mentioned, we have nearly 600 employer designed apprenticeships available for use, operating across all sectors of the economy and at all levels, ensuring progression across the labour market. Whilst others are still in development, increasingly, the institute's apprenticeships work will focus on working with employers to keep the existing stock of standards up to date with the evolving needs of industry. In the last six months, the institute has approved for delivery apprenticeship standards in occupations as diverse as procurement, journalism, dentistry, engineering and healthcare. The institute is often challenged to produce the apprenticeships and skills which programmes 'really need'. Well, I would hope that the sheer diversity of August's new apprenticeships

should give confidence that employer demand is translating into exciting qualifications. Over half a million people have now started on new higher-quality apprenticeships at all levels since the reforms launched in 2014, something to be proud of for all those invested in the future health of our skills system.

An important component of our apprenticeships work has also been to expand the number of degree-level apprenticeships available. Degree apprenticeships are one of the most powerful tools in the education armoury. They support those from a greater variety of backgrounds into high earning and skilled jobs. People of all ages can now train for lucrative and prestigious professions that would never have previously been associated with apprenticeships. Better yet, employers have thrown their weight behind these qualifications, and have a similarly vital say and input to shaping their delivery.

“In an increasingly globally-focused world, it is vital that we learn lessons from our international partners.”

The institute understands the importance of collaboration and employer legitimacy in creating quality apprenticeships, which is precisely why we continue to strengthen the employer voice. Recently, we have strengthened our requirements of trailblazers to ensure their development of apprenticeship standards is effective and genuinely employer led.

These measures include requiring trailblazer chairs to be active participants in the development process and to take responsibility for ensuring their group's membership remains representative. Further, their participation is required *after* the apprenticeship standard has been developed and we require trailblazers to commit to membership of the group for a period of at least two years, ensuring continuity and a strengthened product. In the same spirit, we also seek to ensure that trailblazers have the capacity to deliver, and do this by limiting the number of apprenticeships a single trailblazer can develop to five.

Despite the strength of our employer-designed apprenticeships it will be obvious to most in the sector that apprenticeships can't be the answer to all the economy's skills needs. This is but one reason why the government has chosen to launch initiatives such as traineeships to further enhance the skills and work readiness package.

## Learning lessons

Apprenticeships provide a unique training programme within the skills landscape. If they are to remain a high-quality and respected programme, they cannot be the answer to every skills need in the economy. Protecting the apprenticeship brand does mean having a few firm rules and sticking to them. Crucially, apprenticeships need to train for a genuine occupation where at least a year of training including at least 20% of that time spent training off the job is needed to achieve full competence. Some feel that this requirement needs more nuancing, but we've not yet found a better way of ensuring that apprenticeships only happen where there's significant skill to be gained, or of protecting the interests of the apprentices, many of whom are young and paid the apprenticeship minimum wage.

In an increasingly globally-focused world, it is vital that we learn lessons from our international partners. That is something that WorldSkills International and WorldSkills UK have supported us to do throughout the development of apprenticeship standards. We want to make sure that our system is the best it can be, benchmarked internationally and quality assured.

So, whilst apprenticeships are the jewel in the crown of the skills system, they are not the panacea. They need to be seen as part of a wider system where a diverse range of high-quality training programmes and technical qualifications with a variety of objectives are supported to flourish and dock with one another. We welcome the government's investment in expanding traineeships as this should form a clear pre-apprenticeship path. We also welcome the focus on higher technical qualifications aimed at adults and shorter courses funded via the National Skills Fund.

The challenges for the skills sector, for employers, learners and government alike, have rarely been more profound nor so steeped in wider public policy challenges. However, with our extensive partnerships and our determination to put both the employer and learner at the heart of what we do, I believe that the institute is a torchbearer for high standards. ■



# Embedding excellence

*Using WorldSkills standards in higher education to drive up aspirations*

**Professor Mehmet Karamanoglu** is Head of the Department of Design Engineering and Mathematics, Middlesex University

Middlesex University and WorldSkills UK have been collaborating on a number of fronts since 2008. At the time, WorldSkills UK was searching for a competition organising partner for mechatronics. Middlesex took

the lead in creating a national competition in mechatronics that conformed to the WorldSkills standards. The organisations were introduced by Festo GB, which has worked in partnership with Middlesex since



1996 with the aim of developing mechatronics as a discipline at the university. This also involved creating a jointly-funded, specialist automation facility at the university which has stood the test of time. Over the years, this facility has evolved into a cutting-edge smart factory, supporting academic programmes and research projects using Industry 4.0 technologies such as digital twins.

**“One of the most effective ways of learning, particularly in vocational subject areas, is to practice the subject as you learn.”**

Let’s rewind back to 2008-9. Middlesex was creating new programmes within the broad subject of design engineering, with specialisms in mechatronics, robotics and electronic engineering. The new curriculum was to be based on practice-based learning principles integrated with industry practices. This required close and effective partnership with industry partners. Practice-based curriculum also required a cultural shift among staff, as it is a significant change in approaches to teaching and learning. It was also accepted that the most appropriate way to assess learning in this context was to move away from the traditional end-of-year exams towards more relevant and appropriate assessment methods that would test the student’s learning more effectively.

One of the most effective ways of learning, particularly in vocational subject areas, is to practice the subject as you learn, so ‘learning by doing’ was adopted across the board in the new programme areas. In addition to adopting industry practices, there was also the opportunity to adopt relevant academic standards and competencies into the newly-developed

curriculum. Maintaining compliance with the Engineering Council competencies for Chartered Engineers (CEng) was a given. All programmes had to remain comparable to programmes elsewhere in the UK and retain the required academic rigour.

However, in order to remain relevant to industry, it was decided that additional standards were to be adopted. This was where WorldSkills came in. The competencies detailed in the WorldSkills skills descriptors were written into the curriculum to enhance the provision as well as maintain the academic programme’s relevance to industry. At the same time, these were written at a level appropriate to comply with the Engineering Council requirements for professional registration to CEng level. This led to our degree programmes meeting the expectations of both worlds, giving our students a significant advantage when applying for graduate job opportunities. Not only they would they possess very high academic skills, they would also be trained in their discipline and develop high technical skills. This was a win-win approach leading to an engaging and motivating curriculum for all.

## **Curriculum and competition**

It was also critical that these competencies were not only maintained but could also be demonstrated, even in the absence of traditional exams. It is for this reason that there was a deliberate effort to adopt practice-based learning and embed competition standards into the curriculum at every level. Without the professional accreditation and conforming to the Engineering Council requirements, the absence of the traditional examinations would have been interpreted as sub-standard provision. However, these competencies are now clearly demonstrated to fulfil the required criteria across all programmes using appropriate assessment tools. Needless to say, all our programmes are accredited by their relevant professional bodies like any other university adopting high standards.

It is also imperative to differentiate between embedding competitions (or competition briefs) and competition standards into an

academic curriculum. In early developments, a specific competition was adopted into a module as a compulsory element. This was only warranted if that competition was written for a specific purpose and fitted well with the programme of study. In other cases, it was far more beneficial if the skills standards were embedded, rather than the competition itself that promoted a particular discipline. In our case both scenarios were adopted. For example, mechatronics programmes used WorldSkills competition skills standards to embed into the curriculum. Although the equipment necessary was already available at the university, there was a deliberate attempt to ensure high-level transferrable skills were developed in our students, rather than simply training them to do well in a particular competition. Many students did take the opportunity to enter the mechatronics competition in order to demonstrate their competency in

these skills, while others did not enter the competition but secured very good jobs in their disciplines.

In contrast to the approach taken in mechatronics, leaders of the robotics programme took the decision to embed a competition into the curriculum. Eurobot was chosen as one of the competitions to adopt and the competition task was set as a project brief. Explicit academic requirements were added, to ensure that no student would be disadvantaged if they were unable to compete for whatever reason. However, all students were given the opportunity to be part of the competition should they choose to do so. This has now been made optional, as is the WorldSkills robotics competition. However, the skills standards remain embedded.

## Head and hand

In recent years, the value of practical skills, and students connecting with their discipline at an early stage as possible, has been seen as a real benefit. Unfortunately, many universities do not offer these opportunities to their students early enough in their academic programmes. Some professional bodies are now taking action to influence decisions in higher education institutions, and offering to organise national competitions. One such competition is the Design Challenge, owned by the Institution of Mechanical Engineers (IMechE) and developed in partnership between industry and academia. Middlesex organised the pilot for the London regional competitions for this and is now part of the organising committee for the London universities. The competition is now fully embedded into most university curriculums offering engineering programmes across the UK, with the aim of championing engineering principles and relating these to industry practices, thus connecting engineering students with their discipline in their first year at university. Regrettably, unlike Middlesex, the majority of the UK universities are still not following practice-based curriculum to support learning in vocational subjects such as engineering and students are denied the opportunity to practice their discipline in the



earlier part of their study. Some students only get the chance to have a practical application as part of their final year project as they leave their course.

Our experience at Middlesex University showed that embedding WorldSkills competition standards into curriculum resulted in far better outcomes for the following reasons:

- **Diverse and inclusive curriculum:** The benefits of the skill competencies are available to all students irrespective of their personal circumstances. Not all students are able to or willing to take part in competitions for a variety of reasons.
- **Drive up standards:** Curriculum benefits from nationally and/or internationally recognised skills standards and ensures the curriculum remains relevant and up to date as these standards are regularly reviewed and updated.
- **Improved quality of academic provision:** Ensuring the current industry practices are adopted, resulting in an enriched and higher quality curriculum, better student experience and increased staff expertise.
- **Develop work-ready graduates:** Coupled with practice-based learning approaches delivering high level academic skills and high-level technical skills, graduates are in a unique position to add value to organisations on arrival. This makes them highly employable and adaptable for current and future employment opportunities.
- **Set own aspiration levels:** Those who wish to take part in competitions can still do so and will be supported without the pressure of any set expectations.

From that initial work that took place to start a national competition in mechatronics, Middlesex's relationship with WorldSkills UK has snowballed and affected many students and staff at the university. Staff now organise automation, mechatronics, mobile robotics and laboratory technician competitions. The automation competition was created as a feeder competition to enable level 2-3 apprentices and other learners, such as those studying at

**“Many industry organisations are adopting these competition standards in their workforce training and development as they have clearly seen the benefits of this approach.”**

UTCs, to develop skills and take part in mechatronics competition in subsequent years. This competition has now achieved a very high standard, equalling the best in the world. Many industry organisations are adopting these competition standards in their workforce training and development as they have clearly seen the benefits of this approach. In all four competitions that are organised by Middlesex, the competencies expected in those skills are embedded into the academic provision that is offered in those disciplines and align well with the academic curriculum and standards.

### **Wider benefits**

Along with embedding WorldSkills competencies into curriculum and organising competitions, there have been other benefits to the university staff and students. In 2011, London hosted the WorldSkills International competitions. Middlesex was involved in organising the mechatronics and mobile robotics competitions. It also organised a fantastic 'have-a-go' activity to make these competitions accessible to more than 200,000 schoolchildren who visited the event. This was a turning point for WorldSkills UK, which brought all the competitions under a single umbrella. Out of this



“...it develops a culture of collaborative work ethic, effective partnerships and a sustainable working relationship between key stakeholders.”

event came WorldSkills UK LIVE; Middlesex staff and students have contributed to this event ever since.

Middlesex University has chosen to invest significantly in its relationship with WorldSkills UK, and encouraged and supported its staff and students to take part in everything that WorldSkills can offer. Aside from being involved in competitions (as organisers, sponsors, competitors, judges and technical support), students and staff have had the opportunity to take part in public engagement activities such as ‘have-a-go’ events, competition demonstrations and showcase talks. Since 2012, typical attendance at WorldSkills UK LIVE event has been around 78,000 visitors, over the three days of the event. At an institutional level, the benefits of taking part in such an event, over a period of nearly a decade, are that it develops a culture of collaborative work ethic, effective partnerships and a sustainable working relationship between key stakeholders.

At an individual level, the benefits have been far more significant. The majority of Middlesex students who take part in these events are in their first year of study, with the support of mentors who have been involved in previous years. Some may initially find having to talk to schoolchildren and members of the public about their subject a daunting experience, but within hours you can see they grow in confidence and really enjoy the event. By the

time they return to campus, they are buzzing with enthusiasm and confidence and are eager to share their amazing experience with their classmates. This positivity then spreads right through the programmes, departments and faculties and eventually across the whole institution. It sends a very clear signal about the value individuals get from such activities. In recent years, the typical Middlesex presence at any WorldSkills UK LIVE event has been 130-plus staff and students. This is a huge investment by the university, but the return in developing staff and students has been far more significant – and the impact is felt way beyond the group that attend. Beyond LIVE, there is now a set of five significant public engagement events that take place annually, giving many more staff and students the opportunity to participate and learn from them. This just goes to demonstrate the positive impact of engaging with WorldSkills UK and its methodology.

“This positivity then spreads right through the programmes, departments and faculties and eventually across the whole institution.”

It is of no surprise that many of Middlesex’s students have won national and international competitions. A number of them have ended up as training managers and WorldSkills UK experts at national and international level, training for example Team UK members in the mechatronics, Industry 4.0 and laboratory technician categories. Many of our alumni, who were ex-WorldSkills UK competitors, are now members of academic staff at Middlesex, ensuring the journey and the benefits continue for all. ■



# *Case study:* Coca-Cola European Partners



At Coca-Cola European Partners, we are committed to recruiting young talent from a diverse range of backgrounds, bringing different perspectives and ideas as we work towards achieving excellence in everything we do. We are very much a local business, with factories and offices located in communities across Great Britain, making and distributing soft drinks. It's therefore of great importance to us that we contribute positively to the areas where we operate, part of which is ensuring we are creating opportunities.

We understand the importance of providing a combination of education, vocational training and practical experiences to help educate and inspire career-seekers. A diverse blend of skills and expertise can only truly be achieved by offering a broad range of routes and opportunities into the business world. This is where our growing apprenticeship programme comes in – a programme designed to challenge traditional thinking, break down barriers and inspire the next generation of professionals. In 2018 we launched 'Be Yourself, Be Valued,

Belong' – a living, breathing philosophy that is driving an inclusive culture at the business. It is brought to life by our #JustBe ambassadors, who are a team of inclusion representatives across all functions and levels of the business. When we bring young talent into our organisation, our #Justbe ambassadors showcase and role model the value of inclusivity.

How does this then translate into achieving excellent skills? Being able to live and breathe our inclusive values means that we are able to attract young people from a wider representation throughout the UK. And, with the diversification of the apprentice programmes that we now support, it means that we are recruiting for the skills of tomorrow. As a global brand we continue to be at the forefront of brand innovation, but we need younger talent to bring their inquisitive minds, to challenge the traditional and to ask the “why” questions. Today's millennial generations will be more digital enabled and technologically sound, which means the roles we offer must enable them to utilise these skills and accelerate the learning for all employees who are part of our multi-generational organisation.



## Skills evolution

Historically, engineers were expected to be manually skilled. Today we are looking for those who can diagnose faults online and keep up to date with the latest technologies. Manufacturing and distribution environments are becoming more automated and so the ability to manage in an automated environment is critical. Having an understanding and ability to interpret data displayed on screens, with the ability to take the necessary actions needed, is vital in a digitalised age. Fifteen years ago, our field sales teams only needed to drive a car and be good communicators with their customers. Now they are using technology to bring to life a virtual store layout as they speak to customers.

With the new start-up tech organisations, along with the global expansions of Amazon, Google, and Facebook to name a few, we need to demonstrate to school-leavers and those in their early career journeys that we are an accessible and inclusive organisation, which values contributions and skills from all diverse backgrounds. As a company we believe that, by investing in apprenticeships and our early careers programme, as a business we can drive progress and innovation from the inside out. This is part of an ongoing commitment to growing the future skills of employees, equipping them with the tools they need to achieve excellence and develop in their careers. ■

Being able to live  
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# Stimulating excellence

**Matthew Fell** is Chief UK Policy Director of the CBI

It is no secret that businesses of all sizes and sectors have faced huge challenges in the face of the pandemic, with the repercussions potentially impacting the economy in the longer term. Behind this lies real human impact: roles changing as firms readjust, redundancies, and growing levels of unemployment. Looking a

little deeper, early predictions show the impact is not evenly spread with the poorest and most disadvantaged likely to be the most affected by the fallout. But whilst the pandemic has very quickly unearthed social inequalities, it is important to recognise the pandemic alone did not create them. These inequalities, which

have been brought to the fore, reinforce the importance of adult skills.

There are – of course – practical and economic reasons for the importance of adult skills: opportunities for individuals to progress in work, for employers to adapt and grow, and, consequently, fuelling, or currently, recovering, the UK's economy. But beyond that, adult skills go to the core of the wellbeing of the nation. The Learning and Work Institute's annual adult learning participation survey has shown that for most years, around 40-50% of adults say that they have experienced benefits relating to personal wellbeing or health<sup>3</sup>.

Unfortunately, the UK has seen a downward spiral in adult learning over the last decade and skills gaps continue to persist. The clearest sign has been declining levels of adult participation in learning, which in 2019 hit the lowest level on record<sup>4</sup>. There are now clear inequalities between higher and lower skilled workers. As the UK economy and labour market continue to evolve skills mismatches may grow, and significant funding will be required to redress this imbalance. The CBI's own research in collaboration with McKinsey & Co diagnosed the skills mismatches across the UK just prior to the crisis at a time when the labour market was at record levels of employment.

The workplace has changed considerably and is likely to continue to change, with entire industries transforming, bringing with them new jobs. This is in turn driving up the demand for new types of skills, as well as higher-level skills. Our research with McKinsey goes as far as predicting that up to 90% of the workforce will need reskilling, some 30 million individuals. This refers to anything from developing new skills or 'upskilling' to fundamental retraining into new roles. Furthermore, it will require significant investment – an additional £130 billion is needed by 2030.



## Addressing inequalities

Part of the issue is that education funding is somewhat front-loaded, with only 2% of public funding going to adult learners<sup>5</sup>. Also, those continuing to grow their skills through their adult life tend to already be highly qualified. Graduates are over three times more likely to participate in training than those with no qualifications. And as with the pandemic, the poorest parts of society suffer the most with half of those in the lowest socioeconomic group in the UK receiving no training since leaving school<sup>6</sup> despite this being the group set to benefit the most.

Just over one hundred years ago, the government of the day laid the foundations for the right to 'universal and lifelong' access to adult education and learning. Back then it was a

3 [Benefits of Learning](#), Learning and Work Institute.

4 Adult Participation in Learning Survey (2019), The Learning and Work Institute.

5 Annual report on education spending in England (2019), IFS.

6 [The adult skills gap: is falling investment in UK adults stalling social mobility?](#) (2019), Social Mobility Commission.

response to the need to rebuild from a period of world war and mass poverty. Now the world may look a lot different but the principles in rebuilding and recovery are as important and relevant today as they were then. A centenary commission was launched last year to commemorate the report and reignite the debate on these issues which has been very welcome.

Beyond practical action, a huge challenge for all actors will be bringing about a cultural shift towards lifelong learning. This shift will not be easy – learning can be a daunting experience for some people. Indeed, nearly two out of five (38%) non-learners say that nothing is preventing them from learning, indicating that it's not something they have considered or that they feel would be of value for them<sup>7</sup>.

**“Apprenticeships are great opportunities for people of all ages and levels to learn on the job.”**

From an employer perspective, is it usually larger companies with more capacity to develop and implement corporate HR strategies who are more likely to fund training than smaller firms. But even bigger companies face barriers to investment. On this point, we cannot overlook the impact of the apprenticeship levy which has inadvertently limited skills investment for many firms. Not to mention the impact it has also had on smaller employers who are not levy payers and so are shut out of the apprenticeship system. Apprenticeships are great opportunities for people of all ages and levels to learn on the job, but the structure of an apprenticeship means it is not for

everyone. Nevertheless, we cannot shy away from the fact that whilst employer investment in training has continued to grow over the last decade, it is being outpaced by the growing workforce numbers.

## Unlocking potential

Even at time where cost pressures have hamstrung firms, investing in skills pays off. In a recent Open University (OU) poll of employers, 71% of organisations across all sectors reported that they have been severely affected by the pandemic, but those businesses that have invested in training during lockdown expect to recover more quickly<sup>8</sup>. Employers need to invest now and realise the potential they can unlock in their employees. The CBI's recent report with McKinsey & Co has found that an estimated 80% of the required upskilling investments will generate positive returns for the business that makes the investment<sup>9</sup>.

But there are also individuals that will need more fundamental retraining due to the drastic evolution of their role or in fact their role has disappeared altogether. In this instance, it is often the case that employers do not have a great return on investment unless the employee does progress further. Furthermore, in reaction to the pandemic, the OU research also showed that nearly one in five businesses said that redundant workers will be replaced with new talent offering more valuable skills, instead of talent that could be developed from within<sup>10</sup>.

The government must step in and use policy levers to drive lifelong learning. For those without the skills and qualifications to adapt to the changing world of work, a safety net that supports guidance and funding is vital. The National Retraining Scheme made a good start to this, launching 'Get Help to Retrain' last year. Now an even more substantial cultural shift towards lifelong learning is needed. On a practical level, a product with a strong place-based

7 Adult Participation in Learning Survey (2018), The Learning & Work Institute.

8 [How investment in skills is inspiring jobs recovery](#) (2020), The Open University

9 UK Reskilling Business Case model (2019), McKinsey & Co

10 Ibid





support element, such as expanding Job Centres into wider Skills Centres, would help. These hubs could help people access ‘one-stop-shop’ careers and training advice, especially for those who are not confident using online resources. The localised aspect means it will be able to draw on the expertise of local actors, including Combined Authorities, LEPs, colleges, universities and businesses, ensuring each hub responds to the skills demands of that area. A passporting tool to help individuals capture the qualifications as well as the less formal skills they have accrued in the workplace could be a further addition to the toolbox. Informal skills are a vital part of being prepared for the modern workplace, and often labelled ‘soft-skills’, ‘employability skills’ or ‘life skills’. But whatever you call them, they are essential and a high-demand skill for employers.

Providers, too, will be crucial in addressing the UK’s skills demands. Quality, flexible and modular routes that suit the varying demands and lifestyles of individuals should be at the heart of delivery. Universities and colleges will need to respond by developing shorter courses to offer more flexible ways of learning. Indeed, the ongoing funding battle between these institutions is an unwelcome distraction to a debate that should instead focus on both having adequate funding to deliver the provision that learners desperately need.

The UK’s path will be determined by how successfully we increase investment and participation in adult education. It is one of the defining issues of our age, and the countries that get it right will have an exceptional competitive advantage as the global economy recovers. Every actor must play their part if we are to get this right. No single government policy or individual business can solve the challenge alone. There will need to be a partnership of the century between business, government, the education sector and individuals to level-up opportunity across the UK and ensure that everyone benefits from the opportunities created by new technologies. It will require significant spending, but the returns will also be huge for all those who invest. ■

**“There will need to be a partnership of the century between business, government, the education sector and individuals to level-up opportunity across the UK and ensure that everyone benefits from the opportunities created by new technologies.”**



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