

# The Fusion Factor: White Paper

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## Fusion as a concept

The term ‘fusion’ first appeared in 1550s, taken from the Latin, *fusionem* meaning to "to pour, melt". From around the 1800s, it gained its meaning more as a "union or blending of different things; state of being united or blended"<sup>1</sup> applicable across a range of disciplines from politics and the sciences, through to jazz, gameplay, food, sports and computer studies. The concept of ‘Fusion’ is deliberately chosen, bringing together disciplines, techniques and best practices from across the technology, arts, business sector, public, profit making, charitable and cultural sectors, and more, necessarily ‘fused’ together in response to an uncertain, complex and ambiguous future.

Its usage as a ‘skills’ term to describe a unique set of human capacities arguably emerged in 2013 when Wallace and Barber<sup>2</sup> explored the concept of ‘Fusion Skills’ in relation to the creative industries, noting that a key aspect is the fusing of expertise, knowledge and experience in individuals.

The rapid and radical nature and patterns of work transformations world-wide suggests the future is unlikely to be organised into clearly defined subjects such as science, mathematics and visual arts<sup>3</sup>. Successful ‘Fusion’ as a concept and a skills-set is process led. It relies on close cooperation between schools (education), businesses, the creative and cultural sectors, and further and higher education.

The wide range of labels used to describe the skills employers seek is vast and includes: ‘soft skills’, ‘essential skills’, ‘future skills’, ‘STEAM skills’, ‘transversal skills’, ‘competencies’, ‘qualities’, ‘characters’ and so on. Additionally, ‘cyber skills’, ‘digital literacy’, ‘EQ’ and ‘DQ’ are all terms frequently used to describe the sets of skills, attitudes and values which enable people to thrive and flourish in technologically mediated environments. Each of these terms brings with it unwanted historical and conceptual ‘baggage’. For example;

- ‘Soft skills’ imply a subordinated importance beneath “hard technical skills” and that they are easy to acquire. Research has consistently disproved this notion
- ‘Essential skills’ may be more accurate but implies an exclusivity of skill open to argument, debate and potential negative assessment for someone without ‘essential’ skills
- ‘Future skills’ implies that they are not needed *now*

<sup>1</sup> <https://www.etymonline.com/word/fusion> Accessed September 13, 2019

<sup>2</sup> Wallace, T. and Barber, A (2013) *Fusion Skills: Perspectives and good practice*, Creative Skillset, London. [https://www.screenskills.com/media/1551/fusion\\_report.pdf](https://www.screenskills.com/media/1551/fusion_report.pdf) Accessed September 13, 2019

<sup>3</sup> <http://sirkenrobinson.com/pdf/allourfutures.pdf> Accessed 15 October 2019

- ‘STEAM skills’ imply hard technical skills relevant only in science, maths, engineering, technology and the arts, thus ignoring the human processes required to support and harness these technical skills
- ‘Digital and cyber skills’ imply that these are obtained and useful only in a ‘virtual’ world, thus limiting in scope and breadth across analogue, digital, and real worlds.
- ‘Transversal skills’ come close to describing the ingredients necessary for an uncertain, complex and ambiguous world but is linguistically confusing. In English “transversal” means ‘cutting across a system of lines’ as opposed to fusion being the “union or blending of different things”.
- ‘Transferrable skills’ suggests that the end goal is always to ‘transfer’ the skills and use them in different environments which places too much emphasis on a change of job or learning environment.

Fusion is everywhere: in the economy it is the blending of industries and sectors; in society it is the converging and merging of cultures and attitudes; in life it is the fluidity of identity. The Fusion Effect is innovation, transformation and growth. Fusion Skills are the human qualities which are required for Fusion to occur. They are ‘skills’ because they are transferable across different contexts and they are themselves a ‘fusion’ because when they are successfully applied, they are always a blend of skills, knowledge, behaviours and attitudes. Therefore, the shortlist of Fusion Skills represents the qualities most highly valued by employers for their effectiveness in the workplace and they apply across the full spectrum of Fusion contexts. The presence of Fusion Skills are the enabler and catalyst of progress of innovation, and are required for individual, economic and societal flourishing in the rapidly changing world.

The top 12 transferable Fusion Skills rated by employers<sup>4</sup> are:

1. Oral communication/presentation skills
2. Collaboration and teamwork
3. Initiative
4. Problem solving
5. Organisational skills (planning, time management, deadlines, prioritisation, multi-tasking)
6. Adaptability/flexibility
7. Written communication
8. Independent working/autonomy
9. Critical thinking
10. Resilience
11. Creativity
12. Analysis and evaluation skills

### **The Fusion Economic Effect**

In 2016, Nesta published the report “The Fusion Effect: The economic returns to combining arts and science skills”<sup>5</sup>. In this report, the authors found that ‘Fusion firms’ are widely present in ‘high-tech’ and creative industries but are also common in ‘low-tech’ and ‘mid-tech’ industries. Fusion firms show 6 per cent higher employment growth and 8 per cent higher sales growth than other firms; are 3 per cent more likely to bring radical innovations to market; and, are 10 per cent more productive than the average firm. The authors argued that the positive effects of Fusion hold across the entire economy and are particularly strong for smaller firms. Moreover, the results of the research suggested that there is evidence that the broader the set of skills a firm uses, the higher its level of innovative performance and future growth.

<sup>4</sup> Nesta (2019) *Transferable Skills in the Workplace: Key findings from a survey of UK employers*. City of London, UK p 5  
<https://www.cityoflondon.gov.uk/services/education-learning/schools/Documents/transferable-skills-in-the-workplace.pdf> Accessed September 13, 2019

<sup>5</sup> Siepel, J, Camerani R, Pellegrino G, and Masucci M (2016) *The Fusion Effect: The economic returns to combining arts and science skills*, NESTA, United Kingdom  
[https://media.nesta.org.uk/documents/the\\_fusion\\_effect\\_v6.pdf](https://media.nesta.org.uk/documents/the_fusion_effect_v6.pdf) Accessed September 13, 2019

The development of Fusion Skills relies on close cooperation between schools (education), businesses, the creative and cultural sectors, and further and higher education. Fusion combines the arts, design, technology and business, reflecting how future life is transformed by the fusion of these disciplines, generating opportunities for new businesses, products and services. It is the fusion of creative and technological innovation which underpins the United Kingdom's competitive advantage.

The Department for Education's Employer Skills Survey<sup>6</sup> (2017), found that 41% of UK skill-shortage vacancies were attributed to a lack of complex problem solving skills in job applicants, and concluded that people will need a combination of "soft and technical skills to thrive in the workforce of the future". The Financial Services Skills Taskforce<sup>7</sup> (2019) noted that the Fusion Skills of oral communication and customer service interactions "will be crucial" commenting that "integrated and personalised products and solutions will demand a greater understanding of human behaviour". Human communication has always used different codes. Communication and collaboration are at the heart of Fusion Skills. By understanding Fusion and using it to individual and societal advantage, Fusion Skills are grounded in global, socio-cultural concerns. Based on a study by the Sutton Trust<sup>8</sup> (2017), 97% of teachers said that Fusion Skills were at least as important as academic skills. Fusion Skills draw together academic skills, knowledge and content, and expose the hierarchical re-ordering of Fusion over purely academic and technical skills.

According to Taylor and Wallace-Stephens (2019)<sup>9</sup> there has been exponential technological advancement, creating an uncertain world requiring lifelong learning. The evolving landscape means that none of us can be sure what local systems will look like in five years' time.<sup>10</sup> Mega trends are reshaping our environments, disrupting models, processes and tasks. Fundamental disruptions mean it is not possible for society to continue a 'business as usual' approach. Major disruption factors include:

- *AI and machine learning*: Technology radically transforms all aspects of our lives including education, transport, finance and housing. New and emerging forms of technology have an even greater potential for initiating disruption, including areas such as: cyber security, digitalised banking/finance, data control, blockchain, robots, and increased mobile and pervasive technology.
- *Migration and population changes*: Mass migration and increasing human mobility continues to increase exponentially as the resources of the world becomes 'smaller'. Climate change and increasing inequality leads to more forced migration. While increasing diversity is an essential positive force to promote fusion, there are also dangers of increased alienation.
- *Differentiated society and inequality*: Society has reached a new 'high' in terms of inequality and there is a likelihood of significant negative impacts resulting from such a starkly differentiated society.
- *Environmental sustainability*: Environmental sustainability (and the lack there of) is a major disruption. Urgent action is needed need if society is to have long-term environmental quality and avoid depletion or degradation of natural resources.
- *Irrelevance of education*: The education system is differentiated and largely ill-equipped to prepare people for the future. The school, as it largely exists today, is increasingly irrelevant. There is a chronic

<sup>6</sup> Winterbotham, M., Vivian, D., Kik, G., Huntley Hewitt, J., Tweddle, M., Downing, C., Thomson, D., Morrice, N. and Stroud, S. (2018) *Employer skills survey 2017: Research report*. Government Social Research, UK

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/746493/ESS\\_2017\\_UK\\_Report\\_Controlled\\_v06.00.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746493/ESS_2017_UK_Report_Controlled_v06.00.pdf)  
Accessed September 13, 2019

<sup>7</sup> Hoban, M. (Chair) (2019) *Financial Services Skills Taskforce: Interim report*. The City UK, London. <https://www.thecityuk.com/research/financial-services-skills-taskforce-interim-report/> Accessed September 13, 2019

<sup>8</sup> Cullinane, C. and Montacute, R. (2017) *Life Lessons: Improving essential life skills for young people* Sutton Trust, UK [https://www.suttontrust.com/wp-content/uploads/2017/10/Life-Lessons-Report\\_FINAL.pdf](https://www.suttontrust.com/wp-content/uploads/2017/10/Life-Lessons-Report_FINAL.pdf) Accessed September 13, 2019

<sup>9</sup> Matthew Taylor and Fabian Wallace-Stephens (2019) *Work in Progress* RSA Journal Issue 1, 2019, pp13-14

<sup>10</sup> Bryant, B., Davis, M., Farrar, M. and Rea, S. (2019) *Strategies for transforming local education systems: A think-piece*

Education Development Trust, London p.3 <https://www.educationdevelopmenttrust.com/EducationDevelopmentTrust/files/b0/b02b60d2-e3e9-46f5-b053-64345f249159.pdf>

lag time in educational policy which means that schools are largely out of touch with contemporary economies and future skills needs.

Other main disruptions included loss of health and wellbeing; collapse of middle skilled jobs (also associated with AI and machine learning and greater inequality); the movement to self-employment; and, the general mistrust of institutions. These disruptions are driving the urgency to move learning more rapidly towards Fusion.

### **Why Fusion and Fusion Skills are important**

In more recent years, fusions have become increasingly important to our lives. Across all aspects of society, there is an urgent need for Fusion Skills. According to the Financial Services Skills Taskforce<sup>11</sup>, "we need transformational, strategic, system-wide change."

The demands of businesses are changing, and the pace of change has increased. Contemporary culture has become increasingly dependent on Fusion Skills. A very high percentage of jobs require Fusion Skills and awareness of Fusion in the world. According to Hoban (2019)<sup>12</sup> the skill requirements for the future are evolving faster than the mechanisms to fill those needs. Different skills and talents are needed to boost digital productivity and competitiveness, and to enable people to thrive in their lives<sup>13</sup>. There are already significant skills gaps and a lack of supply of talented people to support digital innovation and enterprise.

Fusion is vital to flourish in society today, vital to the economy, and vital to enrich future lives. There is a proliferation of new types of jobs and new ways of working and the influence of technology is ubiquitous. Fusion will be the predominant way of being and be crucial for future educational success and for gaining information, constructing knowledge and being innovative. Newton<sup>14</sup> (2018) argues that liberal arts skills such as critical reading, communication, creativity and collaboration are future proof skills, prevalent among the top 12 skills cited by employers as most valuable in the workplace.

According to the Oxford English<sup>15</sup> dictionary, the sharing economy is an economic system in which assets or services are shared between private individuals, either charged or for free, typically by means of the Internet. The sharing economy can be regarded as a discontinuous innovation that creates increased abundance throughout society. A commonly cited example of the sharing economy is *Airbnb*, where in theory all people benefit from the sharing of assets. For example, the coordinating website takes a fee, but the owners of the properties generate extra income that they might not otherwise have and at the same time members of the public can get access to more affordable holiday experiences of a unique type. Of course, such a model is not without its critics, with people arguing it reduces 'real jobs' in the hospitality sector, increases insurance risks and transforms the 'liveability' of certain cities and localities. But the sharing economy is one of the examples of new approaches to business which require fusion thinking and working. The largest transport company in the world owns no vehicles, the largest rental company owns no homes, and the largest retail company has no shops and does not hold any stock.

Technology is at the heart of active learning and society. Technology provides sensory and experiential media for learning. If used effectively to develop Fusion Skills, technology provides vicarious experience, prompts

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<sup>11</sup> Hoban, M. (Chair) (2019) *Financial Services Skills Taskforce: Interim report*. The City UK, London. p.2 <https://www.thecityuk.com/research/financial-services-skills-taskforce-interim-report/> Accessed September 13, 2019

<sup>12</sup> *ibid* p. 6

<sup>13</sup> Thomas, A., and Thorne, G. (2009). How To Increase Higher Order Thinking. Metarie, LA: Center for Development and Learning. <http://www.cdl.org/resource-library/articles/HOT.php?type=subject&id=18> Accessed June 21, 2019

<sup>14</sup> <https://www.forbes.com/sites/dereknewton/2018/12/28/the-myth-of-jobs-that-dont-exist-yet/#7bd8f6e770ec> Accessed June 21, 2019

<sup>15</sup> Concise Oxford English Dictionary (2011) Oxford University Press, Oxford, UK

insights, shares problem solving, examines cognitive and behavioural changes, and models possible actions. Arguably, the need for Fusion Skills has been accelerated through the development of Artificial Intelligence (AI). AI has resulted from the development of computer systems that have been designed to interact with the world through capabilities (for example, visual perception and speech recognition) and are capable of intelligent behaviours (for example, accessing the available information and then taking the most sensible course of action to achieve a stated goal) that we would think of as quintessentially human.

In 2017, Nesta published the *Future of Skills: Employment in 2030*<sup>16</sup> report which used a combination of machine learning and trends analysis, to predict the skills that are highly likely to be in demand in the United Kingdom in 2030. This work showed a trend toward skills such as higher order thinking and interpersonal skills and predicted a trend away from 'middle order' skills. According to Luckin (2018)<sup>17</sup>, "AI is taking over a great deal of what has previously been viewed as the human domain. As a result, we need to change the way we view intelligence and the way we design our education systems."

AI can also be combined with Blockchains – digital information blocks stored in a public and transparent ledger - to expand and create mega data and actions. While traditionally used for data on transactions, sales, tracking digital use and payments, more recent uses have seen them being applied to the arts. In 2017, IBM partnered with ASCAP and PRS for the Music Industry to adopt blockchain technology in music distribution (Music Business Worldwide, 2017<sup>18</sup>). Imogen Heap's Mycelia service has also been proposed as blockchain-based alternative "that gives artists more control over how their songs and associated data circulate among fans and other musicians." (Bartlett, 2015<sup>19</sup>). There is also the potential for Blockchain to be used to boost distribution and sharing. For example, there have been some forays into areas such as peer-to-peer and the promotion of the sharing economy. It could be used for democratic processes and for getting people views through online voting being another application of the blockchain (Chandra, 2018<sup>20</sup>).

These trends are pushing skills development in two directions. In one instance, we need people who are capable of higher order thinking such as concept formation and connection, development of schemas, visualisers, inference makers, problem solvers, ideas generators, critical thinkers, and creatives. At the same time, people are mistrustful of some of the uses of big data and technology and are seeking more human forms of interaction. Technology advances beyond human responsibility and capability can be alienating, and uncontrollable. There is a tension between technological advancement and human functioning and adaptability. Human, face-to-face connection is needed more than ever to overcome potential social isolation and confront differences. Fusion Skills combine the higher order thinking skills with the skills needed to manage and build human connectiveness. These include skills such as oral communication, organisational skills, initiative, collaboration, flexibility, resilience, adaptability, autonomy, environmental awareness, empathy, tolerance, cultural fluency and global awareness. Fusion Skills bring together and articulate the skills needed to be successful in a future global context, not only a successful thinker but culturally sensitive, humanistic and real.

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<sup>16</sup> Bakhshi, H., Downing, J., Osborne, M. and Schneider, P. (2017) *The Future of Skills: Employment in 2030*. Pearson and Nesta, London. Accessed 18 June 2019 [https://media.nesta.org.uk/documents/the\\_future\\_of\\_skills\\_employment\\_in\\_2030\\_0.pdf](https://media.nesta.org.uk/documents/the_future_of_skills_employment_in_2030_0.pdf)

<sup>17</sup> Rose Luckin (2018) *Machine Learning and Human Intelligence: The Future of Education for the 21st Century*, UCL IOE Press, London, p. 137

<sup>18</sup> "ASCAP, PRS and SACEM Join Forces for Blockchain Copyright System". Music Business Worldwide. Archived from the original on 10 April 2017.

<sup>19</sup> Bartlett, Jamie (6 September 2015). "Imogen Heap: saviour of the music industry?". The Guardian. Accessed 18 June 2019.

<https://www.theguardian.com/music/2015/sep/06/imogen-heap-saviour-of-music-industry>

<sup>20</sup> Chandra, Prabhul. "Reimagining Democracy: What if votes were a crypto-currency?" Archived from the original on 5 February 2018. Accessed 18 June 2019. <https://www.democracywithoutborders.org/>



## Implementing a Fusion movement

Technological advancement is driving the need to innovate and evolve more rapidly than ever before. The lines between different roles, skills and disciplines are increasingly blurred. Integrated offers around education, skills and employment to drive innovation and evolution must be grounded in the resources provided through the creative, cultural and technology sectors to realise public and private benefit. These networks must encourage flexibility, innovation and integration to respond to the challenge of developing Fusion Skills. Policy and practices must support this by ensuring sector-wide responses where there is greater collaboration and coordination of activities, including sharing best practice and lessons learned.

## Fusion in education

Education remains of fundamental importance to develop and enhance Fusion Skills, locally, nationally and internationally. We need people who can develop the multiple elements of human intelligence. Alloway (2009)<sup>21</sup> wrote about the importance of children developing *Executive Functions* (EF) ie behavioural self-regulation, crucial for children's social function, cognitive and psychological development. EF are central to effective learning and are effective predictors of future academic attainment.<sup>22</sup> This need is echoed in the writing of Luckin<sup>23</sup> who argues for a, "more sophisticated education system that ensures that our students are even smarter than ever before". 'Smarter' means developing and enhancing the human skills and capabilities artificially intelligent computer systems cannot yet compete with.

Currently, the OECD<sup>24</sup> and UNESCO<sup>25</sup> are evolving a national and international standard for these skills, including developing Fusion Skills assessment tools. At about age 12 a child should be able to gain quite high functioning Fusion Skills but for this to occur, the acquisition of Fusion Skills needs to be developed through explicit, thoughtful and sustained forms of learning. The targeted learning needs to focus on fusion skills and emotional intelligence. Fusion Skills are not confined to a particular discipline or subject area of the curriculum. Rather it is something which emerges from multiple sources and through formal and informal learning environments. Fusion Skills are best developed through a more aligned learning approach where meta-cognitive intelligence is developed and practised across all learning and they are developed through practice and by providing broader experiences. Engagement and participation in cultural activity has shown to be an effective vehicle for providing these experiences. Similarly, creative approaches to teaching, including teaching through the arts have also proven to be effective. It is important that wider curriculum opportunities are provided for students. This ensures that students are more motivated to learn and more successful in their learning.

Fusion relies on enhanced lifelong learning and training offers and can be gained equally through deliberative teaching and learning in formal education and through a range of experiences in non-formal and community learning contexts. The challenge is the development of a method to capture these Fusion encounters and to ensure that Fusion pathways progress into further education and post-compulsory learning. Meaningful encounters with the world of work are also important as these experiences help young people to develop the Fusion Skills and personal qualities they need for workplaces. For education to effectively recalibrate their effort towards fusion, education systems require motivated and quality teachers at all levels (in schools, in adult education and in learning and development in the workplace).

<sup>21</sup> Alloway, T. P. (2009). Working memory, but not IQ, predicts subsequent learning in children with learning difficulties. *European Journal of Psychological Assessment*, 25(2), pp. 92-98.

<sup>22</sup> Morgan, P.L., Hui Li, Farkas, G., Cook, M., Wik Hung Pun, and Hillemeier, M. (2018) "Executive functioning deficits increase kindergarten children's risk for reading and mathematics difficulties in first grade" *Contemporary Educational Psychology*, No 10.

<sup>23</sup> Rose Luckin (2018) *Machine Learning and Human Intelligence: The Future of Education for the 21st Century*, UCL IOE Press, London. p. 137

<sup>24</sup> OECD report: The future of education and skills Education 2030

[https://www.oecd.org/education/2030/E2030%20Position%20Paper%20\(05.04.2018\).pdf](https://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf) Accessed September 13, 2019

<sup>25</sup> <https://en.unesco.org/themes/skills-work-and-life> Accessed September 13, 2019

## **Fusion in the workplace**

Businesses need to build and maintain the widest possible pool of diverse talent to compete in a complex and dynamically changing world. Corporates must co-invest in the learning and development of people. Changing roles will drive new types of employee profiles. The Financial Skills Taskforce (2019)<sup>26</sup> suggested that fusion capacities will be vital to cultivating “virtual teams” and that "recruiting for skills, behaviours and potential will become increasingly common." Hoban (2019)<sup>27</sup> summarised this trend stating "currently we recruit those who are nicely rounded as opposed to spiky. We need to redefine the attributes of success."

Significant attention needs to be paid to lifelong fusion learning for adults who are self-employed or not in work as most initiatives are still targeted at people working in larger companies which is becoming less common. There needs to be systems which provide ways for local start-ups and micro-businesses to innovate and thrive. Larger corporations may have a role in providing system leadership by nurturing future leaders (within and outside their businesses) early on and by providing leadership and collaborative capacities to ‘solopreneurs’ and people working in small and micro businesses. Ultimately though, the trend is that the onus for ongoing learning will be on the individual, with support and partnership from larger businesses and the education sector.<sup>28</sup>

## **Fusion in society**

Collaboration and social interaction are key. They build a symbiotic connection between business, culture, the charitable sector and education driven by a sense of immediacy and place. There are real opportunities for collaborations and deeper impacts but also opportunities to reach out to other regions, sectors, audiences and skills-types. This implies better integration of systems to improve outcomes and provide a more coherent approach through identifying key policy levers locally, nationally and internationally. Fusion is most effective where work is undertaken locally but across geographies and populations to promote diversity. It is about a global movement achieved through local action. The act of Fusion must inform political decisions and ensure that diverse voices are heard. It is about seeing the bigger picture by planning and acting locally and regionally, engaging with local partners and stakeholders.

There is a need to build Fusion leadership and capacity at local levels to establish momentum for change. This can be achieved through inviting and enabling people to contribute to a greater purpose and providing Fusion events and services that improve the quality of life, and the environment. Fusion needs evangelists who research, measure impact and value localisation, diversification and personalisation of the messaging. These people will operate as fusion global leaders. They will identify the right opportunities and align with the right partners and drive the right innovations and advancements so that all people will benefit from sharing best practice in innovation and Fusion Skills development. An explicit focus and a culture of trust-based sharing should enable natural synergies and surprising connections to emerge and minimise the risk of fragmentation and maximise the benefits of a more diverse and innovative system. Collaboration and communication ensure there is a clear vision, a shared language and appropriate local and global vehicles to drive change.

## **Conclusion**

The Fusion vision is clear and compelling. Fusion Skills are key to future personal and society success. To achieve these, individuals and groups have come to the same opinion around Fusion Skills, despite very

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<sup>26</sup> Hoban, M. (Chair) (2019) *Financial Services Skills Taskforce: Interim report*. The City UK, London. p.7 <https://www.thecityuk.com/research/financial-services-skills-taskforce-interim-report/>. Accessed September 13, 2019

<sup>27</sup> Hoban, M. (Chair) (2019) *Financial Services Skills Taskforce: Interim report*. The City UK, London. p. 15 <https://www.thecityuk.com/research/financial-services-skills-taskforce-interim-report/>. Accessed September 13, 2019

<sup>28</sup> *ibid* p 9

different places and starting points. The journeys and the focus are converging on Fusion in education, employment and future society. This meeting of minds from very different sectors and backgrounds offers the opportunity to be inspired to make a difference in education, employment and society. Individually and collectively, Fusion is about innovators, thinkers, activists and influencers who are actively redefining, re-evaluating and challenging current practices in skills development to generate real change.

### Further information

Creative work skills helping drive the 4th Industrial Revolution, the fusion of biological, digital and physical

<https://www.ediweekly.com/creative-work-skills-helping-drive-4th-industrial-revolution-fusion-biological-digital-physical/>

Digital Skills for the UK Economy 2016

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/492889/DCMSDigitalSkillsReportJan2016.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/492889/DCMSDigitalSkillsReportJan2016.pdf)

DQ Institute: Empower Every Child with Digital Intelligence by 2020

[https://www.dqinstitute.org/2018dq\\_impact\\_report/](https://www.dqinstitute.org/2018dq_impact_report/)

Employer Skills Survey 2017

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/746493/ESS\\_2017\\_UK\\_Report\\_Controlled\\_v06.00.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746493/ESS_2017_UK_Report_Controlled_v06.00.pdf)

Financial Services Skills Taskforce - Interim report

<https://www.thecityuk.com/research/financial-services-skills-taskforce-interim-report/>

Fusion Skills: Perspectives and Good Practice

[https://www.screenskills.com/media/1551/fusion\\_report.pdf](https://www.screenskills.com/media/1551/fusion_report.pdf)

Future of Skills and Lifelong Learning

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/727776/Foresight-future-of-skills-lifelong-learning\\_V8.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/727776/Foresight-future-of-skills-lifelong-learning_V8.pdf)

Future Skills Centre works with stakeholders to develop, test, and evaluate innovative approaches to skills development.

<https://fsc-ccf.ca/what-we-do/innovation-projects/>

Joint Dialogue: How are schools developing real employability skills?

<https://www.educationandemployers.org/wp-content/uploads/2018/11/JOINT-DIALOGUE-FINAL-REPORT-3.pdf>

Life skills are key to the success of young people: Sutton Trust report

<https://www.suttontrust.com/research-paper/life-lessons-workplace-skills/>

Nesta report: The Fusion Effect: The economic returns to combining arts and science skills

<https://www.nesta.org.uk/report/the-fusion-effect-the-economic-returns-to-combining-arts-and-science-skills/>

OECD report: Three mega-trends which have the potential of significantly altering the nature of work

[https://www.oecd.org/els/emp/wcms\\_556984.pdf](https://www.oecd.org/els/emp/wcms_556984.pdf)

OECD report: The future of education and skills Education 2030

[https://www.oecd.org/education/2030/E2030%20Position%20Paper%20\(05.04.2018\).pdf](https://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf)

OECD report: Envisioning the future of education and jobs

<http://www.oecd.org/education/Envisioning-the-future-of-education-and-jobs.pdf>

Strategies for transforming local education systems: Report of the Education Development Trust

<https://www.educationdevelopmenttrust.com/EducationDevelopmentTrust/files/b0/b02b60d2-e3e9-46f5-b053-64345f249159.pdf>

The Right Combination 2016

<http://www.cbi.org.uk/cbi-prod/assets/File/pdf/cbi-education-and-skills-survey2016.pdf>

University report on future skills challenges

<https://www.universitiesuk.ac.uk/policy-and-analysis/reports/Documents/2018/solving-future-skills-challenges.pdf>

WTF – What the Future – Ep. 14 – Fusion Skills

<https://www.hrforecast.de/2019/08/19/wtf-what-the-future-ep-14-fusion-skills/>

Work, Reimagined: 8 Must-Have Skills in the Age of AI

<https://www.accenture.com/us-en/blogs/blogs-work-reimagined-8-skills-age-ai>

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