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The Cultural Learning Alliance and STEAM

Autumn 2016

There is a current government and educational focus on young people learning the STEM subjects in school: Science, Technology, Engineering and Maths.

Education policy makers hold the belief that young people need to gain the skills, knowledge and understanding associated with these STEM subjects to be ready for current and future job markets. They are right: there is a documented lack of young people graduating with STEM skills.

However, we believe that this focus must be expanded. There is a great deal of evidence which demonstrates that adding the Arts subjects to these priority disciplines – creating a new focus on STEAM, or Fusion learning – is essential to young people's success and that of our businesses.

Nesta has found that firms combining arts and science skills outperform those who utilise only arts skills or science skills. They have 6% higher employment growth and 8% higher sales growth (Siepel, et al. 2016). The 2016 CBI CBI/Pearson Education and Skills Survey showed 87% of businesses said the right attitudes and aptitudes were in their list of top considerations when recruiting graduates and when recruiting school and college leavers a positive attitude and resilience '*consistently ranks far ahead of every other factor by a wide margin*.' These are all skills which participation in the arts helps to develop.

The evidence shows that:

- The study of the Arts fosters creativity, innovation and resilience; skills that are essential to young people (Cultural Learning Alliance 2011)
- STEAM is essential for creating a fit-for-purpose workforce that is ready to solve the problems of the future. Employers tell us that they need recruits with the skills, knowledge and understanding related to both the Arts and to STEM (CBI/Pearson 2016)
- A focus on STEAM will create the most likely learning environment for young people to fulfil their potential (Siepel, et al. 2016)

As the OECD has stated:

> *'In modern societies, all of life is problem solving. Changes in society, the environment, and in technology mean that the content of applicable knowledge evolves rapidly. Adapting, learning, daring to try out new things and always being ready to learn from mistakes are among the keys to resilience and success in an unpredictable world.'* OECD 2014

STEM + ARTS = STEAM

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What is needed

Although there are some good examples of STEAM teaching taking place in the UK the concept has not yet been widely adopted or rigorously explored.

- We need to make the concept of STEAM tangible, visible and irresistible to both policy makers and to practitioners working in schools.

- We need to engage business and industry with STEAM to bring cutting-edge practice into schools. We need to map existing excellent practice across the country.

- We need to work with and across government to embed STEAM across Education, Business and Innovation, Industry and Culture. We believe the creation of an All Party Parliamentary Group for STEAM would help to effectively advance this agenda.

Desired outputs

- Explore new partnership models between industry and education – schools, colleges and universities. We need to bring artists, scientists, cultural organisations and education specialists together to revolutionise classroom teaching.
- STEAM teaching incorporated across all schools, and specialist STEAM schools created.
- Government STEMnet funding, priority and investment shift to STEAMnet.
- Teachers trained in STEAM skills; both at initial teacher training stage and through on-going CPD throughout their careers (they will maintain their subject specialisms).
- Parity of status between arts and science qualifications in schools. This parity will be recognised by school assessments and performance indicators, parents and young people, tertiary and higher education, and the job market.

Next Steps

- a **national network of STEAM advocates and practitioners established**, mirroring that already set up in the US.
- a **digital STEAM resource bank** set up through Creative Skillset and TES Global
- the establishment of an **APPG for STEAM**

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