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Global standards:

bridging the skills gap

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Foreword

Since October 2011, when the WorldSkills Competition was hosted in London, WorldSkills International has transformed its identity and scope through three simultaneous, continuing and connected developments.

The first of these is the WorldSkills brand and communication strategy. The new Vision, Mission and Position statement freshly articulate the significance of both the WorldSkills Competition and the wider WorldSkills movement within which it sits. The newly articulated focus areas (i.e. 'what we do') of Promoting Skills/Advocacy, Career Building, Skills Competitions, Education and Training, International Cooperation, and Research each point to the expanding value of WorldSkills for Members and global partners alike.

The second is the resolve with which the Competition itself has been reviewed and enhanced to make it a byword for Best Practice, technically and professionally. Whether for the talented young people competing, the Experts engaged in its design and implementation, or business, industry and government investing scarce resources, WorldSkills has an obligation to ensure that its standards, assessment and results all meet the toughest expectations. With a Position statement that reads: "the global hub for skills excellence and development" we can do no other.

The third is the dramatic growth in Membership. With 35 new Members in the last 10 years (19 of these have

joined since 2011), the expanded Membership brings with it new challenges and opportunities for regionalisation, diversification and inclusion. This growth, alongside the new Brand and the focus on quality, has lifted WorldSkills to the status of respected global organisation with emerging partnerships and collaboration with other such global organisations as the OECD, UNESCO, UNESCO-UNEVOC and the ILO. We are delighted that they recognise the global platform for skills excellence that WorldSkills represents.

Until recently a Member country may not have found it easy to extract immediate value from the documentation and activities of the WorldSkills Competition. Following two years of intensive development that is no longer the case. The opacity of

the previous documentation has been replaced by transparent, consistent and quality assured guidance and material which is readily adaptable to needs from institutions to governments.

The International Standards Transfer Project is an example of the reciprocal benefit to be gained by a Member country and WorldSkills when we work together. The Project has helped accelerate WorldSkills' output while growing the conditions in the UK for the successful transfer and embedding of those outputs. I am therefore delighted to endorse *Global Standards: bridging the skills gap* as an example of what can be done with the WorldSkills standards to help business and industry, and those who support them, meet the challenges of today and tomorrow.



David Hoey
Chief Executive Officer
WorldSkills
International

Foreword

In 2011 the UK hosted the international WorldSkills Competition, WorldSkills London 2011, with acclaim for both the Event and Team UK's performance. The momentum generated by the Event prompted continued investment from the Skills Funding Agency in an annual Skills Show and also several projects, all of which are now managed by Find a Future. One of these projects was to encourage the UK to make use of the global skills standards that underpin the WorldSkills Competition. This International Standards Transfer Project was based at North Warwickshire and Hinckley College, but had a UK-wide remit.

The Project's aim was to use the WorldSkills Standards Specification and the standards underpinning each WorldSkills skill competition as a benchmark for quality in several respects, including methodology, scope and range, positioning and currency. The success of Team UK at WorldSkills London 2011 had resulted from building performance upwards and outwards through several layers starting from national standards. It was a complex process. Meanwhile, other countries within the WorldSkills movement, for example Finland and Switzerland, had over the years carefully achieved much greater affinity between their national systems and global standards. The Project sought to emulate this in ways appropriate to the UK.

With privileged access to WorldSkills processes, Chief and Deputy Chief Experts, the Project has helped to

generate 50 sets of occupationally linked standards, all of which have been consulted on with business and industry worldwide, and embedded within the WorldSkills Competition. The standards are research-led, have a future orientation, and use knowledge, skill and competence as a baseline for excellence.

Encouraged by the *Richard Review of Apprenticeships*, which in many ways complemented the thinking and processes of WorldSkills, in 2013 the Project used the new thinking around apprenticeship standards to facilitate and record the use of WorldSkills standards through a series of case studies.

This booklet, *Global standards: bridging the skills gap*, is the result of that activity. The case studies range from

local and specific initiatives to broader surveys and reviews. In all instances the standards have proved their worth, including sometimes highlighting the scale of the challenge to be 'world class' as a system, as well as through the exceptional efforts of particular groups and organisations.

As David Hoey notes in his Foreword, both the global community and WorldSkills Member countries are recognising the usefulness of the WorldSkills Standards Specification. I hope that, with the support of this booklet, the UK will also do so.



Carole Stott MBE
Chair: Find a Future
Chair: Association of
Colleges

Introduction

In spring 2012 WorldSkills UK established five WorldSkills London 2011 Legacy Projects. One of these was to use WorldSkills standards to inform the UK's vocational education and training (VET) system. This was the International Standards Transfer Project.

The original aim of the Project was to acquire and help apply, within the UK, global standards of good practice, as contained in the WorldSkills Technical Descriptions for the biennial WorldSkills Competition. Over the following two years the Project team supported the review, enhancement and consultations for the WorldSkills Standards Specifications and in doing so gained access to a full set of 50 global standards of good practice. The Project's involvement in this work helped to accelerate the quality development of the standards and generate a substantial network of industrial, business, institutional and practitioner contacts across the UK and globally.

In mid-2013 WorldSkills UK asked the Project team to refocus their work in order to support the recommendations of the *Richard Review of Apprenticeships in England and Wales*. The *Richard Review* recommendations demonstrated considerable affinity between a potential future apprenticeship programme within the UK and the scope, range and format of the WorldSkills Standard Specifications, together with the assessment strategies that they give rise to.

The Project team was therefore asked to facilitate and record the growing use of WorldSkills standards within and beyond the UK, using the opportunities and contacts that they had generated, and to report by means of case studies. This booklet, *Global standards: bridging the skills gap*, is the response to that request. These multi-agency case studies are grouped according to their type and the nature of their impact, ranging from specific developments in programmes and attainment, through strategies, to capacity building for key elements of the UK's VET system. The booklet ends with a thematic review of the case studies' significance and implications for both future apprenticeships and the wider benefit of VET across the UK.

The scope of the case studies and the range of issues that they highlight are intentionally wide in order to engage and spur to action a spectrum of readers. The concerns and opportunities that emerge tend not to be new. They include the increasing importance of relevant and current industry- and business-led standards; the need to support an internationally competitive economy through clear links with global standards; and our collective dependency on 'cutting edge' programmes linked to appropriate systems for updating, quality and regulation. Last but by no means least, we have to ensure that we invest in the development of our VET teachers to be true world class dual professionals, and to be respected as such. This accords with the conclusions of *It's about work...Excellent adult vocational teaching and learning* (CAVTL 2013). Our rich experience of working with

WorldSkills Experts across the world has amply demonstrated the benefits that accrue to Member countries where the teacher is at the heart of their VET systems.

We hope that these case studies will encourage readers to explore the potential usefulness of WorldSkills further. This can be done in several ways, including by visiting the websites for WorldSkills (<http://www.worldskills.org>) and WorldSkills UK (<https://worldskillsuk.org>), visiting the Skills Show, and contacting the participants in whichever of the case studies most interest you. The Project team will also be delighted to hear from you.



Raising the game in
engineering design

The approach of developing integrated assignments based on the the WorldSkills model has encouraged staff to embed real industrial problems into project briefs. This has had the benefit of engaging with employers on course and assessment design and strengthens the College's partnership with local and national employers.'

Barry Skea, Assistant Head of Faculty, New College Lanarkshire

Partners

New College Lanarkshire (formerly Motherwell College, a delivery partner)

Autodesk (a multi-national software corporation)

Introduction

This case study covers an initiative taken in 2008 and still gathering pace. During this time Motherwell College has become New College Lanarkshire. The case study demonstrates the practical ways in which the WorldSkills Competition can raise colleges' capacity to engage and meet modern industry's needs.

Context

In 2008 Motherwell College was approached by the WorldSkills UK Expert for Engineering Design – Computer Aided Design (CAD) to engage with the WorldSkills Competition. Autodesk is a WorldSkills sponsor and Motherwell College was an Autodesk Centre of Excellence.

Now as then, New College Lanarkshire offers qualification programmes in CAD for the engineering, construction and entertainment industries. These are mainly National Certificates and Higher National Certificates and Diplomas (HNCs/Ds) at Scottish Levels 6 and 7 (English equivalents of 3 and 4). Most students study full-time, with a few on day-release study from industry.

The challenge

For many years industry has identified a lack of alignment between its needs and the scope of qualifications delivered by further education. Skills, such as geometric tolerancing, are inadequately covered. Colleges may provide more than the qualification requires, but funding, verification and inspection are all constraints on this. More time is needed to practise, develop and master modern and high level skills, which qualifications have yet to catch up with.

The challenge was therefore to introduce the high level technical and generic skills required for engineering design in the modern world, and to make it 'work' for the College.

Apprenticeships posed, and still pose, a particular problem since there was and is no appropriate framework to enable CAD qualifications to be offered. Prospective engineering design apprentices have to work towards a 'Performing Engineering Operations' qualification. The usual route into engineering design is through higher education. This is a barrier for both industry and individuals at a time when skill shortages in engineering design are reported by employers.

The developments reported in this case study therefore exclude apprenticeships.

Methodology

To generate this case study, the College's CAD teachers, their line managers, and a potential industrial client were interviewed in autumn 2013. Data on qualification outcomes and participation in competitions were reviewed along with College inspection reports.

Standards

College teachers believe that by preparing students well for industry, the qualification can be treated as an essential by-product.

The WorldSkills cycle covers two years, during which its occupational standards are reviewed by industry across the globe and updated accordingly. Test Projects are designed to meet the standards. This process ensures that both the standards and the competitions remain current and relevant to global best practice.

The engineering design curriculum has been aligned to the WorldSkills cycle. In this way, the College helps itself and its industry partners to stay connected to the movement of industry and markets worldwide.

Pedagogy

WorldSkills Standards Specifications and Test Projects have also influenced the College's pedagogy: its teaching, learning and assessment practices. Integrated assignments use WorldSkills Test Projects as templates for meaningful project-based learning. Projects support the learning and are mapped against the learning outcomes for the qualification. Elements from several qualification units can come together in one project. This meets the needs of both employers and qualifications.

Peer-to-peer teaching and learning is encouraged. Students are teamed up to provide mutual support. Students across year groups work together with more able or advanced students supporting the younger, less experienced ones. This benefits both groups of students, encouraging skill development, reinforcing learning and developing generic skills such as communication and team work, which employers see as hallmarks of outstanding practitioners. This is consistent with the WorldSkills ethos of collaboration and mutual support.

The HNC/D has a graded project-based unit to differentiate those with knowledge and skill from those with knowledge alone. The College uses the



project for a presentation to employers and other stakeholders to test some of the important generic skills.

Quality

New College Lanarkshire recruits students from other centres onto their HNC/D programmes. These externally recruited students have typically completed the National Certificate programme elsewhere, and the College notes that they often lack the high-level generic skills of problem solving and independent working that their own students possess. It therefore offers a catch-up programme of 3 hours per week for the first year to bring their skills up to the level of those who have progressed internally.

The curriculum, pedagogy and teachers' expectations all challenge the students to be outstanding. Teaching staff report that involvement with WorldSkills makes them think differently. In 2013 the awarding body's course review (IED 2013, p. 3) of the HND CAD programme commented:

'The projects reviewed would not disgrace the final year of a degree programme and staff should be encouraged to submit for the IED annual prize competition.'

Learner benefit

WorldSkills competitor training programmes drive students to develop generic skills such as finding innovative solutions to engineering design problems. In the College the use of integrated projects encourages students to solve problems and acquire a deeper understanding of the subject.

Involvement in WorldSkills competitions both benefits the students actively preparing for and competing in competitions, and impacts positively on other students in the cohort. Students see the success of others and are motivated: 'I can do that'. Many students support the UK Squad or Team and participate in other ways; this enhances their own specialist and generic employability skills.

HMIe (2012, p. 2) have reported on Motherwell College as follows:

'The integrated approach to design and manufacture has given students an opportunity to produce something of value – a "real product", which motivates, instils pride and builds confidence in students. This change in focus for delivery has helped relate theory to practice more for individuals. This activity is reflective of industry practice where designers

and engineers work in tandem in the development and production of products. It has helped students from both CADD and Fabrication sections to relate to the importance of team work in industry. Students also develop a better understanding of the need for good communication skills. Integration of the design and engineering aspects provides an opportunity for students to extend their learning beyond the normal curriculum activity, i.e. their knowledge base in related disciplines. This should enhance opportunities for employment (as many employers look for CADD designers with Mechanical Manufacturing experience). The students are encouraged to leave a legacy for the next peer group. The end product(s) of each session will be available to showcase to subsequent learner groups. This has proven to motivate the students and instils pride in the quality of the final output.'

Staff benefit

Involvement in WorldSkills competitions causes teachers to reflect on their classroom management and pedagogy. Teaching through projects requires confidence in one's own specialist knowledge and teaching skills. Teaching becomes less about delivering information and more about facilitating learning.

As a direct result of these changes, student numbers have increased. Teaching staff employed in this department grew from 3 to 8 between 2008 and 2013, at a time of funding cuts and uncertain employment across the sector.

HMIe (2012, p.2) have endorsed this by referring to:

'learner enthusiasm during this activity, motivated members of staff, and this contributed greatly to the quality of the end product.'

College benefit

To use WorldSkills materials to introduce CAD has required a supportive senior management team and college ethos. These have been consistently present, with students selected to represent the UK for WorldSkills Competitions in 2009, 2011 and 2013. A New College Lanarkshire student is in the Squad for the WorldSkills 2015 Competition and has won a gold medal at the EuroSkills 2014 Competition. At the 2013 Skills Show in Birmingham, the College achieved Gold in the Higher category, and Gold and Silver in the Advanced category.

Successful participation in WorldSkills Competitions has enhanced the College's reputation for excellence in engineering design. This has supported the College in attracting local, national and international employers, with a direct impact on student recruitment. Between 2008 and 2013 enrolments grew from 80 to 180. This has brought a proportionate growth in funds, enabling investment in staff and specialist facilities. Low and declining student numbers constrain quality and innovation. In contrast, in the College the greater scale of the programme has increased

its flexibility, with additional specialist staff providing greater breadth, supporting the integrated assignments and continuously enhancing the learning experience.

Following HMIe's Annual Engagement visit to Motherwell College, their Report (2012, p.2) highlighted:

'Excellent Practice: Integrated approaches to design and manufacture': Teaching staff delivering HN programmes in Computer-aided Drawing and Design, (CADD) and in Fabrication, Welding and Manufacturing have worked together very effectively to devise a project which reflects industry practices and enhances the skills and employability of students.'

The College plans to extend this approach to other programmes, in particular to other IT specialisms.

Stakeholders

The College's success in delivering high-quality provision has led to employers approaching it directly for recruits.

Integrated assignments based on the WorldSkills model have encouraged staff to embed real industrial problems into project briefs. This has engaged employers in course and assessment design, thus strengthening the College's partnership with them.

An ex-student who had been through the College's HNC/D programme and represented the UK at a WorldSkills Competition, winning a Bronze Medal,

reported that the integrated projects were a great motivator and support for developing skills for real work and occupations. The WorldSkills standards coupled with real industrial problems can support industry by generating employees with the knowledge, skills and attributes that best support its needs today and tomorrow. Employers offering work experience placements have endorsed this view.

Conclusion

This case study shows that, notwithstanding the current perceived and real restrictions on programme design and delivery, the adoption and integration of WorldSkills standards can generate multiple benefits. The WorldSkills standards mirror industry/s needs and expectations more closely than alternative sources of standards. WorldSkills Competitions, practices and material offer stimulus and aids for enhancing programmes and pedagogy. WorldSkills Test Projects offer exemplars for both projects and substantive end tests, as looked for in future Apprenticeships in England and Wales.

For each of these reasons we hope that reforms to apprenticeships and qualifications will facilitate the wider adoption of the College's initiative.



Introducing cutting
edge apprenticeships

'I would love the Test Project from WorldSkills to be at the end of the four year apprenticeship.'

Gareth Higgins, Managing Director, KMF

Partners

EAL (a specialist awarding body)

KMF (a family business, founded in 1971, with a workforce of 350 and a strong culture of investing in apprentices)

Amada (a global business providing machines, tools and software for the fabrication sector; a WorldSkills UK sponsor)

Introduction

This case study demonstrates the gains that can result when industry and awarding organisations collaborate to raise standards for apprentices in order to meet the needs of a growing industry.

Context

As a result of participating in WSC 2013 in Leipzig KMF was selected for a sample of interviews with industry to gain its views on international standards of best practice and 'practical end tests'. The interview resulted in a stronger relationship between the international standards

being developed for the WSC and practical assessments that are looked for by industry and are becoming embedded within UK apprenticeships.

The challenge

Pressures on the engineering sector call for a new approach to the education and skills base of young people wishing to work in the manufacturing industry. The existence of a skills gap is a long-running concern for the UK manufacturing industry, and specifically sheet metal fabrication, which arguably lags behind other countries in developing its workforce's practical skills. The application of new technologies in sheet metal fabrication calls for a broad range of new, complex skills.

A sheet metal technician interprets drawings, develops suitable patterns (both manually and using CAD), cuts and forms sheet materials into complex shapes and assemblies manually and by machine, sometimes applying programming skills. The technician works with many materials and must understand the joining and fastening of them all. The work involves all types of welding, manual and CNC forming equipment, sheet metal hand fabrication and dressing as well as a range of power operated tools.

Complex technical skills are generally applied to the planning and development of patterns, dimensional accuracy of components and assemblies, the forming and shaping of sheet metal components,

the production of joints and welds and surface finishes, together with a constant concern for quality, efficiency and productivity.

The challenge was therefore to source and introduce the complex technical and generic skills required to respond to the modern-day pressures on sheet metal fabrication.

The opportunity

The Advanced Engineering Apprenticeship delivered by KMF is certificated through:

- EAL Level 3 Diploma in Engineering & Technology (QAN 501/1130/9) and
- EAL Level 3 Extended NVQ Diploma in Fabrication and Welding Engineering (QAN 600/9932/X)

Qualifications that form part of apprenticeship programmes are influenced by external government/ agency funding approval requirements. In working with KMF, EAL recognised an excellent opportunity to trial recommendations from the government response to the *Richard Review* of apprenticeships (2012).

'Trailblazers should look internationally to see what approaches work best in other countries for your occupation – we want English Apprentices to be the best in the world so it is important to benchmark our standards in this way.' (HM Government 2014, p. 8)

EAL's particular intention was to learn from international practice with standards and 'end point assessment':

'In response to concerns that we have heard from employers that apprentices are able to pass qualifications in current frameworks, but the employer does not judge them to be fully competent. The end-point assessment will therefore have to review the apprentice in the round; it must be holistic and test the full breadth of the relevant competencies.'
(HM Government 2014, p. 17)

Methodology

A consultative group was established with representatives from Amada, KMF, City of Wolverhampton College, EAL and the WorldSkills UK Expert for Sheet Metalwork Technology. A working group was also formed.

For the EAL Level 3 Diploma the working group decided to develop an additional unit based on the WorldSkills Standards Specification and the practical Test Project. This was to be worth 10 credits and be part of a suite of 6 optional units for centres/students to select from. It was thought that the additional unit might become mandatory once new apprenticeships are implemented. This is, in effect, 'putting down a marker' for precision sheet metal work in future apprenticeships.

Dave Vaughan (2014), the UK World Skills Expert for Sheet Metalwork Technology, comments:

'This is a significant shift in the way we benchmark vocational education, training and qualifications in the UK. The alignment process will ensure that

high level internationally recognised standards, current technologies and practice used during the WSC are reflected in the skills and qualifications we give our apprentices. This is the sort of radical thinking we need in order to grow the skills of young people and ensure a successful future for our industry.'

The working group agreed that a new sheet metal technology unit should also be developed for the EAL Level 2 Diploma in Engineering & Technology (QCF) (QAN 500/7595/0). The unit will be approximately 7 credits at Level 2.

The two new units have now been approved by Ofqual and will be available from EAL from autumn 2014.

The impact of delivering the higher level unit

The working group has recognised that the introduction of the 'new unit' will have an impact on resources: both staff and equipment. This is seen as a challenge to be embraced and overcome as opposed to avoided. To achieve the aspirations of the Richard Review (2012) there is a need for creative solutions. Another positive outcome of the industry/education working group was the industry's decision to support City of Wolverhampton College in acquiring a piece of technology to enhance the development of higher level skills within a further education environment. It is critical that students can access the latest technology in order to ensure they are able to meet the needs of industry.

The working group has also identified the potential for industry to provide 'kits' for practical tests.



To deliver the new unit, college staff need to feel confident in their own higher level technical skills. Therefore a technically focussed professional development programme is required to refresh or upgrade their skills.

For the apprentices the WorldSkills standards and approach to assessment represents a 'step change' in their development. There is generally a steep 'learning curve' for young people embarking on the WorldSkills journey. Competing against their international peers can be significantly stretching for young people in the UK, due to the limited level and scope of much of the vocational education and training on offer. The current review of apprenticeships is addressing this issue with some urgency.

For industry and business, high level technical skills are a 'must' if they are to succeed in an increasingly competitive global market place. As,

Gareth Higgins, the Managing Director of KMF confirms:

'WorldSkills enables us to equip people with the high level skills, experience and knowledge required to ensure our business remains competitive and at the forefront of engineering excellence.'

Conclusion

This case study illustrates the value of looking beyond the UK to align with international standards and assessment practices. Constant change within the UK vocational education and training (VET) system has, over the years, clouded vision, increased introspection, and reduced aspiration.

Notwithstanding this, by connecting with international standards and assessment methods, UK VET can develop new, ambitious apprenticeships that align with international standards, and thus support industry's competitiveness. These apprenticeships can use the standards to inject the dynamism required by industry and introduce assessment methods that demonstrate knowledge, understanding, skills, performance and values in the ways that industry requires.

In turn this would give new impetus to the technical and professional development of VET teachers.



Driving the agenda for
high level standards

'I am convinced that the Triple A is an excellent, innovative (but tried and tested over the last seven years) system for ensuring good, workplace chef training and assessment...'

Prue Leith, letter to Hospitality and Tourism Trailblazer Group, 23 May 2014

Partners

British Food Trust (Triple A Secretariat)

Applied Ability Awards (Triple A)
National Committee

Cambrian Training (delivery partner)

Edexcel (awarding body)

People 1st (Sector Skills Council)

Introduction

This case study demonstrates the support that the WorldSkills standards can give to industry partnerships determined to go beyond the normal national qualification offer.

Context

'Triple A' is a qualification for professional chefs, designed and delivered by industry for industry, in order to provide benchmarks for the development and promotion of

craft skills. Culminating in a one-day practical assessment, Triple A offers a common syllabus and independent appraisal of in-house apprenticeships.

'There are no common and consistent training standards that have the confidence of industry, and none at all that are set and maintained by the profession itself - that's the opportunity that Triple A now provides.'
Martyn Nail, Executive Chef,
Claridge's Hotel - Triple A Examiner
and Mentor

The challenge

Senior chefs promoted to positions requiring kitchen management skills have a number of established management qualifications to assist their development. However, a gap was identified for craft-led senior chefs needing to maintain a primary focus on food and cooking while also enhancing their management skills.

The challenge of this development project was therefore to design and pilot a Higher Apprenticeship to complete the career ladder for chefs by building on the newly developed and validated Diploma in Craft Cuisine.

Methodology

The aims of the project were to:

- review the new Levels 2 and 3 BTEC Apprenticeship in Craft Cuisine
- develop and pilot a Level 4 Apprenticeship for Chefs, which was designed to address industry concerns and involve employers in the development of the qualification and

associated training programme

- examine the link between the *Richard Review* and subsequent Trailblazer programme with the WorldSkills Standards Specifications and their approach to excellence
- monitor the development of an 'end test' for the apprenticeship and the link between this and the WorldSkills Test Projects and Marking Schemes
- embed the Legacy Project Performance Excellence Qualification within the design of the Apprenticeship.

An Expert Steering Group¹ of industry representatives, Cambrian Training, People 1st, Edexcel and a technical expert² was established, to be chaired by the British Food Trust.

To facilitate the case study the Legacy Project team observed the Expert Steering Group meetings and provided WorldSkills material for standards, test projects and marking schemes to support and influence the development. There were additional meetings with People 1st Wales, the technical expert, Cambrian Training and the British Food Trust to monitor progress and evaluate the impact of WorldSkills material on the design and delivery of the apprenticeship. The WorldSkills Test Project and Marking Scheme influenced the end test and competition that ran during the International Festival of Business 2014.

An associated project aim was to roll out the Performance Excellence qualifications. The resulting Level 4 Award unit, *Striving for Excellence in a Vocational Skill*, influenced the Level 4 Diploma for Chefs: Unit 8, *Developing*

Personal Performance Excellence in a Professional Kitchen. This Unit was approved by the Expert Steering Group at their meeting of 6 May 2014 and adopted as a mandatory unit.

The WorldSkills Standards Specifications for Cooking and Confectionery and Patisserie were mapped to the Edexcel Level 3 Diploma in Craft Cuisine and the Draft Level 4 Apprenticeship. The review revealed significant affinity between the new qualifications and the WorldSkills Standards Specifications, particularly through:

- the focus on high level vocational craft skills
- the representation of a single industry standard rather than one that allows single employers to select their own standards
- the use of the WorldSkills Standards Specifications as a comprehensive industry standard representing global best practice. The proposed Diploma required all units to be completed for successful achievement of the qualification
- the proposed practical end test with a set time and timetable reflecting the WorldSkills Competition
- assessment within the practical end test being done by independent industry experts not connected to the candidate's training provider.

Some minor variances were also noted:

- the Level 3 qualification features a unit on Employment Rights and Responsibilities in the Hospitality, Leisure, Travel and Tourism Sector. This is not included in the WorldSkills standard and would be very difficult to assess in an international competition

with competitors used to differing legal and cultural conditions

- the Level 4 Higher Apprenticeship has a unit called "*Coaching and Mentoring for Individual and Team Needs*". This is aimed at developing the role of the head chef as a coach and mentor to his/her brigade and does not apply to the WorldSkills Competition
- the WorldSkills Standards Specifications for a Confectioner or Pastry Cook contains more content relating to specialised chocolate work, presentation pieces and modelling in various media. This is to be expected because it is a global standard for specialists whose skills extend beyond the skill requirements of a fully competent general craft chef.

The case study has taken account of People 1st's review of learner and employer feedback from the pilot project. The Legacy Project team also attended the final assessment of apprenticeship candidates at the International Festival of Business in Liverpool to observe practice and gain feedback from apprentices, assessors and industry.

Finally, the team mapped the pilot Level 4 Apprenticeship against the *Richard Review Implementation Plan* (HM Government 2013). It found significant synergy between the apprenticeship and the recommendations made by the *Richard Review* (2012). This makes the apprenticeship compatible with Government plans for apprenticeships across England. Representatives from the Expert Steering Group had had input to the Hospitality and Tourism Trailblazer Group.

Outcomes

Building on the Triple A National Committee's development of the Level 2 and 3 Apprenticeship and BTEC Apprenticeship in Craft Cuisine, funding was secured from the Welsh Assembly Government and European Social Fund to complete the craft-led career ladder with the addition of a Higher Apprenticeship. This programme has now been developed and piloted.

Having had workshops and master classes in butchery, fishmongery, pastry, menu development, sustainability and mentoring, the final assessment took the form of each apprentice preparing, cooking and presenting meals for 16 guests.

The apprentices came from a variety of catering operations in Wales and were assisted by commis chefs from the City of Liverpool College. Assessment of the end test was conducted by examiners from the Triple A National



Committee who used an assessment format developed from the WorldSkills process.

The outcome is a programme that:

- defines, develops and maintains comprehensive craft skills for the industry and its customers
- assists in-house mentoring
- culminates in an impartial, independent trade test
- provides a robust measure of the value of the training received and the skills achieved
- generates and applies common standards and so creates consistency for employers, providers and students
- establishes the basis of an industry-led career ladder with 3 stages
- has been designed by chefs, so enabling the profession to set and maintain its own benchmarks
- is consistent with the Government's plans for reforming apprenticeships and used to inform the Trailblazer programme.

Conclusion

The training provider reports that the breadth and depth of the new apprenticeship has produced a more rounded professional. In addition to the apprentice's technical skill development, the structure and content of the programme requires the apprentice to think innovatively, consider work colleagues, solve problems, be an effective communicator and work in an organised and planned manner. Apprentices on the programme have developed confidence in their ability and demonstrated high levels of motivation. The provider has been able, directly, to compare apprentices on traditional frameworks to those on Triple A programmes and has identified a heightened confidence

and motivation to succeed. Students appear to welcome the robustness and rigour of the Triple A programme.

An initial Skills Scan was crucial in establishing the programme and identifying individual areas to focus on. This was a critical self-assessment at the start of the programme and facilitated commitment from the individual, provider and employer. The three-way commitment is a strong feature of the apprenticeship. Students liked the master class model. They were able to take their learning back to their workplaces and apply it in real business situations.

Employers have reported positively on the structure of a clearly defined programme. They have welcomed the master classes and report that the apprentices' application of what was learnt has had real and tangible business benefits in areas such as menu development, staff development and appraisals, costing and innovative approaches to business development.

This has been a challenging programme for the apprentices. The initial cohort of 21 students reduced to 14. The drop-out manifested itself early in the programme as students began to appreciate the commitment required and the additional responsibility for their own learning in a Level 4 programme. After the early withdrawals, the remaining students continued with the programme and all were successful in the end test.

If this programme continues and grows, there will be staff development issues for providers to resolve.

The delivery team needs to be well qualified, experienced and technically competent in order to deliver and assess at this level and thus maintain employers' confidence. The project team has fed into the Apprenticeship Trailblazer process. The Levels 2, 3 and 4 Triple A Apprenticeships meet the criteria outlined in the Government's Implementation Plan and are supported by respected and credible industry groups and employers.

'The Triple A is about chefs taking charge in the battle for craft skills and setting the standards for trainees and trainers alike. Since employers depend on those skills, we need to give them our wholehearted support and participation.'

Bob Cotton, former Chief Executive, British Hospitality Association

End notes

1. The industry representatives of the Expert Steering Group were senior chefs, whose attendance fluctuated according to their availability
2. The technical expert was Ruth Asker-Browne, a consultant with experience of working with awarding organisations



Developing skills demanded
by industry

'The lack of apprenticeships in the interiors sector, together with a largely unqualified workforce, has long been the concern of CITB and employers alike.'

AIS fpdc

Partners

British Gypsum (leading UK manufacturer of interior lining systems, in the Saint-Gobain group)

Stockport College (delivery partner)

Peter Moore, WorldSkills, Chief Expert for Plastering and Drywall Systems

Introduction

The purpose of this case study is to show how WorldSkills Standards Specifications, which combine plastering and drywall systems, can positively impact on the quality and take-up of programmes, and better prepare new entrants to the sector.

Context

Current UK VET programmes focus on traditional wet plastering skills, while the construction sector has a growing demand for skills in drywall systems, for new buildings and commercial development. The lack of apprenticeships in this 'interiors' area concerns the industry.

In 2011, on behalf of the Association of Interior Specialists (AIS) and the Federation of Plastering and Drywall Contractors (FPDC), the Construction Industry Training Board (CITB) funded a review of the low take-up of apprenticeships and formal training for entrants to the interiors sector. The review estimated that as many as two-thirds of site operatives have no formal qualifications, and recommended a new National Training Programme for the Interiors Sector.

This was to be a combined programme for plastering and drywall systems. Such a programme is offered by Stockport College, and has been reviewed for its relationship to WorldSkills standards.

The challenge

The impediments to reform appear to be that:

- Level 2 Plastering (Traditional) is hard to achieve in a college setting, especially for full-time students
- the current programmes do not respond to industry's growing use of drywall systems in new buildings
- most apprenticeships are for traditional plastering, both because advisors lack knowledge of the industry and very few drywall system businesses engage with apprenticeships
- the delivery of drywall courses is very expensive and requires large amounts of workshop space. Therefore few providers offer them
- the qualifications on offer do not match the required level of skill and are seen as irrelevant.

Many practitioners transfer to plastering and drywall systems from other trades from 24 years of age. Qualified plasterers are often considered qualified in drywall systems, but not the other way round.

The challenge was therefore to begin to overcome these considerable impediments, both through the design and piloting of a combined training programme for plastering and drywall systems, and by other measures.

Methodology

This case study is informed by meetings with teachers and trainers, industry and WorldSkills Experts, a review of current qualifications and desktop research.

The combined programme developed by Stockport College was mapped to the draft WorldSkills standards for Plastering and Drywall Systems. In doing this the development team kept in mind that the WorldSkills standards relate to global best practice, while the new combined programme is aimed at new entrants to the sector.

Stockport College offers two training routes depending on the entrants' starting points:

Route 1
Level 1 Plastering
Level 2 Plastering
If no job: Level 2 Drywall Systems

Route 2
Level 1 Plastering
Level 2 Drywall Systems
Level 2 Plastering

Route 2 allows weaker students more opportunities to progress, achieve and prepare fully for employment.

A number of colleges are involved in skills competitions because they help to improve skill levels in competitors and their peers. They are also able to access specialist resources and support from British Gypsum.

Peter Moore, the UK's WorldSkills Chief Expert, has responded to the challenge by establishing a new Construction Skills Academy. His purpose is to

- offer training for excellence rather than competence
- train craftspeople for industry with a broad range of technical skills in both plastering and interior systems
- prepare individuals with skills for business and self-employment.

Outcomes

The system adopted at Stockport College combining training and qualifications in traditional plastering and drywall systems was highlighted as innovative by British Gypsum. This programme follows the WorldSkills standards for this skill and is seen to be more consistent with current and developing industry practice.

The outcome of mapping the combined programme to the WorldSkills Standards Specification for Plastering and Drywall Systems has highlighted that no single qualification equates to that Standard Specification. This matches the feedback from VET providers and industry.

Most providers of construction training deliver plastering programmes only and are therefore not preparing trainees for the wider skills that are in growing demand. Dr Karin Stockerl (2014, p. 30) notes in the *Interior Sectors Training Review*:

'It is estimated that across the commercial interior sector, up to two-thirds of operatives are without an official qualification.'

Dr Stockerl concludes that linking drylining and plastering makes complete sense. The WorldSkills Standards Specification addresses this. Dr Stockerl's research has found rounded multi-skilled tradespeople in industry using the skills in combination. However, she has identified the cause of so few employers engaging with training as being the limited funding and programme structure. The view is that the complicated funding and regulatory environment of the UK makes proper apprenticeships the exception rather than the rule for new entrants to the interiors sector.

The trainer of the 2013 UK Skills Show Gold Medal winner from Belfast Metropolitan College confirmed that special training had to be arranged in drywall systems to prepare the competitor. He added:

'Qualifications for plastering are too fragmented; students do not become rounded craftsmen. Drywall systems is a growth area in the industry with many commercial and industrial buildings using this technology'

The WorldSkills Standards Specification

includes elements that are not in the combined programme. These are:

- thermal, sound and fire insulation
- heritage plastering
- customer care and communication.

Conclusion

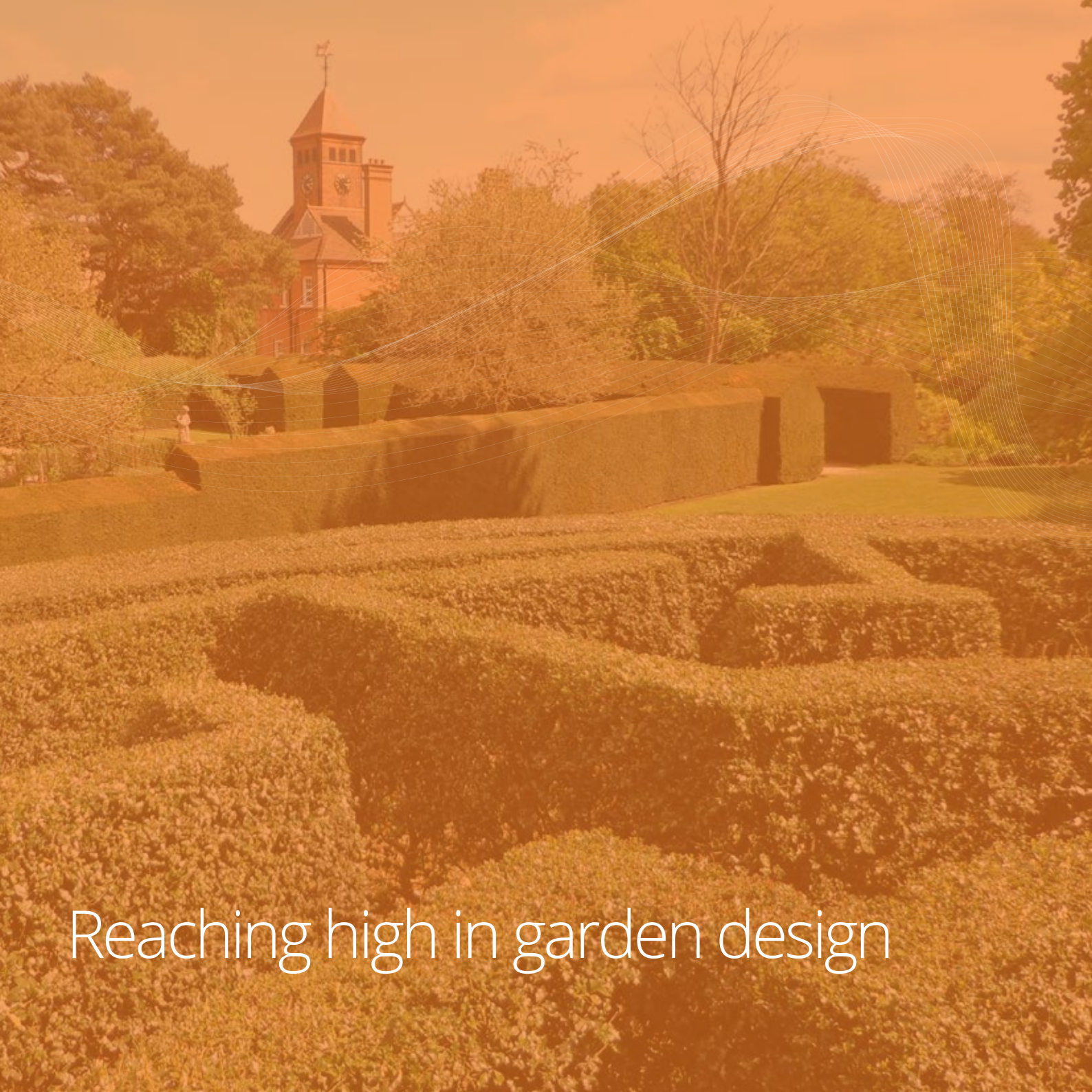
As Jeremy Clayton (2014, p.15), an AIS Training Manager reports:

'training provision and uptake for dry trades (drylining, ceilings, partitions, etc.) is poor.... Plastering and shopfitting trades fared better, primarily because these are long established trades with adequate training provision across the UK...'

Interviewees believe that current qualifications have not kept pace with industry and are no longer entirely relevant. The work role is becoming more technical and requires a complex skill set which is not addressed by the standards underpinning the qualification. This problem is compounded by a system that

- no longer incentivises providers to deliver to qualification standards
- lacks teachers and trainers who are themselves proficient in some of the more technical and current aspects of the occupation.

Although this case study focuses on one of many construction skills, the deficiencies it points to are systemic and need to be addressed urgently.



Reaching high in garden design

‘Capel Manor College has a substantial and respected reputation for Garden Design courses. Learners taking our qualifications are fully equipped for life as professional garden designers. The opportunity to be part of a project which is further developing and inspiring Capel Manor learners and supporting the transfer of WorldSkills standards to the UK to encourage aspirational learning, is a chance not to be missed.’

Lee Sanders, Head of Garden Design and Plantsmanship, Capel Manor College

Partners

Gateway Qualifications (formerly Open College Network (Eastern Region), awarding body)

Capel Manor College, London (delivery partner)

Introduction

This case study outlines a project to develop a new Level 4 qualification for garden design, based on the

WorldSkills Standards Specification for landscape gardening. The qualification also incorporates performance excellence standards, developed as part of a related WorldSkills project.

The case study explains how the WorldSkills Standards Specifications and assessments are being used to develop a Level 4 qualification. This is to raise the aspirations and achievements of learners and in so doing exceed the expectations of industry.

Context

Early in 2014 discussions were held with Gateway Qualifications. The concept agreed provides an exemplar for awarding organisations wishing to align with WorldSkills Standards Specifications and the drive for excellence.

Gateway Qualifications is an awarding organisation, recognised by Ofqual, with over 20 years of expertise. It is also licensed by the Quality Assurance Agency for Higher Education as an Access Validating Agency. It has a reputation for being customer-centric, innovative and forward thinking. It has almost 500 qualifications spanning preparatory, further education, vocational and professional development subjects.

Capel Manor College has a reputation for delivering high quality training with specialist design studios and a Computer Aided Design suite. Learners have access to 30 acres of gardens in Enfield, which provide inspiration

throughout the year. Learners based in Regent’s Park have well-equipped studios and access to areas of Regent’s Park. Learners and staff win awards at RHS Shows on a regular basis. Some graduates are full members of the Society of Garden Designers (SGD) and contribute to journals on garden design. Graduates have also been shortlisted for the finals of the SGD awards.

The concept

Following initial discussions it was agreed that Gateway Qualifications would design the qualification working closely with the College. A unique feature of this Award is the link to the WorldSkills Standards Specification for landscape gardening and the integration of performance excellence standards.

‘Gateway Qualifications welcomes the opportunity to work closely with Capel Manor College on an exciting project that complements the existing Level 2 and Level 3 Garden Design qualifications. The qualifications were developed working closely with the College, Lantra, Royal Botanic Gardens Kew and others.’

‘Gateway Qualifications recognises the extremely high standards reached by learners at Capel Manor College. The project to develop a qualification at Level 4 is further recognising their drive for performance excellence.’
Carol Snape, CEO, Gateway Qualifications

The performance excellence standards were originally designed with support from the Qualifications and Curriculum Development Agency (QCDA), to help Squad and Team UK to prepare for WorldSkills Competitions. They further evolved to help apprenticeship programmes become more stretching, and to provide recognition for high achievers. The *Richard Review* (2012) complemented this aspiration.

The performance excellence standards relate to research undertaken in 2011 (Nokelainen et al, 2013). The new WorldSkills aligned qualification is being piloted at Capel Manor College, initially with one cohort of learners.

Benefits for learners

Professional garden designers deal with all aspects of garden and landscape design. They mostly work in the private sector, but there are also significant roles with local councils which involve, for example, designing public spaces or community-led projects.

Employment opportunities also exist with large companies which design and build landscape gardens, source plants and undertake planting. While the current garden design qualifications demonstrate occupational competence, a qualification that further demonstrates performance excellence for learners enhances employment prospects.

Benefits for industry

Creativity, IT and communication are

all essential skills for garden designers, as is an in-depth understanding of horticulture. Adding demonstrable excellence in delivery enhances the status of practitioners and widens market opportunities.

Benefits for the learning provider

Capel Manor College students are encouraged to demonstrate their skills by designing for shows and competitions which give them invaluable project management experience. Aligning with the WorldSkills standards enhances this experience for both students and the College.

Conclusion

This case study illustrates the value of awarding organisations, colleges and industry working together to look beyond the UK to align with international standards and assessment practices.

The system for developing standards and vocational qualifications is often subject to change within the UK. The competence-based movement was a thirty year cycle which is now being impacted upon by the new apprenticeship programmes which aim to provide 'stretch'.

This initiative illustrates a new approach which is firmly based on raising aspirations and working in partnership with education and industry. By connecting with

international standards and assessment methods, UK VET can develop new ambitious qualifications that align with international standards and thus support industry's competitiveness. It can also link the development of technical garden design skills with generic performance excellence standards. These will inject into standards the dynamism required by industry and introduce assessment methods that demonstrate knowledge, understanding, skills and performance in the ways that industry requires.

A photograph of three young men sitting at a long desk in a computer lab, working on their laptops. They are all looking towards the left side of the frame. The image has a blue color overlay and a decorative graphic of white, wavy lines that resemble a network or data flow, starting from the left and moving across the top of the image. The text 'Trialling international standards in engineering design' is overlaid in the bottom left corner in a white, sans-serif font.

Trialling international standards
in engineering design

'Involvement in piloting the ACU qualification alongside the BTEC course has changed the way I want the core programme to be delivered. Integrating ACU-type tasks provides students with stretching activities that develop their technical skills and are most closely aligned to current industry practice and standards.'

Mark Jackson, Programme Leader, North Warwickshire and Hinckley College

Partners

Autodesk (international software developer)

North Warwickshire and Hinckley College (delivery partner)

Prodigy Learning (delivery partner)

New College Lanarkshire (delivery partner)

Context

Some employers and training providers have identified that there is not a clear route for training Design Engineers, especially apprentices. The current apprenticeship frameworks

are generic engineering programmes with little opportunity for apprentices to gain skills and accreditation in engineering design. In addition, the current main qualifications are not up to date. In a fast developing industry with new technologies, it is difficult for awarding bodies to keep qualifications current and for training providers to maintain the currency of their teachers' skills and specialist resources.

One potential solution to aspects of this problem is to embed WorldSkills Standards Specifications into training programmes. These Standards Specifications are systematically reviewed every two years through the WorldSkills Competition cycle. They are designed to represent best practice in global industry and are subject to consultation with industry.



Autodesk is a major international software developer and sponsor of WorldSkills. It is mapping the WorldSkills Standards Specification for Mechanical Engineering: Computer

Aided Design (CAD) to its in-house qualification: Autodesk Certified User (ACU). In addition, Autodesk is meeting awarding bodies to highlight the revised CAD qualifications which will be nationally available, approved by Ofqual and fundable for eligible students. There is also a plan to develop and make available on-line teaching and learning resources.

Three qualification routes will be available:

- 3D Design – engineering
- BIM – Building information modelling
- Games design

The rationale

Matthew Bell, the Education Programme Manager, Autodesk Education Europe, has met UK awarding bodies regarding the development of new CAD qualifications:

- aimed at schools for GCSE and GCE A Level stage
- aimed at colleges, training providers and industry undertaking vocational programmes.

Updated qualifications will be informed by the ACU qualifications. ACUs are mapped against the WorldSkills Standards Specification at two levels:

- ACU Entry – national competition level
- ACU Professional – international competition level

The purpose of this case study is therefore to gauge the relevance of the WorldSkills Standards Specification to the current and emerging needs of

industry and to monitor the benefits for students of embedding the ACU into programmes of study.

Methodology

Providers engaged in the project piloted the ACU qualification programmes alongside existing programmes of study. As well as the main qualification, students involved also took the ACU qualifications. The inclusion of the ACU criteria into the training programme was intended to determine the impact on students' skills development, their performance within the main qualification, and their readiness for work.

In December 2013 a two-day workshop was hosted by the project team for providers that had volunteered to be part of the pilot. The agenda for the workshop comprised:

- the background and context to the pilot
- Autodesk Inventor Training for ACU examination
- arrangements for taking the Autodesk Inventor ACU examination
- the City and Guilds qualification
- the programme of delivery in pilot centres
- demonstration of materials
- administration
- Prodigy Learning
- quality assurance
- benefits
- available support.

Following the workshop all centres were offered support from the project team, Autodesk and Prodigy Learning. They were all established as Prodigy Learning centres and provided with licences in order to access practice

tests and complete the on-line examination.

From January to July 2014 the centres piloted the ACU qualification programme with approximately 140 students studying on either the Level 3 BTEC Extended Diploma or HNC/D programmes.

The impact

Staff have benefitted from having pre-prepared materials. Participation in the pilot is impacting on the planned delivery of BTEC programmes in the future, leading to consideration of how ACU type tasks are to be integrated into the core delivery.



Delivery of the ACU qualification programme has been embedded within the pre-existing timetable. Both full-time and part-time students have participated. One college has provided a virtual learning environment forum with additional resources that have

encouraged students to practise building their skills outside timetabled hours.

One team leader for Level 3 students reports that the achievement of the students has been raised above the expectation of the BTEC course; students have been able to treat the BTEC assessment tasks as simple rather than complex. No additional time has been allocated; tasks have been combined with specific learning exercises embedded into a skills matrix. The team leader also believes that students' ability to adapt to different software packages has been enhanced, supporting their entry to employment or progression to higher education.

Level 4 students are enthusiastic about their involvement with the pilot, and have volunteered to be included. They report that the ACU would be recognised by industry and that achievement would support their progress into employment. Students

report that some of last year's students have proactively sought access to the programme and that their college has put on special provision for them.

The feedback from staff and students indicates that completing the ACU alongside their main qualification has had the benefit of:

- broadening knowledge and understanding of software applications
- encouraging breadth of thinking and the identification of innovative solutions to design and work-related problems
- encouragement to the students to work under pressure of time
- support for the development of high quality practical skills
- demonstrating that the students are working to a high standard benchmarked to industry.

Some students comment that the ACU trains and tests to one product range whereas the BTEC qualifications are not specific. Nonetheless, the students feel that most of the skills are transferable and, once proficient with one product, it is straightforward to adapt to another.

Conclusion

Both centres and students believe that preparing for and taking the ACU has supported the development of practical design skills that are benchmarked to current industry standards. The requirement for high level skills, tested in a time restricted examination, has prepared students to become valuable contributors to the workplace. In addition, undertaking the ACU qualifications has also supported

success in skills competitions, both at national and international levels, and also strengthened the link between embedded WorldSkills standards and the development of high level vocational skills.



Aligning professional skills
with international standards

'The WorldSkills standard for visual merchandising provided an excellent benchmark for our project with the retail industry. We have developed "professional standards" for visual merchandising, which "aim high" and provide a basis for the creation of new apprenticeship programmes.'

Annette Allmark, Director of Strategic Policy, People 1st

Partners

People 1st (Sector Skills Council)

Introduction

This case study illustrates the new opportunities for UK industry and business to integrate internationally derived WorldSkills Standards Specifications into professional development programmes for their employees as they compete in the dynamic global market place.

Context

People 1st is the principal skills and workforce development charity for employers in the retail, hospitality, tourism, leisure, travel and passenger transport industries. It leads in market

research and skills policy for the sector, is responsible for setting standards, and has developed and implemented many qualifications and apprenticeship frameworks to meet employers' needs.

Following an exploratory meeting regarding WorldSkills standards in autumn 2013, it was concluded that there was opportunity and benefit in joint working. Visual merchandising was identified as an increasingly important occupation within the retail industry. Following discussion with the Retail Apprenticeship Trailblazer Employers Group, it was selected as the focus of a project to develop professional standards and an appropriate methodology for assessing them.

People 1st was then nominated by trailblazer employers to respond to the government's apprenticeship reforms by developing apprenticeship standards and high level assessment for occupations in retail, aviation and hospitality, together with travel and tourism. This work was conducted between March and June 2014, with the expectation of piloting the new standards from January 2015.

The challenge

In the last two years People 1st has worked with employers in both retail and passenger transport to identify what would take an individual beyond competence and to a professional standard in a sample of occupations. The outcome is positive, with employers committed to creating an industry endorsed standard that

can improve performance. They are enthusiastic about recognising individuals' achievement through an agreed assessment process.

Following the publication of the Richard Review (2012), People 1st also identified a need for a new format for standards that represent quality performance, are stretching, raise individuals' aspirations, and reflect a broad capacity to undertake particular work roles successfully. This focused the employers' needs and constituted the challenge.

The rationale

Professional standards are needed across the service sectors as they grow in importance because they:

- are a key element in the effort to up-skill the UK workforce and increase the value of the UK economy
- mark an important move away from a reliance on qualification outputs and instead embrace a new and more flexible approach to staff development, driven by employers' needs
- underpin and promote the professionalism of specific occupations that employers rely on to achieve business success
- not only support rising skills, they also raise the profile of occupations, such as visual merchandising, that are less apparent as a career option
- identify and define critical stages of career pathways and progression opportunities
- provide an independent resource for both accredited and non-accredited vocational education and training

- provide a benchmark that awards and accreditations can be measured against for consistency and alignment.

The opportunity

Both the WorldSkills and People 1st standards projects are committed to 'raising the game'. The unique features of the professional standards and the WorldSkills standards include the fact they:

- are based in aspirational performance
- support progression to higher points in the career ladder
- are outcomes based, thus demonstrating how the standards meet the performance requirements of employers to match customer demand
- are mandatory: there are no optional pathways.

By using the new WorldSkills Standards Specification as the starting point, People 1st was able to create a set of professional standards with international alignment. Given that new apprenticeship programmes are required by the government to aspire to be 'world class', there was a golden opportunity for the retail industry to look to the future when creating a visual merchandising apprenticeship.

'WorldSkills facilitates high-level training based on an extensive visual merchandising skill set. By expanding practical abilities, underpinned by industry standards, WorldSkills drives UK retail practice forward and identifies creative directors of the future.'
Julianne Lavery, International Display Consultant

Methodology

People 1st has adopted the model for professional standards that it previously developed with employers. Research has been actioned to outline the current and future skill needs for a visual merchandiser. Observational analysis of the role has captured the factors that result in high performance and quality outputs. Job descriptions have also been reviewed.

A consultation has been undertaken with the Retail Industry Skills Partnership Group (IPSG) which includes employers that joined together to form the retail apprenticeship trailblazer. The employers include the Co-operative, Tesco, John Lewis and the Horticultural Trade Association.

The development of the visual merchandising professional standard has used as its starting point the WorldSkills Standards Specification drafted through the International Standards Transfer Project. The process included:

- obtaining initial feedback from employers on the content
- adapting and taking into consideration the criteria for new apprenticeships
- consulting with industry representatives: Asda (Head of Sales Development), Mango (Visual Merchandising Manager UK and Ireland Concessions), New Look (Academy New Initiatives and Project Specialist), and Visual-Red (a Visual Merchandising Specialist)
- conducting a verification exercise to ensure employer endorsement of the

final professional standards.

In order to create an appropriate form of assessment for the professional standard, previous WorldSkills assessments have been reviewed. The outcome is the development of an on-line assessment platform enabling individuals to benchmark their attainment against the standard through a series of questions relating to their knowledge, skill and behaviours.

The impact

During autumn 2014 the professional standard and accompanying assessment tool are being 'rolled out' to the retail industry. The desired impact includes:

- improved profile/recognition of professional visual merchandising skills within the retail industry
- greater success for retail businesses within the UK and internationally
- individuals aspiring to reach the highest standards
- new apprenticeships for visual merchandisers.

Conclusion

The concept of professional standards has been introduced by People 1st partly in anticipation of the changes the government has initiated for the development of apprenticeships. The intention is for industry to determine and design the standards they consider critical for their success and the economic position of the UK on the world stage. The focus, therefore, is on high level standards and raised

aspirations. The WorldSkills Standards Specification has been designed to encourage and recognise performance excellence, thus uniting the two initiatives and presenting an ideal opportunity to pave the way for an apprenticeship in visual merchandising.

In order to maintain their integrity, professional standards must be independent of apprenticeships, vocational qualifications and in-house training programmes. The professional standard, like the WorldSkills standard, is the product employers understand. This will ensure, as Doug Richard reinforced in his *Review* (2012), that there is a renewed focus on the outcomes of particular training interventions, rather than an over-focus on their components.



Creating aspiration and success

'Given the opportunity, people with learning difficulty and disability rise to the challenge of showcasing their skills.'

Louise Keevil, Project and Partnership Manager, Derwen College

Partners

North Warwickshire and Hinckley College (centre for Performance Excellence awards and delivery partner)

Derwen College, Oswestry (delivery partner)

Beaumont College, Lancaster (delivery partner)

Sagbacksgymnasiet, Stockholm (delivery partner)

Open College Network (West Midlands Region, awarding body)

Introduction

This case study is in its early stages and sets out to demonstrate that excellence and aspiration can and should feature in every type and level of technical and vocational education and training. International standards, practices and competitiveness are applicable to us all.

Context

Derwen College is a specialist residential college that aims to nurture, develop and challenge the young people who come to them, and equip them with the skills they need for employment and to live as independently as possible.

Derwen College specialises in teaching through vocational programmes. The students learn in real work situations. These may be in a shop, an office, a cafe, a big catering kitchen, a hotel or conference centre, or on an estate, or as a carer. These situations, together with gardening, floristry, food production, car valeting and performance arts are all opportunities for learning and development that embrace national qualifications and offer many life skills.



Young people who come to Derwen College have a wide range of learning difficulties and disabilities. This is why the programmes are designed to meet individual needs. Students are challenged to achieve their full potential while living and learning in a safe place.

Independent living skills are a big part of the weekly routine. The Personal Development Programme supports students in developing confidence and building personal, social and citizenship skills.

Derwen College is one of the leading specialist colleges in the country. Ofsted has recently graded it again as 'Outstanding'. It is the first specialist college in the UK to have retained the Outstanding grade under the most recent Ofsted regime. It has Beacon Status and is a Makaton Centre of Excellence. Derwen College promotes competitions as a means of developing employability skills alongside real, meaningful work in the College's commercial outlets.

Because of its existing commitment to skills competitions, in 2013 Derwen College approached North Warwickshire and Hinckley College (the national centre for Performance Excellence awards) to discuss involvement in a Performance Excellence qualifications pilot project. However, it soon became clear that the initial suite of qualifications at Levels 2-4 was unsuitable for learners with learning difficulties and disabilities.

The challenge

Performance Excellence awards were designed to support Squad and Team UK for the WorldSkills Competition held in London in 2011. The awards were developed to support the performance attributes needed to excel in skill competitions that reflect outstanding performance in the workplace. Following the 2011 WorldSkills Competition the qualifications were further developed so as to support performance excellence in any vocational context.

The newly developed awards at Levels 2–4 were piloted in 2012–13, and then 2013–14. The initial impact of the awards as identified by pilot centres included the promotion of outstanding vocational skills (both technical skills and more generic performance skills), the ability to differentiate between satisfactory and outstanding performance, and the embedding of stretch and challenge into programmes.

In order to promote inclusivity in vocational excellence, the partners identified the need for similar opportunities for students at Level 1 and below. Excellence is demonstrable at all levels; therefore recognition should be available to all. This was the challenge and opportunity that Derwen College presented.

Methodology

The rationale for Entry Level and Level 1 awards was both to support the development of technical and

employability skills and to provide a platform for transition from education to employment.

Three connected developments have been overseen by Derwen College, in its own right and on behalf of the Association of National Specialist Colleges (Natspec), and North Warwickshire and Hinckley College, representing itself and the Association of Colleges National WorldSkills Portfolio Group.

The first development is the creation of a wider partnership to share competition strategies in conjunction with WorldSkills UK and Foundation Learning Inclusive Skills Initiatives such as the 'Footsteps to the Future', a series of national skills competitions at Entry Level and Level 1. The second is the creation of accessible and appropriate Performance Excellence awards. In April 2014 a working party of specialists in performance excellence and the needs of learners at Level 1 and below worked with OCN(WMR) to create awards to suit this group of learners.

In June 2014 Ofqual approved the Entry Level 3 and Level 1 Awards. The working party then prepared unit amplifications and support materials in readiness for the first learners in September 2014.

The third is the involvement of Sagbacksgymnasiet, in Stockholm, Sweden. In May 2014 two staff and two students from Sagbacksgymnasiet visited the 'Footsteps to the Future' Competition in order to consider skills competitions as a motivational and

engagement tool for students unable to join mainstream national vocational programmes in Sweden. More details about Sagbacksgymnasiet are provided at the end of this case study.

Conclusion

The outcome of this initiative is the OCN(WMR) Entry Level Award in Achieving Excellence in a Vocational Skill (Entry 3) (QCF) (601/3473/2) and the OCN(WMR) Level 1 Award in Achieving Excellence in a Vocational Skill (QCF) (601/3472/0), together with supporting materials.

These Awards meet the identified needs of learners working at Level 1 and demonstrate that vocational excellence can be identified at each stage of a student's development. They suit students at all ages and can be embedded into larger programmes aimed at supporting people into employment. For example, they can be linked to work placement programmes to enable the individual to maximise the benefit to him or her and the placements to optimise the quality of the experience.

The Awards support programmes that deliver an appropriate combination of employment and occupational skills, according to the individual's circumstances and the needs of the labour market. More widely they encourage inclusion, provide stretch and challenge, and bring excellence and recognition within reach.

Looking forward

During 2014–15 the new Awards will be piloted in the UK and Sweden. The Awards are available to any provider. In addition to the pilot centres, any other provider is invited to get involved. The first set of awards will be celebrated in due course.

The partners are committed to embedding skills competitions into their curriculum and have applied elements of the WorldSkills Standard Specification to their curriculum design and pedagogy.

To support further development a group of providers across Europe have designed an Erasmus bid. One of the bid's objectives is to

'develop and enhance confidence and performance excellence through involvement in competition activities; to inspire learners to achieve their best; raise their aspirations and improve their employment opportunities; to promote the positive links between vocational excellence and employment; evidencing performance excellence through qualification achievement.'

Sagbacksgymnasiet, Stockholm: a cameo

In Sweden young people wishing to pursue a vocational route into employment apply to take a National Vocational Programme. Around 11%–12% of young people do not achieve the entry requirements for

these. Since 2011 a new programme – Introduction to Vocational Studies – has been developed to meet these students' needs. This programme takes up to three years. Its content is not prescribed and individual training providers design their own programmes. There is also no qualification requirement. Young people can follow several pathways within the Introduction to Vocational Studies, which includes a pathway for immigrants whose grasp of the Swedish language skills is not adequate for the workplace.

Sagbacksgymnasiet has developed an action plan with strategies to increase its attractiveness by developing entrepreneurial learning, collaboration, competition and internationalisation. It has identified that students taking the Introduction to Vocational Studies often lack self-esteem, which arises from failure at school. The key to success for these students is to boost their self-confidence and restore their motivation. In addition, the Introduction of the programme has often been unfairly represented. Given this, it is particularly important to boost the programme's status so that students can be proud of their education. The strategy is therefore to promote motivational activities by introducing skills competitions such as 'Footsteps to the Future'.

Sagbacksgymnasiet has also committed itself to piloting the use of the Entry Level 3 and Level 1 awards in Achieving Excellence in a Vocational Skill. Introduction to Vocational Studies is distinct from the Swedish National Vocational Programmes by focusing

on experience in a workplace with the aim of establishing the student in the job market. The primary goal is not for the student to achieve specific vocational qualifications; it is to assess the quality of an individual's vocational performance in work settings. This complements and fulfils the purpose of the Performance Excellence awards.



Driving excellence with a
WorldSkills strategy

‘There is so much happening in the College as part of the WorldSkills movement that drives excellence in work based skills through participation in regional, national and international competitions, and also have a go events, collaboration with employers and research activity. It is very exciting for staff and students to be part of.’

Margaret Darroch, Head of Skills Academy and Development, City of Glasgow College

Partners

City of Glasgow College (delivery partner)

Introduction

This case study examines why and how a major college of further education uses skills competitions and international standards to support quality improvements in the delivery of vocational education and training (VET).

Context

The creation of City of Glasgow College in 2010 marked an aspiration to transform the quality of further education by redefining students’ experience and creating a world class institution. The College recognises the critical importance of developing and embedding a competition ethos into core learning and teaching as a lever to support the move from competence to excellence. Therefore regional, national and international competitions are regarded as powerful tools to enhance the quality of teaching and raise standards.

The transformation strategy of the City of Glasgow College was informed by a wide body of research that emphasised the positive impact of project based and experiential learning. The strategy was consistent with the philosophy of *Curriculum for Excellence* (Scottish Executive, 2004). Paul Little, the College Principal, has noted:

‘Worldskills is the equivalent of the education Olympics. In preparing for it, students are compelled to enhance skills in their area of study and are driven to succeed.’
City of Glasgow College (2013)

The challenge

The decision to build a new learning strategy on the basis of WorldSkills was ambitious, and rightly so.

The challenge was therefore to implement a WorldSkills learning strategy and evaluate its impact.

Methodology

The Strategy was introduced through three main measures, of which the first was the introduction of a Whole College Strategy including WorldSkills Standards Specifications, participation and competitions.

To pursue this, the College appointed a Head of Skills Academy and Development to be responsible for implementing the WorldSkills Training Academy with a direct link to work and genuine collaboration with employers, schools and universities. This is now in place.

The ethos of the Academy is to put the learner at its heart. It uses competitions and WorldSkills Standards Specifications as tools to improve learning and outcomes for all learners; it is not just a vehicle for success in skills competitions.

Key to the Academy are the Four Capacities outlined by Education Scotland (2004):

‘The purpose of the curriculum is encapsulated in the four capacities – to enable each child or young person to be a successful learner, a confident individual, a responsible citizen and an effective contributor.’

The planned benefits of the WorldSkills Training Academy are set out in the model in Figure 1. The learner is at the centre, encompassed by the Four Capacities and, in the outer ring, the behaviours and capabilities to be developed in each individual learner.

The process to develop the Academy is on the left of the model, and the perceived benefits are on the right.

The second measure was to task a college manager to develop a WorldSkills Strategy and Academy. The vision was to grow competition activity to support the following broader objectives to:

- redefine the learner experience
- enhance practice, innovation and quality
- create transformational professional development in learning and teaching.

The third measure was to set the aims and targets for the WorldSkills Strategy. In addition to the above three objectives, these included:

- enhancing employability
- creating resilient and independent learners
- providing a sustainable community of competition practice
- adding a formal research dimension to the City of Glasgow College WorldSkills movement.

The approach to learning through skills competitions supports the College's new 'project-based interdisciplinary pedagogical model' (City of Glasgow College, 2013).

The impact

The College reports that its data demonstrate that students involved in competition activity go on to be flexible, self-directed lifelong learners. Rather than being prepared for a job alone, they become responsive professionals. In addition, further benefits of competition activity include:

- improving the baseline standards of the community
- injecting ambition and aspiration
- building confidence and self esteem
- benchmarking standards in internal, regional, national and international competition
- the development of vocational skills to outstanding levels
- enhancing capacity in the skills and attributes valued by employers, such as teamwork, time management, prioritisation, judgement and working under pressure.

WorldSkills Standards Specifications have been used as a benchmark to support the development of excellence in vocational skills. To support competitors the College has developed and implemented a WorldSkills Training Plan that is based on the NCFE Achieving Excellence in a Vocational Skill qualification. The Plan acts as a framework for mentoring competitors while they prepare to compete. The College is a pilot centre for mainstreaming Performance Excellence qualifications.

Mentors are allocated teaching hours to support and train competitors. They have a role description for this work and are supported by continuing professional development (CPD), the Head of Skills Academy and Development, and a Health and Wellbeing Manager who works with competitors on their generic skills.

A further impact is that, since the launch of the WorldSkills Training Academy, college students' representation and success in skills competitions has increased

considerably. There has been a 100% increase in regional medallists and representation at the UK annual Skills Show. The College also has learners who are representing the UK at the EuroSkills Competition and in the WorldSkills UK Squad.

The main ambition for the Strategy and the College is to raise standards in teaching, learning and outcomes for learners. The Head of Skills Academy and Development describes the impact on teaching and learning across the six faculties as 'phenomenal'. The Academy's activities have created a 'real buzz' around the College. Linked to this activity, a range of interventions, such as master classes for staff, videos made for use in teaching, training for coaching skills, work placements and specialist guest speakers, have all contributed to a growing ethos of excellence and transformation in practice and expectations (Darroch, 2014).

The WorldSkills Faculty provides significant added value across the College, providing tools and support for teaching for excellence, not just for qualifications. It has created a critical community of practice across a network of practitioners from all curriculum areas in order to share good practice.

The College has invested in its Strategy through the appointment of a manager and mentors. Although this does not directly generate additional income, the College believes that it is justified by higher success rates, improved skill development and progression into employment. In addition, success in

competitions and greater collaborative working with employers raises the College's profile and in turn its recruitment.

The WorldSkills Training Plans and guidelines have been crucial to the successful implementation of the Strategy. Agreement with the mentors and their broad acceptance of the process and planned outcomes has added clarity to their role. Focused and individually tailored professional development for mentors has been pivotal in embedding excellence and high level craft skills. Mentors have disseminated their experience to colleagues and shared resources which have contributed to the positive impact across the College.

The impact of the WorldSkills Training Academy and activity in skills competitions is embedded into the College's Self-Evaluation Framework. This supports the integration of skills competitions into teaching and learning across the College. It raises the awareness of staff and focusses college managers on monitoring impact and providing evidence of the benefits to students as a route to achievement that every student can share, irrespective of their participation in competitions or their choice of college.

In a less connected and more overtly marketised system City of Glasgow College serves as a microcosm for what can be done by a well situated and judicious college seeking similar benefits for its communities.

Figure 1



Conclusion

The UK is not in the position of Finland, where skills competitions are fully embedded in vocational teaching and learning as an organic and powerful means of maintaining its acknowledged world class VET system.



Enabling excellence for VET
teachers

“I am a fan of this project, which will, I am confident, filter through the apprenticeship and training system to raise the standards of work readiness, and hence the employability, of our learners.’

Dr Stephen Vickers, Chief Executive, VTCT

Partners

Vocational Training Charitable Trust (VTCT, an Ofqual approved specialist awarding organisation)

Introduction

This case study introduces research which began in early 2014 and is now at the concept development and testing stage. The research aims to improve the quality of learning by growing the higher level technical skills base of UK vocational education and training (VET) practitioners.

The case study explores the potential for the introduction of a skills development programme, incorporating a trade test aligned to and drawing on WorldSkills Standards Specifications and assessments. The ultimate purpose is to raise the bar for technical skills, to meet the needs of industry as it competes in an increasingly dynamic global market place.

Context

VTCT offers qualifications in hairdressing, barbering, beauty and complementary therapies sectors among others. It is also a charitable donor, and undertakes research and development to support its investment in these sectors. VTCT interfaces with learning providers and their teams and gains feedback on the challenges VET teachers face in developing and maintaining their own ‘leading edge’ technical skills.



In July 2014, VTCT’s Specialist Lead for Hairdressing and Barbering hosted a meeting with 14 representatives from across the sector including awarding organisations, sector skills councils, manufacturers, trade and professional associations, salon owners and educators. The meeting was supported by consultants from Dynamic Influence, a business development consultancy. As a result, VTCT decided to invest in a ‘Trade Testing Scoping Project’ to generate potential solutions.

Members of the meeting in July 2014 gave their reasons for contributing to the research, as follows:

- ‘professional development’ tends

to focus on teaching rather than developing high level technical skills

- employers welcomed an initiative to support VET teachers in demonstrating a ‘set standard’ of high level technical skills
- the needs of learners and their employment opportunities are the priority.

The challenge

The challenge was therefore to explore the causes of inadequate opportunities for the development of high level technical skills for VET teachers.

VET teachers working in a regulated qualifications environment are guided by requirements from their own institutions, awarding organisations and inspection bodies. Meeting the requirements is critical for quality assurance and the success of the learners and the organisations the teachers represent.

In July 2014, David Russell, Chief Executive of the Education and Training Foundation, stated:

‘We believe that teaching and training in our sector should be seen as a high status profession, its reputation flowing from high quality outcomes. Teachers and trainers should be encouraged to exercise professional autonomy and take ownership of their own CPD, in the interests of improved teaching and learning and for the benefit of the learner.’

Professional development for VET has historically been a mix of formal and informal activities. For example,

research, attending courses, gaining qualifications, on-line learning, peer review, mentoring and shadowing are common and excellent methods.

While VTCT fully supports current CPD practice, it also considers that further investment in deep skills development would add value to the learner experience and capabilities. Concerns with current CPD programmes include the fact that they either work on skills within the practitioners' comfort zone or are focused on theory, neither growing nor testing new technical skills.

VET teachers have a significant impact on learners, so an appropriate level of investment in their technical skills and subsequent professional status within industry is critical.

This has been highlighted in a case study about developing high level skills in upholstery and soft furnishings (CAVTL & ETF 2014). The research identified that the first key to success is high level technical standards that motivate learners to raise their own performance and be confident that they will meet the needs of the industry and their future customers.

The resolve

To address its concerns, VTCT resolved to establish trade tests for VET teachers:

The aim of our potential 'Trade Testing' organisation will be to build an inspirational alliance of technical educators who will work to enhance the learning experience. Their focus – and

ours – will be to strengthen the existing approach to professional development, encourage an expectation of expertise and professionalism, and increase the skills and standards of hairdressing, barbering and beauty related educators and assessors through a more rigorous approach to training.... We will raise the standards in our industries by encouraging continual professional development and introducing a proposed trade test to ensure our sector has the best educators in the UK....'
(VTCT 2014)

The potential benefits were anticipated to be:

- for learners
 - inspiration to 'aim high'
 - improved opportunities for employment
- for industry
 - representative of employer expectations
 - increased confidence and support from employers
- for tutors
 - focused skills development
 - identification of potential/talent
 - enabling tailored support
- for learning providers
 - national skills benchmarks for tutors
 - enabling high skill standards to be embedded in the organisation
 - identification of inspirational tutors who excel technically.

Methodology

By connecting with the International Standards Transfer Project, VTCT has gained an insight into the high level technical skills required of the WorldSkills UK Experts/Training

Managers for hairdressing and beauty therapy. The standards they demonstrate must be 'world class'. Likewise the standards developed by WorldSkills International and consulted upon with global industry and business are highly demanding for young people representing their country in the WorldSkills Competition.

To align with international skill standards the opportunity has been identified to draw on the WorldSkills Standards Specifications and assessment methods to enable VET teachers to develop, maintain and practise high level skills, thus encouraging learners in turn to aspire to reach the highest standards.

In August 2014 Dynamic Influence drafted a questionnaire for VET teachers, trainers and assessors. The questionnaire was accompanied by a note explaining the Trade Test initiative and stating:

'To address some concerns about the CPD for educators, assessors and verifiers a radical revision of the current arrangements has been proposed to change the requirements from a set number of hours, to an independently assessed 'trade test' which will measure the development of technical skill.'

The questionnaire was circulated in October 2014 to UK colleges and private training providers.

Issues

VTCT recognises that the development and introduction of the proposed trade

tests will require careful planning and roll out, beginning with a pilot phase. The issues to be discussed and agreed include:

- their relationship with the requirements of current continuing professional development
 - their relationship with the requirements of examiners for new apprenticeships
 - the credentials of the expert group
 - how best to involve industry
 - the design of tests
 - grading
 - the location of trade test centres.
- the credentials of the expert group
- how best to involve industry
 - the design of tests
 - grading
 - the location of trade test centres.

Conclusion

This case study shows that one vocational sector is taking the initiative to strengthen technical skills and aim high. It demonstrates a determination by representatives of VET practitioners and industry to raise their game.

Grasping the opportunity to connect with the WorldSkills Standards Specifications highlights the vision of the contributors in aligning with the government's aspirations for future 'world class' apprenticeships.

The introduction of new apprenticeships will undoubtedly have an impact on VET teachers. Worldskills assessments (Test Projects) offer an excellent basis for the proposed trade tests.

The impact of trade testing will be measured through self-assessment based on the standards of the *Common Inspection Framework for Further Education and Skills* (Ofsted 2012).

Whilst this project may appear quite radical for the UK, it represents what many advanced countries have embedded in their VET systems. It also replicates current recruitment practice for UK industry in the hairdressing and beauty therapy sector.



Achieving mastery in
skills performance

'This award has taught me to reflect on my performance, which is after all the key to excellence.'

Helen Garratt, candidate for the Level 4 Performance Excellence Award

Partners

Awarding organisations

NCFE (a national awarding body)

Pearson (a global learning company, incorporating an awarding body)

Open College Network (West Midlands Region, a regional awarding body)

Delivery partners

Accrington and Rossendale College

Belfast Metropolitan College

Burton and South Derbyshire College

City of Glasgow College

Derwen College, Lancashire

Highbury College, Portsmouth

New College Lanarkshire

North Warwickshire and Hinckley College

WorldSkills UK (the brand name for skills competitions in the UK, affiliated to WorldSkills International)

Introduction

This case study concerns another Legacy Project, which was consigned by the National Apprenticeship Service (NAS) to North Warwickshire and Hinckley College in March 2012. The rationale for assigning the project to the College was that the College had acted as one of the initial test beds for the Performance Excellence Qualifications and one of its predecessors.

Context

In 2010 a suite of Performance Excellence qualifications was developed by UK Skills to recognise people who had exceeded all expectations. The initial target group for these qualifications was Squad and Team UK participating in WorldSkills London 2011.

UK Skills no longer exists as a separate organisation, its functions having been transferred to the National Apprenticeship Service (NAS) and subsequently to Find a Future (FaF).

The challenge

The Performance Excellence qualifications recognise excellence both through skills competitions and also through students demonstrating excellence in work-related settings.

Therefore NAS's aim was to build on the UK Skills experience to design and mainstream a range of qualifications to recognise performance excellence in any vocational area, sector or employment route.

Methodology

In 2012–13, a Project team based at North Warwickshire and Hinckley College (NWHC) took forward the development of these qualifications. Working with national awarding bodies, they created a suite of Performance Excellence qualifications supported by guidelines and amplifications for all units at Levels 2 to 4. These meet the regulatory requirements of the Qualifications and Credit Framework (QCF). A small quality team works from the College to provide support for the pilot centres offering the qualifications.

The Project team worked with Pearson and NCFE to develop a suite of Performance Excellence qualifications, approved by Ofqual in April 2013 (www.register.ofqual.gov.uk). Both the NCFE and Pearson qualifications were listed on the Learning Aim Reference Application (LARA) as fundable shortly afterwards. Unit amplifications and a range of support materials have also been produced.

To provide progression through HE, the team approached the University of Derby regarding the development of a Level 5 programme. With the University, a World Class Skills Performance programme was designed to align with the activities and assessment practices of the WorldSkills training process. The Level 5 programme aimed to support and recognise existing learning and activities, providing academic recognition and rigour to much of the skills development, thereby adding value to the process.

The Project team also approached several colleges and training providers to participate in a pilot project for these qualifications. The centres selected had strong track records in skills competitions and the use of competitions as a strategy for raising the quality of vocational education and training.

One of NAS's aims was to have a qualification that could be offered to the young people preparing to represent the UK in the WorldSkills Competition being staged in Leipzig in 2013. Ten members of the UK Team/ Squad for Leipzig 2013 registered for an Edexcel Achieving Excellence in Skills Performance Award at Level 4 and 10 at Level 3.

The Squad preparing for WorldSkills São Paulo 2015 was selected in spring 2014. At Squad Induction at Loughborough University in July 2014, the Level 4 Achieving Excellence Award was launched. All Squad members are registering for the Award, which will be embedded in their preparations for competition. The Award is planned to be completed by April 2015, in time for final Team Selection. The University of Derby Level 5 qualification has been offered to the WorldSkills UK Alumni and to selected members of Team UK who competed in Leipzig.

A need has also been identified for additional Levels to meet the education and training needs of students studying a vocational skill at Level 1 and below. As well as supporting the development of the individuals' technical skills, participation in the qualification aims to support the

development of generic employability skills for sustainable employment and progression at work.

Participation in skills competitions is a growing aspect of vocational study for such students. Both specialist and mainstream colleges are developing strategies for inclusive skills competitions as a means of supporting valuable specialist and generic employment skills. In addition to being consistent with the development of skills competitions for vocational students working at Level 1 and below, these qualifications also meet the need of students aged 14 and above following a vocational route either at school or through a link with a college or training provider. This is often a group of students needing specialist support, and may include those at risk of exclusion and more likely to become NEET (not in education employment or training).

The Entry Level and Level 1 Awards have been developed in partnership with the Open College Network, West Midlands Region (OCNWMR). Specialists, the project team and OCNWMR met to design the Award to ensure that it met the needs of students. The Awards were approved by Ofqual in June 2014.

Outcomes

For the students

Students report that they have been given a confidence boost, both in being selected for participation in the pilot and also in achieving the qualification. Some students have found that

the qualification has given them a clear framework to facilitate their participation in skills competitions and the wider development of technical and generic workplace skills.

The structure of the qualification has motivated students to aspire to higher levels of skill development. The focus on current performance compared to excellence, the development of improvement plans and their implementation, and their reflection on their own performance, all enable students to be clear about what excellence means in their skill and encourage them to develop further.

In terms of additional work, there has been little impact on most students because much of the evidence is naturally occurring. Successful candidates have gained an additional qualification to recognise that they have consistently performed above expectations in their skill. With many vocational qualifications failing to differentiate between high performers and those who are so far competent, the Performance Excellence qualifications provide the added value of differentiation. Students are able to add this additional qualification to their CV to support applications for employment and career progression.

For students within the same group or cohort, but not involved in the Performance Excellence Pilot, there is little evidence of negative impact. It has been reported that in some instances the possibility of accessing a Performance Excellence qualification has been a motivator and encouraged students to strive higher.

For the staff

Many of the staff involved in the pilot have already been dedicating additional time towards preparing for competition. However, although assessors have been enthusiastic about the qualifications and its impact on their students, it is recognised that there is an additional workload involved in supporting students. There has been little corporate recognition of this so far.

One unexpected use of the Level 4 Award has been to support quality improvement in teaching and training. A number of vocational teachers and trainers have undertaken the Award using teaching and training as the focus. This has been especially effective for newly qualified teachers as part of their ongoing professional development. The Award has encouraged recognition of what good quality teaching and learning looks like and how the individual can develop it in their own working practice.

For the learning providers

During the Pilot Project, NWHC has taken responsibility for all registrations with the awarding bodies, internal moderation, correspondence and liaison with the awarding bodies and external moderators, together with the financing of registrations and certification through the Project's funding. This has kept the financial impact on pilot centres to a minimum. The team at NWHC has provided assessor and quality support for all centres throughout the Pilot Project.

Other outcomes

There have been many other outcomes from this Project:

- both NCFE Awards and Certificates and Edexcel Awards at Levels 2, 3 and 4 have been developed for the QCF and approved by Ofqual
- qualifications have subsequently been listed as fundable and available to any provider
- all NCFE units at all levels have clear guidelines and amplifications
- workbooks and learning resources have been produced for all option units to facilitate face-to-face or distance learning
- a Level 5 programme, validated by the University of Derby, has been developed
- 130+ students have been registered on NCFE Awards
- WorldSkills UK Team/Squad members have been registered on Edexcel Awards
- WorldSkills Team members and alumni have expressed an interest in and registered for the Level 5 Award
- the Pilot has attracted providers from a wide geographical area
- a wide variety of vocational skill sectors and work related settings are represented
- the qualifications have provided assessors with an opportunity to recognise students who are performing beyond normal expectations for their programme of study
- feedback from candidates suggests that the experience has been valuable
- information about the qualifications and their potential impact has been disseminated across the sector.
- a celebration event was held for the first achievers at the 2013 Skills Show.

Conclusion

Within a qualification and funding system that has restricted opportunities to excel, the Performance Excellence Awards help to bridge the gap between competence and excellence. For further mainstreaming, a range of measures is proposed.

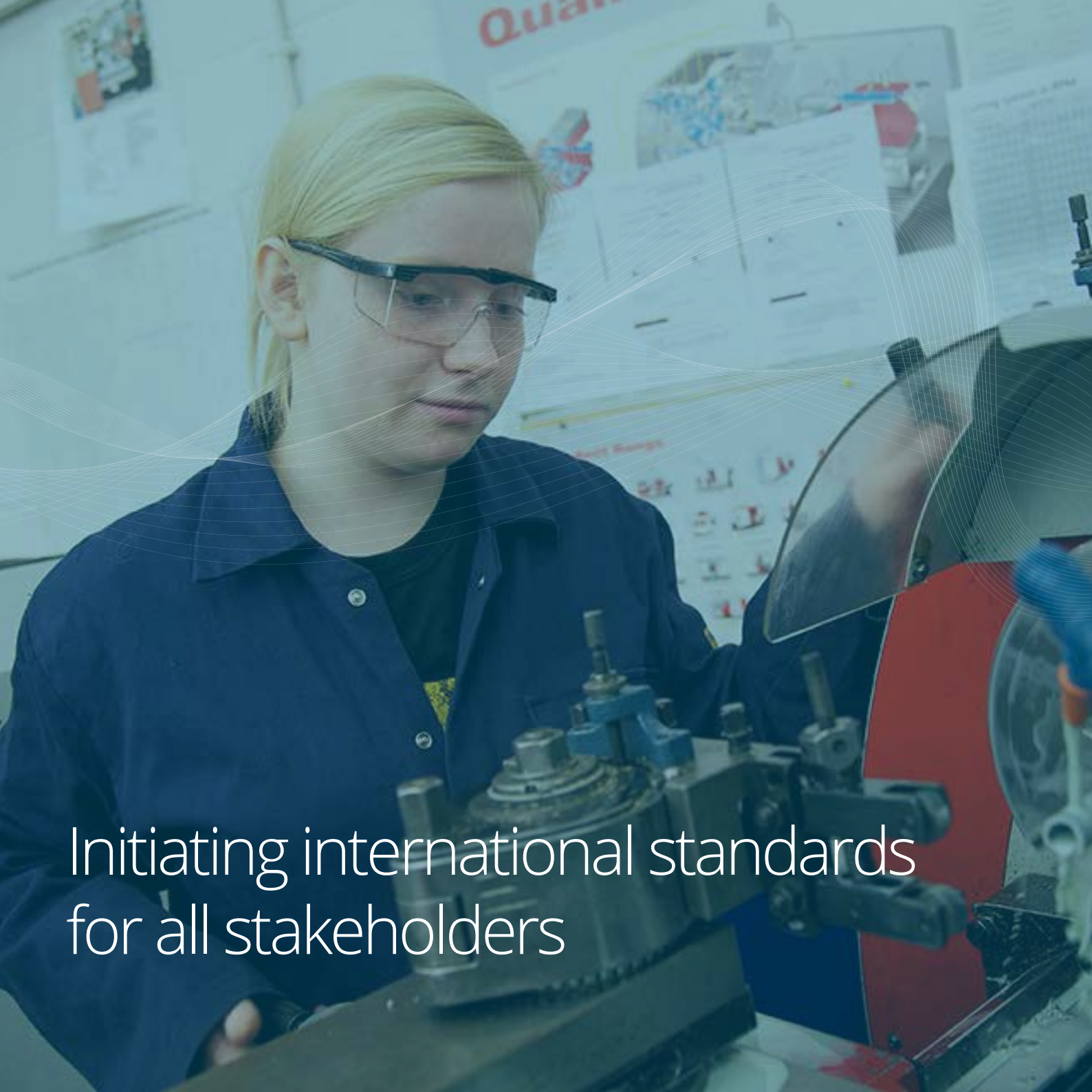
Staff need some recognition for the work involved in delivering these qualifications. Although most of the evidence is naturally occurring, time needs to be taken to provide witness and observation statements, as well as to oversee the completion of portfolios. At the same time, centres delivering the qualification should adopt and adapt the supporting materials to streamline portfolio development and assessment, and to support moderation.

The Pilot has shown that the Award unit has most impact on students' performance. Extension to the Certificate is only relevant for a minority of students. Following the successful pilot project, adoption across the sector would support the development of high quality work related skills and be a tool for differentiation within vocational programmes.

Centres should consider the adoption of the Entry and Level 1 qualification where appropriate. The Award is also appropriate for centres to use in conjunction with work placements. It provides structure and a framework for the learner when planning and preparing for the placement, and it

acts as a good vehicle for recording and evidencing learning and progress during the workplacement. For the Entry 3 and Level 1 qualifications impartial advice and guidance is essential to help students make informed decisions about progression opportunities.

To end on a broad point: the qualifications should be embedded within providers' strategies for supporting excellence in vocational learning and achievement.



Initiating international standards
for all stakeholders

‘Looking back to how a meeting about a competition has resulted in developing a series of qualifications and opportunities for all stakeholders, you cannot help asking the question why has it taken so long to get to this point?’

**Professor Mehmet Karamanoglu,
Head of Design Engineering
and Mathematics at Middlesex
University**

Partners

Middlesex University (higher education (HE) provider)

Festo (industrial automation specialist and global sponsor of mechatronics and mobile robotics competitions at WorldSkills)

Tottenham University Technical College (UTC, sponsored by Middlesex University, Tottenham Hotspur FC, Festo, National Instruments and Mindsets)

Introduction

This case study outlines the ways in which WorldSkills competitions were used at Middlesex University to drive opportunities and lead to new programmes designed to build world class specialist skills. The initiative

was used to influence curriculum development within further education (FE) and UTCs. The critical relationship between industry, FE and HE in supporting the learner in their career choices and employability is also highlighted.

Context

In 2007 an organising partner was sought by WorldSkills UK to work with Festo to develop a national competition in mechatronics. Middlesex University grasped the challenge and was appointed by WorldSkills UK as the organising partner. Within a year, mobile robotics was added to the partnership in order to encourage the development of high technology skills much needed by industry and to represent the UK at WorldSkills events. Interest in the new competition was shared by further and higher education and industry.

Methodology

The first national competition for mechatronics was held in summer 2008 at Middlesex University. While the number of competing teams was small the enthusiasm generated among the competitors and their tutors and sponsors was beyond everyone's expectations. In 2010 mobile robotics was added.

The University chose to use competitions as the catalyst for new HE programmes. While the mechatronics competition was being developed and increasing its participation rate, the University considered developing

new engineering provision. Running competitions, providing industry focused programmes and project based learning was very much the ethos of the University department.

Much of the experience came from the team involved in product design, where showcasing work or competing at national level was the norm. The University had contributed to the organisation of the first European Robot Championship (EUROBOT) in the UK in 2005. This experience encouraged staff to develop the initiative further, since participating in competitions clearly had a positive impact on students.

In 2010 a suite of BEng/MEng degree programmes was launched at the University. These included mechatronics, electronics and robotics. The unique feature of these programmes was project based learning which was at the core of the learning strategy. This, coupled with participating in external events such as competitions and industry based projects, ensured that the students were motivated, became confident, and had the right attitude, skills and knowledge to embark on employment or further study.



The benefits of the new degree programmes for staff included improved teaching practice and assessment strategies plus greater team working. This resulted in a new staffing policy. The norm had been to appoint technicians to support a particular laboratory or workshop. This changed: technical tutors are now appointed as specialists in their field, to teach and assess as well as support other activities.

The impact of international competitions was realised when the University had a substantial presence at WorldSkills London 2011. A team took part in mobile robotics, having previously achieved a Medallion for Excellence at EuroSkills 2010. The activities were largely organised and delivered by its students, supported by staff. The Dean of the School stated:

This is the best staff-student development opportunity possible. I could have sent this group of staff and students on a team building course. The experience they would have gained would have been nowhere near as good and effective as the one they have received at WorldSkills.'

Outcomes

Opportunities realised

One of the most significant roles played by the mechatronics competition at the University was the direct link it provided to employment. The academic programmes became more aligned to industry standards and requirements. From the students' perspective the subject and

programmes were more interesting and exciting. Knowing that your subject is relevant to industry and is supported by a national and international skills competition, based on international standards, gives a very powerful message.

With the development of UTCs over the last five years the emphasis on high technology skills in engineering and higher education working together to define technical specialisms provides a very clear progression pathway. When the opportunity to sponsor Tottenham UTC came along, the University and its industrial partners deliberately planned to embed these high technology skills within the curriculum. Thus mechatronics, mobile robotics and industrial control were written into the UTC's plans. This influenced how the Tottenham UTC's physical resources and capabilities were developed. The UTC has now set itself the ambition to become the regional coordinator for these skills and has the facilities to do so.

Along with the expansion of UTCs, relevant vocational and academic qualifications were also in need of updating and in many instances being newly created. Awarding bodies such as AQA and City & Guilds have developed appropriate qualifications at Levels 2 and 3 with UTCs and their needs very much in mind. Many have also built the standards, established by WorldSkills, into the new qualifications. Mechatronics is included in these.

Having established new competitions

such as mechatronics, a substantial number of these high skill areas were identified as needing 'joined up thinking'. SEMTA, the sector skills council for engineering and manufacturing technologies, established a steering committee to generate and coordinate further interest in engineering competitions on behalf of WorldSkills UK.

'We now have children as young as 14 given the opportunity of a future-proof career path full of exciting curriculum in UTCs, taking them all the way to degree level and beyond, with the knowledge of industry backing behind them.'
**Professor Mehmet Karamanoglu,
Head of Design Engineering and
Mathematics at Middlesex University**



Opportunities not yet realised

As the skills agenda rose within the political landscape, the focus shifted towards the promotion of apprenticeships. As WorldSkills UK became part of the National Apprenticeship Service less attention was paid to HE. However, a rich opportunity remains to include HE in the 'skills message', particularly because it has the capacity to play a significant role in developing high technology engineering skills at all stages of vocational education and training.

Conclusion

This case study shows that competitions are a powerful means of promoting technical education, raising standards, motivating and developing individuals. As the mechatronics competition development showed, enabling universities, in conjunction with industry, to 'pull' rather than 'push' technical education, can result in education and skills that are fit for purpose, today and tomorrow. Particularly in the case of high technology engineering skills, collaboration that involves a college/school, university and industry has been shown to be highly effective. It is for this reason that UTCs are becoming such success stories.

Start-up costs

Start-up costs are the one off costs of setting up the business. They include all of the things you will need to buy before you start trading.



Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm Nn Oo Pp Qq Rr Ss Tt Uu Vv Ww Xx Yy Zz

Item	Qty	Unit	Price	Total
1. Business Plan	1	hour	10	10
2. Business Cards	1000	pack	0.05	50
3. Business Insurance	1	year	100	100
4. Business Bank Account	1	month	10	10
5. Business Website	1	month	10	10
6. Business Stationery	1	month	10	10
7. Business Travel	1	month	10	10
8. Business Phone	1	month	10	10
9. Business Internet	1	month	10	10
10. Business Electricity	1	month	10	10

Capacity building in the UK delivery system

'To drive UK plc forward on the higher level skills agenda, we have a duty to champion investment in the system we rely on to deliver the change. Without 'skills leaders' and cutting-edge resources we cannot maintain a place at the international table.'

Marion Plant, OBE, Joint Chief Executive and Principal, North Warwickshire and Hinckley College and South Leicestershire College

Introduction

This case study presents the key themes emerging from 17 interviews with vocational education and training (VET) practitioners currently providing further, higher and work-based education. These are listed under References. The interviews were conducted between 13 June and 19 September 2014. Their focus was on 'higher level skills': how they are currently being developed and what needs to be considered in order to make progress. The move towards more practical end testing is also addressed in this case study due to the close link between aspirations for the assessment of new apprenticeships and the Test Projects embedded within the WorldSkills Competition. It is recognised that 'raising the bar' will not happen without serious and

continuing investment in VET teachers. Maintaining the currency of skills is a serious business that needs careful planning and implementation. This is not a 'light touch' process.

Context

The development of a suite of internationally derived standards, aligned to global best practice, was the first stage in the International Standards project. This was followed by a series of collaborations designed to demonstrate how high level international standards can enrich and strengthen the UK VET system.

The final strand of the project was to consider:

- the possible impact of embedding international standards within the UK VET system
- the potential effects of more practical end tests being introduced into UK VET programmes as a consequence of the *Richard Review* of apprenticeships (2012) and
- recommendations for a future strategy for capacity building for VET in the UK.

The challenges

The interviews began by considering the experiences of VET teachers involved in building high level technical skills and capabilities in students. The challenges the teachers described are set out below under several headings.

Systemic issues

The first challenge is the requirement to work within internal and external constraints that inhibit the development of high level skills. This is seen as a fundamental and frustrating blockage which is associated with current measures for funding and monitoring. For example, vocational qualifications at Level 3 and beyond are generally considered to be insufficiently skills focussed and frequently not 'leading edge'. Where qualifications are out of date the aspiration for excellence is inhibited. Shorter timescales for refreshing qualifications should be actioned by awarding organisations and regulatory bodies as a matter of urgency.

Comments have also been made about the unit structure of qualifications preventing all students from 'covering the same ground'. While this may appear to offer welcome flexibility, one teacher has remarked that 'with a broad choice of options providers will often choose the units that match staff's ability, or those that are easiest to achieve, rather than the choices most beneficial to the learner and which also meet industry's needs'.

Another interviewee has noted that 'the guided learning hours of qualifications have reduced dramatically and previous workshop activities have been removed'. It is noted that in some colleges there is now a significant lack of modern practical teaching facilities and equipment relevant to industry.

Providing progression to higher education is also considered sometimes to dominate the purpose of the qualification, shifting the focus away from higher level technical skills development.

Achievement of qualifications is a dominant driver of provider behaviour. 'Well qualified' need not indicate 'well skilled'. The UK VET system has become too narrowly focussed on qualifications as a proxy for acquiring skills. As one teacher has commented, 'the focus needs to be on teaching and training for work, and not just the requirements of the qualification'.

More drive, stretch and practice needed

The second challenge comprises the lack of aspiration built into VET. One interviewee has commented that 'our education system does not give youngsters the drive they need. Chinese students don't just want to pass; they want to excel!' It was noted that countries such as Switzerland value high level technical skills and invest in training to develop them. The lack of 'stretch' within current programmes has been highlighted by an engineering teacher who has introduced 'competition work' into his programmes to add value.

The lack of time to enable students to practise their skills is considered a significant barrier to encouraging high level performance. One interviewee has noted: 'to achieve high quality practical skills the individual needs time to apply theory to practice and

develop generic employability skills such as communication and working in teams of mixed professionals.' The issue of having insufficient time to dedicate to skills development also arises in larger groups of students.

Readiness to learn and teach

Thirdly there is a general concern about the poor literacy and numeracy skills of students which hinder the development of high level vocational skills. As industry increasingly uses more complex technology, good English and mathematics are increasingly important. However, the time given to improving English and mathematics is generally at the expense of technical skills development.

Employers sometimes question the level of skill of individuals graduating from VET programmes. Another case study notes that a Level 4 apprenticeship programme has been developed by a range of partners in Wales to respond to industry's dissatisfaction with vocational qualifications' ability to support the delivery of high level craft skills.

Teachers need encouragement to develop and maintain their technical skills. They need to collaborate, reflect critically and be part of a professional development community. In City of Glasgow College, the focus of another case study, a WorldSkills Training Academy has been successful in supporting these ambitions.

The challenges encountered in integrating high level standards include keeping up to date with new technology, maintaining the currency of skills and developing 'buy-in' among colleagues. Resources, including specialist equipment, need to be 'the best'. However there tends to be a culture of 'make do and mend to equipment and technology' in some institutions. This leads to a decline in their credibility with industry.

Resistance to change among practitioners, caused by lack of awareness, fear and insecurity, and a desire for the status quo, has been mentioned by interviewees. Despite this, there is also a view that challenges can be overcome with strong and innovative leadership from senior management.

Some potential ways forward

When interviewed, each practitioner has then discussed how the new WorldSkills Standards Specification and assessment methods can be taken forward within higher level vocational programmes. These are a selection of their views and ideas.

Integrating WorldSkills standards

In Coleg Sir Gar a 'Skills Academy' has been established to provide voluntary sessions for students wishing to develop their IT skills beyond the requirements of their qualification-led programmes. This initiative has

been taken by a lecturer who is also a WorldSkills UK Training Manager and Expert. The WorldSkills standards are the basis for the 'Skills Academy' sessions.

Introducing 'WorldSkills related competition work' has been a key 'standards raising strategy' for a number of learning providers. In the past three years the deeper and wider value of skills competitions has been promoted and recognised more widely in the further education sector.

There is also clear evidence of institutions using the WorldSkills Standards Specifications as a basis for programme development in, for example, engineering, IT, plastering and drywall systems. One respondent has explained the ways in which the generic 'Performance Excellence' framework of standards has helped both teachers and students. For example, improved feedback to students through the adoption of 'feed-forward' is enabling students to focus on next steps and increase their motivation.

The main drivers for embedding WorldSkills standards in the curriculum have been identified as the opportunity to:

- meet the needs and expectations of a high skills economy
- support succession planning for industry
- raise standards and aim for excellence to increase achievement rates
- move from competence to excellence
- provide a benchmark
- challenge and motivate students to

work outside their comfort zone

- enhance the learning experience
- maintain staff's credibility through professional development
- motivate and energise staff.

Awarding organisations have an important role to play in supporting the creation and promotion of high level technical skills standards. There is a view that awarding organisations have contributed to the dilution of quality in qualifications and standards.

Integrating practical end tests

The integration of WorldSkills industry related Test Projects has been recommended, along with more focus on reflection and self-learning. It has been emphasised that 'WorldSkills develops people beyond their technical skills'.

Independent assessment is highlighted as critical for credibility with users and third parties. Strengthening practical assessments has been recommended 'even if it means the qualification can only be delivered in well-resourced centres with industry-experienced staff or with industry partners'. The potential for including a 'WorldSkills standard' grade for vocational qualifications has been mooted.

While it is appreciated that practical end tests would contribute to rising standards, some risks have also been identified. These include the impact on achievement rates and adverse comparisons with learning providers that adopt an 'easier' assessment methodology.

The challenges which can occur when introducing practical end tests were identified as:

- the currency of teachers' skills and their capacity to design, develop and assess practical end tests
- the role of industry in the process and their 'degree of control'
- the need to overcome the culture of 'no failures'
- cost.

The key benefits of introducing end tests were noted to be:

- increased rigour
- challenge for students
- positive impact on learning programmes
- their independence of the learning provider
- their authenticity in reflecting industry standards
- grading and differentiation
- direct assessment of students' readiness for employment
- shared purpose with industry
- improved recognition from employers.

Switzerland has been mentioned as successfully using practical end tests within VET programmes. Within an international hotel company one teacher has endorsed the value of the practical tests used for chefs. It has also been noted that 'within engineering, practical end tests are a fact of life'. Likewise, practical tests are integrated into the curriculum to align with vendor qualifications.

The WorldSkills Test Projects are seen as a good example of alignment with industry's requirements. It is suggested

adapted to include the concept and approach of end tests. As one interviewee has stated: 'Why not ask a student to produce a JAVA Script, instead of expecting them to discuss it?' In supporting the WorldSkills approach to assessment another tutor has declared: 'I wish I had the time to do with my other students what I do with the WorldSkills competitors.'

Moving teaching forward

The final part of each interview focussed on the support that was needed by new and established teachers to enable them to deliver high level standards and practical end tests for their specialism.

Recruiting vocational teachers is increasingly challenging. Attracting individuals with high level technical skills is difficult. This is partly due to the perceived lack of status of vocational teachers and partly due to the level of training and development they have personally experienced. For example, today's new teachers have probably trained during the 'competence-based era' of VET. Their highest qualifications may be in teaching rather than technical and specialist areas.

It has been noted that some learning providers are not seeking high level skills; they are content for teachers simply to meet the minimum requirements of the role. Enthusiasm for their skill and industry, and strong technical experience are, however, regarded by a number of

interviewees as essential attributes of new vocational teachers. There are challenges arising from a lack of succession planning and the introduction of new roles such as instructors, which can be interpreted as a reduced recognition of and respect for skills.

For established teachers there should be a culture of continuing skills development. The need to maintain the currency of skills, to be up to date with technological advancement and industry practice has been stressed. Sabbaticals in industry are among the recommendations. At present the onus is very much on the teacher to take responsibility for his or her skills development. The view is that more support measures need to be introduced. Vocational teachers may be strong theoretically at higher levels but still be unable to apply their knowledge to practical purposes. As one interviewee has stated: 'while they may be able to deliver the standard programme they cannot deal with unexpected problems or provide innovative solutions.'

The ways in which high level skills can be grown include:

- undertaking systematic bespoke advanced technical training programmes
- offering industry sabbaticals
- building industry practice into timetables
- encouraging dual professionalism: working partly in industry and partly in education
- observation of 'masters' such as WorldSkills Experts
- the appointment of regional skills

champions/ambassadors

- involvement in the WorldSkills Competition
- mentoring from WorldSkills Experts
- involving industry in the delivery of programmes
- encouraging innovation in teaching and learning
- incorporating personal development plans within performance appraisals
- maintaining reflective journals
- developing skills networks across learning providers.

Higher level skills development is an important issue for both individual teachers and their organisations. It is vital that teachers aspire to be the 'best in their field' and do not view professional development as a 'process to satisfy'. Energy, enthusiasm and empowerment are needed. The WorldSkills Expert role and the expert community more widely offer helpful models to emulate.

Conclusion

While there are no major surprises in the feedback received from interviewees, the strength of the comments is illuminating. Teachers feel most constrained by the qualifications system. It may now be time to move away from relying so heavily on qualifications for a myriad of purposes (Stasz 2011). More needs to be done to review the validity of vocational qualifications for today and tomorrow's world.

The widening gap between institutions' physical resources, and those of industry, needs to be faced and

resolved by investment and/or the organisation of programmes. Current qualifications do not challenge institutions sufficiently in this respect. In the current qualifications market this is unlikely to improve. Hence it can be too easy to continue delivering vocational programmes with inadequate resources. Hopefully the *Richard Review* will provide some solutions.

The pace of change for industry, and therefore for VET, is accelerating and will continue to do so. At the same time we note the exceptional qualities of the teachers and trainers who constitute the vibrant WorldSkills community of Experts. The WorldSkills Standards Specifications and assessment methods that support them can also play a positive part in supporting the confidence and capabilities of the UK's further and higher education sectors.



Setting a benchmark for
international standards

'Improve the quality of talent cultivation: subject specialisms should be linked to market needs; curriculum should be linked to occupational standards; and teaching should be linked to industry.'

Premier Li Keqiang (2014)

Partners

British Council (China)

Department for Business, Innovation & Skills (BIS), UK

International Standards Transfer Project Team

Ministry of Human Resources & Social Security (MoHRSS) for the People's Republic of China

Shackleton Education Ltd

Introduction

China and the UK are committed to sharing and aligning elements of technical and vocational education and training (VET). They have joint interest in using the WorldSkills Competition (WSC) as a model for development. Since October 2010 the collaboration has delivered WorldSkills Roadshows, exchanges of WorldSkills Experts and support for college-to-college partnerships. This case study presents

the outcomes so far of one strand of work: to use WorldSkills standards to provide a benchmark for quality and a platform for measures to match the dynamism of the global market place.

Context

In summer 2013 British Council (China) and the WorldSkillsUK Standards Project Team, together with the Royal Melbourne Institute of Technology (RMIT), Australia, presented a paper at the 'Global Skills Marketplace' Conference at WSC 2013 Leipzig. As a consequence, in November 2013 during a China-UK Roadshow, the proposed 'China-UK Standards Project' was presented to a multi-college audience of teachers and managers in Hangzhou, China. Three colleges subsequently joined the Project:

- Guangzhou Industry and Trade Technician College for web design, refrigeration and air conditioning
- Hangzhou Technical College for automobile engineering
- Shenzhen Institute of Technology for graphic design.

Although these colleges showed initiative, they did so within China's strong vertical framework for development. Each college is rightly regarded as outstanding and a potential source of WorldSkills Experts and competitors. Each is now a Team China Training Centre for WSC 2015.

The challenge

China has an existing facility for setting and testing national occupational standards. However, the pace of

China's economic development is placing great pressure on that facility to be current and relevant to the market. In February 2014 Premier Li Keqiang announced wide-scale developments amounting to a full political economy for skills. The headlines are to:

- fully involve actors and resources from across society in vocational education
- ensure that the economic progress and technological development, transformations in the modes of production and public service are well adapted to each other
- deepen the integration between industry and education.

Since it began to participate in the WSC in 2010 China has proactively explored the space between its current practice and the WorldSkills Standards Specifications, in order to excel at the WSC and derive wider gains. This is an admirable ambition. For many reasons, including scale, structure, organisation and culture, forging a full connection with WorldSkills Standard Specifications is particularly complex for China, which nonetheless has the capacity to succeed.

An initial report from a Chinese participant summed up the challenge as follows:

'With the WorldSkills standards as our framework of reference, we want to introduce the UK standards and courses into our [college], and establish, pilot and improve our own standards and courses based on our local needs.'
(Pan 2014)

Methodology

Standards for VET must be derived from business and industry, relating directly to their purposes and occupations, and set within a strong conceptual framework. The standards must be capable of assessment according to sound principles and indicate the nature of the skill development required.

For each specialism the objectives of the Project were to:

- develop standards at two levels, to offer steps towards the WorldSkills standard
- compare the standards to what exists and is used in China and the UK
- develop formative and summative assessment measures
- develop curriculum and pedagogy that can best create individuals who meet the standards
- pursue qualifications and recognition, as appropriate.

This is the model (Figure 1) that was followed. It complements the WorldSkills biennial cycle for standards and assessment.

The programme

Phase 1

The Project started in January 2014 with an agreed format for obtaining and reviewing the Chinese standards. The resulting standards were compared with the UK ones, in preparation for Workshop 1 in May 2014.

Workshop 1 focused on the ways in which UK standards are realised through business, industry and colleges, training centres and universities. This was done to illustrate the meaning of Premier Li's 'three to's' (as quoted at the beginning of this case study). It also served to explain what standards should comprise in terms of level descriptors and learning outcomes, and related the Chinese standards to international conventions for setting and communicating standards.

Teaching and learning methods that generate excellence in vocational performance was an important part of the workshop. Moving towards learner autonomy through interactive techniques, including coaching, is unfamiliar and 'counter cultural' for China. However, a personal sense of 'agency' and efficacy is essential to the generation of knowledge, skills, values and self-reflection.

The outcomes of Workshop 1 included:

- realisation that standards are more than a set of documentation
- greater understanding of the relationship between colleges, industry and business in standards setting and delivery
- recognition of the impact of good standards on assessment, curriculum and pedagogy

Phase 2

In October 2014, ten UK participants met their Chinese counterparts in Guangzhou, China, in order to build on Workshop 1 and complete the cycle shown in Figure 1.

Using the same approach as for Workshop 1, industry visits explored the relationship between industry, the colleges' programmes, and national and international standards. Workshop 2 also developed the teachers' skills in delivering excellence in vocational performance.

Project outcomes so far

The results of Workshop 2 were very positive. First, by showing an impressive capacity for hard work, robust action plans were generated for programmes that connected in clear ways to the WorldSkills Standards Specification, both in format and content. Across these plans distinctions between China and the UK comprised:

- the prominence of government regulation in web design
- the conceptual strengths underpinning graphic design
- the scale of influence by particular companies on automobile technology
- in some instances a lack of detailed awareness of the occupations at which the programmes were directed.

It was evident that the Chinese colleges were well on their way to connecting to global standards of best practice due to the pull of particular companies, both private and state owned, and the wholehearted use of WorldSkills as a performance indicator.

In contrast to the UK, and perhaps inevitable at this stage in China's development, the colleges took a selective and elitist, rather than inclusive, view of other parts of the economy and society.

High level generic skills are embedded within the WorldSkills Standards Specifications, and must be grasped if the standards are to be realised. The sessions on interactive learning to grow the personal attributes of vocational performance excellence were very popular and apparently effective. Initially the notion of generating a sense of personal responsibility, instead of imposing or accepting external controls, was hard for participants to grasp, as was the notion that there might be 'no right way'. However, at the Workshop's conclusion participants noted that: 'leadership includes letting your group find their own answers'.

Conclusion

With firm action plans and a desire to embrace performance excellence through teaching and learning, the Chinese colleges are keen to take this Project forward. Discussions are now underway.

Since October 2010 the Chinese government has been fast and unswerving in its recognition and use of WorldSkills as a beacon for reform and development. This was most recently illustrated by the decision to bring all Team China's Experts to Guangzhou during Workshop 2, in order to build on the briefings received just three weeks earlier at the WorldSkills General Assembly.

The WorldSkills Standards Specifications and assessment methods have appeared at a propitious time for China, giving it

the tools that it needs in an accessible form. In adopting and adapting these there is every reason to believe that China will show that size need not be a barrier where there is firmness and continuity of purpose.

Figure 1





Reflections

‘China is joining WorldSkills in order to connect with the global movement of skills and markets.’

Song Jian, WorldSkills Technical Delegate for China, March 2011.

Introduction

The 72 Member countries that invest in WorldSkills do so because it is a global hub for skills. Depending on their character and circumstances they use their Membership to further their national, regional and international interests in many different ways, from the systemic and strategic to the opportunistic and informal.

Until recently WorldSkills has been largely synonymous with the WorldSkills Competition. Now, after a period of intensive brand development it is securing greater global recognition and wider value for its Membership. This wider value has included enhancing the ingredients of the WorldSkills Competition: the 50 Standards Specifications, the assessment methodology and techniques, and making them accessible as models, benchmarks, aids and tools.

The new WorldSkills Standards Specifications are now in place for use in the WorldSkills Competition and much more widely, according to the needs and energy of each Member country. The attractive qualities of the WorldSkills standards include their:

- relative brevity (4 to 5 pages)

- consistent approach and appearance
- direct relationship to an identifiable work role or occupation
- incorporation of high level generic skills
- learning outcomes grouped under knowledge, understanding and tasks, as a baseline from which to grow excellence
- direct relationship to global level descriptors
- weightings for each group of learning outcomes to reflect their relative value to business and industry
- incorporation of feedback from consultation with business and industry
- delivery through a robust assessment methodology and Test Projects.

It is interesting and helpful that the *Richard Review* independently complemented the thinking behind the WorldSkills standards by proposing reforms to:

- put employers at the heart of apprenticeships
- incorporate new challenging and ambitious standards, with broader criteria, scope for excellence, and core competences
- focus on outcomes assessed by end tests.

The rationale for using WorldSkills standards within the UK

The International Standards Transfer Project has played a key part in upgrading the WorldSkills standards, while appraising their relevance and value for the UK, and promoting their

use in various ways where expected to be worthwhile. The meticulous design and consultation process led by WorldSkills has provided confidence in the standards' robustness and suitability for national systems seeking a direct route to global benchmarks. Uniquely, the biennial updating process in place through WorldSkills also offers longevity for those seeking to connect to global standards for programmes, institutions, sectors or systems.

The updated WorldSkills standards are applied through a global assessment strategy, methodology and processes, within which Test Projects represent 'end tests' for national systems. In this way WorldSkills presents an all-through model for standards setting and application.

The impact on organisations

New College Lanarkshire has illustrated the practical ways in which WorldSkills standards can raise a college's capacity to engage and meet modern industry's needs. The focus is on the introduction of high level technical and generic skills within engineering design programmes. The formula for success at New College Lanarkshire comprises:

- aligning programmes to the WorldSkills cycle for updating its standards, thus ensuring it remains connected to the dynamism of global industry and markets

- adapting teaching, learning and assessment practice by, for example, using WorldSkills Test Projects as templates for project-based learning.

Learners are required to solve authentic industry related problems and to acquire a deep understanding of their sector

- introducing peer-to-peer teaching and learning. Learners work together to provide mutual support, thus developing generic skills such as communication and team work, which employers recognise as the hallmarks of outstanding practitioners
- developing tutors to be facilitators of learning
- involving learners in WorldSkills competitions to benefit those actively competing and positively influence others in the cohort
- establishing a reputation for excellence in engineering design, through success in WorldSkills competitions, to support both learner recruitment and opportunities for employment.

New College Lanarkshire has successfully incorporated both the standards and the other key components of the WorldSkills model, thus offering an extensive exemplar for others to emulate.

The impact of the UK vocational qualifications system

The introduction of National/Scottish Vocational Qualifications (N/SVQs) in the late 1980s was based on the demands of industry which still remain recognisable today. The introduction of National Occupational Standards (NOS), as the basis of National/Scottish Vocational Qualifications (N/SVQs), was a major government initiative,

supported by a complex infrastructure which by its very nature could not move swiftly. Since then it has been challenging for sector standards bodies to keep NOS up to date, particularly where technology is involved. In turn this has impacted on the awarding organisations which reference their regulated qualifications to NOS.

Originally designed to facilitate competence-based assessment in the workplace, the public funding system has led to NVQs largely determining what colleges offer. After 30 years the impact of NVQs on pedagogy – teaching, learning and assessment – can be better understood. In essence the systems developed to support NVQs shifted the focus towards processing learners through assessment. As a result, the opportunity to stretch individuals to excel has not usually been available. Nevertheless, some innovative colleges have identified WorldSkills as a vehicle for introducing aspiration and opportunities for higher level skills development within a broader curriculum. Thus there is emerging evidence of a return to teaching and learning beyond qualifications and momentum is building. To support the drive for better outcomes from vocational education and training in the UK, this booklet contains three case studies that highlight how established and new national qualifications are providing stretch through alignment with the WorldSkills standards and assessment methodology. They are also paving the way for the new *Richard* apprenticeships. Within the sheet metal sector a leading company, KMF Sheet Metal Precision

Ltd, through its involvement with WorldSkills declared the need to bridge the gap between the standard required of competitors and the standard required within national qualifications and apprenticeships. The existence of a skills gap is a deep concern for UK manufacturing, and specifically sheet metal fabrication, which arguably lags behind other countries in developing its workforce's practical skills. The application of new technologies in sheet metal fabrication calls for a broad range of new, complex skills.

The key intervention for KMF has been practical tests which KMF recommended be aligned with the WorldSkill Test Project to drive learner aspiration and meet the advanced skill needs of industry. The case study outlines a successful partnership between industry and EAL, an awarding organisation. The outcome is the creation of an additional advanced level QCF unit, aligned to WorldSkills standards and assessment methods, to support the EAL Level 3 Diploma in Engineering & Technology and associated apprenticeships.

In Wales an initiative is developing advanced professional cookery skills. The creation of a higher apprenticeship is part of a significant seven-year programme, driven by industry and in line with the recommendations which have since emerged from the *Richard Review*. In essence a major skills gap identified for craft-led senior chefs has been responded to by a partnership driven by the British Food Trust, and involving Cambrian Training, a private training provider, People 1st, a standards body, and

Edexcel, an awarding organisation. To meet the needs of industry the Level 4 apprenticeship has gone beyond the normal qualifications offer. Unique features of the programme include the integration of the performance excellence standards derived from a WorldSkills project, and a one-day practical test which aligns with the WorldSkills standards and approach to assessment. Early feedback on the higher apprenticeship pilot states that, in addition to deeper, more robust technical skills, the apprentices have also developed greater confidence and motivation.

At Capel Manor College in London a project inspired by WorldSkills is developing a Level 4 garden design qualification in partnership with Gateway Qualifications (formerly Open College Network Eastern Region). Capel Manor College is a leader in developing garden design skills with learners being recognised at Royal Horticultural Society (RHS) shows and the Society of Garden Designers (SGD) awards. The project enables the ladder of national qualifications to be extended by aligning to WorldSkills standards and its assessment model. As with the professional cookery case study, the qualification also integrates performance excellence standards designed to provide stretch and develop generic high level skills much demanded by employers.

Providing more demanding technical qualifications is the common theme of the three case studies summarised above. The first two illustrate how industry has grasped the nettle in an effort to raise standards and

remain commercially competitive. Collaborative working, drawing on the skills of different partners in the VET system, has been a key element of their success. Where, as a result of frustration, industry leads without drawing on other experience and expertise, this often leads to failure. The third case study follows the development of a progression route for high achievers, again in line with the *Richard Review* and the broader needs of the UK economy.

To sum up: for these case studies WorldSkills has acted as a change agent to present options and potential solutions to the identified needs that the UK government is looking to address in concert with industry and business.

Enriching higher education programmes

WorldSkills standards are broadly connected to higher vocational education and training within the UK. Middlesex University quickly recognised this when it used its involvement in skills competitions to expand its offer and add value to higher education programmes. With an increasing focus on graduate employability Middlesex University recognised the opportunity that the WorldSkills standards and assessment methodology offered to its learners. Project based learning is a key feature of the Middlesex programme, providing a close match with the work place.

Introducing differentiation

Within the UK, from 2010 generic performance excellence standards culminated in a suite of QCF qualifications from Entry Level to Level 4, created in partnership with three awarding organisations: Edexcel, NCFE and OCN(WMR). The qualifications can be aligned with the development of any specific skills, and are available to individuals engaged in work-related learning and/or preparing to participate in skills competitions. The qualifications' purpose is to enable individuals to focus on the generic skills that 'make a difference' in terms of excellence and potential for employment. The case study shows that excellence and aspiration can and should feature in every type and level of VET. International standards, practices and competitiveness impact on us all.

The original purpose of the Performance Excellence qualifications was to capture the processes that underpin outstanding performance. In their current form they can be embedded in larger qualifications or stand alone. They offer a means of differentiating performance that does not depend upon grading tied to academic attainment. They get 'inside' and make tangible the standards and processes that generate performance excellence, thus making excellence visible to all. Practically, the standards and qualifications offer programmes a means of injecting stretch and ambition without requiring upheaval in the design and delivery of teaching and learning.

Enabling employers to up-skill and raise the profile of occupations

As a sector skills council, People 1st has extensive experience of developing occupational standards, leading to the creation of national qualifications. More recently People 1st has recognised the need for true professional standards incorporating knowledge, skills, values and a commitment to continuing development.

The professional standards provide a flexible approach to staff development, driven by employers' needs. They also provide a means of recognising the range of skills increasingly required for business success. The People 1st approach to professional standards provides a natural fit with WorldSkills and enables the international dimension to be emphasised. The use of WorldSkills standards to develop professional standards for visual merchandising is engaging leading brands in the retail industry and also establishing a platform for a potential apprenticeship. People 1st is closely involved in developing new apprenticeships and is well placed to bring forward professional and WorldSkills standards and assessments in order to add value.

Within the plastering and drywall industry similar work is underway to develop standards which more accurately meet the needs of today's industry. Historically UK qualifications focus on traditional wet plastering skills; however the construction sector

has a growing demand for skills in drywall systems. Stockport College has developed programmes incorporating drywall systems, benchmarked against the WorldSkills standards. Innovators and entrepreneurs are also now developing comparable programmes to satisfy the sector's demand.

Flexibility and speed in order to keep up with the needs of industry are the central themes of these two case studies. The helpful dynamism of the WorldSkills standards is highlighted. While qualifications are valuable, the standards they are based on are critical. Without up-to-date standards, a national system will hold back industry and business and slip behind its competitors on the world stage. In ensuring that it keeps up, that system must attend to its standards at two levels: those of its professions, including its teachers and trainers, and those fulfilling technician and more basic roles. With the changing nature of labour and economies, standards are essential to underpin the establishment of new occupations at all levels, and to generate greater respect for skills.

Building a college-wide strategy

The influence of WorldSkills is gaining pace for institutions operationally and strategically. A number of college principals/chief executives are showing greater insight into the potential for WorldSkills to help move their institutions forward.

For many colleges the first step is to

engage with WorldSkills competitions: it can be a catalyst for aspiration, as described by Martin Shelton, Vice-Principal at North Warwickshire and Hinckley College (NWHC, 2014):

'In 2005 leaders at the College recognised that competitions for students, together with a competitive element integrated into teaching and learning, could positively impact on learner attendance, retention and success. Our first competition strategy featured ways in which we would develop good practice, promote and maximise the achievements of learners and teachers, and develop our employer engagement strategy, using the vehicle of competitions to increase involvement in apprenticeships.'

The next step, or for others the first step, is the big picture which entails unpacking WorldSkills and understanding how it can impact on standards, curriculum development, delivery methods, assessment, motivation for excellence and teacher development in a deeper sense.

Glasgow City College is just one example of an institution driving an integrated WorldSkills strategy 'from the top'. The strategy includes the establishment of a WorldSkills Training Academy which re-invents the learner experience through teaching, learning and assessment strategies designed to inspire higher achievement. In addition to the incorporation of WorldSkills standards and assessments the College also invests in competition activity to strengthen the overall learner offer. Through the Academy the College is embedding a subtle

change programme in many respects including staff development.

As more colleges become engaged in the development of WorldSkills strategies the opportunity exists for a cross-college senior management community to be established to share knowledge, expertise, experiences and ideas to maximise the benefits of the WorldSkills connection. The strategies need to have depth and be sustainable; they need long-term investment to optimise their value.

International collaboration at government level

WorldSkills is the fulcrum for an enduring partnership between China and the UK, supported by their respective governments. The partnership has taken many forms including roadshows, exchanges between WorldSkills Experts, joint pressure tests, policy exchanges and alignment of standards to each other and WorldSkills. WorldSkills standards are a shared benchmark for quality, thus offering a respected and stable reference point. The case study illustrates how a huge and increasing global player has established a direct connection between cutting-edge standards and economic prosperity, in order to support its movement from low value production to the design and creativity that underpins a highly skilled, high value economy. The partnership has supported the growth of an analytical relationship between industry and education. The need to create a universal high performance

culture and to establish appropriate environments in which to grow individuals also emerges from the case study as a shared challenge for both China and the UK.

Investing in our teachers and trainers

Two case studies focus on VET teachers and trainers. In the first of these the awarding organisation and charity, the Vocational Training Charitable Trust (VTCT) is striving to ensure that the teachers and trainers delivering their qualifications maintain the currency of their skills and aspire to be models of excellent practice. The case study focuses on the ways in which a new approach to professional development can be introduced, with hands on skill development aligned to WorldSkills standards at its centre. The case study includes a proposal to establish trade tests, based on WorldSkills assessment methods and Test Projects, designed to support the growth of teachers and trainers.

In the second case study the outcomes of interviews with 17 VET teachers and trainers are discussed. The case study covers their experience in delivering high level standards and goes on to consider what the future infrastructure for continuing professional development should look like. As emerges strongly from the case studies, teachers and trainers are somewhat frustrated by the constraints of the current VET system, including qualifications, and need space and resources to unleash the potential of their students. The

need for modern tools, equipment and technology should not be underestimated. In the future more focus must be given to developing the high level generic skills which increasingly matter to industry, business and society alike. As the OECD notes, this will be a challenge, since the critical generic skills of the future will also be the most difficult to deliver outside the work environment (OECD 2013).

As a priority, professional and technical upskilling, linked to programme development, is a prerequisite for the attainment of a world class VET system. As a report by McKinsey & Company (2007) states:

'the quality of an education system cannot exceed the quality of its teachers.'

Conclusion

At its simplest level WorldSkills generates a feel good factor for the young people striving to be the best in their skill and to access a ladder of skills competitions. Dig deeper and WorldSkills is a goldmine of global standards which are tested, consulted upon and updated biennially.

WorldSkills is a unique resource which, remarkably, it offers to its Membership at no additional cost. The case studies within *Global Standards: bridging the skills gap* set out both the need to connect to global standards, and the value of responding to that need. They also indicate the relative ease with which these standards can be accessed and applied in a range of contexts;

they create no disruption and offer practical support.

Expectations of VET are high and rising. In relation to current and future occupations, the OECD (2014) notes:

'Vocational education and training (VET) systems, which supply these skills, are now under intensive scrutiny to determine if they can deliver the skills required, and ensure that they adapt to fast-changing needs.'

Through its standards and all that they entail, WorldSkills represents a powerful means of responding positively to this challenge.

End note

The International Standards Transfer Project was one of five projects agreed in March 2012. An overarching report of all five projects will be published by Find a Future and the Association of Colleges in spring 2015.

Suggestions and recommendations for action and development

Here we set out some ideas for how you can benefit from this booklet..

WorldSkills is now developing its website to give greater direct access to its resources, under certain protocols.

Meanwhile, we suggest you:

- visit the WorldSkills website (www.worldskills.org) for a good overview of its purpose and what it has to offer
- visit the WorldSkills UK website (www.worldskillsuk.org) for deeper access to WorldSkills resources, again under certain protocols.

We also suggest that you:

- engage with Find a Future (www.findafuture.org.uk) and WorldSkills UK (www.worldskillsuk.org) to learn more about competition activity and how it can support your organisation
- set priorities for introducing more complex technical and generic standards within learning programmes
- consider how WorldSkills standards and assessments can support the employability skills agenda in further and higher education
- support the development of new ambitious apprenticeships that align with global standards, and thus support the competitiveness of UK industry
- use WorldSkills documentation and processes to benefit from its biennial cycle for updating its standards and assessment practices in line with international best practice
- consider developing strategies and partnerships that reflect your own agenda for incorporating global standards, and overcoming the challenges that these present.

We recommend that you further consider the challenge of high level technical and generic standards for teachers in a range of ways, including through the Education and Training Foundation (www.et-foundation.co.uk).

You may also like to follow up the individual case studies, and/or contact the International Standards Transfer Project team at skills.projects@nwhc.ac.uk. The International Standards Transfer Project team will also connect you to the Performance Excellence qualifications offered by Edexcel and NCFE, and to the associated guidance.

Glossary

AQA: Assessment and Qualifications Alliance: an awarding organisation

Beacon Status: awards that provide public recognition of the excellence and innovation that exists within the further education system

CAVTL: see References

CITB: Construction Industry Training Board

CNC: computer numerical control

CPD: continuing professional development

ETF: Education and Training Foundation

High(er) level: technical or generic standards above Level 3 (Level 6 in Scotland)

HMIe: Her Majesty's Inspectorate of Education (for Scotland)

IED: Institution for Engineering Designers

Lantra: the Sector Skills Council for Land Based and Environmental Industries

Makaton Centre of Excellence: recognition from the Makaton Charity of centres that ensure that all those with learning difficulties and disabilities have the tools that they need to communicate

NCFE: an awarding organization (NCFE is not an acronym)

Ofsted: Office for Standards in Education

Ofqual: the Examinations Regulator for England and Northern Ireland

QCF: Qualification and Credit Framework

RHS: Royal Horticultural Society

SEMTA: the organisation responsible for setting and reviewing national occupational standards for the engineering and advanced manufacturing sectors

Trailblazer: one of the new employer-led apprenticeships piloting and testing the development of new apprenticeship standards

VET: vocational education and training

WorldSkills International: a not for profit membership organization open to agencies or bodies which have a responsibility for promoting vocational education and training in their respective countries/regions. WorldSkills International operates worldwide and is politically and denominationally neutral.

WorldSkills Standards Specification: the WorldSkills-approved framework within which are set out the essential competences and capabilities that demonstrate international best practice linked to particular technical and vocational roles

WorldSkills Test Project: the tasks that enable vocational performance to be assessed during the WorldSkills Competition

WorldSkills UK: the brand name for skills competitions across the UK, linked to the UK's membership of WorldSkills International

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Michael Scarrott, Product Specialist, EAL
Dave Vaughan, Sheet Metal Technology Training Manager/ WorldSkills Expert

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Arwyn Watkins, Managing Director, Cambrian Training Company
Veronica Burt, Project Manager, People 1st
Ruth Asker-Brown, Consultant, People 1st
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Peter Moore, Managing Director, The Construction Skills Academy

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Trialling international standards in engineering design

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