Creative Industries Federation

Social Mobility and the Skills Gap
Creative Education Agenda 2016

“When it comes to opportunity we won’t entrench the advantages of the fortunate few, we will do everything we can to help anybody, whatever your background, to go as far as your talents will take you.”

- Theresa May, Prime Minister, July 13, 2016

The Sorrell Foundation
Photography: Magnus Andersson

Britain's got talent. It is the basis of our hugely successful creative industries which are the fastest growing sector of the UK economy and are worth £87.4bn. Our creative economy now employs one in 11 of the working population[1].

But we also have a talent crisis. We are failing to provide enough young people with the right mix of skills for many of the exciting jobs in the creative economy as well as in other sectors, including engineering.

Brexit will make the skills shortage even worse - at least in the short term. Ready access to often highly-skilled Europeans, comprising 6.1 per cent of the creative industries workforce, has long masked these issues[2].

Education policy, which should be part of the solution, is a major part of the problem. While industry calls for creativity, technical knowledge and design skills, our teaching is driven by the thinking of an academic elite.

Children from disadvantaged backgrounds and communities are likely to be most badly affected by a focus on a traditional set of subjects to the exclusion of creative ones. Far from encouraging the Prime Minister's aims of social mobility, education policy is cutting the life chances of the country's young people as well as narrowing the diversity of the future workforce.

There is a mismatch between, on the one hand, the Government's embrace of the creative industries and calls for social mobility and, on the other, what it is doing in our schools. This is an enormous missed opportunity. If not addressed, we risk losing our position as creative world leaders.

In this document we provide details of:

1) Creative subjects, the economy and Brexit
2) How to make education work for everyone
3) The skills needed by industry and where they sit within school education
4) What must be done

Creative subjects, the economy and Brexit.

The creative industries are one of Britain's biggest success stories, worth £87.4bn in GVA. The creative economy (which includes those in creative jobs outside the sector) employs one in every 11 working people[3]. It has been the fastest growing sector of the economy since the 2008 financial crash. It has highly attractive jobs and ones that are also at low risk of being replaced by robots in the future[4]. In her keynote speech at the Conservative Party Conference this month, Prime Minister Theresa May named the creative industries as a key strategic sector for the economy at large large[5].

Yet the creative industries have long-standing skills shortages. These stem from inadequate training and provision at schools in this country compounded by the ever-greater need for talent in a sector that is growing.

These skills shortages in the UK will be exacerbated - at least in the short to medium term - by any restriction on freedom of movement that comes as a result of tightening immigration laws and the UK exit from the European Union. European talent has for decades supplemented our own in terms of supplying high-skilled talent to our creative companies[6].

This shortage can also be seen in the Migration Tier 2 Shortage Occupation List (jobs where the Government will permit sponsorship of migrants from outside the EU in recognition of severe skills shortages). This highlights that our country is already crying out for a combination of creative skills - and in particular, design and technical skills.

"We will identify the sectors of the economy – financial services, yes, but life sciences, tech, aerospace, car manufacturing, the creative industries and many others – that are of strategic importance to our economy, and do everything we can to encourage, develop and support them."

- Theresa May, October 5, 2016

The list includes creative industries occupations reliant on both, such as graphic designers working in visual effects and 2D/3D animation. Breakdowns of some of these skills pathways and their relationship to the school curriculum are provided later in this paper.

Despite the need for arts subjects for a wide range of careers, entries for GCSEs in arts and creative subjects have fallen by 8 per cent (46,000) this year compared with last, according to official statistics published by exam watchdog Ofqual[7]. Some subjects have fared worse than others: the numbers taking design and technology fell by 41 per cent between 2007/8 and 2014/15[8]. The steep decline in students taking creative subjects is in sharp contrast to some other GCSE subjects, notably those included in the English Baccalaureate (EBacc) – the suite of subjects on which the Government judges school performance. These account for seven to eight GCSEs but notably no arts subjects[9].

The Government has laid down a target of 90 per cent of students taking the EBacc which is going to reduce numbers further, unless it also ensures that the numbers of GCSEs being taken increase dramatically.

In 2015, more than a quarter of students in academies (28 per cent) took seven GCSEs or fewer[10]. If such students have to take the EBacc in future, there would be no space for other subjects, even if these subjects were offered. Students with a high level of deprivation take on average 7.9 GCSEs, with 38 per cent taking seven or fewer[11].

The Federation believes that many schools are simply following the clear message sent out by Government that creative subjects are not a priority. The EBacc is being interpreted as a signal of what matters and what is best for young people.

Yet the referendum result means it is even more important that the Government redresses the mismatch between education policy and what industry needs. It is only ready access to often highly-skilled Europeans, comprising 6.1 per cent of the creative industries workforce, that has masked these issues for so long.

Ministers should work with us and other sector bodies to fix the skills pipeline for these jobs. Otherwise, with Brexit and lack of provision at school, we believe the Shortage Occupation List is likely to grow significantly. The problem will be compounded by the decrease of 8.9 per cent in the number of 18-year-olds between 2012 and 2022.

Ultimately, if not remedied, we will lose our place as world leaders in the creative industries.

Architectural model of White City.
Photography: Ben Broomfield

How to make education work for everyone.

The need for a greater commitment to creative subjects is not just about the economy. It is also a matter of individual life chances. There are many students who could have successful careers in the creative industries who will not get the chance because of current education policy and lack of provision. Government policy will lead to exciting jobs being denied to students who might excel at them.

This Government has made clear that it wants this country to "work for everyone", no matter where they come from or what they excel at. But provision of creative subjects has fallen most significantly in schools with a higher proportion of free school meals[12]. Academies and free schools are at even greater risk of removing provision as they do not have to follow the curriculum and so creative subjects can be dropped entirely without affecting their assessment[13]. Academies do not now have to offer any creative subjects to students from the age of 11 to still qualify as 'outstanding' schools. That means no music, no design and technology, no art and design and no drama.

The EBacc is based on a list devised by the Russell Group of universities. But even this institution does not believe this list is suitable or desirable for all pupils. It is simply one way of keeping options open. In fact, 11 of the 61 most popular subjects offered at Russell Group Universities either require or suggest a creative subject taken to A-level[14]. Specialist institutions, conservatoires and universities offering creative degrees require different combinations again (see section 3: The skills needed by industry).

"Justine Greening and I have set out a new package of reforms, building on Michael Gove's success, to increase the number of good school places across the country... so there's not just a school place for every child, but a good school place for every child. A school place that suits the skills, interests and abilities of every single pupil."

- Theresa May, October 5, 2016

For many students, a technical education may be a better option than university. The Government is introducing new technical pathways as an alternative to A-levels[15]. Under new laws, schools are required to give equal attention to these non-academic routes, which pupils can take post-16. However, here there is a particularly serious mismatch in terms of what students are now being pushed to study up to 16 and what is needed for them to continue their studies or start work afterwards.

EXAMPLE. If you want to start the BTEC extended diploma: interior, architecture and product (3D) at the age of 16 at Cleveland College of Art and Design, they expect you to have studied creative GCSEs such as art, resistant materials or graphic products[16]. This is a course that offers a pathway into the following jobs; interior designer, prop/set designer, architect, product designer, exhibition designer, furniture designer, TV/film set designer, theme park designer, games designer, computer animator. All these are potentially off-limits to pupils in schools with no provision. Patrick Chapman, Head of Employability and Enterprise at CCAD, says: "*Although we try not to be restrictive in our recruitment requirements, we do find that for many of our BTECs, GCSEs in creative subjects are the obvious foundation. This is also what industry told us they expected when we carried out a survey in 2016.*"

EXAMPLE. For those who want to apply for a junior 2D artist apprenticeship at 18, the NextGen Skills Academy says: "Individual employers will set the selection criteria, but this is likely to include A-levels (or equivalent level 3 qualification) in a moving picture or art-related subject. Most candidates will also have English and maths at level 2 on entry."[17]

There were 1,460 arts, media and publishing apprenticeships in 2014-15, 18,290 in construction, planning and the built environment[18], and 74,060 in engineering and manufacturing technologies. Together these make up 93,810 apprenticeships - almost 20 per cent of the apprenticeships started in the UK that year[19]. These positions require many of the skills learnt in creative subjects, such as drawing or tool usage.

The Government has committed, in law, to creating 3 million new apprenticeships, but current education policies are restricting the numbers of pupils likely to follow these pathways[20].

Policymakers must ensure that students who are not talented academically but are talented in creative and practical subjects can keep learning those relevant subjects until they leave school. Otherwise these pathways may be closed to them.

The particular case of students with special educational needs must be also acknowledged. Evidence from our higher and further education working group, which represents higher and further education providers, has shown that many of the courses which need students to have studied creative subjects at school level also have high levels of students with special educational needs.

Dyslexic students, in particular, are a useful example of a large group who might struggle with traditionally academic subjects but excel elsewhere. The British Dyslexia Association says that in terms of careers, "*people with dyslexia are frequently successful in entrepreneurship, sales, art and design, entertainment, acting, engineering, architecture, I.T., computer animation, technical and practical trades and professions.*"[21]

More than 4,000 students (24% of the student population) at University of the Arts London are disabled and/or dyslexic[22], while alumni of the Royal Central School of Speech and Drama include students with learning

difficulties including dyslexia, dyspraxia and ADHD who have graduated to become renowned actors, directors, lighting and sound designers, winning awards including Oliviers and working in television, film and with the major performing companies and on national events such as Olympic ceremonies.

There are many high profile examples of people with dyslexia in our industry, including Richard Rogers, the award-winning architect known for the Pompidou Centre in Paris and Lloyd's Building in London, who told the Yale Center for Dyslexia and Creativity: "*In my youth, in the 1940s, I was called stupid. Not only could I not read but I couldn't memorise my school work. I was always at the bottom of the class. I became very depressed. When I was young, seven or eight, I remember standing on the windowsill and saying, 'Should I jump or shouldn't I jump?'*"[23] Dyslexic students epitomise the kind of pupils who are disenfranchised by an over-emphasis on a small range of subjects from 14 onwards.

However, creative subjects are not just for those who do not fit the Government's traditional academic structure. They can also accelerate learning, attainment and success in students who do fit within this framework. For example, an education including creative subjects can produce better qualified graduates even in STEM subjects: in a study covering 200 civil engineering graduates at the University of Bath, it emerged that having studied art and design or music offered a 1.74% advantage to the class average, whilst design and technology offered a 2.21% advantage. In contrast, having studied only maths and sciences gave a 1.43% disadvantage and further maths offered a 1.9% disadvantage. The STEM subjects the students studied were obviously important, but it is a reminder that creative subjects can be a valuable part of training, too, and improve achievement at HEFE level[24].

"Creative subjects including design and technology and art and design teach spatial, design and practical skills that are absolutely key to the future of engineering. The evidence also shows that for many, and especially for women, creative subjects are the route in to our sector. They are also important in providing a pathway to the apprenticeships engineering offers."

- Naomi Climer, Immediate Past President, Institution of Engineering and Technology (and first female president).

Nicky Morgan, then Education Secretary, and Nick Gibb, Schools Minister, on cultural and creative education. Photography: Ian Watts

“I am clear arts, with sports, are clear drivers in producing dramatic improvements in some of the more challenging schools I have worked with. But creative subjects also offer the opportunity to enrich social cohesion and encourage engagement with the wider society that some of our children feel alienated from. This is particularly important in schools with a narrow demographic.

“The lack of arts at Park View was a result of the previous leaders deeming them academically unimportant. We need to promote curriculum models that make a strong statement about the importance of arts and sport in British culture.”

- Adrian Packer, Chief Executive, CORE Education Trust.

Adrian was responsible for transforming the so-called Trojan horse schools in Birmingham.

The skills needed by industry.

There has frequently been confusion about exactly what ‘skills’ are needed for jobs in the creative industries and how these relate to education at school.

It is relatively easy to identify **jobs** that businesses find it difficult to fill. As explained earlier, the Government’s official Shortage Occupation List[25] has a high percentage of creative and technical jobs. But it is more difficult to identify at a national level exactly what **skills** businesses are looking for, and in particular, how these skills relate to the **subjects** learnt at school.

We know that our sector is broadly growing in areas that need both design and technical skills, alongside basic numeracy and literacy skills. Previous evidence was reinforced this year by a new report produced by Nesta with researchers at Sussex University which found that firms using STEM and art and design skills (STEAM skills) experience faster employment and sales growth than STEM firms[26].

The creative industries, like all highly-skilled sectors and in particular the science and engineering sectors, are reliant on specialist tertiary and higher education training. So you need to work back along the talent pipeline to identify how students qualify for these specialised courses in order to understand what preparation they need at school level.

For many industries, what is needed are the basic drawing, design and spacial skills learnt in art and design, or the practical and craft skills (including use of electronic products, graphics, materials and textiles) learnt in design and technology. For broader benefits, there is considerable evidence[27] of the cognitive skills developed in music, as well as of the important communication skills taught in drama and performing arts which are among the most in-demand of all skillsets[28].

The following table illustrates a range of routes into the creative industries, all of which are to some extent reliant on the choice of creative subjects at GCSE or A-level. We have included two courses which lead directly to jobs on the Shortage Occupation List (visual effects and illustration & animation). The same exercise could be done with many of the hundreds of creative courses offered across the country. These illustrate the type of opportunities lost by students in schools that do not offer these subjects.

Course	Cambridge University, Architecture BA (hons)[29]	University of the Arts London, 3D effects for performance and fashion BA (hons)[30]	Coventry University, Illustration and Animation BA (hons)[31]	University of Hertfordshire, Visual Effects for Film and Television BA (hons)[32]	Royal College of Arts, Vehicle Design MA[33]
Requested level of study	Entrance requirement of A*AA in preferred subjects: A-level/IB Higher Level arts/science mix; one or more of A-level/IB Higher Level art, graphic design, history of art, mathematics or physics[34]	At least two A-levels with preferred subjects: art, design, English, drama and film studies.	Entrance requirement of BBC to include at least one art or design subject.	A-level applicants must have at least on A-level in an art & design or creative subject. If they only have one A-level it cannot be in product design, graphics or photography. BTEC must be in art and design subject if not taken with art-based A-levels.	You must have completed or be in the final year of a first degree in art and design or a related subject.
Skills needed	“You must have an enthusiasm for both the arts and the sciences. The ability to draw and an interest in the history of art and architecture are essential, as is a knowledge of mathematics to at least a good GCSE standard.”	“Drawing skills; life drawing; research skills; process; 3D; photography… And vocational skills; a strong interest in design and the performing arts; The potential for creative problem solving; an approach suited to the demands of the course and the projected career pathways in the chosen field of studies, i.e. 3D effects.”	“If you enjoy creating your own worlds, developing characters and telling stories in pictures, this course offers the opportunity to immerse yourself in that world and learn about how to become successful in illustration and animation”	Subject to portfolio interview	“You will need a proven commitment to the discipline, with a high level of self-motivation and evidence of independent study. You should possess a high standard of illustrative skills and understanding of 3D form.”

Aleksei Kiseliov, principal cellist of the Royal Scottish National Orchestra, at a Federation roadshow in Glasgow.
Photography: Alan McAteer

"Creative success at UAL takes curiosity, determination and, above all, a passion for your chosen subject. It is no secret that this passion often develops early in life - most UAL undergraduates have already obtained qualifications in creative subjects before they apply to study here."

- Nigel Carrington, Vice-Chancellor, University of the Arts London.

What must be done.

It is crucial that education policy is formulated with a proper understanding of the needs of industry and the talents of all students.

There is a widespread view in the creative industries and in education that the EBacc should be dropped or the range of subjects amended. We acknowledge the Government believes that the EBacc delivers a sound traditional curriculum, but the Federation calls on it to be flexible and practical to deliver the skills our sector needs to compete.

The following four proposals, if implemented, would encourage creative education and boost British competitiveness.

Our policy recommendations:

1. Drop the 90 per cent target.
The EBacc should not be the headline assessment measure for schools, but used as part of Progress and Attainment 8. These alternative measures give greater flexibility in terms of what subjects schools are judged on and send out a message that a wider selection of skills are valued.

2. Limit 'outstanding' to schools that warrant it.
A school must teach at least one creative subject, in lesson time, in order to be eligible for an 'outstanding' rating.

3. Audit the skills gap.
The Department for Education should conduct a proper audit of the skills and education needed by the creative industries as part of an industrial strategy. This work would logically extend to all sectors identified by the Government as a strategic priority.

4. Adopt proper careers advice.
The Government should work with industry to launch a sustained national campaign demonstrating the range of jobs in the creative industries and the subjects that lead to them. This should form a substantial part of the work being done by the Careers Enterprise Company, which is implementing the Government's careers advice programme.

Richard Alston Dance Company at the First Anniversary Celebration of the Creative Industries Federation. 2016.
Photography: Ben Broomfield

Endnotes.

1. Including those employed in the creative economy (creative jobs outside of the creative industries)

2. “DCMS Sectors Economic Estimates: Employment Update.” DCMS, August 2016.

3. “DCMS Sectors Economic Estimates.” DCMS, August 2016.

4. Bakhshi, Hasan, Carl Benedikt Frey, and Mike Osborne. “Creativity vs. Robots: The Creativity Economy and The Future of Employment.” NESTA, April 2015.

5. Speech in full available from http://www.independent.co.uk/news/uk/politics/theresa-may-keynote-speech-conservative-conference-birmingham-in-full-a7346171.html - speech given on October 5 2016

6. Windsor, George, Hasan Bakhshi, and Juan Mateos Garcia. “Skilled Migration and the UK’s Creative Industries.” Nesta, September 2016.

7. http://www.artsprofessional.co.uk/news/exclusive-arts-schools-plummets-new-figures-show

8. Pooley, (Dr) Emma, and Andrew Rowell. “Studying Craft 16: Trends in Craft Education and Training.” Crafts Council; TBR, October 2016.

9. http://www.cambridgeassessment.org.uk/Images/307016-up-take-of-gcse-subjects-2015.pdf

10. http://www.cambridgeassessment.org.uk/Images/307016-up-take-of-gcse-subjects-2015.pdf

11. The English Baccalaureate (EBacc) is a performance measure for schools, awarded when students secure a grade C or above at GCSE level across a core of five academic subjects – english, mathematics, history or geography, the sciences and a language.

12. Cairns, Sam. “English Baccalaureate Research: January 2013.” Cultural Learning Alliance, January 2013.

13. https://www.gov.uk/types-of-school/overview

14. https://www.russellgroup.ac.uk/media/5272/informedchoices-print.pdf

15. https://www.gov.uk/government/news/technical-and-professional-education-revolution-continues

16. http://middlesbrough.ccad.ac.uk/interior-architecture-and-product-3d-design/

17. https://www.nextgenskillsacademy.com/course/junior-2d-artist-visual-effects

18. GoConstruct, the website of the Construction Industry Training Board, recommends choosing “creative subjects” to “keep options open” - https://www.goconstruct.org/en/howtogetintoconstruction/choosingacademic-subjects/

19. Apprenticeships Starts by Geography, Learner Demographics and Sector Subject Area.” Department for Business, Innovation and Skills, January 2016.

20. https://www.gov.uk/government/news/governmentkickstartsplanstoreach-3millionapprenticeships

21. http://www.bdadyslexia.org.uk/dyslexic/workplaceinformation

22. http://www.arts.ac.uk/studyatual/studentservices/disabilitydyslexia/

23. http://dyslexia.yale.edu/rogers.html

24. Data provided by Paul McCombie, Admissions Tutor for Civil Engineering and Deputy Head of Department, Department of Architecture and Civil Engineering, University of Bath

25. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/486107/Shortage_Occupation_List_-_November_2015.pdf

26. Siepel, Josh, Roberto Camerani, Gabriele Pellegrino, and Monica Masucci. “The Fusion Effect: The Economic Returns to Combining Arts and Science Skills.” Nesta, May 2016.

27. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/180973/DFE-00086-2011.pdf

28. http://www.recruiter.co.uk/news/2014/01/lack-of-communication-skills-a-growing-concern-as-skills-shortages-vacancies-rise/

29. http://www.undergraduate.study.cam.ac.uk/courses/architecture

30. http://www.arts.ac.uk/fashion/courses/undergraduate/ba-3d-effects-for-performance-and-fashion/

31. http://www.coventry.ac.uk/course-structure/arts-and-humanities/undergraduate-degree/2017-18/illustration-and-animation-ba-hons/

32. http://www.herts.ac.uk/courses/visual-effects-for-film-and-television

33. http://www.rca.ac.uk/schools/school-of-design/vehicle-design/ma-entrance/

34. http://www.undergraduate.study.cam.ac.uk/courses/architecture

35. The Progress 8 measure is designed to encourage schools to offer a broad and balanced curriculum at KS4, and reward schools for the teaching of all their pupils. The measure is based on students' progress measured across eight subjects: English; mathematics; three other English Baccalaureate (EBacc) subjects (sciences, computer science, geography, history and languages); and three further subjects, which can be from the range of EBacc subjects, or can be any other approved, high-value arts, academic, or vocational qualification. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/285990/P8_factsheet.pdf

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Author - Eliza Easton
Edited by - Louise Jury
Designed by - Rosa Carbo-Mascarell

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T: 020 3771 0350
E: info@creativeindustriesfederation.com
W: creativeindustriesfederation.com
Twitter: @Creative_Fed

22 Endell Street, Covent Garden
London, WC2H 9AD