THE CAREERS & ENTERPRISE COMPANY

Careers in the Curriculum.

What works?

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In brief

Teaching careers as part of the curriculum has a dual purpose: (1) to provide careers education as part of the school's careers and enterprise provision; and (2) to enhance the whole curriculum with the addition of career-relevant content.

The careers curriculum can be taught 'as a subject' and 'through other subjects' to promote the career learning, development and wellbeing of students. Careers in the whole curriculum can be 'embedded in subject learning' and delivered 'through co-curricular activities' to promote subject learning and the overall personal and social development and wellbeing of students. In practice, the boundaries between these components of careers in the curriculum are blurred. Secondary schools need to decide and manage the way that careers in the curriculum is delivered in line with the available research.

An extensive UK and international research base provides evidence that careers in the curriculum can have some positive impacts on outcomes for young people. We can assess the strength of this evidence using the ratings schema developed by the Early Intervention Foundation (EIF). as Level 2 (i.e. more research is needed to make causal assumptions).

Careers in the curriculum has been found to have a small but significant impact, especially on young people's personal effectiveness and career readiness. While the effect sizes are typically modest, the inputs that are being measured are often quite small as well. This means that cost effectiveness is generally good although further cost-benefit analyses would be valuable. We also believe that careers in the curriculum has the potential to have a bigger impact on young people's educational outcomes if the quality and consistency of interventions can be raised and more robust studies were commissioned to measure this.

Careers in the curriculum is more effective when it is well lead and managed and integrated with a stable programme of careers and enterprise activity. In line with the Gatsby report, schools need to plan and regularly renew an integrated careers strategy and programme which encompasses personal guidance, experience of workplaces, encounters with employers and encounters with further and higher education alongside careers in the curriculum activities.

Schools need to ask themselves 'what do we want to achieve?' and 'what does the evidence say is the best way to achieve it?'. The Gatsby report argues that all the components of good career guidance, including linking curriculum learning to careers, require that schools have a stable careers programme to bind them together.

Executive summary

Careers in the curriculum describes a range of interventions which allow students to encounter career learning as part of their everyday school curriculum. The Gatsby report identified eight benchmarks of good career guidance one of which, linking curriculum learning to careers, is directly addressed in this paper.

This review looked at over 100 UK and international studies published in the last twenty years on careers in the curriculum.

What is careers in the curriculum?

The curriculum is made up of the formal learning organised by the school. Careers in the curriculum has twin purposes:

- to promote students' career learning, development and wellbeing; and
- to enhance students' subject learning and attainment and their overall personal and social development.

The three main ways of delivering careers in the curriculum are:

- providing career learning as a subject in its own right
- incorporating career learning within other subjects
- organising career learning through co-curricular activities (i.e. enrichment activities strongly connected to the formal curriculum).

What impact does careers in the curriculum have?

Impact is demonstrated when change – cognitive, behavioural or practical – occurs in a young person. There is limited evidence of impacts resulting from careers in the curriculum interventions. The evidence that does exist suggests that impacts can be observed in the following areas:

- personal effectiveness e.g. improving self-esteem, motivation, personal agency and self-efficacy beliefs;
- career readiness e.g. improving career exploration skills, understanding of occupations, decision-making and decidedness and preparedness for transitions; and
- educational outcomes e.g. improving attendance and raising educational outcomes.

There is considerable room to improve the evidence base for careers in the curriculum. We assess its strength to be at Level 2 using the EIF standard (i.e. there is preliminary evidence of impact on child outcomes). We would like to see more large-scale and longitudinal studies, more detailed case studies that could enrich our understanding of how it works, more research into the efficacy of careers in the curriculum for students with protected characteristics and more research looking at how schools can manage careers in the curriculum effectively.

From the research, we identified several actions that schools can take to optimise the impact of careers in the curriculum. Positive impacts are related to:

1. Vision and leadership
A whole-school strategy underpinned by effective leadership and a shared vision is important. Building on local and national initiatives strengthens coherence;

2. A well-designed curriculum
The design of the curriculum is important as deciding priorities, organising the curriculum, allocating time and drawing up a timetable have a strong influence on impact;

3. A strong focus on the learning process
Approaches based on reflection, dialogue, practice and inquiry have the most impact. The quality of learning resources also makes a difference. Schools which use assessment and which record achievement have a bigger impact on developing students' enterprise capabilities and it seems likely that this effect will also apply when it comes to developing students' career capabilities;

4. Trained staff capable of delivering careers in the curriculum
The commitment, competence, confidence and teamwork of staff is important for impact;

5. Engagement of school partners
Contributions by parents/carers, employers, further and higher education and other school partners can significantly enhance the impact of careers in the curriculum;

6. Delivering consistency and volume
Ensuring that young people have access to a series of career learning opportunities which build on each other strengthens the impact of careers in the curriculum.

1. Introduction

Research indicates that students entering higher education who have had fragmented or limited career support at school make poorer choices, are less career ready and feel less inclined to access careers support in the future.[1] Findings such as this emphasise the need for consistently good careers provision in schools.

The Gatsby report into *Good Career Guidance* identified eight benchmarks to show what effective careers provision in schools looks like.[2]

The eight Gatsby benchmarks

1. A stable careers programme
2. Learning from career and labour market information
3. Addressing the needs of each pupil
4. Linking curriculum learning to careers
5. Encounters with employers and employees
6. Experiences of workplaces
7. Encounters with further and higher education
8. Personal guidance

This What Works paper focuses on benchmark 4: linking curriculum learning to careers.

In this report, we will look at the evidence for:

- positioning careers education within the curriculum as a subject in its own right
- incorporating career learning within other subjects
- connecting careers-related co-curricular activities to the curriculum.

We will provide clarity about the potential impacts of careers in the curriculum and an understanding of what constitutes best practice. To find out 'what works', we need to assess the evidence available from research studies and reviews.

We undertook a systematic search of the academic literature and grey sources (reports, policy documents, etc.) to identify relevant evidence published in English between 1997 and 2017. This approach led to the selection of over 90 UK and international primary and grey/secondary sources for detailed analysis based on their continuing relevance to careers in the curriculum.

We found that the evidence base is fragmented with many gaps. The studies provide insights into the value of careers in the curriculum but were often carried out for a different purpose. Relatively few use quantitative methodologies. Most are robust single studies using qualitative or mixed methods to illuminate impact in specific school and cultural contexts. Many of the studies reveal some of the factors which disrupt impact such as poor management and implementation.

1. Aldridge, L. (2016). To what extent has the fragmentation of careers education and guidance, offered to young people in schools and colleges, affected the level of career readiness which students have when they arrive at university? Available from https://www.hecsu.ac.uk/assets/assets/documents/Liverpool_john_moores_university_fragmentation_of_pre_he_careers_provision_2017.pdf [Accessed 10th August 2017].
2. Gatsby Charitable Foundation. (2014). *Good Career Guidance*. London: Gatsby Charitable Foundation.

History and policy

The idea of including careers in the curriculum for school leavers, especially careers education for lower-achieving students, developed rapidly in the 1960s and 1970s. Large-scale reforms such as the Technical and Vocational Education Initiative in the 1980s did not lead to the expected breakthrough of careers in the curriculum and the introduction of the National Curriculum after 1988 curtailed further progress for several years.[3] [4]

Reconsideration of the potential value of careers education in the curriculum led the government in 1997 to make it a requirement for all 14–16-year-olds (extended to 11–13-year-olds in 2003). Work-related learning was made statutory at key stage 4 from 2004. These arrangements lasted until 2012.

Current policy requires schools to provide independent and impartial careers guidance for students in years 8–13 replacing the face-to-face national career guidance service for young people provided by Connexions. At the same time, schools are now responsible for determining their own need for careers in the curriculum while complying with the 2002 Education Act. This Act requires maintained schools to provide a broad and balanced curriculum which:

(a) promotes the spiritual, moral, cultural, mental and physical development of pupils at the school and of society, and

(b) prepares pupils at the school for the opportunities, responsibilities and experiences of later life.[5]

Government guidance for schools suggests a range of careers in the curriculum activities that can help them to fulfil their career guidance duty emphasising the importance of providing real-life contacts with the world of work to raise aspirations and inspire young people.[6]

This review published by the Careers & Enterprise Company identifies the potential for increasing the impact of careers in the curriculum and highlights the need for a research programme to inform policy and practice in this area.

3. Harris, S. (1999). *Careers Education: Contesting Policy and Practice.* London: SAGE Publications Ltd.
4. Andrews, D. (2011). *Careers Education in Schools*. Stafford: Highflyers.
5. Education Act (2002). Available from http://www.legislation.gov.uk/ukpga/2002/32/part/6 [Accessed 10th August 2008].
6. Department for Education. (2017). Careers guidance and inspiration in schools: Statutory guidance for governing bodies, school leaders and school staff. Available from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/440795/Careers_Guidance_Schools_Guidance.pdf [Accessed 10th August 2017].

2. What is careers in the curriculum?

Careers in the curriculum is part of the overall provision of careers education, information, advice and guidance and the whole curriculum. Careers in the curriculum can take three main forms.

- **Career learning delivered as a subject.**
  In this approach careers content is delivered as a discrete curriculum, e.g. in careers education or as part of PSHE. It is allocated time in the timetable and facilitated through a range of activities by teachers, careers professionals, teaching support staff and other external partners, e.g. employers and further and higher education providers. In some cases, learning is assessed and accredited.

- **Career learning delivered through other subjects.**
  In this approach careers content is delivered through subjects, e.g. personal financial planning skills taught in maths, self-presentation skills taught in English. Ideally this approach both provides career learning and enhances the subject learning, e.g. by showing how a mathematical technique is used in the real world.

- **Career learning delivered through co-curricular activities.**
  In this approach careers content is delivered through informal and voluntary learning activities which have a strong connection to the curriculum. Many schools organise after-school clubs, cultural events and residential activities which provide opportunities to complement formal careers in the curriculum provision, e.g. STEM clubs to build on students' interest in science, technology, engineering and maths.

In practice, schools do not maintain rigid distinctions between each of these approaches and often blend them together.

3. What impact does careers in the curriculum have?

Impact is demonstrated when change occurs.[7] Careers in the curriculum can change young people in ways that are:

- **cognitive**, i.e. transforming how they think about themselves, their careers and the subjects they are studying;
- **behavioural**, i.e. developing their career management, employability and study skills; and
- **practical**, i.e. enabling them to make successful transitions into positive, sustained and personally-valued destinations.[8]

Several studies argue that 'soft' or 'intermediate' outcomes that are indicative of personal and social learning and growth are necessary precursors and facilitators of 'hard' educational, social and economic outcomes, both in the immediate and long term.[9] [10] [11] [12]

An extensive UK and international evidence base has been built up over the last twenty years that supports the role of careers delivered as a subject or through other subjects. We can assess the strength of this evidence on the ratings schema developed by the Early Intervention Foundation (EIF). as Level 2 (i.e. more research is needed to make causal assumptions).[13] A synthesis of the literature published in the USA in 2004 suggested that careers in the curriculum interventions have a positive effect if delivered at the right time, with sufficient intensity and avoiding implementation flaws.[14]

Evidence of the impact of careers embedded in subject learning and through co-curricular activities is more limited.

Careers delivered as a subject or through subjects

We can find evidence of the impact of careers in the curriculum on three main outcome areas: personal effectiveness; career readiness and educational outcomes.

Personal effectiveness

Personal effectiveness leads to greater self-awareness, self-confidence, self-esteem, self-control and self-efficacy.

There is some emergent evidence which suggests that careers in the curriculum has a positive impact on personal effectiveness. For example, American high school students who participated in a daily 50-minute careers lesson for nine weeks experienced

7. Hiebert, B. and Magnusson, K. (2014). The power of evidence: Demonstrating the value of career development services. In Shepard, B.C. and Mani, P.S. (Eds.) *Career Development Practice in Canada: Perspectives, Principles and Professionalism*. Toronto: CERIC.
8. Hart, C.S., Biggeri, M. and Babic, B. (Eds.). (2014). *Agency and Participation in Childhood and Youth: International Applications of the Capability Approach in Schools and Beyond*. London: Bloomsbury.
9. Killeen, J. and Kidd, J. (1991). *Learning Outcomes of Guidance: A Review of Recent Research (Department of Employment Research Paper 85)*. London: National Institute for Careers Education and Counselling.
10. Whiston, S.C., Brecheisen, B.K, Stephens J. (2003). Does treatment modality affect career counselling effectiveness? *Journal of Vocational Behaviour*, 62(3), 390-410.
11. Hooley, T., Marriott, J. and Sampson, J. P. (2011). *Fostering College and Career Readiness: How Career Development Activities in Schools Impact on Graduation Rates and Students' Life Success*. Derby: International Centre for Guidance Studies, University of Derby.
12. Hughes, D. and Gration, G. (2009). *Literature Review of Research on the Impact of Careers and Guidance-Related Interventions*. Reading: CfBT Education Trust.
13. Early Intervention Foundation. (2017). *Early Intervention Foundation Guidebook: What do EIF ratings mean?* Available from http://www.eif.org.uk/wp-content/uploads/2016/07/What-do-the-EIF-ratings-mean.pdf [Accessed 2nd May 2017].
14. Hughes, K.L. and Karp, M.M. (2004). *School-Based Career Development: A Synthesis of the Literature.* New York: Institute on Education and the Economy Teachers College, Columbia University.

small but significant increases in decision-making self-efficacy and vocational skills self-efficacy.[15] Similarly a curriculum specifically designed to address the career development needs of young women with disabilities resulted in significant and meaningful improvements in their personal effectiveness.[16]

Personal effectiveness is strongly linked to a range of non-cognitive behaviours such as motivation, persistence and charm. A major predictive analysis of the effects of American high school students' decision-making on their labour market and social behaviour outcomes found that "a change in noncognitive skills from the lowest to the highest level has an effect on behavior comparable or greater than a corresponding change in cognitive skills" (p.2–3). They also found strong evidence that schooling affects both cognitive and non-cognitive abilities. Although they do not discuss the impact of careers in the curriculum directly, their findings are relevant to the debate about what role careers should have in the curriculum.[17]

Career readiness

Career readiness capabilities include understanding of occupations, decision-making, planning, self-presentation and transition preparedness.

Most studies of careers in the curriculum find that they have a positive impact on young people's career readiness. A study by SWA reported inconclusive results.[18]

However, in general, other studies highlight the capacity of careers in the curriculum to develop young people's career exploration skills – a known factor in successful transition at 16.[19] The ASPIRES project found that STEM-focused careers in the curriculum interventions increased young people's occupational awareness.[20] A recent review of the ASPIRES and UPMAP projects concluded that there are good grounds to believe that embedding careers education in STEM lessons should increase the uptake of post-16 STEM subjects.[21]

An earlier ground-breaking American meta-analysis of career counselling studies, investigated the effect sizes of different kinds of careers interventions and raised the issue of how interventions could be combined for maximum impact. They found moderate effect sizes from careers interventions, the strongest in the areas of career readiness and self-knowledge. Careers classes (lessons) were the most effective type of intervention and effect size increased with the number of hours allocated to them.[22]

Educational outcomes

Careers in the curriculum can contribute to improvement in attendance, reduced drop-out, attainment and progression to personally valued educational destinations.

An American review of more than 50 studies reported that career development activities that were more experiential in nature were found to positively influence

15. McWhirter, E., Crothers, M. and Rasheed. S. (2000). The effects of high school career education on social-cognitive variables. *Journal of Counseling Psychology*, 47(3), 330-341.
16. Doren, B., Lombardi, A., Clark, J., and Lindstrom, L. (2013). Addressing career barriers for high risk adolescent girls: The PATHS curriculum intervention. *Journal of Adolescence*, 36(6), 1083-1092.
17. Heckman, J. J., Stixrud, J. and Urzua, S. (2006) The effects of cognitive and noncognitive abilities on labor market outcomes and social behaviour. *Journal of Labor Economics*, 24(3), 411-482.
18. SWA Consulting Ltd. (1998). *The Influence of Careers Education and Guidance Upon Pupils in Year 11*. Sudbury: DfEE.
19. Morris, M., Golden, S. and Lines, A. (1999). *The Impact of Careers Education and Guidance on Transition at 16*. London: DfEE.
20. ASPIRES (2013). ASPIRES: *Young People's Science and Careers Aspirations 10-14*. London: Department of Education & Professional Studies, King's College London.
21. Reiss, M.J. and Mujtaba, T. (2016). Should we embed careers education in STEM lessons? *The Curriculum Journal*. 28(1), 137-150.
22. Oliver, L.W., and Spokane, A.R. (1988). Career-counseling outcomes: What contributes to client gain? *Journal of Counseling Psychology*, 35, 447-462.

such variables as school attendance and completion.[14] A report by the Sutton Trust found an association between schools that had careers quality awards – the criteria for which include having a careers curriculum, careers guidance and work-related learning – and improved attainment and attendance.[23]

The CareerStart programme was designed to prevent disengagement from North Carolina middle schools. Maths, science, language arts and social studies teachers were asked to deliver 10 relevance-enhanced lessons in every class across the school year for three years. Student engagement with school improved. CareerStart also had a significant treatment effect for maths performance. No effect showed up for reading performance but this may have been due to limitations of the study and the compromising of the control sample. Effects were difficult to manage because many of the teachers in the schools in the control group managed to obtain and use the teaching materials.[24] A similar intervention, which infused career development learning in the middle-school English Language Arts curriculum over an eight-week period, also found positive changes in students' 7th grade test scores and gains in their personal 'career agency'.[25] Improved educational outcomes were also noted in a case-study of the impact of a school's comprehensive careers programme on student outcomes. The results pointed to improved GCSE results, the virtual elimination of course switching and drop-out from post-16 study and minimal drop-out from higher education.[26]

Careers delivered through subjects have also been shown to be positively associated with young people's decisions to pursue those subjects in higher education.[27] The *Future to Discover* programme in Ontario which included after-school careers education workshops for lower-income students had strong and significant positive impacts on their enrolment in post-secondary education.[28] Evidence suggests that when overall careers provision is not good, young people with a low self-image choose poorer progression options at 16 selecting qualifications at the same level or even at a lower level than those which they had already achieved.[29]

Careers embedded in subject learning and through co-curricular activities

Careers embedded in subject learning and through programmes of co-curricular activities strengthen relevance, diversify resources and provide real contexts for learning. The intended benefits are to:

- make learning more accessible and boost attainment especially as the content becomes more difficult.
- strengthen engagement in learning building on students' interests and enjoyment.
- promote positive attitudes towards a subject and encourage the take-up of progression pathways in and through the subject.

23. Hooley, T., Matheson, J. and Watts, A.G. (2014). *Advancing Ambitions: The Role of Career Guidance in Supporting Social Mobility*. London: The Sutton Trust.
24. Woolley, M., Rose, R., Orthner, D., Akos, P., and Jones-Sanpei, H. (2013). Advancing Academic Achievement Through Career Relevance in the Middle Grades. *American Educational Research Journal*, 50(6), 1309-1335.
25. Lapan, R., Marcotte, A., Storey, R., Carbone, P., Loehr-Lapan, S., Guerin, D. and Mahoney, S. (2016). Infusing career development to strengthen middle school English language arts curricula. *Career Development Quarterly*, 64(2), 126-139.
26. Morris, M., Rudd, P., Nelson, J. And Davies, D. (2000). *The Contribution of Careers Education and Guidance to School Effectiveness in 'Partnership' Schools*. (DfEE Research Report 198). London: DfEE.
27. Morris, M. and Rutt, S. (2005). *Evaluation of Aimhigher: Excellence Challenge Aspirations to Higher Education: One Year On*. London: DfES.
28. Ford, R., Grekou, D., Kwakye, I. and Nicholson, C. (2014). *Future to Discover: Fourth Year Post-Secondary Impacts Report*. Ottawa, Ontario: The Social Research and Demonstration Corporation (SRDC).
29. Stoney, S., Ashby, P., Golden, S. and Lines, A. (1998). *Talking about 'Careers': Young People's Views of Careers Education and Guidance at School (RD 18)*. Sheffield: DfEE.

The evidence that these approaches work is limited. A literature review of students' perceptions of geography, for example, found that the interest of boys and girls in the subject is related more to how it is taught and the quality of teaching than to the actual subject content.[30] An American study of girls and physics, however, suggests that attention to the context in which the subject is presented does have an impact on female students.[31] Research by the Institute of Physics also indicates that young women learn best when the subject is contextualised and that this does not have a detrimental effect on young men in mixed classes.[32]

This approach has been tested most in STEM education. The five TISME projects – Targeted Initiative on Science and Maths Education – looked at how to strengthen students' engagement, aspirations and choices in science and maths through improved teaching and learning. It had mixed but encouraging results.[33] The ASPIRES project, for example, found that the motivation of Key Stage 3 science teachers to embed career learning in their subject was high. The wealth of teaching resources available also made it easy; but their workloads deterred them from getting started, particularly without external support. A six-week embedded career learning programme at one of the project schools had no significant impact on student aspirations or attitudes to science education. However, the intervention increased students' occupational awareness and may have had the potential to foster the resilience of students with pre-existing STEM aspirations as well as engaging students who were previously bored by science. The project concluded that starting at key stage 2 and drip-feeding careers content in almost every lesson was the most effective practice.

A study of the impact of a project-based science curriculum on minority student achievement, attitudes and careers found that students' science achievement improved but their attitudes towards science and plans to pursue science did not.[34] The project-based methodology they used focused on the broad relevance to students' everyday lives rather than specifically on career relevance; and the critical factor appeared to be the teacher's competence and frequency of use of inquiry-based activities.

Evidence of the impact of careers-inspired subject learning on students' decisions to choose or not choose careers related to the subject is weak. In science and technology, for example, complex personal, psychological, family and school factors influence students' decisions whether or not to pursue careers in those fields, including negative perceptions of what careers in those fields are like.[35]

30. Weeden, P. (2006). *Pupils' Perceptions of Geography: A Literature Review*. Birmingham: School of Education, University of Birmingham.
31. Bottia, M.C., Stearns, E., Mickelson, R.A., Moller, S. and Parker, A.D. (2015). The relationships among high school STEM learning experiences and students' intent to declare and declaration of a STEM major in college. Teachers College Record, 117(3).
32. Murphy, P. and Whitelegg, E. (2006). *Girls in the Physics Classroom: A Review of the Research on the Participation of Girls in Physics*. London: The Institute of Physics.
33. Archer, L. and Tomei, A. (2013). *What Influences Participation in Science and Mathematics? A Briefing Paper from the Economic and Social Research Council (ESRC) Targeted Initiative on Science and Mathematics Education (TISME).* Swindon: ESRC.
34. Kanter, D. E. and Konstantopoulos, S. (2010). The impact of a project-based science curriculum on minority student achievement, attitudes, and careers: The effects of teacher content and pedagogical content knowledge and inquiry-based practices. *Science Education*, 94(5): 855–887.
35. Potvin, P. and Hasni, A. (2014). Interest, motivation and attitude towards science and technology at K-12 levels: A systematic review of 12 years of educational research. *Studies in Science Education*, 50(1), 85-129.

4. What are the lessons for practice?

Building on what works is key to improving practice. Research suggests that the positive impacts associated with careers in the curriculum are related to the following factors:

- a school vision for careers in the curriculum backed up by committed leadership;
- a well-designed curriculum;
- a strong focus on the learning process;
- trained staff capable of delivering careers in the curriculum;
- engagement of school partners; and
- ensuring consistency and volume.

Vision and leadership

Schools need to ask themselves 'what do we want to achieve?' and 'what does the evidence say is the best way to achieve it?'. The Gatsby report argues that all the components of good career guidance, including linking curriculum learning to careers, require that schools have a stable careers programme to bind them together.[2]

Responsibility for the formulation of a vision and strategy for the careers programme rests with the senior leadership team and governing body. Careers in the curriculum needs to be the focus of a whole-school policy (critical for the successful implementation of any change that requires the commitment of all staff), as well as being embedded in other whole school policies such as the policies on teaching and learning and equality, diversity and inclusion. The school's vision and strategy need to be regularly refreshed to keep everyone motivated.

The following table offers examples of resources that may be helpful for schools in considering how to build a whole school vision and strategy for careers.

Examples and resources

Description	Applications
The Gatsby benchmarks of good career guidance include 'linking curriculum learning to careers'.[2]	The Compass school self-evaluation tool is based on the benchmarks and can be used by schools to support the development of a high-quality careers programme.[36]
The **Quality in Careers Standard** criteria for quality in careers education, information, advice and guidance (CEIAG) in England include 'providing a planned programme of careers, employability and enterprise education in the curriculum, together with careers information and careers advice and guidance'.[37]	Schools and colleges can have their programmes externally assessed against the standard. Licensed awarding bodies base their own guidelines and frameworks for supporting and assessing schools on the Quality in Careers Standard.
Inspection frameworks and reports provide evaluation criteria that can assist in the development of good practice.	The Ofsted School Inspection Handbook outlines the judgements that inspectors make about careers provision.[38]
Local frameworks for careers provision provide a framework for schools in a locality to develop their careers provision.	The Kent Model of Career Education and Guidance[39] and London Ambitions[40] provide two examples of how careers provision can be tailored to local need and collaborative working between schools can be encouraged.
The Career Development Institute **Framework for careers, employability and enterprise education 7-19** sets out learning outcomes for KS2, KS3, KS4 and Post 16.[41]	The framework can be used for curriculum auditing, planning and evaluation. It covers three main areas: learning about self, finding out about careers and the world of work and developing career management and employability skills.
Online tools for careers guidance management and administration.	Grofar[42], Future First[43] and Outstanding Directions[44] are examples of priced and free resources designed to help schools manage their careers programmes.

36. Compass is available from http://compass-careers.org.uk/
37. Quality in Careers Consortium (2017). The Quality in Careers Standard. Available from http://www.qualityincareers.org.uk/documents/the-guide-to-the-standard-april-2017.pdf [Accessed 10th August 2017].
38. Ofsted. (2015). *School Inspection Handbook*. Available from https://www.gov.uk/government/publications/school-inspection-handbook-from-september-2015
39. Hooley, T. (2015). The Kent Model of Career Education and Guidance. Maidstone: Kent County Council.
40. London Councils (2015). *London Ambitions: Shaping a Successful Careers Offer For All Young Londoners*. London: London Councils.
41. Career Development Institute (2015). Framework for careers, employability and enterprise education 7-19. Available from http://www.thecdi.net/New-Careers-Framework-2015 [Accessed 26th September 2017].
42. Grofar careers guidance management and administration system https://grofar.com/
43. Future First helps state schools and colleges to build alumni communities http://futurefirst.org.uk/
44. Outstanding Directions careers guidance review, planning and recording tool http://www.outstandingdirections.org.uk/

A well-designed curriculum

Careers in the curriculum requires a substantial commitment of curriculum and staff time which puts schools under pressure from competing priorities. Key aspects of this include: attention to transition from primary; a well organised timetable; high quality curriculum resources and the provision of co-curricular activities.

Attention to transition from primary

The curriculum should build on learning that has happened in primary schools at key stage 2.[45] [46] [47] [48] The primary-secondary transition has been associated with dips in student achievement in years 7 and 8.[49]

Offering an exciting programme of curricular and co-curricular activities to these year groups which takes account of both prior learning and the challenges of transition may help to improve their career exploration and wider engagement in learning.[50]

A well-organised timetable

Ineffective timetable arrangements can inhibit the effective functioning of careers in the curriculum. The table below explains some of the pros and cons of different timetabling arrangements so that schools can work out the combinations which suit them best.

Forms of provision	Pros	Cons
Careers as a separate subject or course (stand-alone)	Easier to plan and deliver a scheme of work	Limited availability of curriculum time
Careers as a specially-timetabled activity e.g. stand-alone/drop down day events	Facilitates inter-disciplinary, thematic and project-based learning. Potential to enable intensive structured careers learning.	Resource intensive to organise.Can reinforce the divorce of careers from the rest of the curriculum
Careers in PSHE	PSHE promotes self- and role-awareness, decision-making, coping with transitions, relating to others, healthy living and wellbeing in a careers context. This means that there is potential for a strong alignment between careers and PSHE but it is important that there is sufficient time for careers content and that teachers have the relevant knowledge to deliver this content. Careers in PSHE is most effective if delivered by trained professionals in timetabled time.	Risk of content overload. Evidence is limited of the effectiveness of careers delivered through PSHE but the research into factors which affect the effectiveness of PSHE are also relevant to the effectiveness of careers in the curriculum.[51] [52] [53] [54]

45. Morris, M. (2004). The case for careers education and guidance for 14-19 year olds. Available from https://www.nfer.ac.uk/publications/CEG01/CEG01.pdf [Accessed 26th September 2017].
46. Foskett, N., Dyke, M. and Maringe, F. (2004). *The Influence of the School in the Decision to Participate in Learning Post 16*. London: Department for Education and Skills.
47. Wade, P., Bergeron, C., White, K., Teeman, D., Sims, D. and Mehta, P. (2011). *Key Stage 2 Career-Related Learning Pathfinder Evaluation*. London: DfE.
48. Whiston, S.C., Sexton, T.L. and Lasoff, D.L. (1998). Career-intervention outcome: A replication and extension of Oliver and Spokane (1988). *Journal of Counseling Psychology*, 45(2): 150-165.
49. Whitby, K. and Lord, P. (2006). *Dips in Performance and Motivation: A Purely English Perception?* Slough: NFER.
50. Ofsted. (2015) *Key Stage 3: The wasted years?* London: Ofsted.
51. Formby, E. (2011). "It's Better to Learn about Your Health and Things That Are Going to Happen to You than Learning Things That You Just Do at School": Findings from a Mapping Study of PSHE Education in Primary Schools in England. *Pastoral Care in Education*, 29(3), 161-173.
52. Formby, E, Coldwell, M, Stiell, B, Demack, S, Stevens, A, Shipton, L, Wolstenholme, C, Willis, B. (2011). *Personal, Social, Health and Economic (PSHE) Education: A Mapping Study of the Prevalent Models of Delivery and their Effectiveness*. London: Department for Education.
53. Willis, B, Clague, L and Coldwell, M. (2013). Effective PSHE education: values, purposes and future directions. *Pastoral Care in Education: An International Journal of Personal, Social and Emotional Development*, 31 (2), 99-111.
54. Formby, E. and Wolstenholme, C. (2012) 'If there's going to be a subject that you don't have to do ...' Findings from a mapping study of PSHE education in English secondary schools, *Pastoral Care in Education: An International Journal of Personal, Social and Emotional Development*, 30(1), 5-18, 30(1), 5-18.

Forms of provision	Pros	Cons
Careers in other subjects and across the curriculum	Careers curriculum is embedded in other subjects. Opens up more space for careers content within the timetable. Subject curricula are enhanced and made more accessible by engaging and relevant careers content. Career and progression pathways from the subject made more visible.	Complex planning needed to embed careers content in other subjects. It puts careers in competition with other cross-curricular issues, e.g. literacy, numeracy, environmental education. It can be challenging to devise viable learning objectives and assessment strategies for career learning within subjects.[55] Subject teachers can be resistant and view this as an attempt to 'dilute the message'.[56] Students may not be expecting to encounter career content in this environment.
Careers in tutor time (pastoral)	Can have a significant impact on attendance and attainment. Tutor-tutee relationship facilitates dialogue and reflection.	Can be challenging to do well as it is often under-valued and squeezed for time. Is very dependent on tutors being trained and willing to engage with careers.

High quality curriculum resources

The delivery of careers in the curriculum depends on the existence of high quality curriculum resources. These curriculum resources need to meet a range of quality criteria including impartiality, accessibility, currency and inclusivity.[57] For example it is valuable to offer a diverse range of career role models.[58]

Careers-related resources can either be 'supplementary' (i.e. independent of the main resources used to teach the topic) or 'integrated' (i.e. integral to the resources used to teach the topic). Evidence for the pros and cons of each approach is lacking, but it is likely that older and higher performing students can cope better with supplementary resources.[59]

The table opposite gives examples of careers in the curriculum resources.

55. Rowe, G., Aggleton, P. and Whitty, G. (1993). Cross-curricular work in secondary schools: The place of careers education and guidance. *Careers Education and Guidance: The Journal of the NACGT*, June 1993, 2-6.
56. Watts, A.G. (2011). Global perspectives in effective career development practices. *Curriculum & Leadership Journal*. 9(9)
57. The Career Development Institute has developed Careers Assured, a scheme for quality assuring careers resources and materials http://www.thecdi.net/Career-Assured
58. Mendick, H., Allen, K., Harvey, L. and Ahmad, A. (2012-2014). The role of celebrity in young people's classed and gendered aspirations'. An ESRC-funded research project (2012-14). Available from http://www.celebyouth.org/ [Accessed 26th September 2017].
59. Newton, D. P. (1988). *Making Science Education Relevant*. London: Kogan Page.

International careers in the curriculum resources

CareerStart[60]

CareerStart aims to help students make connections between the academic curriculum and future careers. English language arts, math, science and social studies teachers in North Carolina were trained to teach a collection of lessons enabling students to understand how course content is applied outside the classroom. Schools in local consortia and multi-academy trusts can work collaboratively on developing teaching materials and resources for the English context and train staff in delivering them.

My World of Work[61]

Skills Development Scotland has worked with teachers to develop one-page 'subject lesson inserts' designed to make learning more relevant to the wider world of work. Activities are in the form of individual or group exercises, worksheets, class discussion, homework and a careers wall, with the aim of inspiring teachers to create their own inserts.

The Real Game series[62]

The series was developed in North America as ready-made careers programmes for different age groups based on co-operative learning and role play. Evaluations have reported that *The Real Game* (for year 9) is effective in several areas of career learning and development.[63] [64] [65] Games, simulations and role plays developed collaboratively by teachers and employers can strengthen careers in the curriculum.

60. See http://www.learnnc.org/lp/organizations/52
61. See https://www.skillsdevelopmentscotland.co.uk/what-we-do/our-products/our-careers-service-in-schools/the-support-we-offer-teachers/
62. See http://www.prospectseducationresources.co.uk/teachers-toolkits/real-game-series.html
63. Edwards, A., Killeen, J., Watts, T. and Barnes, A.G. (1999). *The Real Game: Evaluation of the UK National Pilot*. Cambridge: NICEC.
64. Esbin, H. (2007). *The Real Game Version 2.0: CANADA 2007 National Pilot Report*. Memramcook: National Life/Work Centre.
65. Dimmitt, C. (2007). *The Real Game Evaluation Results*. Washington, DC: America's Career Resource Network.

English careers in the curriculum resources

STEM Learning

- STEM Careers Toolkit https://www.stem.org.uk/elibrary/collection/103798
- STEM Learning resources https://www.stem.org.uk/resources/collection/103798/stem-careers-toolkit
- Science Crime Scene Investigation (CSI) events

Training and Development Agency for Schools

The TDA funded a number of subject associations to develop careers related resources before it closed down in 2012

- Association for Citizenship Teaching https://www.teachingcitizenship.org.uk/resource/citizenship-and-careers-resources-developed-act
- English Career Resources for Teachers http://www.subjectassociation.org.uk/page.aspx?p=77
- Geographical Association http://www.geography.org.uk/resources/careers/getstarted
- Historical Association https://www.history.org.uk/secondary/categories/oa-marketing-history
- National Society for Education in Art and Design http://www.nsead.org/careers/index.aspx

The Design and Technology Association

STEM Careers Resources

https://www.data.org.uk/search/?q=STEM%20Careers

Association for Language Learning

http://www.all-languages.org.uk/resources/why-study-languages/making-the-case-resources

Education-employer collaboration

- Transport and Logistics (Geographical Association with The Chartered Institute of Logistics and Transport) http://geography.org.uk/resources/transport-and-logistics-cilt-resources
- Maths Careers (Institute of Mathematics and its Applications with the Bank of England and EDF Energy) http://www.mathscareers.org.uk
- Tomorrow's Engineers (Tomorrow's Engineers business industry partners with their Teacher Advisory Group) http://www.tomorrowsengineers.org.uk
- The Thames Tideway Tunnel Project https://www.tideway.london/our-community/education-programme

The provision of co-curricular activities

Co-curricular activities are a way of personalising learning opportunities for specific individuals and groups. Schools sometimes use the terms 'co-curricular' and 'extra-curricular' interchangeably but co-curricular activities are planned and designed to complement the formal curriculum whereas extra-curricular activities are more ad hoc and opportunistic.

Examples of co-curricular activities

Programme	Applications
Careers clubs Students participate in lunch-time or after-school activities including talks and presentations by guest speakers.	Skills learned through the clubs and activities can support career learning, thinking and planning.
STEM clubs STEM clubs offer opportunities to extend students interest in science, technology, engineering and maths and often include career relevant content, speakers and activities.	The STEM subjects (science, technology, engineering and maths) are most often cited in relation to the benefits of relating curriculum learning to careers due to policy interest in growing the number of STEM skills.[66] [67] STEM Learning at the University of York is a focal point for this activity in the UK and provides resources, training and STEM Ambassadors to support this area.[68] [69] An evaluation of STEM clubs showed that they had the potential to have a big impact on students' attitudes and attainment in STEM subjects.[70]
CREST Awards[71] Students complete STEM-related challenges and projects at different levels.	Students can take their interest and enjoyment of STEM subjects further by working on real challenges and projects that develop their skills and knowledge of STEM careers.
Children's University[72] The Children's University offers 7 to 14 year olds (and 5 to 6 year olds with their families) a range of innovative learning activities and experiences to enhance their personal and academic development.	The Children's University provides a framework for extra-curricular subject-related learning. A key aim of the programme is to engage young people in thinking about the educational options that may be open to them in higher education.
National Collaborative Outreach Programme[73] The programme aims to increase the number of young people from disadvantaged backgrounds in higher education by 2020.	Consortia of HE providers, schools, colleges and other organisations such as employers undertake outreach activities to support disadvantaged young people in progressing into higher education such as workshops, summer schools and visits.
Gifted and Talented programmes Schools organise a range of enrichment activities to further the special interests and talents of gifted and talented students.	Programmes can include conferences, competitions, challenges, master classes and workshops to meet the needs of exceptional students.

66. CBI. (2016). *The Right Combination: CBI/Pearson Education and Skills Survey 2016*. London: CBI.
67. *Engineering UK 2017: State of Engineering*. London: Engineering UK.
68. STEM Learning is at https://www.stem.org.uk/
69. STEM Clubs https://www.stem.org.uk/community/groups/393345/stem-clubs
70. Mannion, K. and Coldwell, M. (2008). *After-School Science and Engineering Clubs Evaluation.* London: Department for Children, Schools and Families.
71. See https://www.stem.org.uk/enrichment/stem-clubs/
72. See http://www.childrensuniversity.co.uk/
73. See http://www.hefce.ac.uk/sas/ncop/

The evidence on the effectiveness of co-curricular activities is limited, but many schools use them to supplement and extend the curriculum. Some examples of co-curricular activities are shown on the previous page.

A strong focus on the learning process

We can infer much about how to deliver high-impact careers in the curriculum learning from the general research literature on teaching and learning effectiveness.[74] [75] [76] [77] [78] Methods should be chosen according to their fitness for purpose and every lesson should be made to count.

Key features of this element include making use of appropriate learning approaches and assessing and accrediting career learning.

Learning approaches

Evidence from the Netherlands suggests that students acquire career competences such as self-regulation, job exploration and networking when the school provides them with a powerful career-learning environment that combines four inter-related approaches:[79] [80]

- **reflection** – giving students the opportunity to deepen their career understanding and skills by taking part in appropriate and unforced reflective activities;
- **dialogue** – providing students with opportunities to have purposeful, structured conversations with familiar, trusted adults about the personal and social meaning of work based on their experiences at school and outside of school;
- **practice** – enabling students to benefit from active, participative and experiential learning at school and in workplaces; and
- **inquiry** – arranging for students to undertake assignments of their own choosing with appropriate support which involve posing questions, solving problems, responding to scenarios and presenting outcomes.

The evidence also shows that supported or guided self-study is more effective than self-directed study.[22] [81]

Assessing and accrediting learning

There is limited research on assessment and accreditation in careers and enterprise learning.[56] [82] [83] However, what does exist shows that effective assessment can enhance the impact of careers in the curriculum.[84] [85]

Effective assessment practice is associated with:

- **well-developed provision**, i.e. expected outcomes are clear, the programme is well-established in the curriculum and staff are well-trained and committed to it;
- **relevant and meaningful criteria**, i.e. students see the point of the assessment;

74. Sammons, P., Kington, A., Lindorff-Vijayendran, A. and Ortega, L. (2014). *Inspiring Teachers: Perspectives and Practices.* Reading: CfBT.
75. Major, L.E. (2014). *What makes great teaching? Review of the underpinning research*. Project Report.
76. Hattie, J. (2012). *Visible Learning for Teachers*. London: Routledge.
77. Rowe, N., Wilkin, A. and Wilson, R. (2012). *Mapping of Seminal Reports on Good Teaching (NFER Research Programme: Developing the Education Workforce).* Slough: NFER.
78. Patton, A. (2012). *Work that Matters: The Teachers' Guide to Project-based Learning*. London: Paul Hamlyn Foundation.
79. Kuijpers, M., Meijers, F. and Bakker, J. (2006) *Krachtige loopbaangericht leeromgevingen in het (v)mbo: hoe werkt het?* Driebergen: HPBO.
80. Kuijpers, M. and Meijers, F. (Eds.) (2009). *Career Learning: Research and Practice in Education*. BP's-Hertogenbosch: Euroguidance.
81. Edwards, A. (1995). Post-16 careers guidance: The role of tutorial methods in supporting good practice. In Frost, D., Edwards, A. and Reynolds, H. (Eds.) *Careers Education and Guidance*. London: Kogan Page.
82. Barnes, A., Bassot, B. and Chant, C. (2011). *An introduction to Career Learning and Development 11-19: Perspectives, Practice and Possibilities*. London: Routledge.
83. Sultana, R. (2013). Career management skills: Assessing for learning. *Australian Journal of Career Development*, 22(2).
84. Department of Education , Science and Training. (2004). *Enterprise Education: Action Research to Identify Innovative Approaches To, and Best Practice in, Enterprise Education in Australian schools*. Canberra: Department of Education, Erebus Consulting Partners, Science and Training.
85. Spielhofer, T. and Lynch, S. (2008) *Assessing Enterprise Capability: Guidance for Schools*. Slough: NFER.

- **formative processes**, i.e. the assessment helps students to identify what they did well, what they would do differently or better next time and what they need to learn and to do next; and
- **assessment tools that are fit for purpose**, i.e. schools choose the tools that are right for them to optimise learning.

E-portfolios and other forms of portfolio-based assessment can be a useful way to assess careers in curriculum as it allows students to collect, store and reflect upon information about themselves and their opportunities, keep track of their planning and record their achievements. Evaluation of the Progress File showed that planning and recording of achievement tools can have a moderate to strong impact on individuals' self-beliefs, awareness of career skills, capacity to plan and to reflect on their own career and work-related learning and experiences, and in presenting themselves to others.[86]

Assessment can have a range of levels of formality including offering formal accreditation or even nationally recognised qualifications. Students who undertook the Silver CREST Award (based on 30 hours project or enquiry-based work in STEM) achieved half a grade higher on their best science GCSE result compared to a statistically matched control group. They were also more likely to choose a STEM AS level. These impacts were even bigger for students receiving free school meals.[87]

In specific circumstances, careers-related qualifications can have a positive impact on career outcomes by giving successful students a positional advantage. Some students, for example, choose to study a topic for the Extended Project Qualification which will prepare them for their future career in the knowledge that it is recognised by the university departments to which they are thinking of applying. A statistically significant association with improved attainment in GCSE qualifications has been found in schools where 25% or more of students complete ASDAN's Certificate of Personal Effectiveness at Level 2. Lower-achieving students and students from ethnic minority and socio-economically deprived backgrounds benefited the most.[88]

Trained staff capable of delivering careers in the curriculum

The training of staff is essential to overcome the barriers associated with delivering careers in the curriculum. Evidence suggests that this is easier in schools that have created an expansive learning environment for teachers.[89]

Embedding career learning in subjects relies on subject teachers knowing about the connections between their subject and careers such as an understanding of transferable skills and progression pathways. Subject teachers can motivate students by explaining the relevance of what they are studying to solving problems and getting things done in the 'real world' and benefiting their future working lives and careers; but care must be taken not to overload students when they are not in the frame of mind for career planning.

86. Hall, J. and Powney, J. (2003). *Progress File: An Evaluation of the Demonstration Projects* (Research Report No 426). Nottingham: DfES.
87. Stock Jones, R., Annable, T., Billingham, Z. and Macdonald, C. (2015). *Quantifying CREST*. London: British Science Association.
88. Harrison, N., James, D., and Last, K. (2012). *The Impact of the Pursuit of ASDAN's Certificate of Personal Effectiveness (CoPE) on GCSE attainment*. Bristol: University of West of England and ASDAN Education.
89. Hodkinson, H. and Hodkinson, P. (2005). Improving schoolteachers' workplace learning. *Research Papers in Education*, 20(2), 109-131.

Some teachers are unsure about their skills in the delivery of careers in the curriculum and whether it is actually their role to be involved in this area.[90] [91] However, a report for TeachFirst emphasised the key role of teachers in delivering careers in the curriculum and the need for professional development to help them carry out their role.[92] Whilst some of this professional learning can be facilitated in-school, teachers can also benefit from participating in collaborative workforce development, for example, through school partnerships and cluster arrangements coordinated by local authorities, multi-academy trusts and enterprise co-ordinators in Local Enterprise Partnerships.

Another way in which schools can ensure that staff are confident and competent in their careers roles is to include careers in the curriculum in the formal performance management system in the school, e.g. using learning walks and work scrutiny to quality assure the planned inputs by staff.

Engagement of school partners

School partners include parents/carers, other education providers, businesses, education-business link organisations, professional bodies and charities. They enhance careers in the curriculum by resourcing, planning and delivering activities collaboratively with subject and careers staff. Collaborative working is associated with more favourable outcomes for students. It is also important to fit employer-led activities into a clear curriculum frame to optimise learning. This is not just a question of preparing and debriefing students effectively but enhancing their conceptual understanding.

Engagement of partners can support the delivery of careers messaging through the formal curriculum and through delivery of extra-curricular activities. Enterprise advisers, employers, sector skills councils, outreach departments of universities and others can contribute to the contextualisation of the curriculum through sharing experiences of the workplace, further/higher education and life beyond school. Grey literature and project reports[93] often cite best practice but independent impact evidence is harder to find. The fact that schools have a long history of aligning work-related learning[94] and other activities alongside the curriculum, regardless of broader policy changes, could be taken as an indication of the effectiveness of partner engagement.

90. Watermeyer, R., Morton, P, and Collins, J. (2016). Rationalising "for" and "against" a policy of school-led careers guidance in STEM in the U.K.: A teacher perspective. *International Journal of Science Education*, 38(9), 1441-1458.
91. Akos, P., Charles, P., Orthner, D., and Cooley, V. (2011). Teacher perspectives on career-relevant curriculum in middle school. *RMLE Online*, 34(5), 1-9.
92. Hooley, T., Watts, A.G. and Andrews, D. (2015). *Teachers and Careers: The Role of School Teachers in Delivering Career and Employability Learning*. Derby: International Centre for Guidance Studies, University of Derby.
93. Business in the Community. (2017). Principles and Practice for Primary Engagement. Available from http://www.bitc.org.uk/our-resources/report/principles-and-practices-primary-engagement [Accessed 26th September].
94. Mann, A., Stanley, J. and Archer, L. (Eds.) (2014), *Understanding Employer Engagement in Education*, London: Routledge.

The following box contains examples of existing programmes and activities that directly link to the careers in the curriculum.

Examples of established and emerging practice

- Career Ready (https://careerready.org.uk/) is a charity which uses volunteer employers to deliver masterclasses in PSHE, careers and tutorial sessions with follow-up activities for teachers
- Future First (http://futurefirst.org.uk/) puts subscriber state schools in touch with their alumni who provide careers workshops and other activities for them. Future First's Alumni in the Curriculum project for Y9s involved alumni teaching between one and four lessons to show the real-life relevance of English and science/physics. The project had mixed results but participants were positive about its impact on their engagement with the subject, their aspirations and their thinking about their learning choices and career.[95]
- BAE Systems, the Royal Air Force and the Royal Navy sponsor a STEM 'roadshow' predominantly for Y7 and 8 comprising a drama production and supporting materials to teach difficult concepts in STEM and raise awareness of career pathways. Care is taken to embed equality, diversity and inclusion messages through 'theatre in education' and the supporting materials.[96]
- Airmaster Air Conditioning in Rotherham is working on STEM delivery with Aston Academy. One of the most active STEM Ambassadors is an ex-pupil. Activities Airmaster have been involved in include co-delivering activities for the after-school STEM club, supporting teachers in the classroom, attending careers events at the school, ensuring a senior woman has been visible and involved in school links, giving 'mock' interviews at the school.
- Teentech is an example of a national programme. Teentech runs regional competitions linked to technology and winners of these events can compete in national finals.[97]
- National Grid Careers Lab ran a Careers Education pilot involving nearly 2,000 youngsters aged 11-16 http://www2.nationalgrid.com/UK/Our-company/Education/Careers-Lab/

95. Artess, J., Shepherd, C. and Hooley, T. (2017). *Future First: Alumni in the Curriculum – Evaluation 2015*. Derby: International Centre for Guidance Studies, University of Derby.
96. See https://www.baesystemseducationprogramme.com/teachers/index.php.
97. TeenTech. (2014). TeenTech Contributor Report. Available from http://www.teentech.com/wp-content/uploads/2015/05/TeenTech-Report-2014.pdf (Accessed 29th September 2017).

Consistency and volume

Careers in the curriculum approaches should be part of a stable careers programme which is planned, coherent, comprehensive and even-handed. Ad hoc arrangements do not generally serve the best interests of students. Each school needs to work out how best to link curriculum learning to careers and how best to combine the constituent elements that make up a careers programme.

There is some evidence to suggest that careers in the curriculum activities become more effective where they are combined with a range of other careers interventions such as personal guidance and employer encounters.[98] [99] This is the logic that underpins the Gatsby benchmarks which states that *'our work suggests that there is no single 'magic bullet' for good career guidance: it is about doing a number of things, identified in our benchmarks, consistently and well'* (p.7).[2]

There is also evidence to suggest that both the intensity and the variety of careers interventions are important with one study in the Netherlands finding that the more careers activities that a student had participated in, the better the impact on their career decision-making, reduced risk of course switching and dropping out in the first year of higher education.[100] A longitudinal study in South Korea of 15–16-year-olds found that students who participated in six different types of careers education experiences at school twice over a two-year period made the greatest gains in career development skills and school success. In contrast, students who participated only once or not at all did not register any significant gains in career development skills.[101]

98. Blenkinsop, S., McCrone, T., Wade, P. and Morris, M. (2006). *How Do Young People Make Choices at 14 and 16?* (RR 773). London: DfES.
99. Hooley, T., Marriott, J., Watts, A.G. and Coiffait, L. (2012). *Careers 2020: Options for Future Careers Work in English Schools*. London: Pearson.
100. Warps, J. (2013). *LOB en studiesucces. Onderzoek naar de Opbrengsten van LOB op Basis van de Startmonitor 2012-2013 [LOB and Study Success. Analysis of Career Education and Guidance Revenues Based on the Start Monitor 2012-2013]*. Nijmegen: ResearchNed.
101. Choi, Y., Kim, J. and Kim, S. (2015). Career development and school success in adolescents: The role of career interventions. *The Career Development Quarterly* 63(2) 171-186.

5. Recommendations for developing the evidence base

As we have discussed, there are a number of shortcoming in the evidence around careers in the curriculum. Key areas of weakness include:

- imprecise use of terminology;
- over-reliance on self-perceptions;
- poorly designed research studies;
- insufficient use of large scale administrative data;
- insufficient use of quantitative methods; and
- insuffient use of randomisaiton and controls.

These concerns with the evidence base are typical of many interventions in the careers field. However, our understanding of careers in the curriculum would also be enhanced by more illuminative case studies based on qualitative research methods to provide further insights into how schools manage these practices.

There are also important questions about what should constitute an outcome in this area. For example as well as attainment, employment and salary outcomes should we also be looking at outcomes which relate to career happiness, wellbeing, decent work and a good life?[102] [103]

102. Gardner, H., Csikszentmihalyi, M. and Damon, W. (2001). *Good Work: When Excellence and Ethics Meet*. New York: Basic Books.
103. Griffiths, M. (2012). Why joy in education is an issue for socially just policies. *Journal of Education Policy*, 27(5), 655-670.

Conclusion

There is some limited evidence of impacts associated with careers in the curriculum. The evidence that does exist suggests that even small-scale and low-cost careers in the curriculum interventions can have modest but significant impacts on outcomes for young people.

There are enough indications of impact to justify further developmental research to try to understand more about the most positive approaches to careers in the curriculum; and the conditions (organisational; individual; wider careers education, etc.) that are likely to make it most beneficial.

Our research suggests that if schools are to deliver effective careers in the curriculum interventions they will need to ensure that the school has a vision for careers in the curriculum backed up by committed leadership; that there is a well-designed curriculum; a strong focus on the learning process; that the school has trained staff capable of delivering careers in the curriculum; school partners are engaged and the consistency and volume of interventions is ensured. However, it is also important to recognise that impact is often mediated by contextual factors. There is no 'one-size-fits-all' approach to strengthening impact. Each school needs to work out what the factors are that it needs to manage in order to tackle the barriers to better outcomes for young people.

This review has underlined the need for further high-quality and better co-ordinated research efforts. The report of *The End-to-End Review of Careers Education and Guidance* (DfES, 2005) concluded that "the greatest potential for improving CEG delivery lies in driving up the quality and relevance of careers education in schools". The conclusion of this review of the literature on careers in the curriculum is that this remains the case.

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