The Poverty-related Attainment Gap:

A review of the evidence

Laura Robertson and Fiona McHardy, The Poverty Alliance

February 2021

The Poverty Alliance

94 Hope Street

Glasgow

G2 6PH

The Poverty Alliance is Scotland's anti-poverty network. Together with our members, we influence policy and practice, support communities to challenge poverty, provide evidence through research and build public support for the solutions to tackle poverty. Our members include grassroots community groups, academics, large national NGOs, voluntary organisations, statutory organisations, trade unions, and faith groups.

www.povertyalliance.org

0141 353 0440

The Poverty Alliance is recognised as a charity by the Inland Revenue. Reference No: SCO19926

Disclaimer

The views in this report are those of the researchers and opinions expressed in this report do not necessarily reflect the views of the Poverty Alliance or our members.

Acknowledgements

This review was commissioned by The Robertson Trust.

We would like to thank Linda Macdonald, Hazel Robertson and DonnaMarie Steel from The Robertson Trust and Peter Kelly at the Poverty Alliance for their feedback and comments on the review.

Content

Executive Summary

What is the scale and nature of the poverty-related attainment gap in Scotland?

- The poverty-related attainment gap in Scotland starts in the early years and gets wider overtime.
- There is a "spatial school system" in Scotland where disadvantaged neighbourhoods consist of schools with a concentration of pupils from more disadvantaged areas.
- After leaving compulsory education, young people from disadvantaged backgrounds are less likely to end up in "positive destinations" including further education, higher education, employment and training, although individuals from more disadvantaged backgrounds are more likely to participate in further education and adult learning compared to other post-16 routes.
- There are specific groups of children and young people most affected by the poverty-related gap during school years including care experienced young people, Gypsy/Travellers and White Scottish/British boys.

What are the causes and consequences?

- Educational attainment is both a direct cause and consequence of poverty. Research shows that there are mitigating factors which can influence the relationship between children and young people's circumstances and educational outcomes, for example, the social environment within schools, strong family relationships and supportive parenting and the quality of social and physical environments.
- Evidence shows a clear link between educational attainment and later labour market prospects. Lower levels of education and training are linked to long-term lower-income employment and unemployment.
- Covid-19 has had a disproportionate impact on single parents and low-income households. Emerging evidence shows the negative impacts of Covid-19 on disadvantaged children and young people's educational outcomes due to the digital divide and a lack of access to educational related resources.

What is the evidence on effective interventions?

- The most robust evidence on effective interventions to reduce the poverty-related attainment gap is in the early years. The Education Endowment Foundation and recent evidence reviews show that the most effective evidence-based interventions include parental engagement/involvement focused on helping parents to use appropriate strategies to support children's learning at home; high-quality early learning and childcare provision; and targeted interventions in disadvantaged communities that address children's early cognitive, language and numeracy development.
- Evidence on solutions to reducing the poverty-related attainment gap during the school years is less conclusive. There is a lack of robust evidence from the UK context. The existing evidence base shows that programmes that include a focus on teaching reading comprehension strategies and metacognition and self-regulation strategies impact on attainment. There is also positive evidence on the impacts of careers education and guidance, tutoring, and mentoring on improving educational outcomes for disadvantaged children and young people.
- There is a lack of synthesised evidence on evidence-based approaches and interventions that support disadvantaged young people into work and training (including apprenticeships) post-16. Existing evidence on traineeships, supported internships and apprenticeship programmes for disadvantaged young people is largely positive. Effective interventions also include providing a trusted, consistent advisor and personalised support.
- Bursaries, scholarships and grants are the most effective intervention to increasing access to high education. There is a need for more research within the Scottish and UK context.

What is the policy and practice context?

- A range of policies, strategies and initiatives have reformed the Scottish educational and employment landscape in relation to the poverty-related attainment gap in the last six years.
- There has been an increased focus on building evidence-based policy and practice for disadvantaged children in the early years.
- The Scottish Attainment Challenge has driven the development of evidence-based practice in schools coupled with a focus on structural change to give schools more autonomy and sharing learning locally and nationally through the creation of the Regional Improvement Collaborations. However, gaps in practice include a lack of evidence on support for children and young people temporarily or informally excluded from school and on the use of behaviour support services and flexible learning provision. Research has also revealed challenges in engaging and involving parents in schools and in-home learning.
- There is a lack of available evidence on the delivery of employability support interventions targeted at disadvantaged young people across Scotland. National youth employment strategy largely focuses on universal provision for all young people. Targeted interventions for disadvantaged young people are currently largely providing by charities via Inspiring Scotland.
- A significant degree of attention has been paid to widening access in higher education in recent years. The impacts of new interventions such as minimum entry requirements, contextual admissions and the guaranteed university place for care experienced young people are yet unclear in term of their impact. Greater focus is required on tracking student pathways of underrepresented groups across higher education and outcomes on retention and entry into postgraduate education.

Where are there gaps between the evidence on effective interventions and current policy and practice to reducing the attainment gap in Scotland?

- There is a lack of synthesised evidence on what interventions are being used with specific groups of young people in Scotland at school-level and post-16 transitions. In particular, there is a need for mapping to understand the provision of local level employability services that support disadvantaged young people and whether existing programmes demonstrate effective practice as outlined in this review (e.g. advice and support from a trusted, consistent advisor).
- There is a strong evidence base on the effectiveness of one to one tutoring, mentoring and careers education and guidance for disadvantaged children and young people. However, there are a lack of programmes that provide these interventions at school-level in Scotland.
- There is a lack of evidence of effective practice to working with young people who are receiving flexible learning provision and who are not attending school full-time in Scotland.
- Traineeships and apprenticeships that include a mix of work experience placements, work preparation training and numeracy and literacy support are shown to be effective. There is an evidenced need for more support and advice for specific groups of disadvantaged young people (e.g. care leavers) into this post-16 work pathway.

Introduction

This literature review was commissioned by The Robertson Trust in September 2020 to examine the evidence on poverty and education and work pathways in Scotland and the UK. The review has three key elements.

- **Part one** provides an overview of the poverty-related attainment gap in Scotland outlining both the scale and nature of the gap before highlighting key research evidence on causes and consequences and emerging evidence on the impacts of Covid-19 on education inequalities. This section specifically focuses on groups most affected by the poverty-related attainment gap including looked after children and young people/care leavers and Gypsy/Travellers.

- **Part two** focuses on solutions which address the attainment gap in education and work pathways, specifically focused on UK-based interventions that have been evidenced to work in reducing the poverty-related attainment gap and increasing access and engagement in education and into employment. This review focuses on interventions in formal (e.g. early years settings including nurseries and playgroups, schools, colleges and universities) and non-formal educational settings (e.g. community and third sector organisations, vocation training and learning providers, outdoor settings, in the home). It also focused on interventions and approaches across key stages of the learner journey: early years, primary and secondary school and transitions into education (including further and higher education), training (including apprenticeships) and employment.

- **Part three** examines evidence on the current policy and practice landscape around educational attainment and work pathways in Scotland, specifically focused on effective practice and identifiable gaps.

The review concludes by highlighting gaps between the research evidence base and the policy and practice landscape in Scotland identifying where further development of research is required and what interventions are most successful in reducing the gap.

Methodology

This literature review was conducted in October 2020 by the Poverty Alliance, commissioned by The Robertson Trust. The purpose of the review was to focus on outlining key issues and providing an overview of the relationship between poverty and attainment and work pathways principally focused on the Scottish context but also drawing on wider UK literature. It was outwith the scope of this project to conduct a systematic review. However, literature included was based on pre-defined inclusion/exclusion criteria (see Appendix A).

The literature search predominantly focused on searching for research evidence and grey literature from public bodies, civil society organisations, research centres and think tanks (see Appendix B for a full list of sources). Google Scholar and ResearchGate were also searched using variations of search terms including poverty-related attainment gap, children and young people and education. Literature searches were begun by identifying existing evidence reviews in relation to the key stages of the learner journey (see Appendix C for list of included reviews). The Education Endowment Foundation Early Years and Teaching and Learning Toolkits and the Scottish Framework for Fair Access Toolkit were also examined initially to identify evidence-based approaches. The literature included in this review covers the last ten years and is from the UK only (some of the evidence reviews included had an international focus and this is acknowledged throughout). Upon completion of this review, a table was created summarising (i) the research evidence on interventions identified in the review and (ii) the current Scottish policy and practice context in relation to interventions at each stage of the learner journey (see Appendix D).

Limitations

Given the broad focus of this review, it was not possible to systematically review the literature on interventions in part two. However, this section highlights key gaps and limitations in the current evidence base. In the literature search, we also began by review existing systematic and rapid evidence reviews that included robust approaches to reviewing the quality of evidence. Given a focus on high-level findings, a second key limitation of the review is the lack of in-depth analysis of evidenced and emergent solutions. It was not possible to conduct a fully inclusive review of all available sources of literature and it should therefore be borne in mind that this review does not include all evidence-based interventions in the UK. Appendix B identifies the literature sources searched. Lastly, whilst a key aim of this review was to examine the evidence of identifiable gaps in the use of effective interventions or approaches in the current practice landscape in Scotland, it should be acknowledged that it was not possible to explore in-depth practice across Scotland. Therefore, whilst the conclusions provide insights on where there is evidence of effective practice on the ground and gaps, there is a further need to understand the full context of provision of interventions in Scotland.

Part 1: What is the poverty-related attainment gap and how is it experienced in Scotland?

1. Defining and measuring the poverty-related attainment gap

Education Scotland has defined attainment and the poverty-related attainment gap as follows:

> "Attainment is the measurable progress which children and young people make as they advance through and beyond school, and the development of the range of skills, knowledge and attributes needed to succeed in learning, life and work. Many children and young people living in our most deprived communities do significantly worse at all levels of the education system than those from our least deprived communities. This is often referred to as the 'attainment gap'." (Education Scotland, 2020a)

Following a consultation (Scottish Government, 2017a), 11 key measures (supported by 15 sub-measures) were created to monitor the poverty-related attainment gap reflecting key stages of the learner journey (see table 1) (Scottish Government, 2017b). In consultation responses, concerns were raised that the initial key measures did not adequately address the complexities of the education system and whilst the proposed measures might measure attainment, they did not address health and wellbeing. The final key measures included two measures of health and wellbeing (Scottish Government, 2017b).

The poverty-related attainment gap is measured in Scotland using the Scottish Index of Multiple Deprivation (SIMD) (a composite measure of deprivation in small geographical areas). For all 11 key attainment measures, data is available across five groups (quintiles) to compare the measures between the SIMD 20% most deprived areas and the SIMD 20% least deprived areas in Scotland. The use of the SIMD is limited as it does not measure individual circumstances or capture disadvantaged children and young people living in more affluent areas or rural deprivation particularly well (Scottish Government, 2017b; Education and Skills Committee, 2018a). Kintrea (2018) has criticised the lack of data available on socioeconomic background of pupils in Scotland. In 2017, the Scottish Government stated that it would explore the long-term development of a bespoke index of social background focused at the individual-level as opposed to area-level data to enable more targeted interventions for disadvantaged pupils to take into account those disadvantaged pupils not living in deprived areas (Scottish Government, 2017c).

2. Nature and scale of the poverty-related attainment gap and impacts on work pathways in Scotland

Child poverty in Scotland

In Scotland, almost one in four children (230,000) are officially recognised as living in poverty (Scottish Government, 2020a). A significant proportion of children in poverty (65%, 130,000) are living in working households (Scottish Government, 2020a). Certain groups of children are more likely to be living in poverty than others, this includes children from Black and Minority Ethnic communities, those in larger or lone parent families and children in families where someone is disabled.

The nature of the poverty-related attainment gap

Evidence shows that the poverty-related attainment gap in Scotland starts in the early years and gets wider overtime (Sosu and Ellis, 2014; White, 2018). In terms of the "learner journey", the poverty-related attainment gap is evident at key stages in early years (aged 3-5), school-level and post-16 transitions into employment, training and education (particularly into higher education).

In Scotland, most pupils go to their local secondary school under the local authority administered admissions system, therefore schools are largely reflective of their local area (Van Den Brande, Hillary and Cullinane, 2019). Long

standing concentrated socio-spatial segregation in Scotland creates a 'spatial school system' where disadvantaged neighbourhoods consist of schools with a concentration of pupils from more disadvantaged areas, shaping school perceptions and perceptions of local residential areas (Kintrea, 2018). Scotland has a 'highly segregated school system': analysis of the proportion of S1 pupils registered for free school meals (between 2014 and 2016) found that almost two thirds (63%) of top performing schools have free school meal rates below 10%, compared to 30% of all schools (Van Den Brande, Hillary and Cullinane, 2019). Additional analysis using the SIMD indicates that around 80% of the top performing schools in Scotland are ranked in the top two quintiles of deprivation (i.e. the most advantaged) (Van Den Brande, Hillary and Cullinane, 2019). The authors note that if there was no association between attainment and deprivation, an estimated 40% of top performing schools would fall in the top two quintiles. However, it is important to note that the poverty-related attainment gap in Scotland does not exist solely in poorer areas. Analysis of data from the Growing Up in Scotland study shows that while most of the families living in the SIMD 20% most deprived areas were persistently poor (48%), families living in SIMD quintile 4 (32%) and quintile 3 (19%) areas also lived in persistent poverty (Barnes, Chanfreau and Tomaszewski, 2010). Table 1 provides the most recent data across the 11 key attainment gap measures in Scotland.

Table 1: Attainment Gap Key Measures

Measure	All children %	Most disadvantaged (bottom 20% SIMD) %	Least disadvantaged (top 20% SIMD) %	Gap (percentage points)
Early years				
27-30-month review (Children showing no concerns across all domains) (2018/19)	58.2	45.6	61.6	16
School-level				
HWB: Percentage of children with borderline or abnormal total difficulties score (age 4-12) (2014-17 combined)	16	25	9	16
HWB: Percentage of children with borderline or abnormal total difficulties (age 13 and 15) (2018)	37	34	42	8
Primary - Literacy (P1, P4, P7 combined) (2018/19)	72.3	63.1	83.7	20.7
Secondary - Literacy (S3, 3rd level or better) (2018/19)	87.9	81.0	94.7	13.8
Primary – Numeracy (P1, P4, P7 combined) (2018/19)	79.1	71.7	88.5	16.8
Secondary – Numeracy (S3, 3rd level or better) (2018/19)	90.2	82.9	96.3	13.5
Senior phase (2018/19)				
SCQF 4 or above (1 or more on leaving school)	95.9	92.1	98.8	6.7
SCQF 5 or above (1 or more on leaving school)	85.1	74.4	94.6	20.2
SCQF 6 or above (Highers/vocational qualifications) (1 or more on leaving school)	60.5	43.5	79.3	35.8
Participation measure (2019/20)				
Participation measure (percentage of 16-19-year-olds participating in education, employment or training)	92.1	88.6	96.5	9.9

(Source: National Improvement Framework for Scottish Education Interactive Evidence Report and Skills Development Scotland (2020))

The scale of the poverty-related attainment gap

Early years/pre-school

Assessment of child development is measured by health visitors during child health reviews at 27-30 months. In the most recently reported data for 2018/19, children living in the SIMD 20% least deprived areas of Scotland (61.6%) were much more likely than those living in the SIMD 20% most deprived areas (45.6%) to have no concerns recorded across nine domains (National Improvement Framework for Scottish Education Interactive Evidence Report). 27-30-month review data also includes information on looked after children. In 2017/18, children who were looked after (29%) were much more likely than non-looked after children (15%) to have a concern recorded about their development (Information Services Division, 2017). Ethnicity data is not currently collected in early learning and childcare statistics.

School-level

The most recent data on achievement of Curriculum for Excellence levels (2018/19) shows the attainment gap in numeracy and literacy is evident from primary one, through primary school (measured at P4 and P7) into secondary school (S3) (Scottish Government, 2019a). For example, the attainment gap in literacy for primary one pupils between the most and least deprived areas in Scotland was 19.2 percentage points in 2018/19 (Scottish Government, 2019a). By primary seven, the attainment gap in literacy was 21.5 percentage points decreasing to 13.8 percentage points for S3 pupils (Scottish Government, 2019a). Between 2016/17 and 2018/19, there was a small narrowing of the gap between the most deprived and least deprived in expected Curriculum for Excellence (CfE) level in literacy and numeracy (P1, P4 and P7 combined) and in pupils achieving CfE 3rd level or better in numeracy (at S3 level) (Scottish Government, 2020c).

Regarding formal school qualifications, socioeconomic inequalities exist at all Scottish Credit and Qualifications Framework (SCQF) levels, with pupils who live in the SIMD 20% most deprived areas as likely to leave school with one Higher as pupils in the least deprived are to leave with five (Black, 2020).

Data on school exclusions in Scotland also reveals socioeconomic inequalities, although permanent exclusion in Scotland is much lower than elsewhere in the UK, with only five single cases in 2014/15 and 2016/17 (McCluskey *et al.*, 2019). In 2018/19, pupils in the SIMD 20% most deprived areas were four times more likely to be excluded from school compared with pupils living in the 20% of areas with least deprivation (Scottish Government, 2019c). There is a data gap in Scotland regarding the use of "unofficial practices" such as reduced timetables (also known as Flexible Educational Arrangements) for disadvantaged children and young people as well as a lack of evidence on the use of support bases and flexible learning provision (McCluskey *et al.*, 2019; Robertson and McHardy, 2020).

Additionally, pupils living in the most deprived areas have lower attendance levels than those living in the least deprived areas which is most marked at secondary school level. In 2017/18, there was a 6.6 percentage gap in secondary school attendance rates between pupils in the SIMD 20% most deprived and least deprived areas (Scottish Government, 2019c). Research evidence shows that there is a strong association between socioeconomic background and school absenteeism. A current study examining socioeconomic inequalities in school attendance in Scotland found that a range of socioeconomic background factors (including living in a deprived area, living in socially rented housing, coming from households with lower levels of parental education and social class and being registered for free school meals) are linked to school absenteeism (Klein *et al.*, 2020).

Post-16 learner journey

The Annual Participation Measure, adopted in the Scottish Government's National Performance Framework as a measure of young adults' (aged 16-19) participation in education, training or employment, reveals stark gaps in education and employment between the most deprived and least deprived areas in Scotland (Skills Development

Scotland, 2020). The participation gap between those who live in the 20% most deprived areas and those in the 20% least deprived areas was 9.9 percentage points in 2019/20, although it has decreased every year since the first participation measures were collected in 2016 (Skills Development Scotland, 2020). Between 2015/16 and 2019/20, the gap in the proportion of 16-19 participating in education, employment or training between the most deprived and least deprived areas has decreased from 12.9 percentage points to 9.9 percentage points.

Significantly, the proportion of 16–19-year-olds reported as participating in education (in school and higher education) from the least deprived areas (decile 10) was 79.4% compared to 48.1% for those from the most deprived areas (decile 1), a difference of 31.3 percentage points (see Skills Development Scotland 2020 Annual Participation Measure supplementary tables). Comparatively, there is a higher proportion of 16-19-year-olds from the most deprived areas (decile 1) in further education (15.7%) than in the least deprived areas (decile 10) (5.2%).

Data on "positive destinations" approximately nine-months after the end of school year (including higher education, further education, employment, training, voluntary work or personal skills development), shows similar inequalities. In 2018/19, the destination gap between the most and least deprived areas was 8.4 percentage points (Scottish Government, 2020b). However, between 2009/10 and 2018/19, the positive destination gap has decreased from 18.7 percentage points. School leavers in the most deprived areas were more likely to be unemployed (10%) than those in the least deprived areas (2.6%) (Scottish Government, 2020b). However, data on employment has been criticised for not providing specifics on types of employment that young people enter into (for example whether full-time, part-time or zero hours employment) (Seith, 2020).

In 2016, in *A Blueprint for Fairness*, the Scottish Government set three long-term targets for fair access to universities and colleges. The key target set was that 20 per cent of all higher education (across both the college and university sector) entrants will be from the 20 per cent most deprived communities in Scotland by 2030 (Scottish Government, 2016a). In 2018/19, the proportion of full-time first-degree entrants to Scottish universities from the 20% most deprived areas in Scotland increased to 15.9 per cent (0.1 per cent below the 2021 target of 16%). In comparison, 28 per cent of full-time first-degree entrants to Scottish universities were from the 20% least deprived areas in Scotland in 2018/19 (HESA, 2020). Data on retention rates and the percentage of qualifiers shows similar inequalities between SIMD 20% most deprived areas and the overall student population (Scottish Funding Council, 2020a). Students from disadvantaged backgrounds in Scotland are also under-represented in the most prestigious universities and study subjects with lower progression rates to postgraduate studies (Scott, 2020).

Research shows that there are a range of factors that impact on young people from disadvantaged backgrounds going to university including how social inequalities interact with educational aspiration, a lack of understanding of the university system amongst parents and in communities and inequalities in provision of school guidance and support regarding applying for university between high and low attainment schools (Ferguson and Griffiths, 2018). In a key recent study of educational aspirations and poverty, Treanor demonstrates how existing evidence from the Growing Up in Scotland study shows that children living in poverty do have high educational aspirations for themselves, and that the missing element is the knowledge of how to make 'aspirations real and obtainable' (Treanor, 2017, p. 1).

Groups most affected by the attainment gap

Poverty statistics in Scotland show that some groups have a higher risk of poverty than others including non-white minority ethnic groups, single women with children and disabled people (Scottish Government, 2020a). Whilst some data on educational attainment is available for groups with protected characteristics and groups more likely to be affected by poverty living in deprived areas, it is not available for all stages of the learner journey.

Official data shows that there are specific groups of children and young people living in deprived areas most affected by the attainment gap in Scotland.

White boys living in deprived areas

In 2018/19, 63% of primary pupils (P1, P4 and P7 combined) from the SIMD 20% most deprived areas achieved expected CfE literacy levels for their age (see table 1, p. 10). CfE data shows variation in achievement between ethnic groups living in the most deprived areas in Scotland with Asian[1] and African/Black/Caribbean (73%) children in the 20% most deprived areas in Scotland more likely to achieve expected level in literacy than White Scottish (63%)/White (other British) (59%) children. This gap in literacy achievement continues through to S3. Asian pupils[2] and African/Black/Caribbean pupils (88%) living in the most deprived areas have a higher rate of achieving expected literacy levels at S3, compared to White Scottish (81%) and White – other British groups (78%). Data on primary/secondary pupils achieving expected level in numeracy portrays a similar picture.[3]

Looking at the Annual Participation Measure (the % of 16-19-year-olds in education, training or employment) by SIMD and ethnicity, data from 2019/20 shows that 16-19-year-olds from black and minority ethnic communities (mixed or multiple; Asian; African; Caribbean or Black) living in SIMD 20% most deprived areas are more likely to be in education, training or employment (93.7%) than their white peers (86.1%).[4]

Research shows that white working class boys achieve lower levels of educational attainment in comparison to their peers (Impetus, 2014). Research suggests that factors that may lie behind this include less value placed on education at home and a lack of awareness of the link between being successful at school and future employment (Impetus, 2014).

Gypsy/Travellers

The proportion of children in poverty and severe poverty in Scotland is not broken down to include Gypsy/Travellers (Scottish Government, 2020a). However, evidence from the 2011 census shows that Gypsy/Travellers are a particularly marginalised group; for example, White Gypsy/Travellers had one of the lowest participation rates in the labour market (49%) (Kelly, 2016). Young Gypsy/Travellers' have the lowest educational attainment rates of all ethnic groups in Scotland, with school attendance rates the lowest of any ethnic group and school exclusion rates the highest (Scottish Government, 2018a). Many Gypsy/Traveller children do not make the transition from primary to secondary school in Scotland (Scottish Government, 2018a). The most recent data on achievement of expected CfE levels in Scotland by ethnicity shows only 23% of White Gypsy/Traveller primary school pupils compared to 63% all primary school pupils (P1, P4 and P7 combined) living in the most deprived areas in Scotland achieve expected level in literacy.[5]

Care experienced learners

There is a substantial overlap between care experience and SIMD20 area. In January 2020, the Scottish Funding Council set out a National Ambition for Care-experienced Students setting a goal of equal outcomes between care-experienced students and their peers by 2030 (Scottish Funding Council, 2020b). Due to the small numbers of care experienced students, it is not possible to make comparisons to overall figures from the rest of the population. In 2018/19, there were 320 full-time first-degree entrants who were care-experienced (representing one percent of all entrants). Participation of care-experienced learners in further and high education is about half of that for the general population (Scott, 2020).

---

[1] Indian (75%), Pakistani (66%), Chinese (79%) and Asian – other (66%)
[2] Indian (88%), Pakistani (91%), Chinese (89%) and Asian – other (87%)
[3] Data on CfE levels by SIMD and ethnicity was provided via a Freedom of Information request to the Scottish Government.
[4] Data on the Annual Participation Measure was provided via a Freedom of Information request to Skills Development Scotland.
[5] Data on CfE levels by SIMD and ethnicity was provided via a Freedom of Information request to the Scottish Government.

Children with additional support needs

In Scotland, children with additional support needs[6] (ASN) are much more likely to be living in the SIMD 20% most deprived areas (Carmichael and Riddell, 2017). The association between ASN and deprivation is evident across all ASNs apart from dyslexia (Carmichael and Riddell, 2017).

Other factors

Age is also a related factor when it comes to poverty-related attainment and higher education. In 2018/19 data, only 11.8% of undergraduate entrants in Scotland aged less than 21 were from SIMD 20% most deprived areas. This compares to 21.4 percent of entrants from the SIMD 20% least deprived areas aged 21 and above (Scottish Funding Council Widening Access Background Table 2). Rural poverty is also a significant issue affecting educational outcomes in Scotland with the centralisation of services in rural areas creating specific barriers to disadvantages young people accessing training, education and employment (McKinney, Stuart and Lowden, 2020).

3. Overview of evidence on causes and consequences of the poverty-related attainment gap

This section highlights key findings from research conducted in the last ten years on causes and consequences of the poverty-related attainment gap, considering what role education plays in preventing or reducing poverty. For a more in-depth review of existing research in the last ten years on the effects of child poverty on school education in Scotland see White (2018). Whilst the impacts of poverty on education extends beyond formal educational outcomes (e.g. CfE levels) including lack of confidence and anxiety about school, stigma and discrimination, this review focuses specifically on the impacts on attainment (Mowat, 2018).

Explanations of the link between poverty and education have focused on three interrelated levels: (i) individual learner characteristics and relationships (micro-level); (ii) immediate social contexts such as families, communities and schools (meso-level); and (iii) social structures, power and inequality (macro-level) (Raffo et al., 2007). Educational attainment is both a direct cause and consequence of poverty. In a mapping of literature on the links between poverty and low educational outcomes, a lack of agreement on a linear causal effect between poverty and education was identified (Raffo *et al.*, 2007). Research shows that there are mitigating factors which can influence the relationship between children and young people's circumstances and educational outcomes; for example, the social environment within schools, strong family relationships and supportive parenting (White, 2018). Evidence from the Growing Up in Scotland study also shows that a rich home learning environment can improve cognitive development for all children regardless of socioeconomic background and high quality early learning and child care has the potential to reduce socioeconomic inequalities in cognitive development by the start of primary school (Scottish Government, 2015).

The quality of social (e.g. family, school, aspirations) and physical (e.g. housing, community) environments, and how these interact with structural, economic, political and cultural environments, are key to educational outcomes (White, 2018). Learner journeys are also often influenced by Adverse Childhood Experiences (ACEs) including personal and social issues, such as their own and family member's health problems, economic drivers (a need to earn money) and the skills and confidence gained through sports and other hobbies (Scottish Government, 2018b). Evidence from the Growing Up in Scotland study shows that children living in more disadvantaged circumstances were more likely to experience ACEs than their more privileged peers (Marryat and Frank, 2019). There is now a

[6] The Education (Additional Support for Learning) Scotland Act 2004 (as amended) states that a child or young person has an additional support need where they need additional support in order to benefit from school education.

strong evidence base on how adversity and trauma impact on children and young people's health and social outcomes.

There is a clear link been family income and educational attainment (Cooper and Stewart, 2013). Specific impacts of income on education outcomes include parents' ability to pay for resources (e.g. childcare, educational resources (e.g. computers, internet access), transport costs and extra-curricular activities) (White, 2018). Participating in out-of-school activities has been evidenced to be associated with positive educational outcomes and children from low-income households are markedly less likely to take part in organised out-of-school activities (Chanfreau *et al.*, 2016).

Research evidence also highlights the link between neighbourhood effects and young people's aspirations towards education and employment (Kintrea, St Clair and Houston, 2015). A survey-based study with school pupils predominantly living in the most deprived areas in three British cities (Nottingham, Glasgow and Newham in London) found that the majority of young people were 'positively engaged with their own futures' with young people's aspirations around employment far higher compared to jobs existing in the labour market (Kintrea, St Clair and Houston, 2015). Evidence from this study also suggested that there was not a relationship between neighbourhood disadvantage and low job aspirations.

Research evidence demonstrates the link between sense of belonging or connectedness to school and positive indicators related to academic, psychological, behavioural and social outcomes (Mowat, 2018). A sense of belonging or connectedness to school is affected by the quality of school leadership as well as school partnerships and engagement with parents. Evidence shows that both attendance and also duration of pre-school attendance, as well as pre-school quality, has lasting effects to the end of statutory education (Sylva *et al.*, 2014).

Research which specifically examined the pattern of academic achievement of 'bright' but socioeconomically disadvantaged children, from pre-school to A-level, identifies a range of child and family characteristics and pre-school and primary school characteristics that predicted a higher, statistically significant probability of a disadvantaged pupil being in a 'high achieving group' (Sammons, Toth and Sylva, 2015a). At age 11, the high achieving group were over three times more likely than average to have a mother with a university degree, twice as likely to have experienced a 'good' home environment in early years and twice as likely as other disadvantaged children to have experienced 'enrichment activities' such as playing sports (Sammons, Toth and Sylva, 2015a). This group were also more than twice as likely to have attended a higher quality pre-school and primary school. By GCSE level, this group had better examination results associated with engagement in average or better out of school academic enrichment activities (e.g. educational outings). At A-level, bright but disadvantaged students were significantly more likely to obtain three or more A-levels when they attended a secondary school rated as outstanding by Ofsted for quality of pupils' learning (Sammons, Toth and Sylva, 2015a).

A review of literature on how educational attainment affects later labour market prospects provides evidence that the type and level of qualifications, as well as the local labour market context, are key factors (Scottish Government, 2017d). Individuals who have higher qualification levels and skills are much more likely to be in employment and have higher earnings (Scottish Government, 2017d). Analysis of the 1970 British Cohort Study to identify how higher education graduates' labour market trajectories vary by social class, found that graduates from lower social classes have more diversion and less stable trajectories, are less likely to enter top-level jobs in their 20s and more likely to enter and remain in lower social classes than their more socially advantaged counterparts (Duta, Wielgoszewska and Iannelli, 2020). International evidence clearly shows that lower levels of education and training is linked to lower-income employment and unemployment. Countries with higher inequality in educational attainment tend to have higher income inequality and rates of poverty (Paull and Patel, 2012). However, some evidence suggests that there is less certainty on how improvement in educational attainment directly impacts on distribution of earnings, due to the increased prevalence of low paid employment (Scottish Government, 2017d).

Much of the evidence on the role of education in reducing poverty is at an international level. However, the Effective Pre-School, Primary and Secondary Education study in England which investigated the impact of earlier phases of education (including attendance and quality) found indicative findings of the possible magnitude of long-term individual economic benefits of higher pre-school quality (Cattan, Crawford and Dearden, 2014). Looking beyond direct impacts on income, a UK study exploring the effects of higher level of education overtime found a wide range of positive outcomes including greater health and wellbeing and higher social trust (Manstead, 2014).

4. Covid-19 impacts on the poverty-related attainment gap

Impacts on Scottish education system

On March 20th, early years provision, primary and secondary schools, further education colleges and universities in Scotland were closed for learning as normal due to the Covid-19 outbreak (Observatory of Children's Human Rights Scotland, 2020). A move to online learning, as well as virtual services, resources and information, was the core response of the Scottish Government. School campuses remained open for those young people deemed vulnerable in the form of learning hubs. In April, data showed a very small proportion of children regarded as vulnerable were attending these hubs (Scottish Government, 2020d). Families' concerns about children travelling to and from school being exposed to the virus may have been a key reason behind this (Scottish Government, 2020d). In response, the Scottish Government (2020e, p. 5) stated that "the vast majority of vulnerable children are being supported via telephone and online contact with school staff, or by other services including 3rd sector initiatives". Between May and the beginning of the school summer holidays, a steady increase in the numbers of children and young people attending school hubs was reported (Scottish Government, 2020e). A Children's Rights Impact Assessment on the Covid-19 response in Scotland was critical of the Scottish Government's lack of adequate definition of vulnerability which allowed local authorities to adapt to local needs leading to inequity of provision across local authorities for some vulnerable children (Observatory of Children's Human Rights Scotland, 2020).

Impacts on attainment gap and educational outcomes

Since the outbreak of Covid-19, there has been a plethora of research investigating the impacts of Covid-19 on the attainment gap and educational outcomes. Larger scale quantitative studies have principally been conducted in England (Andrew *et al.*, 2020; Eivers, Worth and Ghosh, 2020; Julius and Sims, 2020) but there are several quantitative and qualitative studies which have sought to examine the impacts of Covid-19 on education outcomes for children and young people in poverty in Scotland (Observatory of Children's Human Rights Scotland, 2020).

Research has examined a range of issues regarding the poverty-related attainment gap from both the perspectives of children and young people, parents and teachers including: engagement with remote learning, impacts of blended learning, impacts on learning loss and school exclusion (Andrew *et al.*, 2020; Cullinane and Montacute, 2020; Daniels *et al.*, 2020; Eivers, Worth and Ghosh, 2020; Julius and Sims, 2020; Nelson and Sharp, 2020).

In a review of the impacts of Covid-19 on education in Scotland (Observatory of Children's Human Rights Scotland, 2020) (see Colucci-Gray and Reid (2020) for a full list of studies), several key findings are highlighted regarding impacts on young people affected by educational disadvantage. First, evidence reveals a disproportionate impact on single parents and low-income households and inequalities in how much support parents can give. Second, research found a lack of support for home learning for children and young people with learning and communication needs and households where parents have a lower level of education, have a disabled family member or for whom English is an additional language. Third, digital exclusion impacts on access and participation in online learning for families on low incomes and households with a lone parent (Observatory of Children's Human Rights Scotland, 2020). Additionally, vocational opportunities such as work experience have been cancelled. Groups specifically affected included children and young people with additional support needs unable to access adequate additional support for

learning or teaching either in school or remotely, children seeking asylum, care-experienced young people and young people in the youth justice system (Observatory of Children's Human Rights Scotland, 2020).

The cost burdens of school closures have fallen most heavily on families already living on a low income in Scotland (Child Poverty Action Group in Scotland, 2020). Low-income families were twice as likely to say that they lacked all the resources they needed to support learning at home, with 40 per cent saying they were missing at least one essential resource (Child Poverty Action Group in Scotland, 2020).

A review of research evidence on the Covid-19 response for children, young people, and their families, particularly those experiencing the greatest challenges, in Scotland, highlights that third sector organisations in Scotland have been critical in responding to challenges faced by children and young people and families such as digital support tools and digital resources and emotional and practical support (Scottish Government, 2020e).

5. Evidence gaps

Kintrea (2018) has criticised the current body of research in Scotland for a lack of focus on the relationships between educational disadvantage and place meaning that there is little understanding of geography of educational inequality in Scotland. Whilst the 11 attainment gap measures in Scotland use the SIMD as a measure of area deprivation, Kintrea (2018) points to the implications of focusing on such broad groups, especially at the most deprived end as it does not include detailed analysis of the most deprived areas.

There are gaps in evidence on children and young people's education experiences during the Covid-19 pandemic, particularly quantitative data on a representative sample of children with digital access (Colucci-Gray and Reid, 2020). A need for a more fine-grained analysis of which groups of children, and in which geographical areas, have been affected by the disruption of work experience and apprenticeship opportunities is also needed. A lack of evidence on marginalised groups of children and young people including refugee and asylum seekers, Gypsy/Traveller and BAME children and young people has also been identified.

Part 2: Responses to the poverty-related attainment gap and inequalities in work pathways

Part two of this review provides an overview of evidence on approaches and interventions to addressing the poverty-related attainment gap and inequalities in work pathways specifically exploring:

- How does early learning and childcare and formal education provide a protective environment for young people from poverty and trauma?
- What interventions have been evidenced to work in increasing access and engagement in education, getting people into work and reducing the poverty-related attainment gap? What are the evidenced approaches at different stages of the learner journey?
- Is there a difference in how interventions work?
- What role is there for work pre-school and with broader peers, communities and family networks?
- Where are there other examples of funders working successfully in this area?

This section considers evidence in relation to the separate stages of the learner journey in Scotland: early years, primary and secondary school, and post-16 transitions into education, training and employment. There are a range of UK interventions focussed on addressing the poverty-related attainment gap and ensuring transitions from education into work and training for disadvantaged young people. Interventions designed to address the attainment gap in UK exist at both a local and national level and vary in the extent to which they involve children, young people and their families.

Various interventions and experiences shape disadvantaged children's long-term educational outcomes. Sammons et al. (2015b, p. 28) state: "There is no 'silver bullet' that alone can make a difference at any one age. It is the combination of better (or poorer) experiences over time that counts, particularly for disadvantaged children who are at greater risk of educational failure". Actions to tackle child poverty and therefore the poverty-related attainment gap are two-fold including approaches to maximise household resources and strategies to mitigate the adverse effects of living in a low-income household (White, 2018). Evidence shows the poverty-related attainment gap cannot be reduced by schools working alone, but by a holistic approach taking into account economic, social and relational factors driven by partnerships with higher educational institutions, government agencies, local authorities and schools building a strong infrastructure of support around schools, families and communities (Mowat, 2018, 2020; Mowat and Macleod, 2019).

In 2014, Sosu and Ellis conducted a systematic review of evidence of the most effective approaches for schools and other stakeholders in Scotland to reduce the poverty-related attainment gap, focused on identifying key elements that make particular approaches successful. They found that the 11 types of interventions have a positive impact on reducing the poverty-related attainment gap. These included interventions from the early years to secondary school and in different settings; for example, parental involvement programmes focused on helping parents to use appropriate strategies to support their children's learning at home; high-quality, full day pre-school education; and academically focused after-school activities such as study support (Sosu and Ellis, 2014).

1. Early years

Summary

Early years is a critical time in influencing education attainment. There is a large gap in school readiness between the most disadvantaged and least disadvantaged children (Stewart and Waldfogel, 2017). Evidence shows that there are

two key influences on children's school readiness: parents interaction with children and the wider home learning environment and the amount and quality of early childhood education and care provision, whether formal or informal (Dartington Service Design Lab et al., 2018).

The evidence on early years' interventions is more robust than for other stages of the learner journey. The Education Endowment Foundation's Early Years Toolkit provides a summary of educational research on early years interventions in relation to average impact on attainment, the strength of the supporting evidence and the cost (Education Endowment Foundation, 2018).[7] Early years and pre-school interventions appear to be particularly beneficial for children from low income families (Education Endowment Foundation, 2018b). Once an intervention is in place, improving the quality of provision (e.g. by staff training) appears to be more promising than increasing the quantity of provision (Education Endowment Foundation, 2018b). The Early Years Toolkit shows that communication and language approaches and early numeracy approaches have the highest positive benefits for young children's learning including children from disadvantaged backgrounds (Education Endowment Foundation, 2018a).

There is a need for more research on the impacts of UK-based early learning and childcare provision specifically on disadvantaged children. This review highlights the most well evidenced and effective approaches/interventions that have a positive impact on reducing the attainment gap in the early years. These include:

1. Effective parental engagement/involvement programmes that support parents to develop their children's learning at home by developing parents' knowledge and interaction with their child's learning.

2. High quality early years childcare provision for children from disadvantaged backgrounds including a highly skilled and valued early years workforce, characterised by the development of positive relationships between staff and children and a strong education component.

3. High quality outdoor play spaces and a focus on play-based learning.

4. Targeted interventions in disadvantaged communities that address children's early cognitive and language development. Examples of such interventions include combined classroom-based and individual support for parents; home visiting interventions; and language and pre-literacy programmes promoting shared reading activities and children's use of language (Asmussen *et al.*, 2016).

Parental engagement programmes

This section highlights the high-level findings of evidence reviews and research studies on parental engagement programmes in home learning and in early learning/childcare settings and the impacts on the poverty-related attainment gap.

The National Practice Guidance for Early Years in Scotland states that there are three roles for parents/carers in their child's learning: (i) through parental involvement in the life and work of early learning and childcare settings; (ii) through engagement and interaction with their child's learning at home or in the community and (iii) through family learning where family members learn together with a focus on intergenerational learning (Education Scotland, 2020b). Parental involvement includes the ways in which parents can get involved in the life and work of an early learning and childcare setting (Education Scotland, 2020b). Parental engagement refers to parents' and families' interaction with their child's learning in the home, community or learning setting (Education Scotland, 2020b).

[7] The attainment measure shows that additional months of progress made on average by children/young people who receive an intervention in comparison to those who did not. It is not a measure of impact on disadvantaged children and young people.

Effective parental engagement/involvement programmes that have an impact on the attainment gap are focused on helping parents to use appropriate strategies to support children's learning at home (Sosu and Ellis, 2014). In the Education Endowment Foundation's Early Years Toolkit, parental engagement programmes are identified as having a moderate impact on attainment, for moderate cost, based on moderate evidence (Education Endowment Foundation, 2018a). Key evidence from the Early Years Toolkit includes:

- On average, parental engagement programmes evaluated have led to a positive impact of approximately four additional months' progress in child attainment over the course of a year.
- In general, more intensive approaches, which target particularly families or outcomes, are associated with higher learning gains than those that aim to increase general parental engagement for example.

A systematic review of UK-based early intervention programmes aimed at improving child development outcomes through positive parent-child interactions in the early years found two well evidenced programmes targeting children at risk of low achievement in disadvantaged communities: the Raising Early Achievement in Literacy (REAL) programme and Let's Play in Tandem programme (Asmussen et al., 2016).

In summary, REAL aims to improve disadvantaged children's early literacy development by sharing with parents knowledge of early literacy development and practice for supporting their 3-5-year-old children's literacy skills (Asmussen *et al.*, 2016). REAL programmes involve home visiting and group sessions over a period of 12-18 months to engage parents in their children's early literacy development. Originally funded by the Big Lottery and developed in collaboration with the University of Sheffield with schools and children's centres in Oldham and Sheffield, the programme was then funded by the Department for Education between 2013 and 2016 and delivered in eight local authority areas in England (National Children's Bureau, no date). The REAL programme is now run by the National Children's Bureau in early years settings across the country. REAL impacts include improvements in children's early literacy and letter recognition (Asmussen *et al.*, 2016).

Let's Play in Tandem, a school-readiness programme for parents in disadvantaged communities, aims to improve children's cognitive development and self-regulation (Asmussen *et al.*, 2016). Let's Play in Tandem is usually delivered through Sure Start Children's Centres and runs for 12 months. The programme involves weekly home visits including educational focused activities designed to improve school readiness. Specifically, it teaches parents "scaffolding skills" thought to contribute to children's school readiness. Evidence shows significant improvements in children's school readiness skills (Asmussen *et al.*, 2016).

The early intervention evidence review also found evidence of the Parents as First Teachers (PAFT) programme improving children's early language and behaviour in disadvantaged populations (Asmussen *et al.*, 2016). PAFT is delivered in the UK, U.S. and Switzerland, and aims to increase children's school readiness and school success and increase parent knowledge of early childhood development and improve parenting practice (Parents as First Teachers, no date). PAFT programmes are mainly delivered via Children's Centres in England but are also delivered in Wales and in Dumfries in Scotland (via Aberlour Family Outreach and the NHS).

The Sutton Trust and Esmée Fairbairn Parental Engagement Fund has funded five evaluated programmes, designed to boost learning for disadvantaged 2-6-year-olds through more effective parental engagement (Barbour *et al.*, 2018). Two of the programmes progressed to Education Endowment Foundation trials and have been more rigorously evaluated: EasyPeasy (an app that provides game ideas to the parents of preschool children to encourage play-based learning at home) and the Peep Learning Together Programme (a programme which aims to improve parenting skills and the quality of the home learning environment through combined home visiting and sessions in early years settings) (Miller *et al.*, 2020). An independent study found positive impacts of the Peep programme evaluated including a positive effect on early literacy development and small reported improvement amongst parents in the home learning environment (Miller *et al.*, 2020).

An evidence review of family learning (encompassing analysis of family learning initiatives across Scottish local authorities and a review of both national and international literature) conducted by Education Scotland identifies five areas of learning outcomes and benefits resulting from family learning approaches. These include new skills; increased confidence and understanding; improved communication; changed behaviours and changed relationships with communities and family. Increased parental participation/engagement, improved school attendance, reduction in persistent absenteeism and increased school attainment are also facilitated by family learning approaches (Scottish Government, 2016d).

Early years and childcare settings

This section highlights the high-level findings of evidence reviews and research studies on the impact of early years and childcare settings on the poverty-related attainment gap.

A key message from research is that provision of early years education/childcare provision can provide a protective environment for young people from poverty and trauma but only where this provision is of high quality. UK evaluations and studies of early learning and childcare programmes support the fact that children from disadvantaged backgrounds can benefit in terms of social, emotion and educational outcomes from attending non-parental childcare (Scobie and Scott, 2017). Effects have been demonstrated in terms of children's school readiness but also in relation to their long-term school attainment and lifelong outcomes (Dartington Service Design Lab *et al.*, 2018). However, there is a lack of consistency in definition of what constitutes high quality provision although recent literature has defined key structural and process indicators although studies have most been conducted in the U.S (Scobie and Scott, 2017; Dartington Service Design Lab *et al.*, 2018). A lack of research on outcomes for children aged under three years and on differential effects for children deemed to be "at risk" including those from economically disadvantaged backgrounds has also been identified (Dartington Service Design Lab *et al.*, 2018). As a result, it is not possible to draw conclusions on whether particular interventions might be more effective for certain groups. However, research shows clearly that poor quality early learning and childcare has detrimental effects on children (Scobie and Scott, 2017).

A rapid review of international evidence on the role of early childhood education and care provision, for children growing up in poverty, indicates features of high-quality provision in terms of structure (how early years settings are organised) and also process (what happens on a day-to-day basis in early educational settings e.g the type of interaction) (Dartington Service Design Lab *et al.*, 2018). Features of high quality provision include: staff having warm interactive relationships with children; a good proportion of staff having qualifications (including a trained teacher as manager); and the provision of instructed learning environments amongst others (Scobie and Scott, 2017; Dartington Service Design Lab *et al.*, 2018). Better educated early learning and childcare staff with appropriate training are more likely to improve children's cognitive outcomes (Scobie and Scott, 2017). For disadvantaged children, engagement with parents involving them as partners in their children's learning is important (Scobie and Scott, 2017).

There is robust evidence on the effectiveness of programmes or interventions in terms of improvements to children's outcomes in early years childcare (Dartington Service Design Lab *et al.*, 2018). An Early Intervention Foundation review of teaching and practice in childcare settings identifies interventions that have been robustly tested, however, there is limited evidence on programmes that might benefit at-risk groups of children, particularly from the UK (Sim *et al.*, 2018). Whilst many programmes are targeted at disadvantaged children, few studies test variations in impacts for different groups of children.

Evidence shows that early years settings and schools often struggle to engage with so-called 'hard-to-reach' parents (Dartington Service Design Lab et al., 2018). An evidence review on improving early learning outcomes of children growing up in poverty called for more attention to be given to enabling access to services. Barriers to accessing education services may include cultural/language factors, for example, requiring creative responses (e.g. making

services more welcoming, translating materials, being aware of stigma attached to services and building relationships of trust) (Dartington Service Design Lab *et al.*, 2018).

Evidence on the learning environment, including outdoor and indoor settings, highlights that high quality outdoor play experiences have a direct and positive impact on children's physical, cognitive, social mental health and emotional development (Education Scotland, 2020b). Qualitative research from a small-scale research study on the relationship between poverty and play in Fife highlighted the importance of play amongst children and their parents and positive impacts on wellbeing and social connection. However, some issues impacted on play at home including financial barriers, space within the home, and safety in the community, thereby limiting the positive impacts (McHardy, 2015).

Early language, numeracy and communication interventions

There is strong evidence that children from poorer backgrounds do worse than their better-off peers on a range of early learning and development outcomes, including language, communications and numeracy (Asmussen *et al.*, 2016; Dartington Service Design Lab *et al.*, 2018).

In 2020, the Education Endowment Foundation published findings from an effectiveness trial of the Nuffield Early Language Intervention, a programme designed to improve language skills of reception pupils aged 4-5 in schools across England (Dimova *et al.*, 2020). The intervention lasts for 20 weeks, consists of two 15-minute individual sessions and three 30-minute small group sessions on a weekly basis, and involves scripted individual and small-group language teaching sessions delivered by trained teaching assistants. Findings from a randomised controlled trial showed that the intervention reduced the 'early language gap' by around three months as well as positively impacted on early word reading and language skills for children with English as an additional language.

The Early Intervention Foundation also provides case studies of five local authorities which were identified as having closed the gap on speech, language and communication between disadvantaged children and their peers (Early Intervention Foundation, 2020). Research on these local approaches identifies effective practice around integrated working; early identification and intervention; a focus on the family; getting it right for 2-year-olds through higher take-up of funded places than the national average; and, high quality provision of funded early years care (Gross, 2020).

Early numeracy approaches aim to improve children's knowledge and understanding of early mathematical concepts and may be structured through the delivery of programmes or inform for example through games including computer games. Much of the evidence is form the U.S and the Education Endowment Foundation states that more studies on the impacts of early numeracy approaches in the UK would be valuable (Education Endowment Foundation, 2018b).

Evidence gaps

- There is a lack of UK-based research into the effectiveness of effective pedagogy and practice in the early years, particularly for children below the age of 3.
- There is a lack of robust evaluation of the impact of early learning interventions on disadvantaged children's language and cognitive development in the UK (Asmussen et al., 2016).
- Interventions that aim to increase parent's involvement in their children's learning are frequently under-evaluated in the UK (Asmussen *et al.*, 2016).

- There are relatively few high-quality intervention studies in the UK showing the best ways that schools and early years settings can promote better practices in a workforce with wide-ranging qualifications (Education Endowment Foundation, no date).

2. School-level

This section focuses on interventions that have been evidenced to work in increasing access and engagement in primary and secondary education for disadvantaged children and young people focused on both formal and non-formal educational settings.

Summary

The research evidence shows that there is not a single solution to addressing the poverty-related attainment gap during the school years. As evidenced in part one of this review, there are multiple causes and consequences of the poverty-related attainment gap. There are also specific groups of young people who are most affected by the poverty-related gap and evidence indicates that interventions that target these specific groups (e.g. looked after children) may be more effective.

This review highlights the most well evidenced and effective approaches/interventions that have a positive impact on reducing the attainment gap during the school years within and outside of school settings. These include:

1. Whole school approaches focused on high quality teaching, school leadership and developing networks of support and collaboration with parents, communities and other organisations.

2. Approaches involving development of reading comprehension strategies and metacognition and self-regulation strategies (these aim to support pupils to think about their own learning and develop strategies for planning, monitoring and evaluation).

3. Personalised careers education and guidance beginning at primary school including support and advice from careers' advisors, employer engagement and work experience.

4. Additional educational instruction including one-to-one tutoring, mentoring programmes and after school clubs.

The Education Endowment Foundation's Teaching and Learning Toolkit provides a summary of international evidence on teaching approaches for 5-16-year-olds in relation to average impact on (1) attainment, (2) the strength of the supporting evidence, and (3) the cost (Education Endowment Foundation, 2018c).[8] Approaches which demonstrate high impact on attainment based on extensive evidence include reading comprehension strategies and metacognition and self-regulation strategies (these aim to support pupils to think about their own learning and develop strategies for planning, monitoring and evaluation). In the UK, recent evaluations of programmes that have included a focus on teaching reading comprehension strategies have not found such an extensive impact as in the U.S., although evidence suggests that disadvantaged children might benefit more (Education Endowment Foundation, 2018c). Education Endowment Foundation evaluations of programmes that aim to improve 'learning to learn skills' (encompassing metacognition and self-regulation strategies) have evidenced benefits for low income families (Education Endowment Foundation, 2018c).

[8] The attainment measure shows that additional months of progress made on average by children/young people who receive and intervention in comparison to those who did not. It is not a measure of impact on disadvantaged children and young people.

Whilst the evidence on interventions that address the socioeconomic situations of households is sparse, Congreve and Norris (2020) write that effective policy to improving attainment for disadvantaged young people in Scotland should focus both on the socioeconomic situation of households and the direct inputs to child development such as what happens to children when they are in school. Children in Scotland spend approximately 15% of their waking hours in school, meaning 85% of children's time is spent at home or in their communities (Barnardo's Scotland, 2018). Outside of formal school settings, youth work plays a key role in the provision of support to young people living in socioeconomic deprived areas. Research with young people themselves conveys the need for better links to additional support to deal with personal and health issues, and that schools might not be the best place to receive this support, links should be made with other agencies.

Internationally, there is a growing evidence base that suggests intensive interventions with parents directly at the home-level can be a tool for supporting children's skill development. However, these need to be part of a combined strategy focused on other environments to be effective (Congreve and Norris, 2020). Submissions to the Education and Skills Committee (2018) inquiry on attainment emphasised the need for interventions to not single out young people and families that experience poverty limiting experiences of stigma.

School-based approaches and initiatives

There is a wealth of literature on approaches at primary and secondary school level to reducing the attainment gap. In relation to school system initiatives, this includes after-school and outside-school activities for children in poverty focused on developing confidence, widening knowledge and experiences and increasing motivation and engagement in schooling. To deliver equity in attainment, Ellis and Sosu (2015) state that such initiatives must focus directly on how the provision will specifically raise attainment and not on a general provision of activities. It should also incorporate academically focused knowledge and skills into activities (e.g. literacy, numeracy and study skills). In relation to curriculum pedagogy initiatives in schools, they state that peer and one-to-one tutoring outside lesson times work well where there is active teacher involvement in organising groups and tutoring activities and regular monitoring of provision.

Schools play a key role in reducing inequalities (Marcus, 2016). Marcus (2016) summaries the evidence on educational strategies that can support closing the attainment gap in schools. Six key areas/interventions are identified: (1) high quality teachers and teaching, (2) strong school leadership, (3) reflective practice and research, (4) a network of support and collaboration, (5) effective assessment and evaluation and (6) early intervention (Marcus, 2016).

Specifically, networks of support and collaboration relates to multi-agency collaboration both within and outside of schools as well as engaging parents. Several strategies have been shown to work well in supporting parents and their children including: before and after-school support and activities; high quality full day pre-school education; helping parents support their children's learning at home; funding or sending transport to reduce absence; designated staff to offer pastoral support and staff working with some families in their home (Marcus, 2016).

In relation to high quality teaching, Marcus (2016) identifies a range of approaches including inclusive pedagogies which focus on individual learner needs and differences. The approach was highlighted by the OECD (2011) as being particularly beneficial for increasing the resilience of disadvantaged pupils (cited in Marcus, 2016). The teaching of literacy has also been shown to work to support disadvantaged pupils (Marcus, 2016). An emerging area of research in recent years has been on literacy 'catch-up' schemes for disadvantaged children transitioning to secondary school in England (Gorard, Siddiqui and See, 2017). A recent review of the randomised controlled trials of seven literacy catch-up schemes implemented by teachers in schools highlighted two interventions as particularly promising: Switch-on Reading (Reading Recovery) and Accelerated Reader (Gorard, Siddiqui and See, 2017). On the other hand, they found little evidence of positive impacts of summer school provision of literacy catch up schemes on the

poverty-related attainment gap. An evaluation of a trial of the Switch-on Reading programme in England demonstrated positive impacts on progress for all groups of pupils (including those with free school meal eligibility) (Gorard, Siddiqui and See, 2015). The programme evaluated was provided to year 7 pupils in mainstream secondary school settings. It was a short-term (10-weeks) programme specifically for pupils who had not achieved certain levels in English. The programme consisted of regular 20-minute one-to-one reading sessions with trained staff members using a range of Switch on resources. Important aspects of the intervention included a private space to conduct the sessions and individual one-to-one support.

The School Improvement Partnership Programme which ran between 2013 and 2015 in Scotland focused on supporting innovation and promoting sustainable collaboration across classrooms, school and local authority boundaries (Chapman *et al.*, 2016). The programme involved schools and local authorities in each partnership designing and developing their own programme of work focused on a range of areas (e.g. parental engagement, pupil engagement, maths and literacy). Each partnership was supported by a team of University of Glasgow researchers and local authority and Education Scotland staff who worked as "critical friends". An evaluation of the programme demonstrated that it had fostered collaborative working to tackle education inequity; developed capacity at school and local authority level to effect positive change; and built teachers' knowledge, confidence and skills to challenge inequity (Chapman *et al.*, 2016). For example, in the second year of the programme, an increase in the awareness of appropriate methods for tackling education inequity was identified and in a final staff survey, 94% indicated that programme had had a positive impact on pupils' aspirations. There were also examples of impacts of local authorities' thinking and policies. One of the key challenges of the implementation of the programme at local authority level was time constraints and resource issues. The implementation of the programme required sufficient time for teachers to engage and to ensure a collaborative focus overtime (Chapman *et al.*, 2016).

An NHS Scotland review on health and wellbeing interventions in school settings that have the potential to reduce inequalities in educational outcomes found mixed evidence from the individual programmes evaluated in the UK and Ireland (White, 2017). Whilst there is some evidence on short-term beneficial effects including lower anxiety level and improved concentration, there is a lack of evidence on longer term effects on educational outcomes. Only two UK-based interventions reported impact on educational outcomes with findings inconsistent although positive outcomes on English and maths scores were reported a year after completing the UK Resilience Programme (White, 2017). The UK Resilience Programme, a universal well-being programme, was implemented in mainstream secondary schools in three local authorities in England in 2007 (Challen *et al.*, 2011).

Based on their partnership work with schools and communities supporting disadvantaged children, Barnardo's Scotland outlines key learning for closing the poverty-related gap (Barnardo's Scotland, 2018, 2019). They highlight the importance of taking time and resources to develop trusting relationships with families, especially for those who have found it difficult to engage with services and the importance of delivering support to children and families that is relational, attachment aware and trauma-informed. In partnership with schools, they highlight the importance of co-designing a plan which meets the specific needs of the individual. Barnardo's (2019) also highlight that there are barriers to be overcome in supporting initiatives that focus on health and wellbeing as a means of closing the attainment gap, as many schools report confidence in selecting literacy or numeracy interventions but less so in identifying health/wellbeing approaches. They have called for an examination of health and wellbeing interventions which work, with which populations and in which contexts.

There is limited evidence on young people's own views on what would help young people living in poverty gain the most from education and learning (Elsley, 2014). In research conducted by Save the Children and Scotland's Commissioner for Children and Young People in 2013, involving nearly a thousand young people with experience of living in poverty, young people identified that more support for learning at school was a high priority through more support from teachers, more subject input and more support for home study and more attention focused on meeting families' basic needs and financial support (Elsley, 2014).

A recent qualitative research project examining the experiences of refugee children and young people in schools in four local authorities in Scotland found most of the children and families had positive experiences of their schools. However, language development was the issue most frequently raised by refugee families and a need for better English to Speakers of Other Languages (ESOL) provision would be beneficial. More bilingual support would not only facilitate refugee children's English language development but support their ability to keep up with the broader curriculum (Mcbride *et al.*, 2018).

Parental engagement

Evidence on the impact of parent engagement interventions at school-level on attainment is mixed and unconclusive particularly for disadvantaged families (Education Endowment Foundation, 2020). Most interventions focus on primary school level. The Education Endowment Foundation has funded and tested a number of parental engagement initiatives at school-level designed to improve pupils' outcomes by engaging parents in different types of skills development. A key challenge of the programmes was difficulties in engaging parents although they identity small positive impacts from a trial aimed to prompt greater parental engagement through text message alerts (Education Endowment Foundation, 2020).

Initiatives to reduce child poverty

Evidence shows that the key barrier that impacts on children from low income households being able to fully participate in education is income inadequacy with a range of financial barriers affecting low income families (e.g. the costs of uniforms, transport, equipment, school related activities etc.) (Glasgow Centre for Population Health, 2016). There is limited evidence of initiatives that address socioeconomic factors in school settings.

The Child Poverty Action Group Cost of the School Day programme aims to lessen the impacts of poverty on school children and to contribute to equity in education by reducing or removing financial barriers to full participation in school and by addressing poverty-related stigma (Blake Stevenson, 2020). Inspired by the Children North East programme in north-east England, the Cost of the School Day programme adopts an action research approach by enabling and encouraging whole-school engagement to explore barriers, as well as identifying and implementing actions to address these (Blake Stevenson, 2020). The intended outcomes of the programme focus on increased understanding and awareness of child poverty in schools and reducing/removing cost barriers to full participation in school. The programme involves Child Poverty Action Group in Scotland staff working with schools, pupils and parents to identify policies and practices that have created financial barriers in schools and identifying practical actions and implementing initiatives. An evaluation of the programme in its fifth year identified numerous positive examples of practice change in schools with qualitative evidence highlighting increased participation in school learning by some pupils. However, there has not been a systematic collection of data on outcomes such as participation (Blake Stevenson, 2020). There is also emerging evidence of the impacts of the Maximise! intervention currently being delivered in schools in Edinburgh offering financial advice, family support, and assistance with employability (Edinburgh Poverty Commission, 2020).

Careers education and guidance

There is limited research on the role of careers education at school-level in reducing educational inequalities. However, research demonstrates "significant correlation between career uncertainty or confusion and NEET status at 16 to 18" (Mann, 2012, p. 5). In a review of young people's (aged 15-24) education and training experiences in Scotland, careers advisers were found to have had the most influence on young people who were "disengaged or at risk of disengagement" (Scottish Government, 2017e). Most young people said that they would like to have more contact with a career's adviser whilst at school (Scottish Government, 2017e). Young people consulted in this research also reported that work experience opportunities at school, college and university level are limited, particularly for disadvantaged young people (see section 3 on transitions into working, training and education).

A UK report summarises the types of careers focused interventions which should take place and at what age based on a range of evidence (Millard *et al.*, 2019). Examples at secondary school level include visits from external speakers, linking classroom learning to specific jobs and sectors, offsite visits to workplaces and careers mentoring.

There is extensive international evidence on the positive impacts of parental engagement in their children's career development for supporting the development of children's career decision-making self-efficacy and confidence but a lack of evidence on UK-based interventions and the effects on socioeconomic groups (Barnes *et al.*, 2020).

An international literature review commissioned by the Education Endowment Foundation, whilst not specifically focussed on the impacts on disadvantaged children and young people, found evidence that career learning should begin in primary school, and continue through adulthood (Hughes *et al.*, 2016). The review encompassed a breadth of careers education initiatives (for example interventions included transformational leadership, mentoring, careers provision and work-related learning) and reviewed the impacts of careers education on (i) educational outcomes; (ii) economic outcomes and (iii) social outcomes (Hughes *et al.*, 2016). There is a lack of impact studies in the UK with 46 (63%) of the 73 studies related to U.S interventions and 18 UK specific. Given the variability of types of interventions included in the review, and the way in which outcomes were measured, the evidence from the review should be treated with caution. However, the review found positive outcomes of schools' career provision on educational, economic and social outcomes in around two-thirds of the studies reviewed under each category (Hughes *et al.*, 2016). Whilst highlighting the lack of evidence, the evidence suggests that mentoring, employer engagement and work experience and practical activities in schools (e.g. career exploration) can have positive impacts. To address gaps in the literature, the review recommends studies that focus on personalised and targeted careers education (and career guidance) for specific groups of young people, particularly those in lower-socioeconomic groups (Hughes *et al.*, 2016).

Tutoring

Across the UK, evidence shows that there is a significant gap between socioeconomic groups in access to private, one-to-one tutoring outside of school (Jerrim, 2017). Providing additional instruction (for example private tutoring, after school clubs and extra-lessons) to pupils from lower socioeconomic households has been demonstrated to be one of the most effective interventions to reducing the attainment gap with evidence demonstrating approximately five months' progress on average in relation to school attainment (see the Education Endowment Foundation's Teaching and Learning Toolkit) (Education Endowment Foundation, 2018d). Evidence on successful tutoring programmes also suggests that tuition should be additional to, but explicitly linked with normal teaching and that teachers should have a role in monitoring progress. Also whilst programmes involving teaching assistant or volunteers have shown a valuable impact, they are less effective than those using experienced and specifically trained teachers (Education Endowment Foundation, 2018d).

The Sutton Trust has recommended the expansion of non-profit and state tuition programmes such as the Tutor Trust to connect tutors directly with disadvantaged schools (Jerrim, 2017). Examples of evidenced-based tutoring programmes that specifically support disadvantaged children and young people include Action Tutoring (an educational charity funded by Impetus providing one to one and small group tutoring by volunteers in English and maths in primary and secondary schools in England) (Lucchino, 2016) and the Tutor Trust (an educational charity funded by the Education Endowment Foundation providing one to one and small group tutoring by paid and trained tutors in English, maths and science in schools in Liverpool, Leeds and Greater Manchester) (Torgerson *et al.*, 2018). Both of these programmes have moved their provision online as a result of the Covid-19 impact. Key insights from pilot online tutoring models delivered by volunteers through the Click, Connect, Learn Fund in England for young people from disadvantaged backgrounds found that, on the whole, young people felt that this approach worked well (Nesta, 2019). However, more research is required to examine the longer terms impacts of online tuition for disadvantaged children and young people.

Research on the impacts of Covid-19 on educational inequality has highlighted the lack of access to online learning and adequate space to study for disadvantaged children and young people. The Sutton Trust has called for solutions to help to supply children with the necessary equipment (Montacute, 2020).

Mentoring

The Education Endowment Foundation's review of mentoring initiatives highlights that the extensive evidence base shows very little or no impact on attainment (Education Endowment Foundation, 2018e). However, the impacts of individual programmes vary with some studies evidencing positive outcomes for pupils from disadvantaged backgrounds particularly for non-academic outcomes such as attitudes to school. Mentoring provision typically aims to improve outcomes related to confidence or raising aspirations rather than to develop specific academic skills. Evidence shows that the most effective mentoring programmes include mentors with a professional background and a clear structure and expectations (Education Endowment Foundation, 2018e). Evaluations of the MCR Pathways school-based mentoring programme to care experienced and disadvantaged young people in Scotland found that MCR Pathways participants were more likely to stay on at school, achieve at least one SCQF Level 5 qualification and move on to a positive destination after leaving school (Biggs *et al.*, 2019).

Community-based support and youth work

The impacts of community-based support and youth work on the poverty-related attainment gap is difficult to capture. Provision of this type of support to disadvantaged children and young people in Scotland is typically by social work and locally-based third sector organisations and includes targeted and universal provision (YouthLink Scotland, 2020a). Evidence of locally based community youth work projects tends to be small-scale evaluations which whilst providing useful learning regarding effective practice are limited in terms of assessing wider outcomes on attainment.

There is clear evidence of the importance of engaging with the wider community in reducing the poverty-related attainment gap. Research evidence frequently highlights the significance of support agencies and youth work in helping to develop aspirations of disadvantaged young people (Ferguson and Griffiths, 2018; Fyfe *et al.*, 2018; YouthLink Scotland, 2020a, 2020b). For example, in low attainment schools in Scotland, connections to third sector organisations and programmes that aim to increase participation in higher education (for example the Lothian Equal Access Programme for Schools, Lift Off to Learning and Sutton Trust schemes) are viewed as important steps towards increasing participation (Ferguson and Griffiths, 2018).

There is an existing evidence base on the value to youth work to engaging with young people who are struggling in school, which tends to exist of small-scale qualitative studies (Miller *et al.*, 2015; Fyfe *et al.*, 2018; McPherson, 2020). For example, a small-scale qualitative study with 10 young from working-class backgrounds in Edinburgh, Scotland, most who have negative experiences of school, found that youth work based interventions were an important source of support, including the role that youth clubs had played in offering a welcoming, accessible and neutral place (McPherson, 2020). McPherson describes the "transformative effects" of support from youth workers through the personal, one-to-one focus.

Funded by the Scottish Government via the Scottish Attainment Challenge and Pupil Equity Funding, YouthLink Scotland deliver a youth work and skills partnership programme designed to help close the attainment gap by strengthening the relationship between the youth work sector and formal education. YouthLink Scotland have developed a Youth Work Outcomes Toolkit to help schools understand how youth work outcomes contribute to closing the attainment gap (YouthLink Scotland, no date). YouthLink (2020) conducted a national case study evaluation to review the impact of a cross-section of youth programmes in Scotland in 2019/20. They found that most youth work programmes measure outcomes on skills and development and health and wellbeing and are less likely to measure outcomes on literacy, numeracy, school attendance or positive destinations. Opportunities for

young people to gain accredited youth work awards or qualifications exist in two-thirds of the projects included in the study and motivate young people to continue learning. For young people, there is evidence that youth work approaches increase their confidence, skills and resilience (YouthLink Scotland, 2020a)

Evidence gaps

- There are a lack of research studies examining health and wellbeing interventions in a school setting that report on educational outcomes.
- There is a lack of analysis of universal interventions/approaches and the differential impact on children from different socioeconomic backgrounds.

3. Transitions into work, training and education

This section focuses on evidence-based approaches and interventions that support disadvantaged young people into work, training and education focused on 16-21-year-olds.

Summary

After leaving compulsory education, young people from disadvantaged backgrounds are less likely to end up in "positive destinations" including further education, higher education, employment and training, although individuals from more disadvantaged backgrounds are more likely to participate in further education and adult learning compared to other post-16 routes (Learning and Work Institute, 2020a). Economic disadvantage is strongly associated with being out of the labour market. Analysis on the youth employment gap shows that disadvantaged young people (aged 18-24) are twice as likely to not be in employment, education or training as their better off peers in England (Gadsby, 2019a). This age group also face additional challenges in the labour market as they are more likely to experience precarious forms of employment and underemployment (Youth Futures Foundation and Impetus, 2020).

A key finding from the literature review was a lack of UK-based evidence on what works to support disadvantaged young people into employment including on work experience impacts. There is more evidence of successful interventions to support disadvantaged young people into higher education. This review highlights the most well evidenced and effective approaches/interventions that have a positive impact supporting disadvantaged young people into work, training and education. These include:

1. Features of effective practice to support disadvantaged young people into employment include personalised support packages and a trusted consisted advisor (Newton *et al.*, 2020).
2. Multiple interventions and 'wrap around' approaches (e.g. including a focus on mental health, involving different partners) work effectively for disadvantaged learners to improve attainment and job prospect outcomes (Learning and Work Institute, 2020b).
3. Traineeships and apprenticeships that provide a mix of support including work experience placements, work preparation training and numeracy and literacy support (Learning and Work Institute, 2020b).
4. To increase access to higher education, the most effective approaches include financial aid support, higher education information, advice and guidance and mentoring (Scottish Framework for Fair Access Toolkit).

Employment

To note, many employment interventions for disadvantaged young people do not take place in formal educational settings and instead are delivered by a range of private, public and third sector organisations. In this section, we

highlight key evidence on UK employability interventions targeted at disadvantaged young people where evaluations typically examine whether a young person entered employment or not. In Scotland, there is a lack of robust and synthesised evidence on existing interventions and most existing research comes from England (see Newton et al., 2020).

The Institute for Employment Studies recently conducted a review to examine "what works" in supporting disadvantaged young people into employment commissioned by the Youth Futures Foundation (Newton *et al.*, 2020). The review included evidence of interventions targeted at 16-24-year-olds (particularly those facing barriers) including research which had measured employment outcomes and where causal estimates of the impact on outcomes were able to be made. The review identified five well evaluated interventions, four of which were UK government-led programmes. These included the New Deal for Young People (1998 – 2002); the Activity Agreement Pilot (2006 – 2011); the Future Jobs Fund (2009 – 2012) and the Youth Contract (2011 – 2016) (Newton *et al.*, 2020). It should be noted that there were no voluntary and community sector youth employment programmes as they did not meet the methodology criteria for the review. A separate call for evidence as part of the review provided information on initiatives from voluntary sector-led programmes with evidence of positive effects for relevant groups (see appendix 2 of Newton et al. (2020) for brief summaries of the programmes).

Whilst the review states that the evidence base is not strong enough to draw robust conclusions on what works specifically for those young people furthest from the labour market, key features of effective practice are identified:

- **Accurate identification**: Trying to identify at risk young people as early as possible, possibly through tracking systems.
- **Effective engagement:** Using magnets, including *cultural magnets* such as music, sports or arts; and *financial magnets* for example cash vouchers, to ensure that provision looks different to compulsory education and encourages take up.
- **Effective assessment and profiling:** Accurately understanding an individual's needs in order to personalise support packages.
- **A trusted, consistent advisor:** Young people need to believe support could make a difference to them achieving their personal goals and overcoming their contextual, personal and situational barriers. A consistent advisor can help sustain engagement, develop reflection/ action cycles, and help keep momentum towards the end goal.
- **Delivery of personalised support packages:** including options for:
    - Employability skills, job search skills, work experience
    - Capabilities – agency, self-efficacy, a goal and resilience to achieve it
    - Vocational and basic skills
    - Addressing barriers including health and wellbeing, independent living, housing etc and developing life skills.
- **Strategies focusing on employers:** These are less common, but there is some evidence that targeted use of wage subsidies and intermediate labour markets (ie creative temporary, paid jobs where individuals receive additional support) can be effective.

- **In work support:** The evaluation evidence is somewhat weaker on this, but suggests a stronger case for those with more significant labour market disadvantages.

(Newton *et al.*, 2020, p. 49)

Impetus funds a range of evidence-based employment and/or education programmes for children and young people from disadvantaged backgrounds in the UK. The provision of dedicated one to one support provided by a mentor, coach or tutor is a shared key feature of many of the programmes. For example, the Resurgo Spear Programme, funded since 2010, for 16-24-year-olds from disadvantaged backgrounds not in education, employment or training, supports young people through intensive coaching and careers support in partnership with employers (Baleanu, 2020). The programme currently operates in eight centres in London and in Leeds and Brighton (Baleanu, 2020). Outcomes for Spear programme participants have been benchmarked against the outcomes of all young people not in education, employment or training in the same geographies. This analysis shows that Spear programme participants achieved better education, employment and training outcomes although rates are lower for participants with low or no qualifications (Baleanu, 2020). A qualitative evaluation of the programme identified four key aspects of the programme that prepare disadvantaged children and young people for work/education including: developing mindsets of young people (confidence, motivation and ambition); improving young people's knowledge of employment/educational options; improving skills particularly related to communication; and increased wellbeing (Resurgo, 2020).

A recent international evidence review identifies approaches which have been effective in supporting young people aged 15-24 at risk of becoming not in education, employment or training (Learning and Work Institute, 2020b). A key finding from the review was the overall scarcity of evidence on outcomes for disadvantaged groups. Many of the studies included in the review are also from the U.S. The review highlights that multiple interventions and 'wrap around' approaches work effectively for disadvantaged learners to improve attainment and job prospect outcomes. For young people already not in education, employment or training, one-to-one and tailored engagement interventions have been evidenced to support disengaged young people. An example is given of the Improving Engagement and Attainment in Maths and English project, which developed and tested a range of 23 behavioural interventions, in England, to improve participation and completion of maths and English courses. Programmes focused principally on 16-19-year-olds and adult students at further education colleges but also in workplaces and communities (Hume *et al.*, 2018). The most successful trials were for those in education. Interventions which demonstrated positive impacts included text messages to learners aged 19 and over to improve class attendance and social support texts from family and friends to support 16-19-year-olds specifically (Hume *et al.*, 2018).

The review also found that basic skills support can improve progress and reduce the risk of becoming not in education, employment or training (Learning and Work Institute, 2020b). An example is given of the Summer Arts College programme (delivered by the Youth Justice Board and Arts Council in England), which used an arts-based programme to embed literacy and numeracy skills for young people recently released from custody. Seventy two per cent of those who participated in the programme progressed to an education, employment or training destination within one month and 70 per cent increased their literacy and numeracy grades (Learning and Work Institute, 2020b).

In Scotland, many employment services are area based, delivered by a range of public, private and third sector organisations. There is limited up-to-date mapping of employability services available in each local authority. Many local youth employability programmes are provided by third sector organisations and are small-scale and therefore have not been evaluated. Evidence based programmes tend to be universal in their provision and therefore do not provide specific learning on working with disadvantaged young people. Talent Match, a National Lottery funded programme, implemented between 2014 and 2018 by 21 voluntary/community sector-led partnerships across England provided personalised and individual support to young people aged 18-24 furthest from the labour market

(including a range of groups such as young parents, BME groups, carers, refugees/asylum seekers etc.) (Damm *et al.*, 2020). The programme was co-designed and co-delivered with young people and adopted a test and learn approach. Key goals of the programme included positively impacting on training and employment outcomes; improving young people's wellbeing; developing response models of holistic support; building capacity in local areas and increasing young people's influence on services (Damm *et al.*, 2020). Pre-employment support varied by local area but key common activities focused on information, advice and guidance; basic and soft skills and peer mentoring for example. Some programmes also included job brokerage linking beneficiaries to local market opportunities and employer focused activities involving the creation of jobs for Talent Match participants. An independent evaluation of Talent Match programmes found 46% of young people who participated in the programme had secured employment by the end of December 2018 whilst 17% secured sustained employment for at least six months. However, nearly half of the young people felt that they were underemployed. Types of support positively associated with securing employment were financial support, peer mentoring and support with travel for example. Sustainability of support provided via the programmes was a key issue with less than a fifth of organisations involved in delivery able to continue to deliver the same level of service when funding ended. Learning from the evaluation included a need for fuller engagement with local employers to consider opportunities such as provision of in-work support.

Work experience

In a recent review of young people's (aged 15-24) experiences of education and training experiences in Scotland, a lack of work experience was cited as one of the main barriers to employment facing young people leaving school, college or university (Scottish Government, 2017e). In workshops with 145 young people aged 15-24, from across SIMD deciles, young people reported limited opportunities to access good quality placements whilst at college, school and university, however. As work experience placements are often organised by young people themselves, those who do not have access to employer contacts or wider networks are disadvantaged in this process (Scottish Government, 2017e). Research has also demonstrated that working class pupils commonly end up in placements linked to lower playing or lower status jobs (Hatcher and Le Gallais cited in Mann, 2012).

There is a lack of evidence on the specific impacts of school work experience placements for disadvantaged children and young people. The research which does exist highlights approaches in schools in England (Mann, 2012). In a 2012 review of evidence on work experience placements in England, only one study was identified on how period of work experience could benefit lower achieving young people (Mann, 2012). Raffo (2006) found that extended work experience placements (one day a week over key stage 4) often demonstrated significant effects on educational attainment (cited in Mann, 2012). More recent research conducted in England highlights the positive impacts of school and college based work-related activities including on the development of soft employability skills (Natcen Social Research, 2017).

Interventions for specific groups of young people

There is limited evidence on the effectiveness of targeted employment initiatives for ethnic minority groups (Hughes, 2015). A review of literature on ethnicity, poverty and youth employment highlights that the causes of differing outcomes vary widely both within and between different ethnic groups (Hughes, 2015). Hughes (2015) highlighted that there is an overlap between the challenges facing young people from ethnic minorities and those affecting disadvantaged young people. Research has demonstrated that ethnic minorities may often face specific barriers into employment including discrimination from employers, lack of social networks to aid job search and English language difficulties. For young black men in particular, the employment gap is wide. The Moving on Up initiative in London, funded by the Trust for London and City Bridge Trust, has demonstrated positive impacts on employment and attitudes, confidence and understanding of work (The Social Innovation, 2017). A key challenge for Moving on Up projects was being able to engage with employers. Young black men identified key features of the

projects that worked including a targeted, tailored approach with consistent support from project staff (The Social Innovation, 2017).

A research project on the attainment gap faced by Black Caribbean and free school meal-eligible white pupils in London identified seven 'best bet' areas for action based on multiple sources of evidence gathered (Millard et al., 2018). Areas of action identified multiple issues that need to be addressed by different organisations and in different settings (including in schools, in the community and in households). For example, evidence shows for that this group of young boys, emotional wellbeing and mental health needs to be addressed in order to improve attainment outcomes, involving relationships and partnerships between frontline professionals, local families and communities. Alongside this, evidence shows that solutions need to focus on raising teachers' expectations and addressing their biases towards this group of young boys drawing on evidenced good practice such as emphasising progress over ability or providing training on implicit bias.

There is also a limited evidence on the effectiveness of targeted employment initiatives for care leavers, although there is ample evidence of barriers to educational or employment pathways for care leavers including disrupted and/or negative school experiences and low self-esteem and confidence (Baker, 2017). Research in Newcastle evidenced that two of most significant school age indicators of being not in education, employment of training aged 17-19 was having been looked after or having had Children's Social Care involvement (Social Finance, 2016). The report states that there appears to be few interventions which address young people's wider family experiences.

Traineeships and apprenticeships

Much of the evidence on apprenticeships and social mobility comes from England. An international evidence review of effective interventions to support young people aged 15-24 at risk of becoming NEET found that traineeships, supported internships and apprenticeship programmes can deliver positive employment and earnings outcomes (Learning and Work Institute, 2020b). Randomised controlled trials of the government traineeship programmes in Wales and in England have demonstrated positive impacts on employment and earnings outcomes (Learning and Work Institute, 2020b). Key features of these programmes included a mix of work experience placements, work preparation training and numeracy and literacy support.

Evidence in England shows that the most disadvantaged young people are more likely to start on a lower level apprenticeship than similarly qualified but better off peers (Gadsby, 2019b). Additionally, take-up of apprenticeships in England among the most vulnerable young people is low (Buzzeo *et al.*, 2016). Research has also highlighted the "ethnicity gap" in the young apprentices highlighting the lack of BAME representation in apprenticeships (Greater Manchester Combined Authority, 2018). Findings from a survey of employers in England also has highlighted that most do not target their employment and training opportunities towards disadvantaged young people (Buzzeo *et al.*, 2016). Additionally, training providers have highlighted barriers to increasing access to apprenticeships amongst disadvantaged young people including time/resources required with Buzzeo et al. (2016) highlighting that many may focus on young people requiring less training.

Specific barriers that prevent disadvantaged young people accessing apprenticeships include financial barriers, entry criteria, cultural and social barriers and a lack of suitable local apprenticeships (Buzzeo *et al.*, 2016; Skills Commission, 2017). The Skills Commission in England has identified best practice by training providers in helping young people from disadvantaged backgrounds gain the skills required to undertake an apprenticeship. Employers are also identified as having a key role in supporting access to and completion of apprenticeships by disadvantaged young people (e.g. by providing pastoral in-work support). The commission identify the need for inclusive recruitment processes. Evidence from the English context on intermediate level apprenticeships and subsequent progression indicates little impact on earnings upon completion compared to secondary level qualifications (Skills Commission, 2017).

Further education

In Scotland, further education takes place in colleges and includes vocational and academic qualifications. As previously mentioned, disadvantaged young people are more likely to participate in further education than other post-16 routes. There has been limited activity focused on bring together evidence on what works to improve socioeconomic outcomes and social mobility for disadvantaged young people in further education (Learning and Work Institute, 2020a). A recent evidence review conducted by the Learning and Work Institute sought to plug this gap by reviewing and mapping the evidence on what works to improve outcomes in this sector. The focus of the review included interventions for disadvantaged students aged 16 and over and included studies from OECD countries published in English (Learning and Work Institute, 2020a). There is a lack of research in the UK context, with most drawn from the U.S. No studies were identified that focused on specific disadvantaged groups (e.g. BAME groups, young adult carers and care leavers). The review found mixed evidence of programmes designed to support disadvantaged students to improve attainment on individuals' attainment of basic skills qualifications and other qualifications and it is difficult to draw conclusions on what works in the UK context. More development and research on interventions in this sector is needed.

Access to higher education

A number of initiatives to support and broaden access to higher education exist both within Scotland and the UK. A study on widening access to higher education in Scotland in comparison to the UK found although multiple interventions were on offer to improve access, there was a need for greater analysis and evidence on intervention types in terms of effectiveness (Riddell *et al.*, 2013). Findings from this study indicated that summer schools, campus visits and contact, including mentoring, with current students are particularly highly valued. In the UK, interventions focused on widening access to higher education are targeted at different age groups. The most common types of intervention are listed in table 2.

Table 2: Common types of widening access initiatives across the UK

Types of Intervention	Target group
Talks in low progression school to raise awareness and aspirations Involvement of students as mentors and role models in community activities	Pupils in early years of secondary school, or even primary schools
Talks about subject choices, in school or on campus Campus visits, involving current students	Pupils in S3 and S4
Campus visits Discussions of options; taught subject sessions and lectures Talks on budgeting and availability of bursaries Guidance on applications and interviews Mentoring from current students Summer schools	Pupils in S5 and S6 about to make progression decisions
Talks and discussion groups with parents/carers	Parents/carers, especially those with no prior high education experience
Talks in colleges, and on university campus Summer schools Opportunities for articulating students to form networks and use the university facilities before formal entry	Students moving from college to higher education
Pre-entry summer schools	Mature entrants from access courses; pupils from under-represented groups about to start university courses

(Riddell et al., 2013)

Analysis by the Commission on Widening Access in Scotland found that the most successful interventions are bridging programmes; academically based programmes which enable disadvantaged learners to supplement their attainment through summer schools, gateway programmes and top-up schemes (Scottish Government, 2016a). These schemes are effective as they tackle multiple issues such as familiarisation with the institution and teaching style as well as different pathways on offer (Scottish Government, 2016a). Bridging programmes have been identified as particularly useful to assist with transitions points for student between both school and university and college and university (Universities Scotland, 2017).

Barriers to accessing higher education include issues such as parents' occupations, incomes, and social backgrounds (Mullen, 2010). Interventions must consider socioeconomic status alongside other key variables such as age, gender, disability, care-experience and ethnicity (Scott, 2020). As well as considering these characteristics individually, there is a need for higher education institutions to take an intersectional approach to understand the complex barriers experienced by some individuals (Equality Challenge Unit, 2016).

There is also evidence that disadvantaged young people are less likely to apply to higher tariff institutions or specific courses such as those associated with professions (i.e. law, medicine) (Scott, 2020). A study by Lannelli *et al.* (2016) found that that subject choice is a strong mediator of social inequalities in higher education entry. Subject choice created differential educational pathways and could help more affluent students maintain their advantage using their networks around them to create stronger educational pathways (Lannelli *et al.*, 2016).

A significant development to bring together an evidence base on interventions has seen the creation of the Scottish Framework for Fair Access. This has brought together wider evidence on individual interventions in terms of their effectiveness and developed a toolkit for universities on effective interventions. This Framework focuses on interventions based around several outcomes such as employability, retention and applications.

Financial aid

Bursaries, scholarships and grants are identified as the most effective interventions for disadvantaged or underrepresented groups in the Scottish Framework for Fair Access. These interventions are characterised by financial awards paid directly to students to help support study and other costs and usually are not repayable. Potential outcomes include improved retention and qualification completion, and improved attainment while in higher education. However, most of the evidence is drawn from the U.S. and there were no studies conducted in Scotland. The Framework also provides evidence on how financial support approaches can most effectively work in practice. For example, financial support linked to attendance and attainment is more likely to be effective (i.e. students must attend and/or attain at a certain level to receive ongoing financial support). The University of Glasgow's Talent Scholarship Programme provides an example of a financial support intervention. The programme engages with those from lower income groups as well as underrepresented populations. A condition of the scholarships is that students must continue to display the talent they showed at the point of application throughout their degree.

Support with financial aid is generally seen as an important strand of support. Research by the National Union of Students indicated that students apply two principles when deciding to go to university. Firstly, that the eventual benefits will outweigh the cost and secondly, that they have the means to pay the money when needed (National Union of Students, 2014). This study reported that a significant proportion of students did not feel that they had sufficient information about the full costs of studying at university. This study also found high levels of concern were expressed about debt levels amongst prospective (74%) and undergraduate students (75%). Analysis by Robinson and Salvestrini (2020) found that financial barriers are at the core of concerns for higher education students. They state that the evidence base on financial aid widening access within the UK is limited. However, they conclude that providing financial aid to disadvantaged students is a high-cost widening participation intervention that has a small

but positive effect on enrolment. It is also most successful when it is relatively easy to understand and apply for. There is a need for interventions that support students and their families to navigate the financial landscape.

Higher education information, advice and guidance and mentoring

In the Scottish Framework for Fair Access toolkit, the second most effective interventions for students of lower socioeconomic status include higher education information, advice and guidance and mentoring focused on accessing higher education. Information, advice and guidance covers activities such as: applications and admissions processes, personal statements, finance and the wider costs and benefits of higher education. This is predominantly targeted at secondary school students but can also be aimed at other people involved in their decision-making such as parents/guardians. The evidence base for these interventions provides a mixed picture of outcomes in practice, with most evidence from the U.S. The evidence indicates impacts on submissions/intention to submit an application but less on actual enrolment. Also, outcomes were strongest for those considered most likely to progress to higher education. In terms of the structure of interventions, interventions need to provide a combination of information and advice about higher education and costs and approaches focused on individual student needs, interests and situation are most likely to be effective. The Scottish Framework for Fair Access toolkit includes an example of an information, advice and guidance intervention in Scotland. The REACH Scotland (Access to the High Demand Professions) programme gives secondary pupils in S4 to S6 from non-traditional backgrounds insights into studying competitive, high-demand professions (such as medicine, law, dentistry and veterinary medicine). This programme has been delivered by multiple universities in Scotland since 2010.

Mentoring covers activity where support is provided to raise pupils' aspirations, confidence, and motivation to progress to higher education. Examples of the role of the mentor include providing support with study and learning skills and sharing their own experiences of higher education. Mentoring can take many forms such as online/in-person, to groups or individuals but is usually for sustained period (Scottish Framework for Fair Access). Overall, the evidence reviewed suggests that mentoring focused on widening access to higher education can have a positive impact on outcomes and specifically on enrolment in higher education. However, much of the evidence base comes from the U.S, with only three studies from the UK, and the strength of the evidence on mentoring is moderate. The toolkit identifies good practice drawn from learning from delivering mentoring programmes. Examples include providing initial and ongoing training for mentors and agreeing clear aims with mentees (Scottish Framework for Fair Access).

In Robinson and Salvestrini's (2020) international review of the impact of interactions for widening access to higher education, they found that interventions in the areas of mentoring, counselling and role models have generally positive outcomes including on students' confidence to succeed in higher education. Evidence on mentoring suggests this intervention leads to outcomes such as higher confidence and broadening aspirations. It was particularly helpful if students had relatable mentors (Robinson and Salvestrini, 2020).

Raising awareness and aspirations through outreach

There is also an evidence base on widening access interventions focused on raising aspiration and awareness of higher education. Rizzica (2018) conducted research exploring the relationship between aspirations and higher education. This included an analysis of widening participation policy within the UK. Rizzica defines this policy as interventions where all colleges and higher education institutions in the country receive public funding to engage pupils from low socioeconomic background in outreach activities, such as summer schools, open days and meetings. Rizzica (2018) highlights that universities put maximum effort in trying to target individual students rather than the whole school. Rizzica's analysis found that policies and interventions were most effective for pupils belonging to families at the top of the income distribution and for students with medium ability.

It is recognised that parents and carers have a key role to play in other levels of education through home learning this is however much less considered within the setting of higher education. A study conducted by Kings College London found by freedom of information requests to the UK's 30 top tariff universities that the majority of institutions are engaging parents in their widening participation outreach, although five universities are not. Within this it was found nearly half of the activities which do engage parents do so as part of a student outreach programme without providing anything distinct or specific for parents. Information, advice and guidance was found to be the most common type of parental engagement activity although there was some activity aimed at parents beyond just informing parents about a student programme (Mulcahy and Baars, 2018). A significant worry for parents was student debt (Mulcahy and Baars, 2018).

Multiple interventions

It is important to highlight that most widening participation initiatives analysed in Robinson and Salvestrini's review were 'black box' interventions – interventions that encompass two or more outreach components (e.g. summer schools, mentoring, counselling etc.). In terms of the evidence, combinations of interventions are suggested to lead to improvements on higher education outcomes (Robinson and Salvestrini, 2020). However, they note that when programmes are multi-faceted, evaluation tends to focus on the programme as a whole and there is a less definitive evidence base on the effectiveness of individual components. They recommend that 'black box' interventions assess the value of individual components as well as the programme as a whole (Robinson and Salvestrini, 2020). One example of a 'black box' intervention is Heads Up, a longitudinal programme run at Sheffield Hallam university, that aims to increase disadvantaged young people's knowledge of higher education and their aspiration to progress. The evaluation found evidence of increased confidence and aspirations but students still faced concerns about barriers they may face (Robinson and Salvestrini, 2020).

Retention

The experience of underrepresented groups at high tariff universities often considered to be Russell group universities within the UK remains a challenging area for interventions. Interventions in this area take a number of different formats such as that pre- and post-arrival strategies, bursaries and options such as extended degrees with additional pastoral and academic support built-in (Russell Group, 2018). One example of this type of programme is delivered at King's College London aimed at educationally disadvantaged students and students from non-traditional backgrounds who have the potential to complete a medical degree successfully. Within these programmes, students are offered a full medical degree extended by a year for development of subject knowledge and confidence and access to pastoral and academic support from staff (Russell Group, 2018). Evidence on retention shows that for applicants from non-traditional backgrounds, the course's retention and success rate since 2009 is 92%, in comparison to 97% achieved by students on the standard five-year medical degree at King's (Russell Group, no date). It was unclear from the evidence the impact on specific populations within the framing of 'non-traditional' groups.

Evidence gaps

- There is an incomplete picture of evidence-based employment support programmes that work to support disadvantaged young people into employment in the UK.
- The is a lack of robust, UK-based evidence on what works to improve attainment among disadvantaged students in the further education sector.
- Research on access to higher education is limited for specific populations such as care leavers and minority ethnic groups. There is a lack of focus on Gyspy/Travellers within the higher education context particularly.

- There is a need for greater tracking of higher education interventions over time which would enable the development of more effective interventions at different states of the student life cycle (Robinson and Salvestrini, 2020).
- More research is needed on young people's journeys into higher education from further education colleges

Part 3: Scottish policy and practice context

Part two of this review provides an overview of the Scottish policy and practice context exploring:

- What is the current policy and practice environment around the poverty-related gap in Scotland?
- Where is there evidence of effective practice and gaps?

This section of the review explores the policy and practice landscape relating to attainment and education in Scotland beginning with providing a high-level overview of developments in the landscape in the previous five years before focusing specifically on current policy and practice in relation to the key stages of the learner journey.

1. Overview

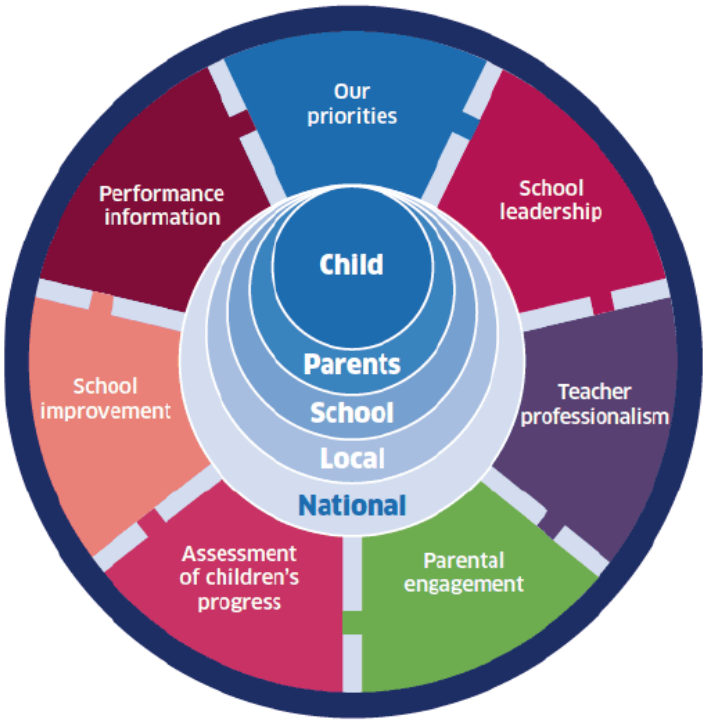
There have been a range of changes to policy, strategy and initiatives in the previous five years which this section largely focuses on. These changes have seen more emphasis on a "self-improving system" through performance monitoring of education and equity via the National Improvement Framework. They also include structural and cultural changes to the policy landscape with schools empowered to lead change through a focus on school leadership and the creation of new bodies to share and implement best practice such as the Regional Improvement Collaboratives (Scottish Government, 2018e).

The Scottish Government's Programme for Government 2016-2017, set out its "defining mission" to close the poverty-related attainment gap (Scottish Government, 2016b, p. 5). The Programme set out a range of targets for each stage of the learner journey. In relation to early learning and childcare, a target was set to double provision of fully funded, early learning and childcare to 1,140 hours a year for all three- and four-year-olds and eligible two-year-olds. For schools, a £750 million School Attainment Fund was set up to close the poverty-related attainment gap, including £100 million directly given to schools. A new framework of proven educational interventions and strategies to improve attainment in schools was also proposed, published later in 2016 (Scottish Government, 2016c). Lastly, the Scottish Government programme focused on improving learning for 16-24-year-olds specifically aiming to increase the proportion of looked after children moving from school into education, training or employment by four percentage points per year. A review of learning for all 16-24-year-olds was also announced to consider improvements across school, college, university and training, published in 2018 (Scottish Government, 2018b).

The 2016 *National Improvement Framework for Scottish Education* set out a framework for closing the attainment gap in Scotland underpinned by existing policies including Getting it Right for Every Child and the Early Years Collaborative (Scottish Government, 2016c). Four key priorities were identified in the Framework: (1) Improvement in attainment, particularly in literacy and numeracy; (2) Closing the attainment gap between the most and least disadvantaged children; (3) Improvement in children and young people's health and wellbeing; and (4) Improvement in employability skills and sustained positive school leaver destinations. The Framework also included six key drivers of improvement to provide focus for gathering evidence and identifying progress (see figure 1).

Scottish minsters have a statutory duty under the Education (Scotland) Act 2016 to review the National Improvement Framework and publish a plan on an annual basis (Scottish Government, 2020c). The most recent Framework highlights progress in relation to the four priorities and six key drivers of improvement (Scottish Government, 2020c). In relation to the six key drivers of improvement, evidence is provided on what is working well and where further improvements in practice can be made in the annual report. An online National Improvement Framework Interactive Evidence Report brings together a range of data on how well children and young people are doing in education in relation to each of the four key priorities and the six key drivers for improvement. The most recent summary publication of the National Improvement Framework 2020 highlights data on the 11 key attainment measures (see table 1, p. 10).

Figure 1: National Improvement Framework Key Drivers of Improvement



In 2016, an International Council of Education Advisers was established to advise Ministers on how best to achieve excellence and equity in the Scottish education system. In their first report, covering 2016-2018, key strengths of the Scottish education system were identified which included the measures taken through the Scottish Attainment Challenge and Pupil Equity Funding approach (see later for discussion) (Scottish Government, 2018c). The Council has also identified three key priority areas in relation to improvement: (1) improving pedagogy for specific subjects and using clear evidence to identify what works in the classroom; (2) developing effective leadership at all levels in Scottish education; and (3) ensuring a culture of collaboration exists throughout Scottish education, at classroom, school, regional and national level (Scottish Government, 2018c). The 2016-2018 report also proposed 19 recommendations targeted at the Scottish Government for further improvement to policy and practice across all stages of the learner journey. These include a mixture of specific as well as more high-level recommendation many of which are focused on improving collaboration and learning within the system.

In 2016, the Children and Young People Improvement Collaborative was also formed with the aim to make early years, health, family services and schools more effective and responsive in tackling inequality and improving children's outcomes. The collaborative exists of Improvement Advisors working at local authority level and nationally and national learning events to support a quality improvement approach (defined as method to "test, measure, evaluate and implement new and more effective ways of working").

2. Early years

In Scotland, early learning and childcare includes the care and learning services that children receive before they start school and is funded by parents or by councils. Early learning and childcare services are currently delivered in a range of settings (e.g. nurseries, early years settings, playgroups) and delivered by public, private and third sector providers (Audit Scotland, 2020). The early years workforce is comprised of support workers, practitioners and managers/lead practitioners all of whom are required to hold or be working towards the relevant qualification for their position (Wane, 2019).

Early learning and childcare

In 2017, the Scottish Government published *A Blueprint for 2020: The expansion of early learning and childcare in Scotland* detailing (1) how a high quality experience of early learning and childcare would be secured for all children and (2) the expansion of provision in the coming years (Scottish Government, 2017f). The four principles underpinning the expansion of early learning and childcare expansion are: quality, flexibility, affordability and accessibility. The Blueprint set out 31 actions for the first year including providing a Quality Action Plan setting out what needed to be done to strengthen the quality of provision and producing a national standard for providers.

Part 2 of this review highlighted a key finding from research that early learning and childcare must be of high quality to impact on the poverty-related attainment gap. A Quality Action Plan, informed by research evidence on the benefits of early learning and childcare for the development of children, was published in 2017 (Scottish Government, 2017g). The Action Plan defines the characteristics of high quality early learning and childcare, these include for example: a high quality workforce, a focus on play-based learning, supporting parents to engage in their children's learning, provision that is accessible to all, and clear quality standards (Scottish Government, 2017g). The Action Plan states that "the single most important driver of the quality of a child's ELC experience is a high quality workforce" (Scottish Government, 2017g, p. 6), which is a key finding in the research evidence base on early learning and childcare provision (Dartington Service Design Lab *et al.*, 2018).

In the 2020 National Improvement Framework report, the Scottish Government stated that most of the 15 actions in the Quality Action Plan had been delivered (Scottish Government, 2020c). Additionally, a national standard that all funded providers must meet and the expansion of early learning and childcare entitlement for all 3 and 4-year-olds, and eligible 2-year-olds, to 1140 hours per year was introduced in August 2020 (Education Scotland, 2020b). The national standard sets out what children and families should expect from their early learning experience, regardless of where they access their provision, setting out a minimum quality threshold for providers (Scottish Government, 2017f). This expansion is underpinned by a new funding model, Funding Follows the Child, with the aim to provide a "provider neutral" approach, where parents and carers can access their child's funded hours from any provider which meets the criteria in the national standard (Wane, 2019).

Based on the evidence on the significance of outdoor learning, the Scottish Government is also currently focused on promoting and enhancing outdoor learning for example through a requirement in the national standard to offer children daily access to outdoor play and learning.

Realising the Ambition: Being Me provides guidance for early years learning and childcare and early primary education for all early years settings in Scotland (Education Scotland, 2020b). Significantly, it highlights what research and evidence means for best practice.

Parental engagement

Research shows that targeted evidence-based interventions for socioeconomically disadvantaged children to improve language skills can be effective (Reeves *et al.*, 2018; Dimova *et al.*, 2020). Research on universal initiatives in Scotland such as Bookbug and the PlayTalkRead website suggests that these are less impactful for parents and children who are most disadvantaged. The targeted Bookbug for the Home programme for more vulnerable families trains professionals to introduce the principles of Bookbug sessions into the homes of families. An evaluation demonstrated the programme enables early years workers to work in new ways with families and observed impacts on parents' and children's interaction (Blake Stevenson, 2015).

For disadvantaged communities, the Scottish Government has shown a commitment to adopting family learning approaches. Defined by the Scottish Government, a family learning approach is a method of engagement and

learning which encourages family members to learn together (Scottish Government, 2016d).[9] The Scottish Government states that the approach "is key in raising attainment and closing the poverty-related attainment gap" (Scottish Government, 2016d). Family learning approaches can range across literacy, numeracy, STEM, English for speakers of other languages, parental engagement and health and wellbeing (Education Scotland, 2018).

There is evidence of effective practice around the delivery of family learning initiatives in Scotland, which exist primarily at pre-school level but also at the transition stage to primary school. In policy, family learning was identified as a key driver for change in the 2018 *National Improvement Framework* and *Improvement Plan for Scottish Education* (Scottish Government, 2017b). In the "Learning Together" National Action Plan (2018-2021), action 34 states: "In the early years we will increase support for evidence-based family learning programmes in order to embed this in the early learning and childcare support for families facing disadvantage" (Scottish Government, 2018d). A strategic framework to support the planning, development, delivery and evaluation of family learning approaches in Scotland was published in 2018 (Education Scotland, 2018). Set out in the 2019/20 Programme for Government in Scotland, the Family Learning Scotland Programme targeted at priority families is being delivered by Peeple between 2019-2021. The key aims of the programme are to help parents gain new skills and take up learning and training – integrated with the expansion of early learning and childcare to allow parents to build on their skills and gain better work.

Ten illustrative case studies of family learning approaches in Scotland included in the Scottish Government's family learning review (Scottish Government, 2016d), as well as case studies published via the online National Improvement Hub, demonstrate the diversity of programmes delivered throughout Scotland (e.g. focused at different groups including families where English is a second language and parents in prison and vary in length, format and delivery) (Scottish Government, 2016d). Education Scotland provides a list of features of highly effective practice (e.g. creative approaches to engage with families, effective partnerships) which practitioners can use when planning and delivering family learning outcomes (Education Scotland, 2016). Gaps in the evidence identified include a need for additional research on why and how family learning approaches should be used as well as longitudinal impacts (Scottish Government, 2016d).

3. School-level

Scottish attainment challenge

Under the SNP administration, several strategies, approaches and initiatives have been introduced by the Scottish Government to address the poverty-related attainment gap in schools. Most notably, the Scottish Attainment Challenge, launched in 2015, aims to achieve equity in educational outcomes, particularly focused on the poverty-related attainment gap. Modelled on the London Challenge, from 2016, a £100 million initial investment and subsequent additional funding to nine "challenge" local authorities[10] has aimed to raise the attainment of children and young people living in deprived areas (Education Scotland, 2020a). Additionally, the Schools Programme supports primary schools and secondary schools outwith the challenge areas. The focus of the fund has changed over time to a more universal offer to all schools and local authorities across Scotland through the Innovation Fund, for projects focused on raising attainment in literacy, numeracy, health and wellbeing for disadvantaged children and young people.

Pupil Equity Funding (2016-2021) provides additional funding directed towards individual schools across Scotland to address the poverty-related attainment gap, allocated on the basis of free-school meal entitlement (Scottish

[9] There are eight values that underpin the family learning National Occupational Standards (Scottish Government, 2016d).
[10] The challenge authorities currently include Glasgow, Dundee, Inverclyde, West Dunbartonshire, North Ayrshire, Clackmannanshire, North Lanarkshire, East Ayrshire and Renfrewshire.

Government, no date). A targeted fund for care experienced children and young people was also provided from 2018 to deliver targeted initiatives, activities and resources for this group of young people (Scottish Government, no date). The Scottish Attainment Challenge has been supported nationally via the appointment of local authority-based Attainment Advisors, the establishment of the National Improvement Hub and the National Improvement Framework (Mowat, 2018).

There has been an ongoing evaluation of the Scottish Attainment Fund across Pupil Equity Funding, Challenge Authorities and Schools Programme Funding streams, examining its overall implementation and assessing progress towards four long-term outcomes. The long-term outcomes of the Scottish Attainment Fund include:

1. Embedded and sustained practices related to addressing the impact of the poverty-related attainment gap
2. All children and young people are achieving the expected or excellent educational outcomes, regardless of their background
3. An educational system which is aspirational, inclusive in practice and approaches for all including teachers, parents and carers, children and young people
4. Closing the attainment gap between the most and least disadvantaged children and young people.

(Scottish Government, 2020f)

Evaluations of the Scottish Attainment Fund have highlighted positive examples of effective practice. The most recent year four evaluation highlights positive perceptions of improvements in closing the poverty-related attainment gap amongst teachers and headteachers, particularly linked to perceived change in culture/ethos (Scottish Government, 2020f). Higher levels of progress have been identified by School Programme respondents than PEF-only schools.

Schools have developed Attainment Scotland Fund interventions focused on literacy, numeracy, health and wellbeing, family support and engagement, teacher skills development and equipment and resources (Scottish Government, 2018e). At school level, there is a mix of targeted and universal approaches to involving children and families in Attainment Scotland Fund activity (Scottish Government, 2018e). Whilst evidence-based interventions are developed by local authorities using available evidence from organisations such as the Education Endowment Fund, qualitative research with stakeholders involved in planning and delivering interventions within Challenge Authorities identified the need to have robust evidence at national level to support the selection of interventions (Scottish Government, 2018e).

Evidence from the latest evaluation of the Attainment Scotland Fund shows that there has been a move away from a focus on individual interventions to broader, local authority wide approaches around literacy, numeracy, health and wellbeing to close the poverty-related attainment gap (Scottish Government, 2020f). An example is given of the development of whole school nurture approaches linked to health and wellbeing. The Cost of the School Day project has also been developed in several Challenge Authorities. Approaches adopted have commonly focused on targeted support for pupils from deprived backgrounds. Parental and family engagement approaches, in particular, have been developed in some schools. In a survey with head teachers, a need for greater clarity in terms of how parents can positively support learning was identified.

A report examining impacts on learning and raising attainment in the Scottish Attainment Challenge Authorities highlights that, where progress is greatest, there are clear links between strong leadership, high quality data, robust self-evaluation, high-effective professional learning and the focus of interventions has been identified (Education Scotland, 2019). However, qualitative research with education stakeholders highlights that schools alone cannot address the poverty-related attainment gap (Scottish Government, 2018e). Whilst the year four evaluation reveals

positive collaboration with third sector organisations to deliver specific interventions or projects in Challenge Authorities, some stakeholders identified the need for better connections between education and wider services supporting disadvantaged children (Scottish Government, 2018e) . It is outwith the scope of this report to review how Pupil Equity Funding is being used by schools. There is a lack of accessible information on how schools are using this funding stream. Available information highlights that a range of interventions are being delivered including home-school link workers, breakfast clubs, counsellors and family learning programmes. There is also evidence of a significant proportion of Pupil Equity Funding being spent on staffing related costs (McEnaney, 2019).

Education Scotland has developed a framework of 'Interventions for equity' to help guide the decisions of school leaders in relation to the Pupil Equity Fund (White, 2017). NHS Health Scotland were asked to identify and review international health and wellbeing interventions in school settings that contribute to reducing inequalities to develop evidence-based programme within the Equity Framework. This review highlighted the lack of conclusive evidence in the UK.

The creation of six Regional Improvement Collaboratives in 2018 brings together local authorities and Education Scotland to collaborate on securing excellence and equity in education (McKinney, Stuart and Lowden, 2020). They are designed as a support and advice mechanism for teachers and schools in each regional area (Scottish Government, no date). There is little evidence at this stage on the impact of Regional Improvement Collaboratives.

In terms of tailored support for Gypsy/Traveller families with children, the most recent progress report for the Tackling Child Poverty Delivery Plan highlighted work that has been done to improve education opportunities in a programme of action delivered in partnership by STEP (a national centre supporting equitable access to education for mobile communities in Scotland), Education Scotland and local authorities and Gypsy/Traveller families (Scottish Government, 2020g). Learning from a recent pilot study providing supported use of digital tablet devices as part of a tailored programme of community education for Gypsy/Traveller children has influenced the design and roll-out of a community education programme to help mitigate the impact of the coronavirus on Gypsy/Traveller communities.

School attendance and exclusions

A focus on school attendance and school exclusion has been a prominent theme in Scottish educational policy in recent years (Scottish Government, 2017h). As examined in part one of this review, there is a 6.6 percentage gap in secondary school attendance rates between pupils in the SIMD 20% most deprived and least deprived areas. Whilst permanent exclusion rates in Scotland are low, non-permanent school exclusions made up 2.68% of the Scottish school population in 2017/18 (McCluskey *et al.*, 2019). National guidance focuses on approaches that work towards preventing the need for exclusion including the use of flexible, individualised packages of support that may include time in onsite school support and offsite support centres to prevent exclusion (Scottish Government, 2017h). However, research has highlighted dissonance between policy and practice. A lack of national data on the work of behaviour support services in different areas and the potential misuse of support bases and flexible learning provision was highlighted specifically (McCluskey *et al.*, 2019). The use of unofficial exclusions, also referred to as "informal exclusions" in practice and the impacts on children and young people in terms of a clear access to support has also been raised (McCluskey *et al.*, 2019; Robertson and McHardy, 2020).

Careers information and guidance, mentoring and tutoring provision

Part two of this review highlighted evidence that careers advisers were found to have had the most influence on young people who were "disengaged or at risk of disengagement" in Scotland (Scottish Government, 2017e). Careers information, advice and guidance in schools in Scotland has been a central focus in Scottish policy in recent years. In 2015, Education Scotland provided an outline of career education standards for children and young people aged 3 to 18 (Education Scotland, 2015). Currently, Skills Development Scotland provides careers guidance to schools, colleges and adult settings. The types of services provided by Skills Development Scotland in schools are predominantly

universal although an intensive support coaching service is targeted at those who would benefit most from intensive support (see Skills Development Scotland School Service Offer).

Part two of this review also highlighted that tutoring and mentoring interventions can have positive impacts on reducing the poverty-related attainment gap. MCR pathways provides mentoring to care-experienced and disadvantaged young people in Scotland in school settings across 12 local authorities in Scotland. The 2018 MCR impact report highlighted a range of positive outcomes on attainment; for example, an increase of 20 percentage points in mentored care-experienced young people attainment in literacy and numeracy at level four or above (MCR Pathways, 2018). Whilst research evidence shows that tutoring is an effective intervention to reducing the attainment gap, there is a lack of widespread tutoring provision in Scotland, in comparison to schemes in England via the National Tutoring Programme. The key provider of tutoring for disadvantaged young people in Scotland is the Volunteer Tutors Organisation.

Parental engagement and involvement

The Learning Together National Action Plan set out a vision for parental involvement and engagement from pre-birth to age 18 (Scottish Government, 2018d). Parental and family engagement is highlighted as a key factor in helping children and young people achieve high standards and closing the attainment gap, based on evidence from the research. The International Council of Education Advisors (2018) has emphasised the importance of ensuring parental engagement at both primary and secondary school. Many schools have undertaken work on engaging and involving parents and families in the school under the Attainment Scotland Fund focused on raising aspirations and changing attitudes to learning (Scottish Government, 2018e). Examples of initiatives include parent workshops on a range of topics aimed at engaging families with challenging needs and targeted homework and family learning support. Qualitative research examining education stakeholders' views around the Attainment Scotland Fund highlighted ongoing challenges regarding parental engagement and home learning (Scottish Government, 2018e).

4. Post-16 transitions

Developing the Young Workforce is the Scottish Government's youth employment strategy, published in 2014 (Scottish Government, 2014), and followed by annual progress reports. The strategy was principally focused on mainstream change of provision in education and training, although recognised the need for extra support and guidance for specific groups of young people (including care experienced young people, minority ethnic groups, disabled people and a focus on the gender-gap). Since the strategy was published, a range of initiatives have focused on "underrepresented groups"; for example, a targeted Modern Apprenticeship campaign and supported employment opportunities in the third sector provided for care leavers and other groups of young people. The most recent progress report highlighted the need for more work to be done in supporting care experienced and disabled young people in transitioning into work in Scotland (Scottish Government, 2019b). Concerns have also been raised by the Education and Skills Committee around the delivery of employment support and advice digitally through the My World of Work, an online tool to support career decisions and planning, as disadvantaged young people may not have digital access evidence shows they may need more targeted one-to-one support (Education and Skills Committee, 2018b). Also, evidence to the Education and Skills Committee indicated that those most in need may be least likely to ask for support and advice.

Targeted Scottish Government funded initiatives include the Community Jobs Scotland programme and Inspiring Scotland's 14-19 Fund which support disadvantaged young people access education, employment or training (Scottish Government, 2018f). The Inspiring Scotland Fund ran from 2009-2018 aiming to help the most disadvantaged young people aged 14-19 into education, training or employment through funding charities across Scotland to deliver person-centred and employability support (FMR Research, 2017). The projects are largely focused on building confidence and self-esteem through one to one support, mental health and counselling and

employability support, with evidenced positive impacts on outcomes (FMR Research, 2017). The Developing Your Potential programme, a partnership between the Prince's Trust, Barnardo's and Action for Children, also provides targeted support to care-experienced young people aged 16-29 to move into work, training or educational opportunities (Scottish Government, 2018f). This service involves two key strands: intensive support for young people with more complex needs with a project worker providing one-to-one support for up to a year and a 12 week employability programme providing a mixture of work experience, qualifications and involvement in community projects.

Development of pathways though apprenticeships has been a key focus of the Developing the Young Workforce strategy. In Scotland, there are three types of apprenticeships delivered by Skills Development Scotland: (1) Foundation Apprenticeships: chosen by pupils in secondary five and six in school as part of their subject choices; (2) Modern Apprenticeships: for any person aged 16 or above working towards a qualification with a college or learning provider; and (3) Graduate Apprenticeships: for any person aged over 16 who is employed and works fulltime while gaining an honours or masters degree. In 2015, Skills Development Scotland set out a five year equalities action plan to drive forward equality of participation in Modern Apprenticeships, focused on the four underrepresented groups identified in Developing the Young Workforce (Davies, 2019). Research and evaluation of the Modern Apprenticeship scheme in Scotland has tended to focus on overall experiences of the scheme rather than specific outcomes for disadvantaged groups of young people. Much of the focus on equality in access to apprenticeships has been in relation to gender and minority ethnic communities.

The Scottish Government *15-24 Learner Journey Review*, a more recent policy initiative, was set up to consider the learner journey from the senior years of school leading to employment, including further and higher education, vocational training and apprenticeships (Scottish Government, 2018b). The Scottish Government set out existing learner journeys for 15-24-year-olds, illustrating the relationship between the education and the skills system and identifying areas where improvement could be made including in information, advice and support offered to young people through long-term, one-to-one support (Scottish Government, 2018b). The review includes 17 recommendations aimed at improving the education and skills system by providing a more coherent and consistent education journey that allows all young people to better plan and progress their future pathways.

5. Higher education

The further and higher education sector refers to study up to undergraduate or postgraduate-degree level including further education colleges and universities. Within Scotland there are 19 universities which deliver higher and further education and 26 colleges delivering further education. Despite a key focus on widening access to higher education in Scotland, equality and access remain challenging across the higher education sector in Scotland.

In 2015, a Commission on Widening Access was established by the Scottish Government to advise ministers on the steps required to meet the ambition that "every child, irrespective of socioeconomic background, should have an equal chance of accessing higher education" (Scottish Government, 2016a, p. 7). The subsequent *A Blueprint for Fairness* Report set out a series of 34 recommendations "to achieve the goal of equal access for those from deprived backgrounds or with a care experience" (Scottish Government, 2016a, p. 8). As part of this a target was set that by 2021 16 per cent of full-time first-degree Scottish domiciled entrants to higher education institutions in Scotland should come from the 20 per cent most deprived communities as measured by the SIMD. Progress for this was on track reaching 15.9 per cent in 2018-19 (Scott, 2020).

Both minimum entry requirements and contextual admissions have been introduced in Scottish universities in 2020 in recognition of variations across universities' in their admission processes. This means there are two sets of entry

requirements: standard and minimum. Minimum entry requirements apply to 'widening access'[11] students. Policy is determined by individual universities and colleges which results in potential inconsistency in application. As this is a new development, robust evaluation evidence on effectiveness is not yet available. The development of a common protocol for reporting to ensure transparency in term of admission decisions has been recommended (Scott, 2020). Alongside the minimum entry requirements, care experienced learners will be guaranteed an offer of a place at a university if they meet minimum entry requirements from autumn 2020 (Universities Scotland, 2017).

The Commission on Widening Access report highlighted the importance of building on good practice that already exists in Scotland such as bridging programmes. It also highlighted the lack of robust evidence on the relative effectiveness of different access initiatives (Scottish Government, 2016a). As a consequence, the Framework for Fair Access was launched in 2019 providing evidence and highlighting best practice and the Scotland's Community of Access and Participation Practitioners (a forum focused on sharing and developing best practice on access to support) was established.

Understanding the evidence base around access to higher education is a complex issue. There is a need to consider access across both institution as well as subject discipline and population. Monitoring and evaluation across Scotland remain critical to understanding the effectiveness of interventions and practice. Widening access work within the Scottish higher education sector is funded via several different streams such as the Scottish Funding Council, universities themselves and charitable institutions such as the Sutton Trust (Hunter Blackburn *et al.*, 2016).

Beyond access to higher education, attention needs to be given to pathways to postgraduate study. Analysis on entry to postgraduate study shows that those living in the SIMD 20% most deprived areas have lower rates of entry to postgraduate degrees than they do for first degrees. Differences in leaver destinations between SIMD20 leavers and other leavers at postgraduate level are starker than those observed at first degree level and persist when subject studied, institution attended, and qualification type are accounted for (Scott, 2020).

The impact of Covid-19 on higher and further education is difficult to ascertain. This has been a challenging time for the education sector and the myriad of measures in particular school closures, the cancellation of examinations (replaced by teacher assessments) and the shift from face-to-face to online teaching in universities will be likely to have negative consequences for fair access. All these measures will have impacts on existing inequalities in terms of access (Scott, 2020). There is also a need to consider wider issues raised by the pandemic such as the potential restrictions on libraries having impacts on students without quiet home space (Langella, 2020).

[11] Some examples of 'widening access' students who be eligible include those who have successfully completed a pre-entry programme, live in a targeted postcode area, attend a target school or college, have experience of being in care or are estranged from their family (UCAS, no date).

Conclusions

This review concludes by providing an overview of identified gaps between the wider UK evidence base and policy and practice in Scotland pointing to opportunities for further research as well as where interventions could be focused. As a note of caution, this review does not present a full review of research being carried out in this area nor does it provide a full critique of the current policy and practice landscape in Scotland.

Early years

The research evidence clearly shows that the poverty-related attainment gap begins in the early years. In Scotland, there has been a significant focus on reducing the poverty-related attainment gap in policy and practice in the early years in the last five years. Supported by the evidence base on the positive impacts of high-quality early learning and childcare provision on disadvantaged children (Scobie and Scott, 2017; Bonetti and Brown, 2018; Dartington Service Design Lab *et al.*, 2018; Sim *et al.*, 2018), the Scottish Government has focused on improving the early learning experience via the national standard which must be met by all providers from August 2020. Alongside this, the expansion of early learning and childcare has increased the quantity of early learning and childcare entitlement for all 3 and 4-year-olds and to eligible 2-year-olds. Family learning approaches which, where implemented effectively, show key positive impacts on disadvantaged children's attainment outcomes in the early years, have also increased in provision across Scotland under the Family Learning Scotland Programme. The full evaluation of the expansion of early learning and childcare on disadvantaged children will not be published until 2024.

In practice, identified issues include a lack of retention of the early years workforce and a lack of take up of early learning and childcare provision by low income households and those in the most deprived areas (Scottish Government, 2018g; Wane, 2019). Parents/carers who are on low incomes are also less likely to base their choice of early learning and childcare provider on inspection reports and good outdoor space (Scottish Government, 2018g). This indicates a need for greater awareness of entitlement and local level provision amongst low-income families. Research on the impacts of Covid-19 have also highlighted the lack of access to resources by low-income families which impacts on opportunities for home learning (Observatory of Children's Human Rights Scotland, 2020).

School-level

Numerous interventions have been implemented at school and local authority level through the Attainment Scotland Fund. Interventions are chosen by local authorities and schools and are largely delivered in practice by schools and third sector organisations. As a consequence, there is lack of synthesised evidence on what interventions are being used and with which groups of young people. This lack of available evidence has been identified in relation to the Pupil Equity Fund. In research with education stakeholders across Scotland, positive examples of evidence-based practice/interventions are highlighted, but a need to have robust evidence at national level to support the selection of interventions has been identified (Scottish Government, 2018e). A lack of conclusive evidence on how health and wellbeing interventions in school settings in the UK can contribute to reducing the poverty-related attainment gap has also been identified (White, 2017).

Based on this review, there are evidence gaps on how behaviour and support services and flexible learning provision are working for disadvantaged young people. Given key evidence in the research that children and young people living in deprived areas are more likely to be temporarily or permanently excluded from school and experience informal forms of school exclusion (McCluskey *et al.*, 2019b), there is a need to focus interventions on this group. However, evidence of effective practice in Scotland to supporting disadvantaged children and young people in school settings is not synthesised and is largely available via case studies and practice exemplars of individual school provision via the National Improvement Framework.

Evidence from the Education Endowment Foundation's Teaching and Learning Toolkit (Education Endowment Foundation, 2018c), and wider research, shows that there are a range of evidence-based interventions that work to improve attainment outcomes in both formal school settings and in-formal school settings (e.g. literacy catch-up schemes, mentoring, careers education and guidance, tutoring, and initiatives designed to reduce child poverty). Whilst evidence on the value of youth work for disadvantaged children and young people is clear, there is less evidence on the specific impacts on educational attainment. Given the lack of targeted careers and guidance and tutoring initiatives in Scotland, there is a need to further explore and develop practice in this area. Lastly, whilst the research evidence is clear on the relationship between low-income and poor attainment outcomes, there is a lack of evidence driven practice in Scotland in this area, apart from the Child Poverty Action Group's Cost of the School Day Programme (Blake Stevenson, 2020).

Post-16

The post-16 evidence base on supporting disadvantaged young people into work, training and education is vast with most of the evidence available on individual evaluations of area-based, targeted interventions. An Institute for Employment Studies review on "what works" in supporting disadvantaged young people into employment highlights the lack of robust evaluation of UK-based programmes but identifies key feature of effective practice to supporting this group of young people (Newton *et al.*, 2020). The evidence base on the impacts of work experience, traineeships and apprenticeships is stronger, although mostly comes from an international context, with some evidence from England (Learning and Work Institute, 2020b).

Impact evidence from Inspiring Scotland's 14:19 Fund for third sector projects to deliver employability related services to disadvantaged young people demonstrates a range of positive outcomes (FMR Research, 2017). There is some limited evidence from England that employability/educational focused interventions in non-formal settings work best where targeted at specific groups of young people (for example for ethnic minorities and care experienced young people) (Social Finance, 2016; The Social Innovation, 2017). Knowledge of the landscape of targeted employability support availability across Scotland for young people could be improved by mapping existing interventions and gaps in provision.

There is a complex evidence base on interventions within higher education and whilst many interventions such as bursaries and bridging programmes indicate positive outcomes there is a lack of disaggregation on specific groups and long-term impacts such as retention. Further evidence is needed on underrepresented groups who access but do not complete the higher education pathway to provide more insights into student pathways, barriers faced, and the interventions required to support students. Beyond undergraduate study there is need to consider the routes for postgraduate studies given the attainment gap there and the differential outcomes in terms of higher earnings for those with postgraduate qualifications. The introduction of new interventions such as contextual and minimum requirement admission will need to be carefully observed to understand the impact they have.

The Covid-19 context

Overall, the context and landscape has been drastically impacted by Covid-19. Those who are most disadvantaged will have experienced most critically the disruption of education from early age provision right through to higher education and postgraduate study. The global pandemic has resulted in changes in terms of the delivery of learning, examination structures and many other key areas and the full impacts of this are yet unknown. The second wave continues to present challenges to educators across Scotland in terms of supporting students and improving attainment amongst the most disadvantaged.

Going forward will require interventions and innovative thinking as well as wider analysis to understand in full what learners needs and experiences are. Policies and practice will need to be robust and targeted as well as evidence-

based recognising the evolving circumstances of students and the wider context households find themselves in as the economic downturn increases.

References

Andrew, A. et al. (2020) Inequalities in children's experiences of home learning during the COVID-19 lockdown in England. Available at: https://www.ifs.org.uk/uploads/publications/wps/WP202026-Inequalities-childrens-experiences-home-learning-during-COVID-19-lockdown-England.pdf (Accessed: 23 September 2020).

Asmussen, K. et al. (2016) Foundations for Life: What works to support parent-child interaction in the early years? Available at: https://www.eif.org.uk/report/foundations-for-life-what-works-to-support-parent-child-interaction-in-the-early-years (Accessed: 14 October 2020).

Audit Scotland (2020) Early learning and childcare Follow-up. Available at: https://www.audit-scotland.gov.uk/uploads/docs/report/2020/nr_200303_early_learning.pdf (Accessed: 6 October 2020).

Baker, C. (2017) Care leavers' views on their transition to adulthood: A rapid review of the evidence. Available at: https://coramvoice.org.uk/sites/default/files/999-CV-Care-Leaver-Rapid-Review-lo %28004%29.pdf (Accessed: 21 October 2020).

Baleanu, T. (2020) Research Briefing 7: Benchmarking Resurgo. Available at: https://impetus.org.uk/assets/publications/Research-Briefing-7-Benchmarking-Resurgo-FINAL.pdf (Accessed: 20 October 2020).

Barbour, L. et al. (2018) Parental Engagement Fund. Available at: https://researchportal.bath.ac.uk/en/publications/parental-engagement-fund (Accessed: 20 October 2020).

Barnardo's Scotland (2018) Closing the poverty related attainment gap: Before and beyond the school gates. Available at: https://www.barnardos.org.uk/sites/default/files/uploads/Closing the poverty related attainment gap - Before and beyond the school gates - 2018 %28PDF%29.pdf (Accessed: 12 October 2020).

Barnardo's Scotland (2019) Closing the poverty related attainment gap; early learning from our partnership work with schools and communities across Scotland. Available at: https://www.barnardos.org.uk/sites/default/files/uploads/Closing the poverty related attainment gap - early learning from our partnership with schools and communities across Scotland - 2019.pdf (Accessed: 12 October 2020).

Barnes, M., Chanfreau, J. and Tomaszewski, W. (2010) Growing up in Scotland: the circumstances of persistently poor children. Available at: https://www.gov.scot/publications/growing-up-scotland-circumstances-persistently-poor-children/ (Accessed: 22 October 2020).

Barnes, S.-A. et al. (2020) The role of parents and carers in providing careers guidance and how they can be better supported International evidence report. Available at: http://wrap.warwick.ac.uk/134365/13/WRAP-role-parents-carers-providing-careers-guidance-how-they-can-be-better-supported-international-evidence-report-Barnes-2020.pdf (Accessed: 19 October 2020).

Biggs, H. et al. (2019) MCR Pathways Social Bridging Finance Initiative for Educational Outcomes: Evaluation Report. Available at: https://www.therobertsontrust.org.uk/publications/mcr-pathways-evaluation/ (Accessed: 24 October 2020).

Black, B. (2020) Attainment and disadvantage in Scotland's schools: what may the impact of lockdown be? Available at: https://policyscotland.gla.ac.uk/wp-content/uploads/2020/06/Black_ScottishAttainmentandCovid_20200904.pdf (Accessed: 23 September 2020).

Blake Stevenson (2015) Assertive Outreach-Bookbug for the Home Year 2 Evaluation-Final Report. Available at: https://www.edubuzz.org/supportfromthestart/wp-content/blogs.dir/1207/files/2015/04/Bookbug-for-the-Home.pdf (Accessed: 16 October 2020).

Bonetti, S. and Brown, K. (2018) Structural elements of quality early years provision - A review of the evidence. Available at: https://epi.org.uk/wp-content/uploads/2018/08/Early-years-structural-quality-review_EPI.pdf (Accessed: 9 October 2020).

Van Den Brande, J., Hillary, J. and Cullinane, C. (2019) SELECTIVE COMPREHENSIVES: GREAT BRITAIN Access to top performing schools for disadvantaged pupils in Scotland, Wales and England. Available at: https://www.suttontrust.com/wp-content/uploads/2019/12/SelectiveComprehensives-GreatBritain-1.pdf (Accessed: 2 October 2020).

Buzzeo, J. et al. (2016) Tackling unemployment among disadvantaged young people Research for Centrepoint Institute for Employment Studies. Available at: https://www.employment-studies.co.uk/system/files/resources/files/cpt0316.pdf (Accessed: 26 October 2020).

Carmichael, D. and Riddell, S. (2017) Autonomy, Rights and Children with Special Needs: A New Paradigm? An overview of statistics on SEN in England and ASN in Scotland. Available at: http://www.docs.hss.ed.ac.uk/education/creid/Projects/39_ii_ESRC_SENChildren_WP_1.pdf (Accessed: 25 October 2020).

Cattan, S., Crawford, C. and Dearden, L. (2014) The economic effects of pre-school education and quality. Available at: https://www.ifs.org.uk/uploads/publications/comms/R99.pdf (Accessed: 6 October 2020).

Challen, A. et al. (2011) UK resilience programme evaluation: final report Report. Available at: http://eprints.lse.ac.uk/51617/1/West_etal_UK-resilience-programme-evaluation-final-report_2011.pdf (Accessed: 19 October 2020).

Chanfreau, J. et al. (2016) Out of school activities during primary school and KS2 attainment. Available at: https://www.natcen.ac.uk/media/1135440/CLS-WP-2016-Out-of-school-activities-during-primary-school-and-KS2-attainment.pdf (Accessed: 24 September 2020).

Chapman, C. et al. (2016) The School Improvement Partnership Programme: Sustaining collaboration and Enquiry to Tackle Educational Inequity Final Project Report to Education Scotland August 2016. Available at: https://education.gov.scot/improvement/documents/sippfinalreportsept16.pdf (Accessed: 21 September 2020).

Child Poverty Action Group in Scotland (2020) THE COST OF LEARNING IN LOCKDOWN FAMILY EXPERIENCES OF SCHOOL CLOSURES IN SCOTLAND. Available at: https://cpag.org.uk/sites/default/files/files/The-cost-of-learning-in-lockdown-Scotland-FINAL.pdf (Accessed: 29 September 2020).

Colucci-Gray, L. and Reid, K. (2020) Appendix 3: Education: Children's Rights Impact Assessment (CRIA) STAGE 1: SCOPING (Background and Rights Framework). Available at: https://cypcs.org.uk/wpcypcs/wp-content/uploads/2020/07/CRIA-appendix-education.pdf (Accessed: 5 October 2020).

Congreve, E. and Norris, J. (2020) The Economics of Parenting: Children and Inequality in a Time of Shutdown. Available at: https://mk0fraserofalladdy84.kinstacdn.com/wp-content/uploads/2020/06/The-Economics-of-Parenting-emma-and-jonathan-formatted.pdf (Accessed: 23 September 2020).

Cooper, K. and Stewart, K. (2013) DOES MONEY AFFECT CHILDREN'S OUTCOMES? A SYSTEMATIC REVIEW. Available at: https://www.jrf.org.uk/sites/default/files/jrf/migrated/files/money-children-outcomes-full.pdf (Accessed: 24 September 2020).

Cullinane, C. and Montacute, R. (2020) COVID-19 and Social Mobility Impact Brief #1: School Shutdown. Available at: https://www.suttontrust.com/wp-content/uploads/2020/04/COVID-19-Impact-Brief-School-Shutdown.pdf (Accessed: 1 October 2020).

Damm, C. et al. (2020) Talent Match Evaluation: A Final Assessment. Available at: https://blogs.shu.ac.uk/talentmatch/files/2020/07/tm-eval-final-assessment-final-2020.pdf (Accessed: 20 October 2020).

Daniels, H. et al. (2020) School exclusion risks after COVID-19. Available at: http://www.education.ox.ac.uk/research/excluded-lives/ (Accessed: 22 September 2020).

Dartington Service Design Lab et al. (2018) EVIDENCE REVIEW / IMPROVING THE EARLY LEARNING OUTCOMES OF CHILDREN GROWING UP IN POVERTY: A RAPID REVIEW OF THE EVIDENCE. Available at: https://static1.squarespace.com/static/5c86931b4d87114c07db1adb/t/5d11f4b220828c00012d82de/1561457851435/Evidence+Review+SCUK+DSDL+2018.pdf (Accessed: 5 October 2020).

Davies, C. (2019) Exploring positive action as a tool to address under-representation in apprenticeships. Available at: https://www.equalityhumanrights.com/sites/default/files/research-report-123-positive-action-apprenticeships.pdf (Accessed: 29 October 2020).

Dimova, S. et al. (2020) The Nuffield Early Language Intervention. Available at: https://educationendowmentfoundation.org.uk/public/files/Nuffield_Early_Language_Intervention.pdf (Accessed: 12 October 2020).

Duta, A., Wielgoszewska, B. and Lannelli, C. (2020) 'Different degrees of career success: social origin and graduates' education and labour market trajectories', Advances in Life Course Research. doi: 10.1016/j.alcr.2020.100376.

Early Intervention Foundation (2020) Closing the gap on speech, language and communication in the early years: local case studies, Early Intervention Foundation. Available at: https://www.eif.org.uk/resource/closing-the-gap-on-speech-language-and-communication-in-the-early-years-local-case-studies (Accessed: 2 October 2020).

Edinburgh Poverty Commission (2020) A Just Capital Actions to End Poverty in Edinburgh. Available at: https://edinburghpovertycommission.org.uk/wp-content/uploads/2020/09/20200930_EPC_FinalReport_AJustCapital.pdf (Accessed: 2 October 2020).

Education and Skills Committee (2018a) What support works? Inquiry into attainment and achievement of school children experiencing poverty. Available at: https://sp-bpr-en-prod-cdnep.azureedge.net/published/ES/2018/7/12/What-support-works--Inquiry-into-attainment-and-achievement-of-school-children-experiencing-poverty/ESS052018R04.pdf (Accessed: 12 October 2020).

Education and Skills Committee (2018b) Young People's Pathways: a progress report on Developing the Young Workforce. Available at: https://sp-bpr-en-prod-cdnep.azureedge.net/published/ES/2018/11/27/Young-People-s-Pathways--a-progress-report-on-Developing-the-Young-Workforce/ESS052018R6.pdf (Accessed: 12 October 2020).

Education Endowment Foundation (2018a) Early Years Toolkit. Available at: https://educationendowmentfoundation.org.uk/public/files/Toolkit/complete/EEF-Early-Years-toolkit-July-2018.pdf (Accessed: 8 October 2020).

Education Endowment Foundation (2018b) Early years interventions. Available at: https://educationendowmentfoundation.org.uk/pdf/generate/?u=https://educationendowmentfoundation.org.uk/pdf/toolkit/?id=130&t=Teaching and Learning Toolkit&e=130&s= (Accessed: 14 October 2020).

Education Endowment Foundation (2018c) Teaching and Learning Toolkit. Available at: https://educationendowmentfoundation.org.uk/public/files/Toolkit/complete/EEF-Teaching-Learning-Toolkit-October-2018.pdf (Accessed: 20 October 2020).

Education Endowment Foundation (2018d) One to one tuition. Available at: https://educationendowmentfoundation.org.uk/pdf/generate/?u=https://educationendowmentfoundation.org.uk/pdf/toolkit/?id=135&t=Teaching and Learning Toolkit&e=135&s= (Accessed: 20 October 2020).

Education Endowment Foundation (2018e) Mentoring. Available at: https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/mentoring/ (Accessed: 25 October 2020).

Education Endowment Foundation (2020) Parental engagement. Available at: https://educationendowmentfoundation.org.uk/pdf/generate/?u=https://educationendowmentfoundation.org.uk/pdf/toolkit/?id=139&t=Teaching and Learning Toolkit&e=139&s= (Accessed: 24 October 2020).

Education Endowment Foundation (no date) Early Years - Supporting children's early learning and development. Available at: https://educationendowmentfoundation.org.uk/school-themes/early-years/ (Accessed: 8 October 2020).

Education Scotland (2015) Developing the Young Workforce Career Education Standard (3-18). Available at: https://education.gov.scot/documents/dyw2-career-education-standard-0915.pdf (Accessed: 19 October 2020).

Education Scotland (2016) How good is our early learning and childcare? Available at: https://education.gov.scot/improvement/Documents/Frameworks_SelfEvaluation/FRWK1_NIHeditSelf-evaluationHGIELC/HGIOELC020316Revised.pdf (Accessed: 7 October 2020).

Education Scotland (2018) Family Learning Framework Advice for Practitioners. Available at: https://education.gov.scot/improvement/Documents/FamilyLearningFrameworkApril18.pdf (Accessed: 7 October 2020).

Education Scotland (2019) How well are the Scottish Attainment Challenge authorities improving learning, raising attainment and closing the poverty-related attainment gap? Available at: https://education.gov.scot/Documents/SACSummaryReport.pdf (Accessed: 22 October 2020).

Education Scotland (2020a) Scottish Attainment Challenge. Available at: https://education.gov.scot/improvement/learning-resources/scottish-attainment-challenge (Accessed: 22 October 2020).

Education Scotland (2020b) Realising the ambition: Being Me National practice guidance for early years in Scotland. Available at: https://education.gov.scot/media/3bjpr3wa/realisingtheambition.pdf (Accessed: 6 October 2020).

Eivers, E., Worth, J. and Ghosh, A. (2020) Home learning during Covid-19: Findings from the Understanding Society Longitudinal Study Eemer Eivers, Jack Worth and Anusha Ghosh. Available at: https://www.nfer.ac.uk/media/4101/home_learning_during_covid_19_findings_from_the_understanding_society_longitudinal_study.pdf (Accessed: 23 September 2020).

Ellis, S. and Sosu, E. (2015) Closing Poverty-Related Attainment Gaps in Scotland's Schools: What Works? Available at: https://pureportal.strath.ac.uk/en/publications/closing-poverty-related-attainment-gaps-in-scotlands-schools-what (Accessed: 5 October 2020).

Elsley, S. (2014) Learning Lessons: Young People's Views on Poverty and Education in Scotland. Available at: https://www.cypcs.org.uk/ufiles/Learning-Lessons.pdf (Accessed: 5 October 2020).

Equality Challenge Unit (2016) Intersectionality in Scottish higher education institutions: examining socioeconomic status and protected characteristics. Available at: https://www.ecu.ac.uk/wp-content/uploads/2016/03/Intersectionality-in-Scottish-HEIs.pdf (Accessed 20 October 2020).

Ferguson, J. M. and Griffiths, D. (2018) 'Preparing versus persuading: Inequalities between Scottish state schools in university application guidance practices', Social Sciences. MDPI AG, 7(9). doi: 10.3390/SOCSCI7090169.

FMR Research (2017) Profiles of Young People: Inspiring Scotland 14:19 Fund. Available at: https://www.inspiringscotland.org.uk/wp-content/uploads/2018/03/Inspiring-Scotland-14-19-Fund-Young-People-Profile-Report-FMR.pdf (Accessed: 29 October 2020).

Fyfe, I. et al. (2018) The Impact of Community-based Universal Youth Work in Scotland. Available at: https://www.youthlinkscotland.org/media/3183/impact-of-community-based-universal-youth-work-in-scotland-november-2018.pdf (Accessed: 25 October 2020).

Gadsby, B. (2019a) Research briefing 1: Establishing the Employment Gap. Available at: https://impetus.org.uk/assets/publications/Report/Youth-Jobs-Gap-Establising-the-Employment-Gap-report.pdf (Accessed: 19 October 2020).

Gadsby, B. (2019b) Research Briefing 3 - Apprenticeships. Available at: https://impetus.org.uk/assets/publications/Research-Briefing-3-Apprenticeships.pdf (Accessed: 26 October 2020).

Glasgow Centre for Population Health (2016) Learning from the cost of the school day project. Available at: https://www.gcph.co.uk/assets/0000/6096/Briefing_paper_BP49_cost_of_school_day_WEB.pdf (Accessed: 12 October 2020).

Gorard, S. A. C., Siddiqui, N. and See, B. H. (2015) 'An evaluation of the "Switch-on Reading" literacy catch-up programme', British educational research journal, 41(4), pp. 596–612.

Gorard, S., Siddiqui, N. and See, B. H. (2017) 'What works and what fails? Evidence from seven popular literacy "catch-up" schemes for the transition to secondary school in England', Research Papers in Education. Routledge, 32(5), pp. 626–648.

Greater Manchester Combined Authority (2018) Apprenticeships and diversity in context in Greater Manchester. Available at: https://www.greatermanchester-ca.gov.uk/media/1921/removing-barriers-for-bame-people-accessing-apprenticeships.pdf (Accessed: 26 October 2020).

Gross, J. (2020) Closing the word gap: learning from five areas who have gained ground, Early Intervention Foundation. Available at: https://www.eif.org.uk/blog/closing-the-word-gap-learning-from-five-areas-who-have-gained-ground (Accessed: 12 November 2020).

HESA (2020) Higher Education Student Statistics: UK, 2018/19 - Student numbers and characteristics, HESA. Available at: https://www.hesa.ac.uk/news/16-01-2020/sb255-higher-education-student-statistics/numbers (Accessed: 30 September 2020).

Hughes, C. (2015) Ethnicity, poverty and youth employment: improving outcomes for young people. Available at: https://www.jrf.org.uk/report/ethnicity-poverty-and-youth-employment-improving-outcomes-young-people (Accessed: 21 October 2020).

Hughes, D. et al. (2016) Careers education: International literature review. Available at: https://educationendowmentfoundation.org.uk/public/files/Presentations/Publications/Careers_review.pdf (Accessed: 19 October 2020).

Hume, S. et al. (2018) Improving engagement and attainment in maths and English courses: insights from behavioural research. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/738028/Improving_engagement_and_attainment_in_maths_and_English-courses.pdf (Accessed: 21 October 2020).

Hunter Blackburn, L., Kadar-Satat, G, Riddell, S. and Weedon, E. (2016) Access in Scotland: Access to higher education for people from less advantaged backgrounds in Scotland. Available at: https://www.suttontrust.com/wp-content/uploads/2020/01/Access-in-Scotland_May2016.pdf (Accessed: 21 October 2020).

Impetus (2014) Digging deeper: Why white working class boys underachieve and what can be done about it. Available at: https://impetus.org.uk/assets/publications/Report/Impetus-PEF_Digging-Deeper1_June_2014.pdf (Accessed: 20 October 2020).

Information Services Division (2017) Child Health 27-30 Month Review Statistics: Scotland 2017/18. Available at: https://www.isdscotland.org/Health-Topics/Child-Health/Publications/2019-04-09/2019-04-09-Child-Health-27m-review-Report.pdf (Accessed: 29 September 2020).

Jerrim, J. (2017) EXTRA TIME: Private tuition and out-of-school study, new international evidence. Available at: https://www.suttontrust.com/wp-content/uploads/2017/09/Extra-time-report_FINAL.pdf (Accessed: 20 October 2020).

Julius, J. and Sims, D. (2020) Support for vulnerable pupils and the children of keyworkers Schools' responses to Covid-19. Available at: https://www.nfer.ac.uk/media/4075/schools_responses_to_covid_19_support_for_vulnerable_pupils_and_the_children_of_keyworkers.pdf (Accessed: 23 September 2020).

Kelly, M. (2016) POVERTY AND ETHNICITY: KEY MESSAGES FOR SCOTLAND. Available at: https://cpag.org.uk/sites/default/files/key_messages_scotland.pdf (Accessed: 1 October 2020).

Kintrea, K. (2018) Disadvantage and Place in Scottish Secondary Education, CR&DALL. Available at: http://w.cradall.org/sites/default/files/CRADALL_WP301_18_0.pdf (Accessed: 2 October 2020).

Kintrea, K., St Clair, R. and Houston, M. (2015) 'Shaped by place? Young people's aspirations in disadvantaged neighbourhoods', Journal of Youth Studies. Routledge, 18(5), pp. 666–684.

Klein, M. et al. (2020) Socioeconomic Inequalities in School Attendance in Scotland: Research Brief. University of Strathclyde. Available at: https://pureportal.strath.ac.uk/en/publications/socioeconomic-inequalities-in-school-attendance-in-scotland-resea (Accessed: 23 September 2020).

Langella, M. (2020) COVID-19 and Higher Education: some of the effects on students and institutions and how to alleviate them (blog). London School of Economics British and Irish Politics and Policy. Available at: https://blogs.lse.ac.uk/politicsandpolicy/covid19-higher-education/ (Accessed: 23 October 2020).

Lannelli, C., Smyth, E. and Klein, M. (2016) 'Curriculum differentiation and social inequality in higher education entry in Scotland and Ireland', British Educational Research Journal. 42(4), pp. 561-581.

Learning and Work Institute (2020a) Improving attainment among disadvantaged students in the FE and adult learning sector: An evidence review. Available at: https://learningandwork.org.uk/resources/research-and-reports/evidence-review-improving-attainment-among-disadvantaged-students-in-the-fe-and-adult-learning-sector/ (Accessed: 21 October 2020).

Learning and Work Institute (2020b) Evidence review: What works to support 15 to 24-year olds at risk of becoming NEET? Available at: https://learningandwork.org.uk/resources/research-and-reports/2140/ (Accessed: 20 October 2020).

Lucchino, P. (2016) ACTION TUTORING'S SMALL---GROUP TUITION PROGRAMME. Available at: https://actiontutoring.org.uk/wp-content/uploads/2017/08/action_tutoring_impact_evaluation.pdf (Accessed: 20 October 2020).

Mann, A. (2012) Work Experience: impact and delivery-insights from the evidence. Available at: https://www.educationandemployers.org/wp-content/uploads/2014/06/work_experience_report__april_2012_.pdf (Accessed: 19 October 2020).

Manstead, A. (2014) The wellbeing effect of education. Available at: https://esrc.ukri.org/files/news-events-and-publications/evidence-briefings/the-wellbeing-effect-of-education/ (Accessed: 1 October 2020).

Marcus, G. (2016) SPICe Briefing: Closing The Attainment Gap: What Can Schools Do? Available at: https://www.parliament.scot/ResearchBriefingsAndFactsheets/S5/SB_16-68_Closing_The_Attainment_Gap_What_Can_Schools_Do.pdf (Accessed: 21 September 2020).

Marryat, L. and Frank, J. (2019) 'Factors associated with adverse childhood experiences in Scottish children: A prospective cohort study', BMJ Paediatrics Open. BMJ Publishing Group, 3(1).

McBride, M. et al. (2018) Educational needs and experiences of refugee children in Scotland. Available at: www.whatworksscotland.ac.uk (Accessed: 21 September 2020).

McCluskey, G. et al. (2019) 'Exclusion from school in Scotland and across the UK: Contrasts and questions', British Educational Research Journal. Blackwell Publishing Ltd, 45(6), pp. 1140–1159.

McEnaney, J. (2019) 'Analysis: What is PEF money actually being spent on?', 17 March. Available at: https://www.heraldscotland.com/news/17502170.analysis-pef-money-actually-spent/ (Accessed: 30 October 2020).

McHardy, F. (2015) Play In & Around The Home: Play & Poverty in Fife. Available at: https://www.fifegingerbread.org.uk/site/assets/files/1142/the-gateway-play-and-poverty-in-fife-2015.pdf (Accessed: 13 October 2020).

McKinney, S. J., Stuart, H. and Lowden, K. (2020) 'Poverty and education in Scotland: reality and response', in Thompson, I. and Ivinson, G. (eds) Poverty in Education Across the UK: A Comparative Analysis of Policy and Place. Britol: Policy Press, pp. 65–86.

McPherson, C. (2020) '"It's just so much better than school": the redemptive qualities of further education and youth work for working-class young people in Edinburgh, Scotland', Journal of Youth Studies. Routledge, 23(3), pp. 307–322.

MCR Pathways (2018) MCR Pathways: Impact Report 2018: Helping young people realise their full potential through education. Available at: https://mcrpathways.org/wp-content/uploads/2018/06/GCC-Impact-Report-Final.pdf (Accessed: 30 October 2020).

Millard, W. et al. (2018) Boys on Track Improving support for Black Caribbean and Free School Meal-Eligible White Boys in London A research report. Available at: https://cfey.org/wp-content/uploads/2018/12/LKMco-and-GLA-Boys-on-Track-FINAL-version-for-web.pdf (Accessed: 5 October 2020).

Millard, W. et al. (2019) More than a Job's Worth: Making Career Education Age-Appropriate. Available at: https://cfey.org/wp-content/uploads/2019/04/Making-Careers-Education-Age-Appropriate-digi.pdf (Accessed: 19 October 2020).

Miller, J. et al. (2015) 'Exploring youths' perceptions of the hidden practice of youth work in increasing social capital with young people considered NEET in Scotland', Journal of Youth Studies. Routledge, 18(4), pp. 468–484.

Miller, S. et al. (2020) Peep Learning Together Programme. Available at: https://educationendowmentfoundation.org.uk/public/files/Projects/Evaluation_Reports/Peep_Learning_Together_Programme.pdf (Accessed: 8 October 2020).

Montacute, R. (2020) Social Mobility and Covid-19: Implications of the Covid-19 crisis for educational inequality. Available at: https://www.suttontrust.com/wp-content/uploads/2020/04/COVID-19-and-Social-Mobility-1.pdf (Accessed: 19 October 2020).

Mowat, J. G. (2018) 'Closing the attainment gap – a realistic proposition or an elusive pipe-dream?', Journal of Education Policy. Routledge, 33(2), pp. 299–321.

Mowat, J. G. (2020) 'Interrogating the relationship between poverty, attainment and mental health and wellbeing: the importance of social networks and support–a Scottish case study', Cambridge Journal of Education. Routledge, 50(3), pp. 345–370.

Mowat, J. and Macleod, G. (2019) Poverty, attainment and wellbeing: Making a difference to the lives of children and young people. Available at: https://www.scottishinsight.ac.uk/Portals/80/ReportsandEvaluation/Programme reports/Poverty Attainment and Wellbeing_Final Report.pdf (Accessed: 5 October 2020).

Mulcahy, E. and Baars, S. (2018) Partners In Progression Engaging Parents In University Access. London: Kings College.

Mullen, A. (2020) Barriers to Widening Access to Higher Education. Available at: http://www.parliament.scot/Research%20briefings%20and%20fact%20sheets/SB_10-07.pdf (Accessed: 5 October 2020).

Natcen Social Research (2017) Work experience and related activities in schools and colleges Research report Authors-NatCen Social Research and SQW. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/601373/Work_experience_and_related_activities_in_schools_and_colleges.pdf (Accessed: 19 October 2020).

National Children's Bureau (no date) Making it REAL. Available at: https://www.ncb.org.uk/what-we-do/together-we-deliver-better-childhood/focusing-early-years/making-it-real (Accessed: 14 October 2020).

National Union of Students (2014) The Pound in Your Pocket: Summary Report. Available at: https://www.nus.org.uk/PageFiles/12238/PIYP_Summary_Report.pdf (Accessed 14 October 2020).

Nelson, J. and Sharp, C. (2020) Schools' responses to Covid-19: Key findings from the Wave 1 survey. Available at: https://www.nfer.ac.uk/media/4097/schools_responses_to_covid_19_key_findings_from_the_wave_1_survey.pdf (Accessed: 23 September 2020).

Nesta (2019) Click, Connect... Learn? Available at: https://media.nesta.org.uk/documents/Click_connect..._learn___v7.pdf (Accessed: 20 October 2020).

Newton, B. et al. (2020) Supporting disadvantaged young people into meaningful work: An initial evidence review to identify what works and inform good practice among practitioners and employers. Available at: https://youthfuturesfoundation.org/wp-content/uploads/2020/04/v14-IES-evidence-review-FINAL.pdf (Accessed: 19 October 2020).

Observatory of Children's Human Rights Scotland (2020) Independent Children's Rights Impact Assessment on the Response to Covid-19 in Scotland. Available at: https://cypcs.org.uk/wpcypcs/wp-content/uploads/2020/07/independent-cria.pdf (Accessed: 23 September 2020).

Parents as First Teachers (no date) The Evidence Base — Parents as First Teachers. Available at: https://parentsasfirstteachers.org/the-evidence-base (Accessed: 14 October 2020).

Paull, G. and Patel, T. (2012) An international review of skills, jobs and poverty. Available at: https://www.jrf.org.uk/report/international-review-skills-jobs-and-poverty (Accessed: 1 October 2020).

Raffo, C. et al. (2007) Education and poverty A critical review of theory, policy and practice. Available at: https://www.jrf.org.uk/sites/default/files/jrf/migrated/files/2028-education-poverty-theory.pdf (Accessed: 24 September 2020).

Reeves, L. et al. (2018) 'Early talk boost: A targeted intervention for three year old children with delayed language development', Child Language Teaching and Therapy. SAGE Publications Ltd, 34(1), pp. 53–62.

Resurgo (2020) Resurgo Trust: Our Impact Approach. Available at: https://resurgo.org.uk/cms/uploads/2020/02/Annual-Impact-Report-2020.pdf (Accessed: 20 October 2020).

Riddell, S., Hunter Blackburn, L. and Minty, S., (2013) Widening Access To Higher Education: Scotland In UK Comparative Perspective. Available at: http://www.docs.hss.ed.ac.uk/education/creid/NewsEvents/52_v_CoWA_Paper.pdf (Accessed: 20 October 2020).

Rizzica, L. (2018) Raising Aspirations And Higher Education: Evidence From The UK's Widening Participation Policy. Temi di discussione (Working Papers) Number 1188. Available at: https://www.bancaditalia.it/pubblicazioni/temi-discussione/2018/2018-1188/en_tema_1188.pdf (Accessed: 20 October 2020).

Robertson, L. and McHardy, F. (2020) The Use of Flexible Educational Arrangements for Young People: Exploring Practice in Fife. Available at: https://www.povertyalliance.org/wp-content/uploads/2020/06/Flexible-Educational-Arrangements-for-young-people-Report-FINAL.pdf (Accessed: 22 September 2020).

Robinson, D. and Salvestrini, V. (2020) The Impact of Interventions For Widening Access To Education: a review of the evidence. Available at: https://epi.org.uk/publications-and-research/impact-of-interventions-for-widening-access-to-he/ (Accessed: 20 October 2020).

Russell Group (no date) Extended Medical Degree Programme at King's College London. Available at: https://russellgroup.ac.uk/policy/case-studies/extended-medical-degree-programme-at-king-s-college-london/ (Accessed 25 October 2020).

Russell Group (2018) How Russell Group Universities Are Supporting Students From Disadvantaged And Under-Represented Backgrounds To Succeed. Available at: https://russellgroup.ac.uk/media/5693/social-capital-briefing-march-2018.pdf (Accessed: 27 October 2020).

Sammons, P., Toth, K. and Sylva, K. (2015a) BACKGROUND TO SUCCESS Differences in A-level entries by ethnicity, neighbourhood and gender. Available at: https://ora.ox.ac.uk/objects/uuid:73234362-2489-45ee-b13d-994618770bf8 (Accessed: 10 October 2020).

Sammons, P., Toth, K. and Sylva, K. (2015b) Subject to Background What promotes better achievement for bright but disadvantaged students? Improving social mobility through education. Available at: http://www.educationengland.org.uk/documents/pdfs/2015-sutton-subject-to-background.pdf (Accessed: 2 October 2020).

Scobie, G. and Scott, E. (2017) Rapid evidence review: Childcare quality and children's outcomes. Available at: http://www.healthscotland.scot/media/1613/rapid-evidence-review-childcare-quality-and-childrens-outcomes.pdf (Accessed: 13 October 2020).

Scott, P. (2020) Fair Access to Higher Education: Progress And Challenges Annual Report 2020. Commissioner for Fair Access. Available at: https://www.gov.scot/publications/fair-access-higher-education-progress-challenges/ (Accessed: 20 October 2020).

Scottish Funding Council (2020a) Report on Widening Access 2018-19. Available at: http://www.sfc.ac.uk/web/FILES/statisticalpublications_sfcst062020/ROWA_2018-19.pdf (Accessed: 30 September 2020).

Scottish Funding Council (2020b) National Ambition for Care-experienced Students. Available at: http://www.sfc.ac.uk/web/FILES/corporatepublications_sfccp012020/SFCCP012020_National_Ambition_for_Care_Experienced_Students.pdf (Accessed 5 October 2020).

Scottish Government (2014) Developing the young workforce: Scotland's youth employment strategy - gov.scot. Available at: https://www.gov.scot/publications/developing-young-workforce-scotlands-youth-employment-strategy/ (Accessed: 21 September 2020).

Scottish Government (2015) TACKLING INEQUALITIES IN THE EARLY YEARS: Key messages from 10 years of the Growing Up in Scotland study. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/research-and-analysis/2015/10/tackling-inequalities-early-years-key-messages-10-years-growing-up-scotland-study/documents/tackling-inequalities-early-years-key-messages-10-years-growing-up-scotland-study/tackling-inequalities-early-years-key-messages-10-years-growing-up-scotland-study/govscot%3Adocument/00486755.pdf?forceDownload=true (Accessed: 1 October 2020).

Scottish Government (2016a) A Blueprint for Fairness: The Final Report of the Commission on Widening Access. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/progress-report/2016/03/blueprint-fairness-final-report-commission-widening-access/documents/00496619-pdf/00496619-pdf/govscot%3Adocument/00496619.pdf?forceDownload=true (Accessed: 21 September 2020).

Scottish Government (2016b) A plan for Scotland: the Scottish Government's programme for Scotland 2016-2017. Available at: https://www.gov.scot/publications/plan-scotland-scottish-governments-programme-scotland-2016-17/pages/2/ (Accessed: 28 October 2020).

Scottish Government (2016c) National Improvement Framework for Scottish Education: Achieving Excellence and Equity. Available at: https://dera.ioe.ac.uk/25158/2/00491758_Redacted.pdf (Accessed: 10 October 2020).

Scottish Government (2016d) REVIEW OF FAMILY LEARNING SUPPORTING EXCELLENCE AND EQUITY. Available at: https://education.gov.scot/improvement/Documents/Family-Learning-Report-full-document.pdf (Accessed: 6 October 2020).

Scottish Government (2017a) National Improvement Framework: Consultation on measuring the attainment gap and milestones towards closing it. Available at: https://consult.gov.scot/national-improvement-framework/measuring-the-attainment-gap/results/summaryreport11dec2017.pdf (Accessed: 30 September 2020).

Scottish Government (2017b) 2018 National Improvement Framework and Improvement Plan. Available at: https://www.gov.scot/publications/2018-national-improvement-framework-improvement-plan/pages/5/ (Accessed: 30 September 2020).

Scottish Government (2017c) A Research Strategy for Scottish education. Available at: https://www.gov.scot/publications/research-strategy-scottish-education/ (Accessed: 7 October 2020).

Scottish Government (2017d) Drivers of poverty: analytical paper. Available at: https://www.gov.scot/publications/drivers-of-poverty/ (Accessed: 22 September 2020).

Scottish Government (2017e) Young people's experience of education and training from 15-24 years A Report to the Scottish Government. Available at: https://www.gov.scot/publications/young-peoples-experience-education-training-15-24-years/ (Accessed 5 October 2020).

Scottish Government (2017f) A Blueprint for 2020: The expansion of early learning and childcare in Scotland. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2017/10/blueprint-2020-expansion-early-learning-childcare-scotland-quality-action-plan/documents/00526782-pdf/00526782-pdf/govscot%3Adocument/00526782.pdf (Accessed: 13 October 2020).

Scottish Government (2017g) Expansion of early learning and childcare in Scotland: Quality Action Plan. Available at: https://www.gov.scot/publications/blueprint-2020-expansion-early-learning-childcare-scotland-quality-action-plan/pages/4/ (Accessed: 5 October 2020).

Scottish Government (2017h) Included, engaged and involved part 2: preventing and managing school. Available at: https://www.gov.scot/publications/included-engaged-involved-part-2-positive-approach-preventing-managing-school/ (Accessed: 29 September 2020).

Scottish Government (2018a) Improving educational outcomes for children and young people from travelling cultures. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2018/12/improving-educational-outcomes-children-young-people-travelling-cultures/documents/improving-educational-outcomes-children-young-people-travelling-cultures/improving-educational-outcomes-children-young-people-travelling-cultures/govscot%3Adocument/00543573.pdf?forceDownload=true (Accessed: 1 October 2020).

Scottish Government (2018b) 15-24 Learner Journey Review. Available at: https://www.gov.scot/publications/15-24-learner-journey-review-9781788518741/ (Accessed: 22 September 2020).

Scottish Government (2018c) International Council of Education Advisers Report 2016-18. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/independent-report/2018/06/international-council-education-advisers-report-2016-18/documents/00537450-pdf/00537450-pdf/govscot%3Adocument/00537450.pdf (Accessed: 28 October 2020).

Scottish Government (2018d) “Learning together”: Scotland’s national action plan on parental involvement, parental engagement, family learning and learning at home 2018 - 2021. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2018/08/learning-together-scotlands-national-action-plan-parental-involvement-parental-engagement/documents/00539357-pdf/00539357-pdf/govscot%3Adocument/00539357.pdf?forceDownload=true (Accessed: 7 October 2020).

Scottish Government (2018e) Annex: Qualitative Research for the Evaluation of the Attainment Scotland Fund. Available at: https://dera.ioe.ac.uk/31284/2/00532726.pdf (Accessed: 30 October 2020).

Scottish Government (2018f) No One Left Behind: Review of Employability Services: Research of User and Provider Journeys. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2018/12/one-left-behind-review-employability-services/documents/research-user-provider-journeys/research-user-provider-journeys/govscot%3Adocument/research-user-provider-journeys.pdf (Accessed: 29 October 2020).

Scottish Government (2018g) Parents’ views and use of early learning and childcare: report. Available at: https://www.gov.scot/publications/exploring-parents-views-use-early-learning-childcare-scotland/pages/8/ (Accessed: 28 October 2020).

Scottish Government (2019a) Achievement of Curriculum for Excellence (CfE) Levels 2018-19 - gov.scot. Available at: https://www.gov.scot/publications/achievement-curriculum-excellence-cfe-levels-2018-19/ (Accessed: 24 September 2020).

Scottish Government (2019b) Developing the young workforce: fifth annual progress report 2018-2019. Available at: https://www.gov.scot/publications/developing-young-workforce-fifth-annual-progress-report-2018-19/ (Accessed: 29 October 2020).

Scottish Government (2019c) Summary statistics for schools in Scotland no. 10: 2019 edition. Available at: https://www.gov.scot/publications/summary-statistics-schools-scotland-no-10-2019-edition/pages/8/ (Accessed: 22 September 2020).

Scottish Government (2020a) Poverty and Income Inequality in Scotland 2016-19. Available at: https://www.gov.scot/publications/poverty-income-inequality-scotland-2016-19/pages/4/ (Accessed: 1 October 2020).

Scottish Government (2020b) Summary Statistics for Follow-up leaver Destinations, No. 2: 2020 Edition. Available at: https://www.gov.scot/publications/summary-statistics-follow-up-leaver-destinations-no-2-2020-edition/ (Accessed: 21 September 2020).

Scottish Government (2020c) National Improvement Framework and Improvement Plan: 2020. Available at: https://www.gov.scot/publications/2020-national-improvement-framework-improvement-plan/ (Accessed: 1 October 2020).

Scottish Government (2020d) Coronavirus (COVID-19): supporting vulnerable children and young people – data intelligence report. Available at: https://www.gov.scot/publications/supporting-vulnerable-children-young-people-data-intelligence-report/ (Accessed: 29 September 2020).

Scottish Government (2020e) Coronavirus (COVID-19): children, young people and families - evidence and intelligence report. Available at: https://www.gov.scot/publications/children-young-people-families-covid-19-evidence-intelligence-report/pages/4/ (Accessed: 23 September 2020).

Scottish Government (2020f) Attainment Scotland Fund evaluation: third interim report - year 4. Available at: https://www.gov.scot/publications/evaluation-attainment-scotland-fund-third-interim-report-year-4/ (Accessed: 27 October 2020).

Scottish Government (2020g) Tackling Child Poverty Delivery Plan: Second year progress report 2019-20. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2020/08/tackling-child-poverty-delivery-plan-second-year-progress-report-2019-20/documents/tackling-child-poverty-delivery-plan-second-year-progress-report-2019-20/tackling-child-poverty-delivery-plan-second-year-progress-report-2019-20/govscot%3Adocument/tackling-child-poverty-delivery-plan-second-year-progress-report-2019-20.pdf?forceDownload=true (Accessed: 12 November 2020).

Scottish Government (no date) Schools: Pupil attainment: closing the gap. Available at: https://www.gov.scot/policies/schools/pupil-attainment/ (Accessed: 27 October 2020).

Seith, E. (2020) 'Are these "positive destinations" really so positive?', TES, 16 January. Available at: https://www.tes.com/news/are-these-positive-destinations-really-so-positive (Accessed: 30 September 2020).

Sim, M. et al. (2018) Teaching, pedagogy and practice in early years childcare: An evidence review | Early Intervention Foundation. Available at: https://www.eif.org.uk/report/teaching-pedagogy-and-practice-in-early-years-childcare-an-evidence-review (Accessed: 2 October 2020).

Skills Commission (2017) SPOTLIGHT ON...Apprenticeships and Social Mobility. Available at: https://www.policyconnect.org.uk/sc/sites/site_sc/files/report/469/fieldreportdownload/aspotlightonapprenticeshipssocialmobilityweb.pdf (Accessed: 26 October 2020).

Skills Development Scotland (2020) Annual Participation Measure for 16-19 year olds in Scotland 2020. Available at: https://www.skillsdevelopmentscotland.co.uk/media/46999/2020-annual-participation-measure-report.pdf?url=https%3A%2F%2Fwww.skillsdevelopmentscotland.co.uk%2Fmedia%2F45904%2F2019_annual-participation-measure-report.pdf&data=02%7C01%7CCourtney.Hendry%40sds. (Accessed: 24 September 2020).

Social Finance (2016) New Insights into Improving Outcomes for At-Risk Youth - The Newcastle Experience. Available at: https://impetus.org.uk/assets/publications/Report/Social-Finance-report-as-of-05.07.2016.pdf (Accessed: 20 October 2020).

Sosu, E. and Ellis, S. (2014) Closing the attainment gap in Scottish education. Available at: https://www.jrf.org.uk/report/closing-attainment-gap-scottish-education.

Stewart, K. and Waldfogel, J. (2017) The role of early years policy in promoting social mobility in England. Available at: https://www.suttontrust.com/wp-content/uploads/2019/12/Closing-Gaps-Early_FINAL.pdf (Accessed: 2 October 2020).

Sylva, K. et al. (2014) Students' educational and developmental outcomes at age 16 Effective Pre-school, Primary and Secondary Education (EPPSE 3-16) Project Research Report. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/351496/RR354_-_Students__educational_and_developmental_outcomes_at_age_16.pdf (Accessed: 6 October 2020).

The Social Innovation (2017) An evaluation of the Moving on Up initiative. Available at: https://www.bteg.co.uk/sites/default/files/Moving on Up - full evaluation report_.pdf (Accessed: 21 October 2020).

Torgerson, C. J. et al. (2018) Tutor Trust: Affordable Primary Tuition Evaluation report and executive summary. Available at: https://www.thetutortrust.org/Handlers/Download.ashx?IDMF=f327d9b8-3ec9-413d-bdb3-5d987d762e9a (Accessed: 20 October 2020).

Treanor, M. (2017) Can we put the 'poverty of aspiration' myth to bed now? Available at: https://era.ed.ac.uk/bitstream/handle/1842/25787/CRFR briefing 91 - Treanor.pdf?sequence=1&isAllowed=y (Accessed: 2 October 2020).

UCAS (no date) Widening Access and Participation. Available at: https://www.ucas.com/advisers/guides-resources-and-training/guides-and-resources/widening-access-and-participation (Accessed: 10 October 2020).

Universities Scotland (2017) Working to Widen Access. Available at: https://www.universities-scotland.ac.uk/publications/working-to-widen-access/ (Accessed: 10 October 2020).

Wane, K. (2019) SPICe Briefing: The expansion of early learning and childcare. Available at: https://sp-bpr-en-prod-cdnep.azureedge.net/published/2019/4/16/The-expansion-of-early-learning-and-childcare/SB 19-20.pdf (Accessed: 28 October 2020).

White, J. (2017) Rapid Evidence Review: Reducing the attainment gap – the role of health and wellbeing interventions in schools. Available at: http://www.healthscotland.scot/media/1694/reducing-the-attainment-gap-the-role-of-health-and-wellbeing-interventions-in-schools.pdf (Accessed: 19 October 2020).

White, J. (2018) Children's social circumstances and educational outcomes. Available at: http://www.healthscotland.scot/media/2049/childrens-social-circumstances-and-educational-outcomes-briefing-paper.pdf (Accessed: 24 September 2020).

Youth Futures Foundation and Impetus (2020) Young, vulnerable, and increasing-why we need to start worrying more about youth unemployment. Available at: https://impetus.org.uk/assets/publications/Impetus_YFF_NEET_Report.pdf (Accessed: 19 October 2020).

YouthLink Scotland (2020a) National Case Study Evaluation 2020: Youth Work's Contribution to the Scottish Attainment Challenge. Available at: https://www.youthlinkscotland.org/media/5439/national-evaluation-publication.pdf (Accessed: 12 November 2020).

YouthLink Scotland (2020b) The Impact of Community-based Universal Youth Work in Edinburgh. Available at: https://www.youthlinkscotland.org/media/5480/universal-youth-work-study-in-edinburgh-final.pdf (Accessed: 12 November 2020).

YouthLink Scotland (no date) The Youth Work Outcomes. Available at: https://www.youthlinkscotland.org/policy/youth-work-outcomes/ (Accessed: 21 October 2020).

Appendix A: Review Inclusion/Exclusion Criteria

Inclusion criteria	• Engagement with formal educational establishments from pre-school to end of further/higher education (including apprenticeships, other routes from school into employment) • Evidenced and emerging activity and policy aimed at addressing poverty-related attainment gap, engagement with formal education and at ensuring transitions from education into work/training (including apprenticeships) • Activities/interventions in non-formal educational settings, but only where there is a clear intention to improve engagement/attainment within formal educational settings • Work with broader families and networks, where the intention is educational engagement, access and attainment • Educational settings as an enabler for broader attachment and relationship work (with individuals and families) • Consideration of how different demographic groups may be affected by the poverty-related attainment gap e.g. girls, BAME, disability. • UK only
Exclusion Criteria	• Interventions and policy that don't focus on addressing poverty/trauma or poverty-related attainment gap • Whole population approaches to educational engagement • General employability and labour market skills (may be considered as a separate research plan) • Engagement in educational and work/skills pathways beyond the end of the formal education journey at age 21-22

Appendix B: Review Literature Sources

Public bodies	Audit Scotland, Children and Young People's Commissioner Scotland, Education Institute of Scotland, Education Scotland, Poverty and Inequality Commission, Public Health Information Network, Scottish Government, Scottish Parliament and Information Centre (SPICe), Skills Development Scotland
Civil society organisations	Aberlour, Action for Children, Barnardo's, The Child Poverty Action Group, Children's First, Children in Scotland, Children's University, NSPCC, One Parent Families Scotland, Youthlink Scotland
Academic Centres/Studies	CELCIS (Strathclyde University), Centre for Research in Education Inclusion and Diversity (Edinburgh University), Centre for Vocational Educational Research (LSE), Children and Young People's Centre for Justice (Strathclyde University) Growing Up in Scotland, Robert Owen Centre for Educational Change (Glasgow University), Understanding Inequalities (Edinburgh University), Warwick Institute for Employment Research, What Works Scotland

Think tanks and philanthropic bodies	Centre for Education and Youth, Early Intervention Foundation, Education Endowment Foundation, Education Policy Institute, Institute for Employment Studies, Impetus, Joseph Rowntree Foundation, Learning and Work Institute, National Children's Bureau, National Foundation for Educational Research, Nesta, Nuffield Foundation, Sutton Trust, Tavistock Institute, Youth Employment UK

Appendix C: Evidence reviews

Stage of learner journey	Existing evidence reviews
Early years	Bonetti, S., and Brown, K. (2018). Structural elements of quality early years provision - A review of the evidence. Education Policy Institute. Dartington Service Design Lab, Save the Children, University of Plymouth, and Centre for Evidence and Implementation. (2018). Evidence Review – Improving the Early Learning Outcomes of Children Growing Up in Poverty: A Rapid Review of the Evidence Base. Scobie, G. and Scott, E. (2017). Rapid evidence review: Childcare quality and children's outcomes. Edinburgh: NHS Scotland. Scottish Government (2016). Review of Family Learning: Supporting Excellence and Equity. Edinburgh: Scottish Government. Sim, M., Belanger, J., Hocking, L., Dimova, S., Iakovidou, E., Janta, B., and Teager, W. (2018). Teaching, pedagogy and practice in early years childcare: An evidence review. Early Intervention Foundation.
School-level	White, J. (2017). Rapid Evidence Review: Reducing the attainment gap – the role of health and wellbeing interventions in schools. Edinburgh: NHS Health Scotland.
Post-16	Learning and Work Institute (2020). Evidence review: What works to support 15 to 24-year olds at risk of becoming NEET? Learning and Work Institute (2020). Improving attainment amongst disadvantaged students in the FE and adult learning sector: An evidence review. Newton, B., Sinclair, C., Tyers, C. and Wilson, T. (2020). Supporting disadvantaged young people into meaningful work. An initial evidence review to identify what works and inform good practice among practitioners and employers. Institute for Employment Studies. Robinson, D and Salvestrini, V. (2020). The impact of interventions for widening access to higher education. Education Policy Institute

Appendix D: Summary table on solutions

This table summarises solutions to the poverty-related attainment gap identified in the review across key stages of the learner journey. The purpose of the table below is to compare the evidence, practice and policy against an ideal 'good solution' scenario.

Stage	Solution	Evidence	Policy & practice
		What does good look like? • Robust evidence base of solutions • Long-term and established evidence base • Multiple sources/methodologies • Tested in Scotland • Interventions that are proven, promising, interesting • The gaps in evidence and our knowledge	**What does good look like?** • Models(s) of practice informed by strong evidence base • Model(s) of practice accepted and understood by relevant organisations and communities Model(s) of practice in widespread use Model(s) of practice well defined and supported by guidance • Policy is informed by evidence base • Policy advocates and supports best practice • Demand in the system is met by resources • Emerging practice is being heard by policy makers
Pre-school	Increased parental engagement to understand children's development and encourage family learning	• There is **robust evidence**, from multiple sources of UK-based evidence on the impact of parental engagement/ family learning. • **Robust evidence** review showed that parental engagement has a moderate impact on attainment, for moderate cost, based on moderate evidence. Parental approaches lead to approximately four additional months' progress in child attainment over the course of a year. • There is **interesting evidence** that more intensive approaches, which target particularly families, are associated with higher learning gains than those that aim to increase parental engagement more generally. • Evaluation evidence from family learning interventions are **mainly drawn from England.** • There is a small evidence base of the **impact of family learning in Scotland,** this includes an ongoing evaluation of the family learning programme delivered by Peeple.	• There is a variety of practices in this area but some similarities between approaches such as working 1-2-1 with families are in widespread use. • **Scottish Government (SG) policy supports** a role for parents/ carers in family learning and publishes strategic frameworks through the National Action Plan for Parental Involvement throughout education lifecycle. • **Relevant organisations define and advocates** for models of practice and make link to evidence base.
	High quality early years childcare is available to all eligible families	• There is an **accepted evidence** base that children from disadvantaged backgrounds can benefit in terms of social, emotion and educational outcomes from attending high-quality childcare. • This **evidence comes from multiple sources - evidence reviews** and studies	• There are **not accepted models of practice** that are linked to evidence base – there is no consistent model of what high quality childcare looks like. • **SG have put in place national standards** for high quality childcare and for improving collaboration between early years childcares and other agencies to improve outcomes. These are universal standards that include private childcare.

Stage	Solution	Evidence	Policy & practice
		• There are **gaps in the evidence base** for approaches that target just disadvantaged children. The evidence looks at the outcomes for disadvantaged children *within* universal childcare provisions. • There is a **lack of evidence** about the impact of childcare on children under 3 years old. • There is a lack of an accepted consistent definition of 'high quality' childcare. However, a recent international review of evidence pointed to factors such as staff training and warm interactive relationships between staff and children. • This evidence base contains UK studies, English only or international studies. There is not a Scottish evidence base. • There is evidence that early years education providers struggle to engage with '**hard-to-reach' parents**.	• They have defined high quality childcare along the same lines as a recent international review of evidence, specifically around a qualified workforce. • **SG has policy** to increase the provision of free accessible childcare and have an expanded provision for 2 year olds from families on low incomes recognising the positive impact of high quality childcare on disadvantaged children although this isn't linked to a specific evidence base on childcare for under 3 year olds. • There is emerging recommendations on strategies to engaging with **hard-to-reach parents** such as providing translated materials, being aware of stigma and taking a relational approach.
	High quality outdoor play-based learning available to all eligible young people.	• There is **some evidence** that high quality outdoor learning has a positive impact on children's social, physical and cognitive development. • This **evidence is from very limited sources** and we don't know the locale of this evidence. • **Limited qualitative evidence from Scotland** suggests a possible relationship between children and their families in poverty and the positive impacts on social connection and wellbeing.	• There is **evidence of accepted practice** in outdoor play-based learning • The **SG requires the opportunity** for outdoor play within its national standards for childcare.
	Targeted interventions to reduce the 'early language gap' for children from poorer backgrounds and support early language and communication development	• There is **strong UK based evidence** of the link between poverty and worse outcomes in language and cognitive development. • There **is extensive evidence of the impact of communication and language based approaches to learning** from several high quality studies from the UK. • There is an **evidence gap** of the impact of these approaches specifically on disadvantaged children and those under 3 years old. • However, there is **some promising evidence** from a couple of UK-based studies that shows the intensive programme to support early literary can close the attainment gap by three months and positively impact on children who have English as a second language. • There is **US based evidence** on the effectiveness of general programmes to support the development of numeracy skills. • There is **not a Scottish evidence base** on this solution.	• There is **some small scale UK-based emerging evidence** on good practice across local authorities that have closed the attainment gap on early cognitive and language development. • There is **no evidence** to suggest that this emerging good practice is accepted or widespread.

Stage	Solution	Evidence	Policy & practice
School	Whole school improvement approaches including high quality teaching and school leadership to support reducing the attainment gap	• There is a **substantial evidence base** from throughout the UK on range of whole school approaches including supporting family learning and high quality teaching. • There is evaluation evidence from **one programme set specifically in Scotland** which showed success as fostering collaboration and school improvement.	• There are **models of practice** this is informed by the evidence base and widely accepted by organisations and communities. • A number of **accepted models of practice** have been shown to work well in closing the attainment gap, for example, literacy catch up schemes, inclusive pedagogies that focus on individual learner need • **Policy is informed by evidence** – move to multi intervention models in broader local authority wide approaches. • **Policy backed by resources** – £750 million School Attainment Fund and additional funding for specific local authorities. Targeted fund for **care experience children** to deliver targeted initiatives, activities and resources specifically to this group.
	Mental health and stress awareness sessions in schools to support the health and wellbeing of children and young people	• **Evidence from one Scottish** based source on impact of programme found short term improvements in wellbeing but no impact on attainment. • **Limited evidence** on health and wellbeing interventions which work, with which populations and in which contexts.	• **Lack of practice and evidence:** Many schools report confidence in selecting literacy or numeracy interventions but less so in identifying health/wellbeing approaches • **Gap between policy, evidence and practice**. 2015 National Improvement Framework for Scottish Education identified priority of improving children and young people's health and wellbeing but no guidance on practice or link to evidence base.
	Strategies on teaching reading comprehension, meta-cognition and self-regulations to ensure children and young people from all backgrounds are gaining the most from their education	• **Extensive, robust evidence** from UK-wide sources than these solutions have the biggest impact on attainment. • There is **limited evidence** on the impact of these solutions on disadvantaged children. • Internationally there is an **emerging evidence** base that these strategies, involving parents and delivered at the home level, can have a positive impact on learning. • There is **no Scottish specific evidenced base** for this solution. • There is limited evidence on the experiences of **refugee children**. Small amount of evidence show greater need for English language teaching provision.	• **SG's Scottish Attainment** Fund supports and funds interventions to tackle attainment but there is no defined or supported models of practice in this area. **Policy does not link to evidence base**.
	Strategies to increase parental engagement and learning support for all children	• Evidence base on impact of parent engagement interventions at school-level on attainment is mixed and inconclusive particularly for disadvantaged families. • There is no **Scottish specific evidenced base** for this solution. • Most evidence from primary school not secondary school	• **Mixture of emerging models of practice** on parental engagement at school level including initiatives such as communicating with parents, parent workshops and targeted initiatives to children with challenging needs. • **Communities and organisations in this area identify difficulty** of parental engagement and need for support in defining and implementing practice.

Stage	Solution	Evidence	Policy & practice
			• **Gap between policy, practice and evidence. Policy does not support practice** but does set out 'vision' for parental engagement throughout all of school lifecycle delivered through Attainment Scotland Fund.
	Changes to the school environment and polices to address the impact of poverty on participation in education	• **Accepted evidence base** from multiple sources shows income inadequacy is key barrier that impacts on children from low income households being able to fully participate in education. • **Evaluation evidence from one Scottish** based source for this solution.	• There is **no accepted or widespread model of practice** in this area. • **Limited evidence base** around models of practice that address initiatives that address socioeconomic factors in school settings • **Emerging practice in organisations and communities not supported by evidence base or policy.** This includes initiatives to identify and policy and practices that support financial barriers in education (eg, CPAG Cost of the School Day) • **Emerging practice in supporting Gypsy/ Traveller** communities with digital exclusion and community education approaches.
	Career guidance and further education opportunities to children and young people from primary school onwards	• **Limited evidence base research** on impact of careers education in reducing educational inequalities. Some evidence from US found positive outcomes of schools' career provision on educational, economic and social outcomes. However, there is an established correlation been NEET status and confusion/ uncertainty about careers. • **Emerging international evidence** that careers education would benefit from early intervention model. • **Extensive international evidence** on practice of parental engagement in their children's career development • **Lack of evidence on UK-based interventions** and the effects on different socioeconomic groups. • There is **no Scottish specific evidence** for this intervention.	• **Various models of practice exists** in relevant organisations and communities, not linked to evidence base. • **Models of practice not liked to policy**, but careers information, guidance and advice is 'central' to Scottish education policy. • Relevant organisations provide models of practice on careers advice throughout education lifecycle that is not widely accepted or linked to practice.
	Improvement in access to additional educational instruction outside of school	• There is **widely accepted evidence** that additional instruction outside of schools (tutoring, after school clubs, extra lessons) is one of the most effective ways to reduce the poverty based attainment gap. • This evidence base is mostly from UK studies or English only studies. • There is small **Scottish evidence base** on tutoring, specifically peer-tutoring approaches.	• **There are accepted models of practice** linked back to the evidence base which shows that the best additional instruction is linked to normal teaching, monitored by children's existing teachers and delivered by qualified teachers. • There is a **lack of both policy and provision in Scotland** of additional educational instruction compared to other nations of the UK. • Where there is tutoring provision in Scotland this is delivered by third sector organisations and is not linked to established good practice.
	Providing mentoring initiatives to children	• **Extensive evidence base** from UK wide sources that shows little impact on attainment	• **Some emerging models of practice** from limited sources

Stage	Solution	Evidence	Policy & practice
	and young people to support engagement and attainment at school	• **Small scale programmatic evaluation, from Scotland**, shows positive outcomes particularly for non-academic outcomes such as attitudes to school and more positive outcomes for more disadvantaged young people. Evaluation also showed increase in literacy and numeracy attainment for **care-experienced young people.**	• There is **no evidence** to suggest that this emerging good practice is accepted or widespread.
	Community-based youth work with the aim of increasing engagement with education	• **Limited evidence on impact** of community youth work. Difficult capture and measure impact. • **Limited evidence base** does not contain studies from Scotland. • **Some small scale evaluations** evidence the value of youth work to young people who are struggling at school.	• **Some emerging** but not widespread models of practice. • **SG provide funding** for third sectors youthwork intermediaries, but policy does not define practice.
Post-school **Transition into work, training and education**	Increased resources available for delivery of personalised employment support and advice for young people	• **Lack of evidence from Scottish sources**, most research comes from England. • **Robust and accepted evidence** of specific models of practice from English studies. • **Lack of evidence** on the outcomes of this solution, especially for disadvantaged young people. Evidence from universal approaches that are *not targeted to* disadvantaged young people. • Much of existing evidence base comes from US sources.	• **Widespread models of practice in England** linked to evidence base. • **Gap between practice in Scotland and policy intention**. SG previous programme of government focused on improving employment outcomes for young people. • **SG policy** recognised the need for extra support and guidance for **specific groups of young people** (eg, care experienced young people, disabled young people etc.). • Emerging practice of interventions supporting **underrepresented groups** but evidence of gaps in provision. • Range of agencies involved in delivery – no consistent model of practice across different local authorities. • **More demand than resources.** Many employment programmes offered by small third sector organisations. Issue of sustainability of third sector support has been flagged.
	Access to good quality work experience is available to all young people	• **Evidence base, including studies from Scotland**, identified benefit of work experience in overcoming barriers to employment • Evidence from universal approaches *not targeted to* disadvantaged young people.	• There are a **lack of models of practice** in work experience. • There is **evidence that informal practices take place**, ie, young people organising their own work experience, which re-enforces existing inequalities between young people.
	Good quality interventions for specific groups of young people (e.g. BAME, Care Experienced) are implemented with clear outcomes	• **Evidence from one source in England** indicated that belonging to certain groups (looked after children and involvement in children's social care) is strong predictor of future NEET status. • **Established UK-based evidence** on employment gaps for certain groups of young people. • There is **not a Scottish evidence base on this solution**. • **Lack of evidence** on the effectiveness of targeted approach to BAME groups	• **Emerging non-widespread models of practice** in England. • **Identified practice gap** – few interventions address young person's wide family experiences. • **Emerging practice not being heard by policy.**

Stage	Solution	Evidence	Policy & practice
	Good quality traineeships and apprenticeships are available to all young people	• **Robust international evidence review** and review of interventions in England and Wales found a number of approaches that can deliver positive employment and earning outcomes, but outcomes not as strong for lower level apprenticeships • There is evidence of low participation in apprenticeships by **BAME groups**. • There is **not a Scottish evidence base** on this solution.	• There are **accepted features within models of practice**, but it is unclear if linked to evidence base. • **Evidence of bad models of practice** exist in England, ie, available opportunities focus on those who need to least training. • **Gap between practice in Scotland** and policy intention. SG previous programme of government focused on improving employment outcomes for young people. • Relevant organisations in England have identified robust and widespread models of practice.
	Increased support and guidance available for all young people intending to access Further Education	• There is a **limited research in this sector** especially in the UK and in disadvantaged groups. • Review of evidence by English institution found that mixed evidence of the outcomes of targeted interventions for disadvantaged young people which aimed to increase their qualifications. • There is no evidence base on **outcomes of specific groups of learners** (BAME groups, young carers, care leavers) • There is **not a Scottish evidence base** on this solution.	• **SG reviewed practice of learner journeys** from 15-24 and set out models of practice in supporting young people into further and higher education.
Post-school **Transition into higher education**	Academic-based bridging programmes that provide disadvantaged learners the opportunity to supplement their learning	• Evidence that 'bridging programmes' such as summer schools, gateway programmes, top-up schemes are the **most successful programmes** in enabling transition to HE.	• Practice that 'bridging programmes' effectively used with **mature entrants from groups underrepresented in higher education**.
	Young people and their families are aware of what financial aid support is available and university and know the process of how to access it	• There is **not a Scottish evidence base** on this solution. • Limited evidence from UK found that financial support is a high-cost widening participation intervention that has a small but positive effect on enrolment. • **Evidence from US** of improved retention and improved attainment	• **Scottish Government's Scottish Framework for Fair Access** identifies financial support as the **most effective interventions for disadvantaged or underrepresented groups** and identified good practice as linking financial support back to attainment and attendance at university. However, these approaches are not backed by evidence base. • **Some emerging practice** of linking financial support to attainment and attendance (eg, Glasgow University's Talent Support Scholarship Programme) working with **underrepresented groups** as well as those with a low income.
	Clear advice and guidance is provided/available to	• There is **not a Scottish evidence base** on this solution. • US evidence base shows mixed outcomes. Impacts on submissions/intention to apply but less on actual enrolment. Outcomes	• There are **accepted models of practice by relevant organisations that are not linked to evidence base,** ie, combination of information and advice about higher education and costs and approaches focused on

Stage	Solution	Evidence	Policy & practice
	young people and their families who wish to access Higher Education	were strongest for those considered most likely to progress to higher education	individual students' needs, interests and situations, engagement with parents. • **Wide-spread and long-established practice in Scotland,** eg the REACH Scotland gives insights into studying high demand competitive subjects to secondary school children. • **Scottish Government's Scottish Framework for Fair Access** identifies IAG as the second most effective interventions for students of lower socioeconomic status. Approach not backed by strong evidence base.
	Good quality mentoring to support eligible young people wishing to access higher education	• **Evidence base, of moderate strengths**, from mostly US sources that mentoring for the purpose of access to HE has a positive impact, specifically on enrolment in higher education and outcomes such as higher confidence and aspiration. • There is a **limited evidence base from the UK including Scotland.**	• There are **established models of practice** in mentoring. • There is **no evidence to suggest that this emerging good practice is accepted or widespread.**
	Outreach by HEIs work to engage with young people from disadvantaged backgrounds and those underrepresented in higher education	• There is **established evidence** that outreach is an effective method of widening participation to HE, but for students with medium ability, at the top of the income distribution. There is **no evidence** that outreach makes an impact on the poverty based attainment gap. • There is **not a Scottish evidence base** on this solution.	• There are **established models of practice** in outreach including parental engagement. • **Models of practice is supported by widening access policy** in both Scotland and the UK. Colleges and HEIs in the country receive public funding to engage pupils from low socioeconomic background in outreach activities
	Multiple widening access interventions providers collaborating for maximum impact on the support offered to those young people accessing higher education	• **Evidence base** that combinations of interventions lead to improvements on higher education outcomes. • **Evidence base focuses** on outcomes of multiple interventions not on individual components.	• **Some emerging practice in UK based organisations** of multiple interventions. Practice is not widespread.
	Strategies that support the retention rate of young people from lower income backgrounds in higher education	• There is **lack of evidence** on the gap between retention rates for **different groups of students.** • **Unclear from evidence** about the outcomes of interventions on specific groups within framing **of 'non-traditional' groups.**	• **Various models of practice** in organisations and communities – no clear widespread practice linked back to evidence base • **Policy does not define or support models or practice** or link to evidence base.