Innovation in VET and the concept of Studio Schools

United Kingdom
This article on innovation in VET in the UK written in 2014 is the third one of a set of articles prepared within Cedefop’s ReferNet network. It complements general information on VET systems available online at http://www.cedefop.europa.eu/EN/Information-services/vet-in-europe-country-reports.aspx.

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Introduction

This article provides a brief overview of the link between VET and innovation in the UK, and a more detailed description of the Studio School model of education, which is a relatively new approach in England to teach the skills and attitudes necessary for young people to become innovative.

Europe's innovation performance is still lagging behind its competitors (1). Employers need workers who actively and constantly seek out new and improved ways of doing things in all occupational levels and in all sectors, including those not usually thought of as ‘knowledge sectors’. Europe’s 2020 strategy emphasised the need to foster skills for innovation. Innovation policies have normally focused on technological R&D and its connection to university research. However, 'Innovation Union' (2), one of Europe 2020 flagship initiatives also advocated for a strong VET to further develop an appropriate set of skills that empowers people to be more entrepreneurial, creative and innovative. Research shows that a culture of innovation depends on education and training fostering transversal competences. Problem solving, reflection, creativity, critical thinking, learning to learn, sense of initiative, risk-taking and collaboration are key (3).

Similar articles on the topic of innovation are produced in European countries covered by the ReferNet network. Cedefop will use the articles to complement existing evidence and studies and the work will contribute to overviews prepared for the Latvian EU Presidency in 2015 and other EU-level events on the contribution of VET to innovation strategies.

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(1) European Commission, Innovation Union Scoreboard 2014
A. Links between VET and innovation in the UK

There are separate innovation strategies for the UK, Scotland, Wales and Northern Ireland. Innovate UK operates under the UK Department for Business, Innovation and Skills (BIS) to support research, innovation and development in businesses, as well as organising and developing competitions and collaboration between business and education providers. The link between skills, innovation and economic growth is highlighted in BIS’ Innovation and Research Strategy for Growth (\(^\text{4}\)). The Innovation for Scotland Strategic Framework describes the importance of the public and private sector to bring skills, finance, technology and management together in a demand-led, outcome focussed approach (\(^\text{5}\)). The Innovation Strategy for Wales urges stakeholders to concentrate on improving collaboration, promoting a culture of innovation, and providing flexible support and finance for innovation. The Welsh Government also aims to provide young people with the skills to be creative (\(^\text{6}\)). The Northern Ireland Innovation Strategy emphasises that innovation is not just research and development, but also investment in skills, leadership, design, branding, training and marketing. Currently a lack of skills is considered a barrier to innovation and that a collaborative effort from the public sector, businesses and education providers is needed (\(^\text{7}\)).

This employer engagement that is considered so important to develop the right knowledge, understanding and skills, as well as motivation and guidance to young people is increasing. Employers are crucial in the process of setting National Occupational Standards (NOS) that many vocational education programmes are based on. In England, employer ownership of qualifications is encouraged through development of the Apprenticeship Trailblazer programmes and the Employer Ownership of Skills pilots in which employers are part-funded to create training programmes that meet their specific needs. Local Enterprise Partnerships, University Enterprise Networks and Knowledge Transfer Partnerships works towards bringing together businesses, universities and further education colleges in sharing knowledge and expertise, and creating new ideas, concepts and products. The UK

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\(^\text{4}\) Innovation and Research Strategy for Growth, BIS, December 2011
\(^\text{5}\) Innovation for Scotland: a strategic framework for innovation in Scotland, Scottish Government, June 2009
\(^\text{6}\) Innovation Wales, Welsh Government, 2014
\(^\text{7}\) InnovateNI: Innovation Strategy for Northern Ireland 2014-2025, Northern Ireland Executive, September 2014
Government's Growth and Innovation Fund provides funding for employers to improve skills in their sector.

B. Overview of Studio Schools

The name and concept of the Studio School is inspired by the Renaissance studios that existed in Europe around 1400 to 1700. In these studios, inventors and artists, such as Leonardo da Vinci, Raphael and Michelangelo, learnt and later taught in the same workshop that the master craftsmen invented and produced their work.

The modern Studio Schools in the UK are set up to combine learning with experience of work. Both key academic and vocational subjects are taught to 14 to 19 year olds. Subjects are taught in small class sizes and through projects imitating working life, as well as working on projects in local enterprises and in the community. Alongside a vocational specialisation, the Studio School curriculum and learning methods aim to foster employability skills, enterprise skills, and creative thinking ability that are important in today’s labour market and with regard to developing a workforce that can drive innovation.

Each year at a Studio School is split into three periods that all contain a project focusing on a specific area of learning. Projects are different for each school and adapted to the local community, and many are commissioned by local businesses or organisations. Projects grow in dimension and become increasingly challenging towards the end of the study programmes, and students are expected to work more independently as they progress.

Studio Schools have a vocational orientation, but also offer mathematics, English and science subjects from the National Curriculum. By completing subjects within the National Curriculum and qualifications within the Qualifications and Credit Framework (QCF), students are awarded nationally recognised qualifications upon successful completion of the study programme. Qualifications are awarded at QCF level 2 and 3 (EQF levels 3 and 4) which allows progression to a number of routes, including higher education, further education, apprenticeships and the labour market.

Work experience is a key component of the study programme. Students will spend from half a day to two days per week in a work place, helping them prepare for working life. This time spent working in the industry will also expose students to the newest technology and modern working methods currently in use.

A new curriculum, called the CREATE curriculum, was developed specifically for delivery in Studio Schools. Whilst the Studio School curriculum includes a focus
on a vocational specialisation combined with key academic subjects, it also covers employability and thinking skills. The enquiry and project based, independent type of learning aims to develop students’ creativity and problem solving abilities, in addition to communication and social skills. The CREATE skills framework includes thinking skills within the technical, subject related skills necessary to contribute to the innovation process. Thinking skills in the CREATE framework are defined as: “learners can process ideas to make reasoned judgements and solve problems” (8). CREATE stands for Communication, Relating to people, Enterprise, Applied skills, Thinking skills and Emotional intelligence.

The Studio School model of education offers personal learning plans and access to personal coaches to develop individual learning plans for students and track their progress towards completing the learning within the CREATE framework. Coaching rather than traditional teaching encourages independent learning and problem solving. Small class sizes and a maximum of 300 students per school ensure that students are closely followed up by personal coaches and learning coaches.

*The CREATE skills framework*, SST
Studio schools are classed as academy schools in England. Academies operate with more autonomy than local authority maintained schools in terms of the curriculum, teachers’ pay and conditions and finances in general.

B.1. Rationale

The 2006 Leitch Review of Skills in the UK concluded that “without world class skills, UK businesses will find it increasingly difficult to compete and innovate” (9). Employers are also reporting to the Confederation of British Industry (CBI) that they experience a lack of employability and intermediate technical skills amongst school leavers. The CBI’s definition of employability skills includes problem solving skills, such as analysing facts and circumstances and applying creative thinking to develop appropriate solutions (10). Employers are furthermore recognising the value of and their role in providing work experience and work tasters to students. Businesses are increasingly creating links with schools and vocational education providers to raise awareness of the skills needed in the workplace and also bring their expertise into schools and colleges by taking on governor roles.

In order to equip young people with the knowledge and skills to become innovative, it helps to expose students to the world of work by doing real work in businesses. By forming partnerships with schools and colleges, businesses can show the value of skills, and by providing work experience opportunities they can better prepare young people for working life.

The Studio Schools Trust (SST) aims to prepare students for the labour market through a combination of academic and vocational subjects, work experience, project-based learning and a focus on employability skills. However, in the current competitive global economy, employability skills alone are not considered sufficient for the UK industry to grow. The SST also emphasises the need to think creatively, build resilience, and be able to respond effectively to rapidly changing circumstances. The SST believes these competencies can best be achieved based on knowledge and skills (11).

The Studio School curriculum contains elements of the CBI’s seven required competencies (12) and Personal Learning and Thinking Skills (PLTS) (13). The CBI highlights problem solving as a key employability skill, and PLTS develops students’ independent enquiry skills and creative thinking amongst other learning.

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(9) *Prosperity for all in the global economy – world class skills*, Leitch, S, 2006, page 9
(10) *Building for growth: Education and skills survey 2011*, CBI, 2011
(11) *The need for Studio Schools*, Studio School Trust
(13) *PLTS, Gateway Qualifications*, OCN
B.2. Initiators and stakeholders involved

Studio Schools have been developed in partnership with local and national employers, education agencies, the UK Department for Education (DfE) and local partners from across the country.

The skills framework and unique curriculum model offered in Studio Schools were developed by the Studio Schools Trust (SST), which is a charitable organisation. The SST acts as a link between studio schools, shares best practice across the network, provides advice and curriculum support, and works closely with the DfE and national and local organisations and employers. The SST moreover assists partnerships that wish to establish new Studio Schools, and existing schools with stakeholder management, recruitment, curriculum development and staff training. Membership of the SST is voluntary at the moment, but schools may, in the future, need a licence to operate. Studio Schools are run by academy trusts, which are charitable companies limited by guarantee. Trustees act as the schools’ governors and directors.

Regional Schools Commissioners (RSCs) take decisions about academies and Studio Schools in relation to opening of schools, monitoring performance and prescribing interventions to secure improvements if necessary. RSCs have been appointed by the Secretary of State so that decisions can be taken closer to the schools instead of at national level (14). Further quality assurance of Studio Schools is provided by the Office for Standards in Education, Children’s Services and Skills (Ofsted) who is responsible for inspection of schools and colleges in England. Schools’ performance tables are published on the DfE’s website.

Studio Schools form partnerships with local businesses. Schools choose businesses, as much as possible, based on how close the professional areas of the businesses are to the area(s) the schools specialise in.

C. Implementation

The first Studio Schools opened in the autumn of 2010. The initial concept was introduced five years earlier. Recent years have seen a rapid rise in numbers of Studio Schools from just two in 2010 to 36 in 2014 with nine more in the process of opening (15). The Studio Schools Trust (SST) is working towards raising the number of open schools to 100 by 2017, which would increase the schools’ impact and

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(14) Opening a studio school: a guide for studio school proposer groups on the pre-opening stage, DfE, August 2014
(15) List of Studio Schools, SST, viewed 16/12/14
nationwide recognition. However, to maintain a good quality of education in existing schools, the number of new schools opening each year might be limited to 15-20 per year unless the capacity of the SST and Department for Education is increased.

Studio Schools are at present only available in England, but may in the future also appear internationally.

C.1. Incentives, financing and funding

Studio Schools are open to students of all abilities between the ages of 14 to 19. Studio Schools are fully inclusive and comply with the national School Admissions Code. The type of education appeals to students who are motivated to learn through practical project work rather than traditional examinations and classes. Close personal follow-up by coaches in small schools and real work in businesses are a motivation for young people who would like to gain skills and qualifications whilst contributing to community-led projects. Seeing this link to working life is useful to show the skills students should work towards achieving.

Traditional maintained schools in England are funded through local authorities. Studio Schools are funded directly by the central government through the Department for Education's executive agency the Education Funding Agency. Through the schools’ academy status, they have more autonomy in regard to how this money is spent.

Education is free of charge for all students and extra financial support is available through bursaries for eligible students. Students over the age of 16 are also paid for work placements they complete in businesses as part of the study programme.

C.2. Cooperation arrangements

The Studio Schools Trust supports member schools by sharing best practice and providing advice and curriculum support. The key cooperation arrangements in the Studio School model are the partnerships between schools and employers, which help progression from education to working life, bring expertise from the industry into schools, motivate students to careers in the local area, and familiarises young people with expectations, working methods and technology at work. The work experience is not only about learning though, as students also work for companies.
D. Results

The Studio School model of education and many Studio Schools are still quite new, so there are no strong indicators on the direct effect the schools have had on innovation and creativity in UK industry.

However, some results regarding the effectiveness of the model of education have been found in a 2013 report evaluating the Studio Schools Trust (16). The report discovered that the CREATE skills framework was in the main appreciated and well-understood by students and parents. Learning coaches at the schools evaluated in the report witnessed that students gained skills, also in science, English and mathematics, through project-based learning as well as acquiring transferable skills, such as functional skills, team work, debating skills, research skills and independent learning. Project-based learning allowed for more integrated learning, and students expressed that they enjoyed having more freedom and choice of how they worked and which areas to focus their research. It was also felt that project work was helping with their research skills. Real work experience helps students see business needs in terms of development and working methods.

The inspection agency responsible for ensuring quality in education in schools and colleges in England, the Office for Standards in Education, Children’s Services and Skills (Ofsted), has provided positive feedback to a number of Studio Schools they have inspected. Feedback includes equipping young people with a wide range of skills in preparation for employment, producing motivated, mature students with emotional intelligence and confidence. Work placements stimulate learning and personal development and personal coaches assists improvements in behaviour, attitudes and academic progress.

Ofsted did also find that in some cases, students did not achieve enough in terms of qualifications and grades. Some students were not challenged to think deeply enough or being set sufficiently demanding tasks. There was furthermore criticism directed at some colleges in attracting too few students as most schools are running below capacity.

Students from some Studio Schools are achieving better results than others. Studio Schools, as with other education providers at this level, are measured against the standard performance measure of achieving five key GCSE subjects with grades

(16) An evaluation of the Studio Schools Trust and its role in raising the status of practical and vocational learning, Hendry, E. and Sharpe, T, February 2013
A*-C at age 16. A limited number of vocational subjects can be counted towards this performance measure, and, as Studio Schools have a vocational focus, it can be difficult in some instances to meet this requirement. Another new performance measure is the English Baccalaureate awarded to students completing a number of key subjects at the age of 16. Whilst these key subjects are available in Studio Schools, their narrow subject specialisation and vocational focus may not fit this measure either.

D.1. Positive outcomes and lessons learned

Hendry and Sharpe’s evaluation report on the Studio Schools Trust explains that employers believe the balance of time invested to positive outcomes was superior to the traditional work experience period. The traditional work experience placement was one short period that was sometimes felt to be “generally ‘philanthropic’, time consuming and one way, and tended to result in little impact for the young person or the business” (17). The Studio School work placement model aims to give students the opportunity to do real work in relevant professional areas to increase the value to the business and the students. When enlarging the role of the employer in the learning process, there is subsequently less scope for the employer to blame the schools for the workforce’s lack of skills.

Students indicated that they chose the Studio Schools due to the freedom and independence, in addition to the practical learning and projects this model of education offered. Some students of one school stated that this type of learning helped to develop their creativity and confidence.

Learning coaches teaching in Studio Schools reported that they preferred the pupil-centred education, small class sizes, project-based learning and the freedom to be creative in Studio Schools. It was also mentioned that the Studio School programmes prepared young people better for work.

D.2. Bottlenecks and challenges

Although good progress has been made in a short period of time, there are still relatively few students enrolled in Studio Schools. The model of education requires active employer involvement and large scale employer involvement may prove challenging. However, it is hoped that when more Studio Schools have opened and

the model of education becomes widely known, it will be easier to promote the schools and encourage businesses to form partnerships with schools.

The Studio School learning method is resource intensive with personalised coaches. It works in small schools of a maximum of 300 students, but staff questions whether this model of learning would be possible in a bigger institution. More time can, on the other hand, be spent per student as students are not in the school every day when also working in a company. The project-based learning method is also labour intensive in terms of planning. Learning coaches spend a significant amount of time incorporating the Studio School skills framework in project-based learning. Additionally, the small size of the schools means that there are fewer teachers and consequently the provision of subjects is narrower than in a large school. This risks narrowing down students’ future education options, particularly in regard to further and higher education study.

Studio Schools market themselves as all inclusive, but may not be the best option for all students. Academically gifted students may benefit from the traditional, examination-based method of education and the youth who are most disengaged with education are unlikely to cope with long-term project-based work and attending regular work experience. Yet, a growing number of bright young people do prefer a more practical type of education at this stage of their education.

E. Conclusion

The UK is losing low-skilled manufacturing jobs to other countries, and is changing to an economy requiring a workforce with a higher skill level. This higher skill level is partly needed to make companies more competitive through more investment in innovation. Traditionally universities have been more active in contributing to research and innovation in the UK and producing highly skilled, creative graduates with problem solving skills, in addition to forming more knowledge transfer partnerships with businesses in the UK. Studio Schools aim to add to the pool of the future workforce that possesses the skills, knowledge and attitudes to contribute to economic growth through innovation. The Studio School method of education is growing in popularity as an alternative to traditional school education, which doesn’t suit every student equally well. With unemployment rates and skill shortages varying between regions in the UK, the collaboration with local businesses is also well placed to plug skill shortages.