

Early years education and childcare

Lessons from evidence and future priorities

Josh Hillman and Teresa Williams





About the Nuffield Foundation

The Nuffield Foundation is an endowed charitable trust that aims to improve social well-being in the widest sense. It funds research and innovation in education and social policy and also works to build capacity in education, science and social science research.

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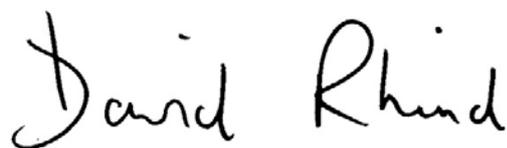
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Foreword from the Chair of Trustees

Almost all children experience some combination of formal childcare and early education before they start school. This is important, not least because children's experiences in their first few years of life have a major impact on their development. But the provision of education and childcare for young children has other functions in our society. For example it plays an important role in the rate and flexibility of parental employment, particularly for mothers. It also has potential to help reduce educational inequality, which is already evident by the time children start school.

For these reasons early education and childcare has recently become an important area of focus for the Nuffield Foundation, and over the past five years we have committed over £2 million in funding for research and innovation projects in this area. This report is written by Josh Hillman and Teresa Williams, who direct our *Education* and *Children and Families* programmes. It brings together the findings from these two programmes and highlights the key insights that we believe are essential for any informed consideration of changes to early years provision. In doing this, we also identify where there are connections and tensions in the evidence, as well as gaps and uncertainties. And it is these observations that have informed our development of a new research and innovation funding programme, *Early Years Education and Childcare*.

The report represents a good example of the Foundation standing back from the specific projects that it funds and setting them in a broader perspective. It is aimed at a broad audience of those interested in policy and practice for the early years. But we hope that in particular it will offer the wider research community a useful and thought-provoking synthesis of current evidence, a strong flavour of the Nuffield Foundation's perspectives and interests, and a stimulus for project ideas that could be funded by the Foundation in the future. Early years education and childcare is growing in prominence in public policy debates, and we are delighted to be launching this new programme, which has the potential to effect change that will in time benefit children and their families.



Professor David Rhind
Chair of Trustees

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We are immensely grateful to all those who have helped us in various ways with this report. It benefited in particular from extensive background research and synthesis by independent researcher Jenny Reynolds. Detailed and invaluable comments on an early draft were provided by a range of critical friends: Vidhya Alakeson (then Resolution Foundation), Dr Jo Blanden (University of Surrey), Professor Mike Brewer (University of Essex), Caroline Bryson (Bryson Purden Research), Professor Charles Hulme (University College London), Dr Sandra Mathers (University of Oxford), Anand Shukla and colleagues (Family and Childcare Trust), Professor Margaret Snowling (University of Oxford), Dr Kitty Stewart (London School of Economics) and Professor Jane Waldfogel (Columbia University).

These people also participated in an extraordinarily useful symposium held at the Nuffield Foundation in July 2014, as did Professor Kathy Sylva (University of Oxford), Dalia Ben-Galim (IPPR), Ellen Broome (Family and Childcare Trust), and Professor Helen Penn (University of East London). We would like to thank them and all of the participants at this event for their time and energy, not least because many of the issues and ideas discussed found their way into the report.

Last but not least, we owe a big thank you to colleagues at the Foundation. The symposium was impeccably organised by Kim Woodruff and Debbie O'Halloran. The report benefited hugely from a wise and careful reading by our Director Sharon Witherspoon; Cheryl Lloyd provided some important further research; and the tireless Fran Bright had overall editorial and production responsibility. Any errors are, of course, our own.

Josh Hillman and Teresa Williams

List of abbreviations

| | |
|--------|---|
| EYPP | Early Years Pupil Premium |
| FSP | Foundation Stage Profile |
| ONS | Office for National Statistics |
| Ofsted | Office for Standards in Education, Children's Services and Skills |
| EYFS | Early Years Foundation Stage |
| ECERS | Early Childhood Environment Rating Scale |
| ESRC | Economic and Social Research Council |
| EPPSE | Evaluation of Pre-School, Primary and Secondary Education |
| ITERS | Infant Toddler Environment Rating Scale |
| MCS | Millennium Cohort Study |
| PVI | Private, voluntary and independent (sector) |
| NPD | National Pupil Database |

Definitions

Full day care is settings that provide on-site day care for children under five for a continuous period of four hours or more in any day, in premises which are not domestic premises.

Sessional providers are settings where children under five attend for no more than five sessions a week, each session being less than a continuous period of four hours in any day. Where two or more sessions are offered in any one day, there is a break between sessions with no children in the care of the provider.

Nursery schools provide education for children under the age of five and over the age of two. Maintained nursery schools generally accept children in term time. Data from 2013 includes independent as well as maintained settings so is not directly comparable to previous years.

Primary schools with nursery and reception classes operate throughout the school year. Data from 2013 includes independent as well as maintained settings, as well as any early learning provision offered for children aged two or younger so is not directly comparable to previous years.

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Overview and summary

The subject of this report is early years education and childcare, by which we mean the full range of provision, activities and experiences aimed at children prior to their entry into primary school, encompassing education and wider child development, as well as childcare. The topic has grown in prominence over the past two decades, largely because of its perceived potential to address a number of social policy objectives:

- Improving developmental and educational outcomes for children.
- Tackling disadvantage by addressing the attainment gaps already apparent between children of different backgrounds by the time they start school.
- Increasing maternal employment rates, with associated reductions in welfare expenditure and increases in tax revenues.

There may well be tensions between these objectives. For example, high quality early education may be better for outcomes, but more expensive provision may be less affordable for families, inhibiting maternal employment and associated fiscal benefits. There are questions about whether the evidence underpinning the rationale for state intervention is sufficiently strong, and about the extent to which expected gains have been achieved. These are all important questions, not least during a time of austerity.

The Nuffield Foundation has funded over 20 projects relating to early years education and childcare over the last five years, with a total contribution of around £2 million. Our work has been driven by a range of perspectives. Many projects take a longitudinal view of the potential benefits of early years education and childcare and the extent to which they have been realised, addressing factors associated with education and child development outcomes across the life-course, and the relationship between them. Others attempt to identify causal mechanisms that can help inform the design of early years interventions. We have funded projects that consider a broad range of institutional and more informal arrangements for delivering early years education and care and, importantly, how they fit together. Finally, our interests in the wider implications for public policy are reflected in our funding for projects which examine issues such as funding and quality regimes, and approaches to affordable childcare, often drawing on international comparators.

Our aims in publishing this report are to:

1. Highlight key insights from the work we have funded in order to increase understanding of how outcomes in the early years and beyond can be improved through changes to policy and practice.

2. Set these new insights in the context of existing evidence. We do this by synthesising and critically appraising a large and complex body of evidence, highlighting connections and tensions, as well as gaps and uncertainties.
3. Set out the themes, priorities and questions for the Nuffield Foundation's new funding programme, *Early Years Education and Childcare*. We hope this programme will make a major contribution to this wider evidence base in the coming years.

Our primary audience is the research community in its broadest sense: not only academics based in universities and research institutes, but also those who are directly involved in bringing research to bear on early years policy and practice. We also want to engage with researchers from a range of disciplinary backgrounds and to encourage dialogue between them. Some of these, such as speech and language therapists, and those studying business and management, may not have previously been considered central to the early years research community, but we have identified a need for their expertise. We also hope this report serves as a useful resource for policy-makers, practitioners and other research funders.

Summary of key messages

Expansion and the mixed market

The past two decades have seen nothing short of a revolution in the priority and pace of change in public policy for education and childcare. There has been a rapid expansion in the overall scale of provision, partly in response to increased public investment. Successive UK governments have sustained a commitment to a mixed economy of providers and the promotion of parental choice. However, by far the greatest increase has come from private, voluntary and independent providers (such as childcare chains, Montessori nurseries and community-based centres) rather than the publicly-maintained sector. This mixed market model seems unlikely to change, though we believe the evidence raises questions about whether it currently provides consistently high quality childcare.

Funding and take-up

Public funding has been allocated both to the universal free entitlement to part-time early years education and childcare and to assist families with the costs of childcare. There has been a significant growth in take-up of provision overall, but availability varies by region and participation remains proportionally lower for disadvantaged groups, even though evidence suggests they have the most to gain.

Quality and disadvantage

There is strong evidence that the overall quality of provision is lower amongst private and voluntary sector providers than in the public sector. This is particularly true in disadvantaged areas. However, there are suggestions that in comparison with other

countries, England has been more successful in using early education and childcare to counteract disadvantage. A key contributory factor is that children in deprived, predominantly urban, areas tend to access publicly maintained provision, such as children's centres and nurseries attached to primary schools, where quality is higher.

Costs for families

Another encouraging sign is that the percentage of disposable family income allocated to childcare has improved – in that it has decreased – for most families, at least up to 2012. Even so, costs to families for early years education and childcare in the UK remain among the highest in the OECD. This overall picture masks substantial variation by family type, working pattern and position on the income distribution. On average, though, low-income families and lone parents in the UK fare relatively well; they have lower net childcare costs as a proportion of family income than similar families in other OECD countries. This is not the case for moderate and high-income families.

Evidence on outcomes

Evidence on whether the policy measures have delivered as intended is still emerging in the UK. We know that when early years settings are of high quality, there are positive effects on a range of child outcomes that are sustained well into the teenage years. However, when we look across provision as a whole, the effects are much more modest and fade out over the course of the primary phase of schooling. There are a number of possible explanations, but it is likely that a combination of two factors in particular have played a part: improvements to primary education may have dampened any effect of early years education and childcare; and the variable quality of provision may have limited the potential impact. In addition, it appears that there is a fair amount of 'dead-weight' state funding, whereby public expenditure is substituted for activity that would otherwise be privately funded. Of course, this is more likely for policies that are universal rather than targeted, but it is difficult to evaluate how much of a problem it is.

At the same time, the effects of free entitlement to early years education and childcare on maternal employment are modest. This is perhaps unsurprising given that so much provision is not necessarily designed to fit working patterns, and the design of work incentives could be improved to reduce the very high marginal deduction rates (where, for example, a high proportion of additional earnings is lost in reduced tax credits or benefits) faced by some subgroups.

Driving quality

The research we have funded provides some evidence about the factors that may lead to higher quality early years education and childcare. There is growing evidence that development of both cognitive and non-cognitive skills in the early years are important in improving later outcomes for children. Work funded under our 'Foundations for Learning' theme has demonstrated that a particular focus on early oral language skills is a crucial precursor for later language and literacy development

and other aspects of 'school-readiness'. There are already a few properly trialled interventions that have been shown to help boost these skills, including for children who, for a variety of reasons, experience delays in their development. But in this and other areas there needs to be greater investment in developing evidence-based practice in the early years sector.

Staff qualifications

There is a strong relationship between the level of staff qualifications and the quality of early years education and childcare, and there is scope to use funding mechanisms channelled through providers to create stronger incentives for higher quality care. In the private and voluntary sector, where quality is lower overall, providers with better qualified staff are more likely to provide higher quality care, whatever the level of advantage or disadvantage of their intake of children. But across all providers, it is specifically graduate leadership that is associated with a narrower gap in measures of quality between those settings located in the most and least deprived areas. This is an important finding, but we do not know nearly enough about whether it is the skills that graduates have developed through their higher education that are playing a part, nor about how the skills of graduates are best deployed in early years settings.

Further expansion of public funding?

In conclusion, we find the evidence that might be used to support further expansion of public funding of early years education and childcare is far from conclusive. The immediate priorities should be to ensure that the most effective use is made of existing funding to improve incentives for higher quality care, whilst at the same time improving the evidence base that might support any future funding expansion.

What we do know is that quality – in terms of content, delivery and organisation – is of central importance to the outcomes of early years education and childcare. This is particularly true for disadvantaged groups. Yet the rapid expansion of provision seen over the past two decades may have privileged quantity over quality, and not given adequate consideration to the detailed aspects of early years settings that drive positive outcomes. So before a strong case for significant further investment in early years can be mounted, there needs to be a significant improvement in our understanding of how funding currently flows and might better flow; how quality might be improved and regulated to maximise effects on child outcomes; and how provision might best fit in with the family context, not least for working parents.

The Nuffield Foundation's new funding programme: *Early Years Education and Childcare*

Our new programme aims to address some of the gaps we have highlighted. We hope it will also help address some of the structural challenges we have identified – such as the availability and quality of data and the fragmented nature of the early years sector – which are constraining efforts to improve the evidence base. This new programme will address five key themes:

- **Impact on children's outcomes.** We want to improve our understanding of the impact of early years education and childcare on educational attainment and broader child development outcomes, and the mechanisms through which this is achieved. This is critical to the design and evaluation of formal interventions.
- **Tackling social disadvantage.** We have a particular interest in understanding the extent to which variations in attainment and other outcomes at school entry are underpinned by broader structural differences in society, and the potential role that early years education and childcare might play in narrowing these gaps.
- **The parental and family context.** We are interested in the potential for early years education and childcare to improve the quality of parenting and family childcare, both as an objective in its own right and because of the potential consequences for improved children's outcomes. What are the opportunities to improve the home learning environment and to better integrate early years education and childcare with other services?
- **Wider societal impacts.** What are the costs and benefits of early years education and childcare and how are these distributed across different sections of society? This includes employers and other beneficiaries as well as families with children under five.
- **Public policy mechanisms.** There is an urgent need to improve our understanding of the early years 'market', and in particular the workings of private and voluntary sector providers, to inform the design and focus of future policies to improve quality.

Further detail on our funding priorities can be found in Chapter 4, and at www.nuffieldfoundation.org/apply-for-funding

Structure

The report has four chapters:

Chapter 1 defines early years education and childcare and sets out why it is important; the approach that the Foundation has taken to date; and what we believe is distinctive about our involvement.

Chapter 2 outlines the current state of early years policy and provision, including how and why the current model developed as it has.

Chapter 3 discusses what we have learned from work the Foundation has funded on early years education and childcare, puts that in the context of the wider evidence, and identifies some particularly pressing gaps in our understanding. We examine the key findings relating to the potential for early years education and childcare to fulfil its aims of improving child development outcomes, narrowing the attainment gap, and improving parental employment. We also consider some of the wider public policy implications of the work we have funded.

Chapter 4 sets out the key priorities for the Foundation's work in early years education and childcare, in the form of a detailed rubric for our new research programme.

Chapter 1: Why is early years education and childcare important and what are the Nuffield Foundation's perspectives?

1.1 What do we mean by early years education and childcare?

By early years education and childcare we mean the full range of provision, activities and experiences aimed at children prior to their entry into primary school. It is delivered by a diverse range of providers, serving children between birth and school age and the emphasis on its primary purpose can vary. At one end of the spectrum, provision is primarily focused on enabling parents (typically mothers) to return to, or find, paid employment. A substantial proportion of this provision is provided informally by grandparents, other relatives and friends. More formal childcare provision – including childminders and day nurseries – is regulated by Ofsted and is required to support children's development as well as provide basic care. At the other end of the spectrum, the primary focus is to provide educational and developmental input and improve child outcomes, for example nursery classes in school. Our definition of early years education and childcare includes the full range across this spectrum, and we also acknowledge that in practice many providers deliver both functions, albeit to different degrees and quality.

The Nuffield Foundation's work has generally concentrated on the educational and quality aspects of early years education and childcare, and this is reflected in the report, which focuses largely on formal provision delivered in institutional settings. This is also a reflection of where the evidence base is currently focused. The Foundation is, however, one of the few funders to have supported work on informal childcare, and to consider the effects on maternal employment. Later in this report we draw some of these strands together.

1.2 Why is early years education and childcare important?

Early years education and childcare has grown in prominence in the public policy arena because of its potential contribution – backed to a lesser or greater degree by robust evidence – to achieving a range of positive outcomes for society. These policy aims are not always explicit, and it is helpful to consider some of them here.

The importance of the pre-school years for children's outcomes

One important aim is to improve children's short- and long-term outcomes, from making them more ready for school to improving longer-term education and other outcomes. Research into the relationship between participation in early years education and childcare and these outcomes has used a variety of methods, with different degrees of robustness. The overall conclusions are not clear-cut and need careful interpretation,

as we discuss in Chapter 3. But there is evidence that when early years education and childcare is of high quality, it is associated with a positive impact on children's social and cognitive development in both the short and long term.¹ Children who attend high quality provision are more likely to demonstrate school-readiness, having acquired the cognitive, linguistic and self-regulation skills that create the foundation for their future learning and development.² Indeed, early years education and childcare plays an important role in introducing young children to the structured and social aspects of a collective environment, and in playing a transitional role between parent-dominated babyhood and formal primary schooling. And there is evidence about the potential for longer-term beneficial outcomes, which is even more complex.

The role of early intervention in tackling inequality

Children begin schooling with *wide variations* in cognitive abilities, communication and language skills, social and behavioural development, emotional resources, and readiness to learn. These variations are strongly associated with different types of advantage and disadvantage.³ Already by the age of three, children from poorer backgrounds could on average be as much as a year behind their more advantaged peers.⁴ The attainment gap widens by the time children enter school: at the beginning of their first year, children from the lowest-income families are already on average 16 months behind those from high-income families.⁵ These gaps increase steadily over time, can last a lifetime, and are apparent across a range of indicators, from health and well-being to income and attainment.⁶ So one aim of early years education and childcare is to redress the balance, helping children from more disadvantaged backgrounds to catch up (or at least, not fall further behind) children from more advantaged families.

The importance of accessible and affordable childcare in increasing maternal employment and wider benefits for the family

Affordable early years education and childcare potentially enables parents, particularly mothers, to be in paid employment. International studies have found that countries with greater enrolment rates in publicly funded or provided childcare also have higher maternal employment rates,⁷ although untangling causal relationships is complex. From the point of view of the household, additional income, especially for the less well-off, is itself associated with better outcomes for children, as child poverty has been shown to be a key independent determinant of children's outcomes.⁸ From the point of view of the public purse, as mothers enter employment they are likely to claim fewer benefits and to generate extra revenues through income tax and national insurance

1 Apps, Mendolia and Walker (2012); Phillips and Lowenstein (2011); Sammons (2010); Sylva and others (2010); Mathers and others (2014); Smith and others (2009); Maisey and others (2013).

2 Gambaro, Stewart and Waldfogel (2014); Sammons (2010); Sammons and others (2007); Sylva and others (2010); Sylva and others (2012a); Sylva and others (2012b); Parker (2013).

3 Blanden and Machin (2010); Washbrook and Waldfogel (2010); Ofsted (2014).

4 Hansen and Joshi (2007).

5 Feinstein (2003).

6 Halle and others (2009); Heckman (2008); Marmot (2010); Shonkoff (2012); Parker (2013).

7 Ben-Galim and Thompson (2013).

8 Cooper and Stewart (2013).

contributions.⁹ Maternal workforce participation also contributes to gender and social equality and in particular to erosion of the wage penalty associated with motherhood, which sees women who have children, especially those who have taken time out of paid work, earning less over their lifetime than women who do not.¹⁰ In addition, early years education and childcare provision plays a role in supporting both parents in more flexible working arrangements that help them balance the demands of work and family life. For all these reasons, increased maternal employment is sometimes an objective of early years education and childcare policy.¹¹

Some commentators have argued that the unifying rationale for state intervention has not been clearly articulated, that there are tensions and potential trade-offs between justifications, and that the underpinning evidence is of varying quality or applicability: we think there is much to be said for these concerns.¹² In addition, there are questions about the extent to which the potential benefits have indeed been realised, and whether the design and implementation of policy and practice approaches have made best use of the available evidence.

1.3 What underpins the Nuffield Foundation's work on early years education and childcare?

The Nuffield Foundation's work in early years has explored many of these questions. Our approach is based on the *combination* of the following key principles.

- We try to take a comprehensive view, spanning policy and practice interests across the spheres of education, the family, the labour market and social welfare.
- We bring independence, impartiality and a long-range perspective. Standing outside particular public, private and voluntary sector interests, we are driven by a desire to secure and apply as strong an evidence base as possible. We have no axes to grind or particular models to push, and take a longer-term view than the life of any one government or parliament. This is not just a matter of principle but essential for a proper consideration of outcomes.
- We value rigorous evidence, and have a particular focus on the use of large-scale datasets to understand the state of play at population level at different times, and the factors that may be associated or causally related to outcomes of interest. Our more development-oriented work aims to turn basic science into interventions that can be effectively delivered and tested, and to fund controlled trials to establish whether those interventions can be effective. Our

⁹ Thompson and Ben-Galim (2014).

¹⁰ Thompson and Ben-Galim (2014).

¹¹ Cooper and Stewart (2013).

¹² Brewer, Cattan and Crawford (2014); House of Lords (2015).

work is interdisciplinary, and so involves developmental psychologists, economists, sociologists and public policy generalists as well as educational specialists.

- We work to bring researchers, policy-makers and practitioners together with a focus on the 'how' as well as the 'what'. We have a long tradition of education projects that are oriented towards practical application, for example in innovative curriculum development or new professional development models. More recently, we have extended our interest in practical interventions to other areas, such as family policy and family justice. Projects such as the Nuffield Early Language Intervention bridge our research and curriculum development approaches.

Beyond these overarching principles, the Foundation's interest in early years education and childcare is driven by a range of more specific perspectives.

A longitudinal perspective on the factors associated with educational and child development outcomes, and the relationship between them

Our work in early years education and childcare is partly driven by concerns about the differing life chances of children, the wide variations in skills and abilities by the time they begin school, and how these relate to family and social background. Looking at longer-term outcomes, research teams who have followed up participants of early interventions carried out decades ago point to reductions in unemployment, crime, and even blood pressure. The long-term 'scarring' effect of different life chances, coupled with preliminary evidence about such a wide range of sustained positive benefits, raises questions about the most appropriate stages in the life-course for intervention. The extent to which interventions in the early years will bring greater return on investment, compared to interventions for older ages, is partly dependent on the strength of the predicted relationship between childhood risks and adulthood outcomes, and a properly longitudinal perspective is needed to get a fix on these. Similarly, it is important to consider the range of risk factors that affect outcomes – including underlying structural causes as well as genetic and behavioural factors – and the balance between them. This has implications for the extent to which the appropriate policy responses should be targeted at particular groups of children and their families or whether a more systemic approach – whether at area or national level – is more appropriate.

Interest in causal mechanisms and the implications for design of early years interventions

One explicit rationale for state intervention in early years education and childcare is its potential to narrow attainment gaps, in school and beyond, between different groups of children. Our interest is to understand the mechanisms by which this might occur. The extent to which disadvantaged groups will 'catch up' (or be prevented from falling further behind) may depend on the extent to which early years education and childcare is focused exclusively on disadvantaged groups (so they are getting something that more advantaged children are not); whether more disadvantaged children differentially benefit from such provision; and whether

disadvantaged children benefit more if they are in 'mixed provision' with more advantaged children (either because it results in higher quality settings or because there are peer effects). The answers have important implications for decisions about both the targeting and design of early years education and childcare. Parallel questions have been researched in the formal education system.

An interest in the broad range of institutional and more informal arrangements for delivering early years education and childcare, and how they fit together

The apparent relationship between early years education and childcare experiences and later outcomes raises questions about disjunctions in policy, practice and research between the early years and primary school. Apart from school-based nursery provision, there is a large structural break between pre-school childcare and the reception year. The introduction and refinement of the Early Years Foundation Stage curriculum by successive governments attempts to compensate for this by creating a common framework, although there is still a significant break in curriculum between reception and year 1 *within* schools. We believe that more could be done to increase coordination and integration between early years education and childcare and primary education, indeed that was one of the aims of our 'Foundations for Learning' theme. There are also important potential complementarities between the quality of early years education and childcare and that of primary schooling. For example, high quality pre-school may increase the added value that schools can provide, or in some cases partially compensate children for the effects of a less than excellent school.

In practice, the majority of early years education and childcare is delivered outside of school-based settings; we are interested in the implications of this mixed economy of provision in achieving positive outcomes. Beyond the direct effects on children, we are interested in how different types of early years education and childcare affect parents, families and households, and what that might imply for wider family policy. Child development and children's life-chances are significantly affected by factors such as family structure, household income, the educational background, skills and employment of parents, as well as other strengths and weaknesses in parenting. Early years education and childcare may have an independent impact on these factors, apart from any role it may play in increasing participation of women in the labour market. This in turn raises questions about the potential role of well-designed early years education and childcare to improve the home learning environment or parenting quality.

Wider public policy perspectives

Early years education and childcare also has implications for a broader range of public policy questions. Some of these are generic, for example questions about the appropriate balance of state and private funding and provision, the conditions under which markets should operate, different models of organisation and regulation, and the relationships between services that are universal and those that are targeted on

specific groups (e.g. the disadvantaged). There are also broader questions about the links between the provision of early years education and childcare and wider children's services such as health, mental health, social work, play and recreation provision, and library and other cultural provision.

So questions about who and what early years education and childcare is for are complex. Potential beneficiaries are children, parents, families, the wider economy and society, depending on what outcomes are being considered. Our starting point is that it is only by examining the *combination* of these benefits, and the interactions between them, that we can understand if there is a powerful argument for large-scale public investment in early years education and childcare and its regulation. It is therefore important that these *combined* goals are held in mind whenever changes to policy levers are considered. Too often changes are made which focus on one particular outcome (for example, maternal employment) without considering the impact on others (for example, quality of provision to improve children's outcomes). In some cases, there may be trade-offs between these aims, which affect how the purpose of early years education and childcare provision should be framed and its outcomes balanced. In addition, how spending and provision should be given priority and how changes might be phased are particularly important in a period of limited public resources.

Over the past five years the Foundation has funded over 20 projects, with a total value of almost £2 million, exploring different aspects of early years policy and practice from birth, through infancy and into compulsory schooling. These research, development and innovation projects have mainly been funded from either our *Education* programme or our *Children and Families* programme, depending on the focus. But a unifying theme has been to improve understanding of how outcomes in the early years and beyond can be improved through changes to policy and practice, underpinned by robust evidence.

Some projects have developed and evaluated specific interventions and approaches geared towards assessing and improving children's foundational skills, for example oral language or basic number skills. Others have explored the impact of different forms of provision on later educational outcomes. We have also funded work that explores the wider design of early years education and childcare policy, such as funding regimes and quality assurance systems. Other projects have examined informal childcare, maternal employment and mental health. A summary of all these projects is available in the Appendix, and we summarise the main insights from them in Chapter 3.

Chapter 2: The current early years landscape and how we got here

In this chapter, we review the current structure of early years education and childcare, and describe how we got here, looking at developments in policy and practice over the past two decades. Others have provided more comprehensive accounts.¹³ We then provide a brief assessment of different models of provision, drawing extensively on existing administrative data, supplied to us by the Family and Childcare Trust, who recently published a formal review of the ten-year National Childcare Strategy, launched by the Labour government in 2004.¹⁴

It should be noted that whilst the Foundation's interest is in the UK as a whole, and indeed beyond, for pragmatic reasons (such as the inconsistent collection of UK-wide data) this chapter presents data from England only, unless otherwise specified.

2.1 Recent history

The past two decades have seen nothing short of a revolution in the place and priority of early years provision in public policy. Before the 1990s pre-school childcare was seen as a matter for private family decision-making, with little scope or rationale for state intervention. But in that decade a series of influential inquiries and reports presented evidence on the importance of the early years for children's later outcomes. Many of these drew an unflattering picture of provision in the UK compared to other countries, highlighted the absence of strategic thinking about either policy or provision, and offered detailed and costed recommendations which might address these deficiencies.¹⁵ The incoming Labour government's ambitious targets in 1997 for tackling child poverty were also central to moving early years up the policy agenda.

The impact of this collective body of work represents a positive case study for how concerted and well-marshalled synthesis of evidence can influence and even shape policy. This process continued with further influential reviews carrying strong implications for investment and policy in the early years. Examples included Frank Field's review on poverty and life chances, Graham Allen's review of early intervention policy and Professor Sir Michael Marmot's review of health inequalities.¹⁶

¹³ Grauberg (2014); Butler, Lugton and Rutter (2014); Stewart and Gambaro (2014).

¹⁴ Butler, Lugton and Rutter (2014).

¹⁵ Sylva and Moss (1992); National Commission on Education (1993); Ball (1994).

¹⁶ Field (2010); Allen (2011); Marmot (2010).

A series of childcare strategies and associated policies from respective governments (see **Table**) transformed provision in a number of ways: raising workforce standards, extending access to free pre-school places, and reducing the costs borne by parents through a combination of supply-side and demand-side funding changes.

Table: Key policy and strategy milestones in early years education and childcare from 1996 to the present day

| YEAR | POLICY AND STRATEGY MILESTONES |
|-----------|---|
| 1996 | The Conservative government announces plans for vouchers for parents towards costs of nursery places for four-year-olds. It also publishes <i>Nursery Education: Desirable outcomes for children's learning on entering compulsory education</i> , which sets out six areas of experience/learning for early years settings, including early literacy and numeracy and the development of personal and social skills. |
| 1998 | The Labour government's <i>National Childcare Strategy</i> , as set out in its Green Paper <i>Meeting the Childcare Challenge</i> , pledges to provide every four-year-old with a free part-time nursery place (an extension to three-year-olds is announced in 2000 and introduced in 2004) and introduces Childcare Tax Credit. |
| 2000 | Introduction of the Foundation Stage curriculum for children from age three to the end of the reception year, covering a range of learning and development goals. |
| 2001 | Ofsted takes over regulatory responsibilities from local authorities, including the lead on registration and inspection of daycare and childminding provision. |
| 2004 | The Labour government publishes <i>Choice for Parents, the Best Start for Children: A ten year strategy for childcare</i> , which extends these entitlements and pilots further entitlements for disadvantaged two-year-olds in England. |
| 2005 | The Labour government publishes the <i>Children's Workforce Strategy</i> , which sets out a commitment for all full day care settings to be led by a graduate early years professional, with requirements specifying the number of staff qualified to Levels 2 and 3 in each setting. |
| 2006 | The <i>Childcare Act</i> requires local authorities in England and Wales to ensure sufficient childcare for working parents and those undertaking work-related training. |
| 2006–2011 | Other changes brought in by the <i>Childcare Act</i> include bringing Foundation Stage and other guidelines under the banner of the Early Years Foundation Stage Framework (EYFS), setting standards for the learning, development and care needs of children from birth to five years of age in all settings, including reception classes in primary schools, private providers and childminders. It introduces the new Early Years Professional role for those leading children's centres and full day care settings, with funding for this and wider workforce development put in place via the Transformation Grant (2006–2008) and later by the Graduate Leader Fund (2008–2011). Providers are incentivised to support staff in gaining graduate-level qualifications or to take on staff educated to graduate level. |

| | |
|------|--|
| 2012 | Under the Coalition government EYFS is revised and simplified, with a focus on three prime areas of learning; personal, social and emotional development; communication and language; and physical development. |
| 2012 | Publication of Professor Cathy Nutbrown's, <i>Foundations for Quality: The independent review of early education and childcare qualifications</i> . It recommends a minimum standard of Level 3 for the workforce by 2022, with entry requirements of Level 2 English and maths; graduate leadership; and the introduction of an early years specialist qualification with Qualified Teacher Status. |
| 2013 | The coalition government has not adopted the Nutbrown recommendations in full but in its response, <i>More Great Childcare: Raising quality and giving parents more choice</i> , it instead proposes a new Early Years Teacher (EYT) status, to replace the Early Years Professional. The new EYT role carries the same entry requirements as school teachers but carries neither Qualified Teacher Status nor the same pay as school teachers. There is also a new Level 3 Early Years Educator role, carrying a minimum entry requirement of C in GCSE English and maths; these qualifications are now mandatory for all staff included in staff-to-child ratios. |
| 2013 | The Department for Education publishes <i>More Affordable Childcare</i> , proposing a range of measures to use tax breaks for childcare, and Universal Credit to reduce childcare costs. |
| 2014 | Plans to introduce childminding agencies are announced by the coalition government. The agencies will act as 'one-stop shops' where parents will be able to find a childminder and childminders will be able to access business support, training and advice. At the same time, changes to the inspection regime for childminders mean that from September 2014 it is the agency and a sub-sample of individual childminders which are inspected. Childminders who are members of an agency will not be individually graded. ¹⁷ These changes are set out in <i>Childminder Agencies: A step-by-step guide</i> , published by the Department for Education (DfE). |

¹⁷ The role of the local authority in accrediting childminders is being removed, and it is not clear how much contact and training childminders will be able to expect from their agency, or what will be available to childminders who do not join one.

2.2 Quantity, distribution and type of provision

Early years education and childcare is currently offered by a variety of providers, with a number of different underlying aims, structures and models. State-maintained providers are in the minority, with the private, voluntary and independent (PVI) sector forming a large majority. PVI is a catch-all term covering such diverse providers as large childcare chains, nursery schools with particular educational philosophies such as Montessori, and community-based nurseries in places like village and church halls. Over the past two decades the overall scale of provision has grown rapidly, partly in response to increased public investment. Governments have sustained a commitment to a mixed economy of providers and the promotion of parental choice, but by far the greatest increase has come in the PVI sector. The latest figures show that the majority of full day care providers are in the private sector (61%) and the voluntary sector (30%).¹⁸ The maintained sector makes up the remaining 9% of providers, and this proportion has declined since 2005.¹⁹ The maintained sector is dominated by nursery schools or nursery classes attached to primary schools, with a limited amount of provision in the form of children's centres.

There has been a large increase in the number of full day care settings in England from just over 6,000 in 1997 to 17,900 in 2013. There has been a corresponding increase in availability of childcare places: 796,500 registered full day care places were available in 2013, which represents a 46% increase since 2006.²⁰ There is a lack of consistent data available about the breakdown by sector of these overall numbers of providers and places. This makes it very difficult to track and interpret changes in total market share and provision.

Figure 1 provides indicative evidence about the shift in composition of the childcare market since 1997, drawing on information collated from a range of sources about the nature of the offering in institutional settings (i.e. excluding childminders) in England. A particularly notable change is the decrease (from 15,800 to 7,100) in the number and proportion of sessional providers which tend to provide only part-time care. It is thought that many of these sessional providers have been transformed into full daycare settings rather than having disappeared.²¹ Following the 2008 recession there was a fall in the number of nurseries, with market conditions making many unsustainable, particularly in areas with high unemployment where parents could not afford the fees.²² The figure also shows that there was little change in the number of nursery classes in primary schools between 2006 and 2011 (changes in the definition in 2013 mean direct comparisons with 2013 are not possible).

¹⁸ Brind and others (2014).

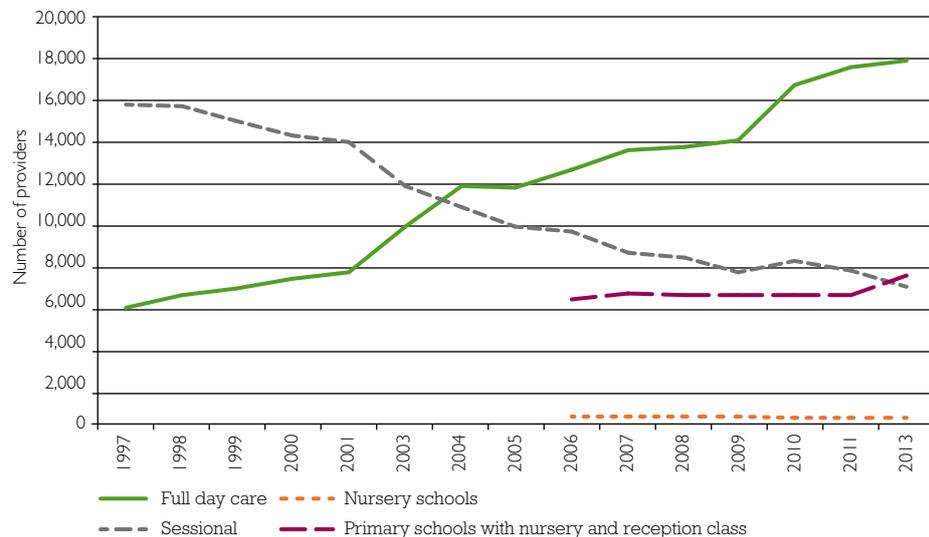
¹⁹ Brind and others (2012).

²⁰ Brind and others (2014).

²¹ Butler, Lugton and Rutter (2014).

²² Blackburn (2013).

Figure 1: Early years education and childcare provider types in England between 1997 and 2013²³



For definitions see p.4

Information about UK-wide trends from the 2014 LaingBuisson *Children's Nurseries UK Market Report* indicates that budget cuts under the coalition government led to a decrease in the number of state daycare providers while the number of voluntary sector providers has remained stable.²⁴ They also report that after the fall in supply during the recession, demand for places was increasing again in 2013 and 2014 due to the introduction of funded places for two-year-olds.

Time trends for the number of registered childminders have not been included in **Figure 1**, because the large volumes distort the picture, but we know that there was a large decline in the number of registered childminders from 72,300 in 2001 to 55,900 in 2013, which is likely to be in response to the improved access to, and demand for, group provision.²⁵

The average trends presented in **Figure 1** mask considerable variation in the numbers and profile of providers by area. Attempts have been made to address this, and between 2011 and 2013 there was an increase in the number of pre-school care providers in the 30% most deprived areas (as defined by the Index of Multiple Deprivation). Despite an overall decrease in the number of children's centres, nearly three-quarters (72%) of these providers were operating in the most deprived areas in 2013.²⁶

²³ Chart adapted from Butler, Lugton and Butler (2014). This chart draws on data from: *Childcare and Early Years Workforce Survey 2002-03*; *Childcare and Early Years Providers surveys 2005 to 2013*; DfEE Statistical First Releases SFR 28/1999, SFR 32/2000 and SFR 33/2001; Ofsted.

²⁴ LaingBuisson (2014).

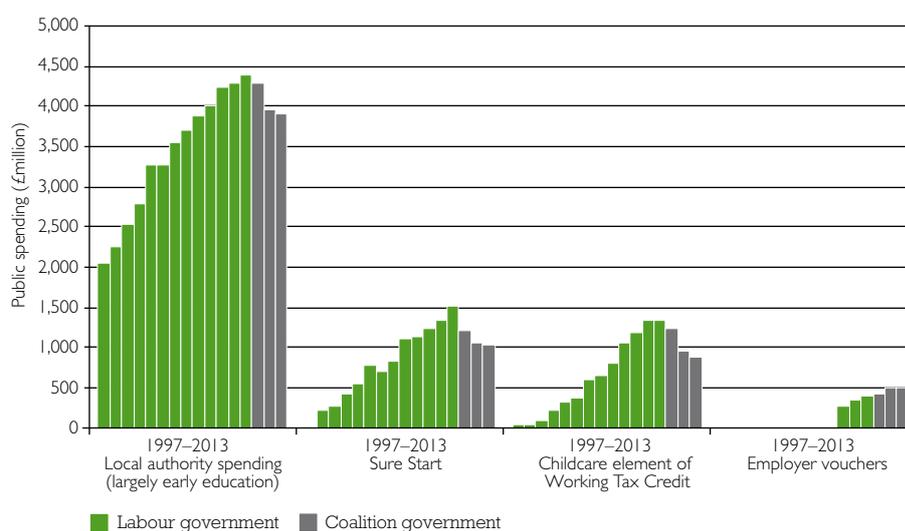
²⁵ Brind and others (2014).

²⁶ Brind and others (2014).

2.3 Expenditure and new funding routes

Figure 2, drawn from Nuffield-funded analysis by the LSE, illustrates government spending on early years education and childcare in England since 1997, with the dark-green bars showing spending during the Labour government, up to 2009–10.²⁷ Although there has been a dramatic increase in spending overall since 1997, the amount in real terms has fallen by an estimated 21% since 2010–11. Over the same period there has been an increase in the number of children under five, which means that spending per child has fallen considerably, from £2,508 in 2009–10 to £1,867 in 2012–13. This is the direct cost to the public purse and does not include the costs to parents.

Figure 2: Annual public expenditure on Sure Start, early education and childcare in England 1997–98 to 2012–13 (£million, 2009–10 prices)²⁸



Free entitlements

Much of the growth of public expenditure for early years has come through progressively generous entitlements to free nursery provision. In 1996 the Conservative government introduced Nursery Education Vouchers for four-year-olds that could be used for a range of stipulated provision. This system was replaced in 1998 by the new Labour government's offer of free nursery places for four-year-olds of 12.5 hours over five days for 33 weeks a year. This entitlement was later extended to all three-year-olds, and increased for both ages so that from September 2010 all three- and four-year-olds were entitled to 15 hours per week used over three to five days for 38 weeks each year. From September 2013, this entitlement was extended to two-year-olds from poorer families (currently 40% of two-year-olds) and there are proposals to extend it to all two-year-olds by 2016.

²⁷ Stewart and Obolenskaya (2015).

²⁸ Stewart and Obolenskaya (2015). See original for sources <http://sticerd.lse.ac.uk/dps/case/spcc/WP12.pdf>, pp.23–24 [accessed 28 January 2015].

These methods of funding provision have sometimes been described as 'demand-side', in that the subsidy is provided nominally via the parents who use the services and can choose which to use. But in reality, since the money goes directly to the provider, and can only be used with regulated providers, it is arguably nearer to a supply-side albeit 'demand-led' form of funding.²⁹ For the most part, genuine 'supply-side' funding – direct funding of early years providers – has largely disappeared. Formerly this existed in the form of local authority funding for direct provision as well as for their role in planning, support and regulation of providers. In the meantime, there has been a range of other ways in which government has injected demand-side funding into the system.

Tax credits

From October 1994 a childcare 'disregard' was available for some means-tested benefits, including Family Credit, to help with the costs of childcare for children aged under 11 (extending to children under 12 from June 1998).³⁰ Since 1998 a Childcare Tax Credit has formed part of the Working Families Tax Credit (and now the Working Tax Credit). This is available to single parents working 16 or more hours a week, or for couples where both parents work more than 16 hours. It is means-tested and currently reimburses parents for up to 70% of childcare expenditure up to a limit of £175 for one child and £300 for two or more children.

In time, this will be replaced by Universal Credit, where parents will receive up to 70% of their childcare costs to a monthly reimbursement limit of £532.29 for one child and £912.50 for two or more children. From 2016 this will increase to 85% of their childcare costs up to a limit of £646 for one child and £1,180 for two or more children.

Tax-free childcare

Employer involvement in the provision of early years education and childcare is limited. In 1990, the government introduced tax relief for employees on use of nurseries or play schemes provided by their employer. In 2005 childcare vouchers were introduced, offering tax relief on a maximum of £55 costs per week for basic rate taxpayers, which could be used on any regulated provider. In this latter scheme, the role of the employer is limited to responsibility for administering the scheme.³¹

The 2013 *More Affordable Childcare* strategy detailed plans for a tax-free childcare scheme that will replace the employer administered vouchers from autumn 2015 and will further reduce the role of employers in early years education and childcare provision.³² For parents not receiving support for childcare through Universal Credit, the new scheme will involve the government contributing up to 20% of parents' annual childcare costs with an upper limit of £6,000 (i.e. a maximum reimbursement

²⁹ Stewart and Gambaro (2014).

³⁰ Strickland (1998). This meant that up to a specific amount of income could be disregarded when family income was assessed for benefits. Eligible childcare was defined as registered childminders, day nurseries, out-of-school clubs and specific other organisations.

³¹ HMRC (2013).

³² DfE (2013c).

of £1,200). The scheme will eventually cover childcare costs for children under 12 years old. When this scheme fully matures, more public funding will be available than has been the case under the tax-free vouchers that it replaces. There are questions about whether this additional spending represents value for money, given that recent evidence suggests much of it is being directed to families who would have paid for childcare even without the subsidy.³³ A number of commentators have expressed concern that this scheme will further reduce the role and responsibilities of employers, who are arguably important beneficiaries of early years education and childcare. On the other hand, there has been increased policy focus on other means through which employers can play an active role, for example through parental leave and other flexible working policies.

Direct supply-side funding

On a much smaller scale, a range of policies have directed public funds towards the direct provision of early years education and childcare, mainly via local authorities (LAs) and providers themselves. The most prominent of these was the national roll-out of Sure Start. Between 1999 and 2007, 250 local programmes were created, targeting under-fives in the most disadvantaged areas. During this time, however, the focus of Sure Start centres changed, as a greater role was given to evidence about effective interventions, and Sure Start programmes are now generally based around children's centres.³⁴ There are over 3,000 children's centres, all located in disadvantaged areas. Initially, these had to offer year round full day care, but they also included a range of other services such as drop-in provision for parents and carers.³⁵ Since 2011, revised guidance means these centres are no longer required to provide integrated early years education and childcare services or other services on-site but instead provide a triage function to help identify families with greatest need and facilitate their access to those services.³⁶

The Neighbourhood Nursery Initiative (NNI), launched in 2001, aimed to expand daycare provision in the 20% most deprived areas of the country. By 2004, 45,000 new nursery places were created, mainly through the extension or refurbishment of existing settings, although some were developed from scratch. To some extent it contributed to one of the aims of Sure Start, in expanding provision in targeted areas to support opportunities for parents to return to employment, although evaluation of the NNI showed that take-up by the target audience was disappointingly low. The evaluation found that nurseries serving the most disadvantaged neighbourhoods had the most difficulty in surviving without some form of subsidy. Private sector nurseries, which tended to serve less disadvantaged neighbourhoods, appeared likely to be more sustainable.³⁷

³³ Blanden and others (2014).

³⁴ Eisenstadt (2011).

³⁵ House of Commons (2010).

³⁶ Sarah Teather speech to Daycare Trust annual conference 16 November 2010.

³⁷ Coxon, Sigala and Smith (2007).

The role of LAs has waxed and waned under different strategies:

- Labour's 1998 strategy required LAs to bring providers and employers together to review provision and prepare plans for expansion and improvement in local childcare partnerships. LAs also received grants to provide development support and training for funded settings and for supporting and coordinating individual childminders.
- The 2006 *Childcare Act* required LAs to ensure sufficient early years places for all children whose parents want them and to assess sufficiency on a regular basis. The means by which LAs have been required to oversee supply and demand is through 'childcare sufficiency assessments' looking partly at population needs. However recent analysis by the Family and Childcare Trust has shown that only 69% of English LAs described themselves as having sufficient provision.³⁸ One possible explanation is the introduction of a clause in the 2006 Act which for the first time prevented them from providing places directly, unless they first establish that no private or voluntary sector organisation is willing to do so. More recently, the 2014 *Children and Families Act* removed the requirement on LAs to assess sufficiency, further eroding their ability to respond directly to shortfalls in provision – and curtailing any local strategic assessment of whether childcare markets were operating well, especially in areas where parents could not pay market rates for private provision.³⁹
- The coalition government's *More Affordable Childcare* strategy signalled a revised role for LAs with an increased focus on working with providers rated as 'inadequate' or in need of improvement, and a reduced role in supporting improved quality generally.⁴⁰ The potential disadvantage to this is that Ofsted is the sole arbiter of quality, with local authorities unable to make their own assessment of quality when deciding which settings can offer the free entitlement. This would matter less if Ofsted's quality rating scales were better correlated with those underpinned by research evidence; we return to this issue later.

Finally, the Early Years Pupil Premium (EYPP) was announced in the government's most recent childcare strategy and is currently being evaluated as part of the Study of Early Education and Development (SEED).⁴¹ This offers extra money for providers offering the free entitlement to disadvantaged three- and four-year-olds. Settings will be given guidance on how best to use the additional funding, and linked to measurement of outcomes against baseline data collected for the relevant children.

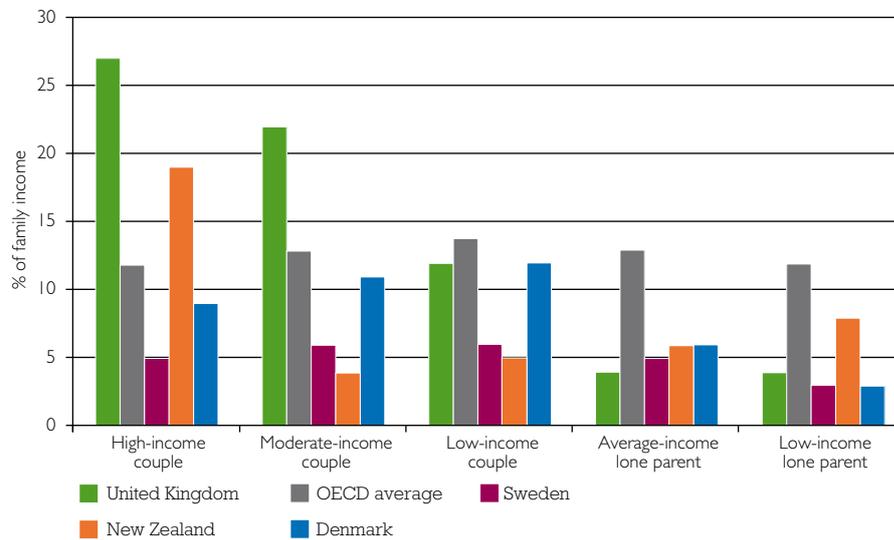
38 Rutter and Stocker (2014).

39 2014 *Children and Families Act* (Chapter 6, Clause 86).

40 Grauberg (2014).

41 DfE (2013a).

Figure 3: Net childcare costs as a proportion of family income⁴²



Source: Richardson 2012.

Note: These calculations place the UK well above the OECD average for high- and moderate-income two-parent families, just below for low-income two-parent families, and substantially below the OECD average for lone parents. The proportion of family income spent on childcare, compared to other countries, is higher for two-parent families and similar for lone parents.

What effect have these developments had on the price paid by parents for childcare in the UK? The evidence suggests a mixed picture. As **Figure 3** shows, percentage of disposable family income spent on childcare has reduced for most families, although costs remain among the highest in the OECD. In 2012, a couple earning 150% of the average wage between them with a two- and a three-year-old in full-time childcare, spent 19% of their disposable income on childcare, compared to 21% in 2008 and more than 30% in 2004.⁴³ However, low-income couples and lone parents in the UK have lower net childcare costs on average than OECD comparators.⁴⁴ It is unclear whether this is the result of public subsidy for childcare specifically, or the effect of wider welfare support boosting the incomes of more disadvantaged families. Nor is it clear whether the increase in public funding – whether in the form of tax relief and childcare credits, or the free entitlement to 15 hours of early years education – has been well spent. We return to this in the next chapter.

⁴² Figure reproduced with permission. Thompson and Ben-Galim (2014), p.25.

⁴³ Alakeson and Hurrell (2012).

⁴⁴ Thompson and Ben-Galim (2014).

2.4 Approaches to quality and regulation

There has been progressively strong regulation and quality control of the early years sector as funding has increased and provision has grown. The three main mechanisms for this are: specification of curriculum or expected child outcomes; specification of staff quality, qualifications or ratios; and monitoring and inspection regimes for providers and for provision as a whole.

Curriculum and focus

A welcome development has been the creation and evolution of a framework setting out the expected focus and outcomes of early years education and childcare provision in the form of the Early Years Foundation Stage (EYFS). This is now widely accepted and respected (including internationally) and spans pre-school settings and universal provision at primary school in the reception year, in which children turn four. Earlier iterations of the EYFS were felt to be too 'prescriptive, bureaucratic and damaging to innovation and diversity in provision', concerns that have largely been addressed.⁴⁵ However, there remain misgivings in some quarters about whether the concept of a formal educational curriculum at such an early age is appropriate, the 'downgrading' of play-based activity, and related concerns about the school starting age in the UK.⁴⁶

As we discuss in the next chapter, where provision is of high quality it is likely that key elements of the EYFS, such as those relating to early language and the foundations of literacy and numeracy, are instrumental in supporting improvements in later outcomes. And there is increasing interest in the role of wider developmental factors such as self-regulation and social and emotional skills, both because they contribute to school-readiness and because they may bring longer-term benefits. Children from more disadvantaged families stand to gain more from interventions focused on these developmental factors.⁴⁷

Staffing-related factors

Despite cumulative reforms, qualifications and ratios still vary across the sector. School-based settings are much more likely to be staffed with qualified teachers and nursery nurses at a staff-to-children ratio of 1:13 for three- and four-year-olds. In contrast, the minimum standard in PVI settings is for 50% of staff to hold a GCSE equivalent (Level 2) qualification, with supervisory and management staff needing an A Level equivalent qualification (Level 3). The presence of graduate workers is not required, although a number of PVI settings do employ them. PVI settings are usually required to have lower ratios (1:8 for three- and four-year olds, and lower still for even younger children) in recognition of the lower qualification requirement in this

⁴⁵ House of Commons (2009).

⁴⁶ Alexander (2010); *Daily Telegraph* (11 September 2013).

⁴⁷ Boyd and others (2005); Garcia (2014); Carneiro and others (2006).

sector. But where PVI settings employ a graduate who works directly with children, they are able to relax the ratio to 1:13, in line with the maintained sector.

A much higher proportion of staff in the maintained sector is qualified to Level 6 (degree level) or above, depending on the setting. For example, over 40% of staff in primary schools working with under-fives are qualified to degree level or above, in contrast with just 11% of staff in full day care settings.⁴⁸ The next chapter will examine this issue, and why we might expect better staff qualifications to improve the quality of early years childcare and education.

It is also worth briefly mentioning childminders, a small but significant sector with 6% of two-year-olds and under and 5% of three- to four-year-olds receiving this form of childcare.⁴⁹ Although childminders are generally the lowest qualified and least trained providers of early years care and education, they are still inspected by Ofsted. Each childminder in England may care for a maximum of six children under the age of eight (of which a maximum of three can be under five, and only one under the age of one). Since 2014 childminders must complete an introductory course in home-based childcare, and there are proposals in the Nutbrown Review that those delivering EYFS must also be at least working towards a Level 3 or higher qualification so that all have this qualification by 2022.⁵⁰ Childminders are not routinely as well-integrated with other forms of provision as they could be. In the past some intermediary bodies such as local authorities had started to do more to help develop the role of childminders. For example they provided support for their professional networking and development, and encouraged their complementary role in providing a wrap-around service around sessional and part-time provision. There are more recent signs that these early steps have faltered.

Regulation of providers and provision

A range of measurement tools and frameworks have been developed to assess the quality of early years education and childcare, with the expectation that quality of inputs will influence outcomes. In general there are considered to be two key dimensions of quality: **structural factors** (including staff- and premises-related components such as qualifications, ratios, centre size and equipment) and **process factors** (focusing on the interactions with children and families, appropriateness of resources and aspects of leadership and management).⁵¹

Work funded by the Foundation suggests that both structural and process factors are important for understanding and achieving quality provision.⁵² For example workforce qualifications and carer-child ratios are associated with positive outcomes, and there

⁴⁸ Brind and others (2012).

⁴⁹ Huskinson and others (2014).

⁵⁰ Nutbrown (2012).

⁵¹ Mathers, Singler and Karemaker (2012).

⁵² Gambaro, Stewart and Waldfogel (2014).

are suggestions that their impact is partly mediated through process factors.⁵³ To date, there is relatively good evidence about which factors are related to high quality, but we understand less about which factors result in improved outcomes and what their relative contributions are.

In practice, Ofsted's regulatory framework – in which each provider on its register is inspected at least once every 47 months – appears to have a stronger emphasis on structural than on process factors. The proportion of childcare providers judged by Ofsted on this basis to be 'good' or 'outstanding' increased from 56% in 2007/8 to 68% in 2009/10. Measurement frameworks looking at process factors do exist, and these have until recently been used by local authorities to complement the Ofsted framework by highlighting specific aspects of provision which have been shown to be important to outcomes and that need improvement, as we shall see in Chapter 3.⁵⁴ Importantly, studies have shown that these frameworks do not perfectly correlate with Ofsted gradings – in fact, they provide valuable additional information that would create a richer understanding of quality.^{55, 56}

The best known of these frameworks is the research-based Early Childhood Environment Rating Scale (ECERS) which covers provision for children aged from two-and-a-half to five years old.⁵⁷ This includes a subscale (ECERS-E) that specifically focuses on curricular provision, and has been used in a range of research studies. One such study, which sought to assess whether there had been improvements in quality for three- to five-year-olds between the late 1990s and 2005, found significant improvements in quality across all early years sectors during this period, with the largest gains in the voluntary sector.⁵⁸ On the other hand, the maintained sector continued to be the most effective overall, especially in terms of learning outcomes, partly because it continues to score more highly on various structural and process measures of quality. This underlines the role of staff qualifications in raising quality, with the presence of a teacher with graduate-level qualifications identified as particularly important.

2.5 Conclusion

There is now a clear political consensus about the importance of early years education and childcare, although each of the parties attaches different weight to the objectives we described. The increased attention and investment seen over the last 20

⁵³ Mathers, Singler and Karemaker (2012).

⁵⁴ See for example Mathers, Singler and Karemaker (2012).

⁵⁵ Hopkin, Stokes and Wilkinson (2010).

⁵⁶ A new scale, Sustained Shared Thinking and Emotional Wellbeing (SSTEWE), will be launched by Professor Ted Melhuish on 10 March 2015. SSTEWE pays greater attention to carer/child interactions and is being used in SEED alongside ECERS.

⁵⁷ For children under three, the related Infant and Toddler Environment Rating Scale (ITERS) is used.

⁵⁸ Mathers and Sylva (2007).



years have transformed the size and shape of the sector: from 59,000 nursery places in England and Wales in 1990 to nearly 1.8 million places today.⁵⁹

But the extent to which this expansion has achieved its various goals remains unclear. In particular, there is a concern that a focus on maternal employment and living standards has led to too great an emphasis on availability of places and costs. Meanwhile, the need to improve educational and wider development outcomes requires greater attention to quality of provision. And while the expansion in provision might have been expected to deliver economies of scale, the reality is that the majority of providers are small-scale and fragmented across the PVI sector, with few intermediaries to exploit that potential.

⁵⁹ Butler, Lugton and Rutter (2014).

Chapter 3: What have we learned?

This chapter sets out what we have learned from the work the Foundation has funded on early years education and childcare. Where appropriate, we set this in the context of wider national and international evidence, although it is not intended to be a comprehensive review of the literature (and not all that evidence is necessarily relevant to the UK).

We believe the quality and effectiveness of early years education and childcare need to be assessed through at least three different 'lenses': outcomes for children (including subgroups such as those from a disadvantaged background or with special educational needs); the needs of working parents; and wider public policy implications. We consider each of these perspectives and attempt to answer some key questions on which the Foundation's recently funded projects have focused.

1. What impact has early years education and childcare – and its differential roll-out and take-up – had on later outcomes for children, ranging from short-term outcomes such as 'school-readiness' to longer-term outcomes? In particular, what is the relationship between access to high quality provision and socio-economic background, and what role can early years education and childcare play in tackling disadvantage?
2. What general approaches and specific programmes might be developed, delivered and evaluated to improve outcomes? Do we know enough about different models of provision and what 'works' to improve quality in the sector overall?
3. What impact have recent developments in early years policy and practice had on maternal employment; the home learning environment; and other aspects of family life?
4. What do we know about the feasibility and effectiveness of different approaches to early years systems: mixes of state and private funding and provision; or the operation and regulation of childcare markets?

3.1 Impact of early years education and childcare on outcomes for children

When considering the outcomes and overall impact of early years education and childcare we are interested in four key questions:

- Do children who attend formal early education and childcare settings start formal Key Stage 1 schooling at an advantage, as measured by the Foundation Stage Profile?

- Is this advantage sustained over time, as measured by their subsequent educational attainment and life chances?
- Are these differences attributable to those early years inputs?
- Can early years education and childcare help disadvantaged children catch up with their more advantaged peers?

Early years outcomes for children in England are currently framed in terms of the Early Years Foundation Stage (EYFS) which covers seven dimensions: communication and language skills; physical development; personal, social and emotional development; literacy; mathematics; understanding the world; and expressive arts and design. Children's progress is measured between ages two and three and again at age five, the latter through teacher assessment at the beginning of Year 1 to produce a Foundation Stage Profile (FSP).⁶⁰ To date the FSP has been compulsory although there are plans to change this, which will limit the future availability of comprehensive data for research purposes⁶¹ and means that any advantages of having a universal, structured assessment are lost.

International evidence suggests that early years education can play a vital role in improving outcomes for children.⁶² But there has been a surprising lack of equivalent evidence in the UK. Until recently the Evaluation of Pre-School, Primary and Secondary Education (EPPSE) was the main national study, conducted by researchers at the University of Oxford and the Institute of Education and funded by the Department for Education.⁶³ The EPPSE project is a large-scale, longitudinal study of the progress and development of more than 3,000 children who were in pre-school provision in 1997, following them from that stage to post-compulsory education. It considers the aspects of pre-school provision which have a positive impact on children's attainment, progress and development. The children were drawn from six local authorities and were assessed at the start of pre-school (aged three). Their development was monitored until they entered school around the age of five, and they have been assessed again at key points through secondary school and will continue to be followed up in their post-16 education, training and employment choices.

The EPPSE study has shown sustained improvement in educational outcomes through to GCSE for those attending high quality pre-school provision. Those starting pre-school at an earlier age benefited the most, but there was little difference in outcomes between those attending full- and part-time. However, the long-lasting effects have been found among those who attended the highest quality settings, largely concentrated in the public sector at the time, as now. Disadvantaged children

⁶⁰ DfE (2014c).

⁶¹ DfE (2014d).

⁶² For example Heckman (2011); Almond and Currie (2011).

⁶³ See <http://www.ioe.ac.uk/research/153.html> [accessed 28 January 2015].

in particular were shown to benefit from good quality pre-school experiences, especially where they attended settings catering for a mix of children from different social backgrounds. But disadvantaged children tended to attend pre-school settings for a shorter period of time than other children, and so there was scope to improve these gains.

Similar conclusions about the importance of quality are drawn from the evaluation of the Early Education Pilot for Two Year Old Children in England.⁶⁴ Between 2006 and 2008 the pilot provided free early years education to over 13,500 two-year-olds from a range of disadvantaged backgrounds, which varied by participating local authority area but common factors included living in a disadvantaged ward or having a child on the Child Protection Register or with Special Educational Needs. The pilots aimed to improve their cognitive and social outcomes, as measured by the Early Years Foundation Stage Profile. At age three years, there was no overall significant improvement in their cognitive or social development but there was a positive improvement of vocabulary amongst children who attended a high quality setting (although the researchers noted that small numbers of these children were attending high quality settings and this limited the analysis). There was no corresponding improvement amongst children attending low quality settings. The follow-up study for children at age five found very similar results.⁶⁵ A new and larger longitudinal study started in 2013 and is following over 5,000 two-year-olds to the end of Key Stage 1. The study will assess the impact and value for money of early years education and childcare provision on their educational development, and identify how settings establish and maintain good practice.⁶⁶

Recent work funded by the Nuffield Foundation and the Economic and Social Research Council (ESRC) adopts a different approach to exploring the effects of early years education and childcare, using administrative datasets covering all those potentially eligible, as well as those who actually use it.⁶⁷ A team led by Dr Jo Blanden from the University of Surrey and Dr Birgitta Rabe from the Institute of Social Research at the University of Essex, undertook statistical modelling to analyse the impact of the roll-out of the free childcare entitlement for three- and four-year-old children, which was particularly intensive over the period 2000–2005. This roll-out provided a natural experiment in two respects. First, it varied by area in its speed and intensity, enabling the research team to compare the results in areas which saw large and rapid increases in provision and take-up with those that did not. Second, since the entitlement to free provision is based on month of birth, once roll-out was complete the researchers were able to use children on either side of the cut-off date

⁶⁴ Smith and others (2009).

⁶⁵ Maisey and others (2013).

⁶⁶ The Study of Early Education and Development (SEED), commissioned by the Department for Education and being carried out by NatCen Social Research in collaboration with Professor Edward Melhuish, 4Children and Frontier Economics. See <http://www.seed.natcen.ac.uk/professionals> [accessed 28 January 2015].

⁶⁷ Blanden and others (2014).

to compare the impact of an additional term of funding on educational achievement on entry to primary school (at age five) and progression thereafter (at ages 7 and 11).

Using the geographical roll-out methodology, the research showed modest beneficial effects of take-up of the free entitlement to part-time early education on outcomes at age five. These effects were more pronounced in areas where previous provision had been patchy but then saw rapid expansion, with the implication that the benefits come from additional participation rather than income effects. More modest improvements were seen for boys as a whole, and for children living in more disadvantaged areas or for whom English was not their first language. However these beneficial effects seem to disappear by the time children leave primary school – in contrast to the findings of the EPPSE study.

The reasons for the disappearance of these effects are not yet fully clear, although fade-out is a common phenomenon in a number of US evaluations. For example, in the Perry Preschool study, improvements in cognitive outcomes (e.g. vocabulary naming and IQ) found during early school years faded out before the end of primary school. However some longer-term effects were still found: rates of 'on-time' graduation from secondary school were higher amongst children who received the programme, and longer-term effects were reported at ages 27 and 40 relating to lower levels of crime, dependence on welfare support and higher employment.⁶⁸ In comparison, the Abecedarian Project reported that some (but not all) effects on educational performance, cognitive development and behaviour were still present at age 21, although no significant differences in criminal activity were found.⁶⁹

There are a number of possible explanations for the contrast between the EPPSE study and the ESRC/Nuffield-funded study. First, the two studies focused on different cohorts of children, with the earlier EPPSE cohort being studied in the late 1990s. The subsequent rapid expansion of free entitlement was implemented at the same time as a large increase in spending on education, which led to smaller class sizes and more teaching assistants, as well as the introduction of a new curriculum and increased school accountability. It could be that, as primary schools have improved (partly through better resourcing and more focused literacy and numeracy strategies) children are more likely to fulfil their potential and pre-school experiences matter less. Under this scenario the lack of sustained differences at ages 7 and 11 might better be characterised as the result of 'catch-up' resulting from primary school input rather than a 'fade-out' of early years inputs.

A second explanation for the difference in findings relates to other methodological differences between the studies. It is possible that the design of EPPSE cannot fully control for 'selection effects' – background differences between those 'choosing' pre-school provision and those who do not – which might contribute to the positive

⁶⁸ Schweinhart and others (2005); Melhuish (2004); Besharov and others (2011).

⁶⁹ Melhuish (2004); Campbell and others (2002).

outcomes observed beyond the effects of the provision itself. On the other hand, there are also differences in the measures used, with the EPPSE study looking at a wider range of outcomes and more detailed attainment scores. Finally, it could be that the rapid growth and highly variable quality of provision over this period, particularly in PVI settings – in which the majority of children receive it – has inhibited widespread and sustained improvements in child outcomes. These are clearly issues which require further investigation.

Outcomes for disadvantaged children

One of the rationales often given for public investment in early years education and childcare is its potential to narrow the attainment gap for disadvantaged groups and possibly do so before formal schooling starts. Like the EPPSE study, the ESRC/Nuffield-funded analyses provide some evidence that the attainment gap can be modestly narrowed. They found some evidence that the impact of increased free entitlement on outcomes at age five were larger for children from lower rather than higher socio-economic backgrounds – with these children achieving larger increases on their FSP scores – although the narrowing in differentials faded out during primary school.⁷⁰ However these effects were not observed for children on free school meals or with English as an additional language, and the researchers noted that there was no strong evidence that more children from poorer backgrounds entered formal childcare as a result of the policy, which may help explain why the overall impact on outcomes was limited.

Using international comparisons, another Nuffield-funded review, led by Dr Kitty Stewart and Ludovica Gambaro, concluded that England has been more successful than many other countries in using early years education and childcare provision to counteract disadvantage. They suggest that a key contributory factor is the increased likelihood in England, (compared to these other countries), that children in deprived, predominantly urban, areas will access state provision, where quality is shown to be higher.⁷¹

However, Ofsted statistics suggest that within England the quality of provision in deprived areas is lower on average than in affluent areas, so this international advantage may rest as much on poor provision in other countries as on good quality provision here. Sandra Mathers and Rebecca Smees analysed ECERS data and concluded that maintained schools located in disadvantaged areas and serving disadvantaged children offered provision for three- and four-year-olds that was of comparable quality – across all measures of quality – to schools serving the more advantaged. Indeed, in some cases the standard was higher. But across the private and voluntary sector quality was lower in settings located in deprived areas and in those serving disadvantaged children. Worryingly, this was most evident in the quality ratings relating to interactions with children, support for learning language and literacy,

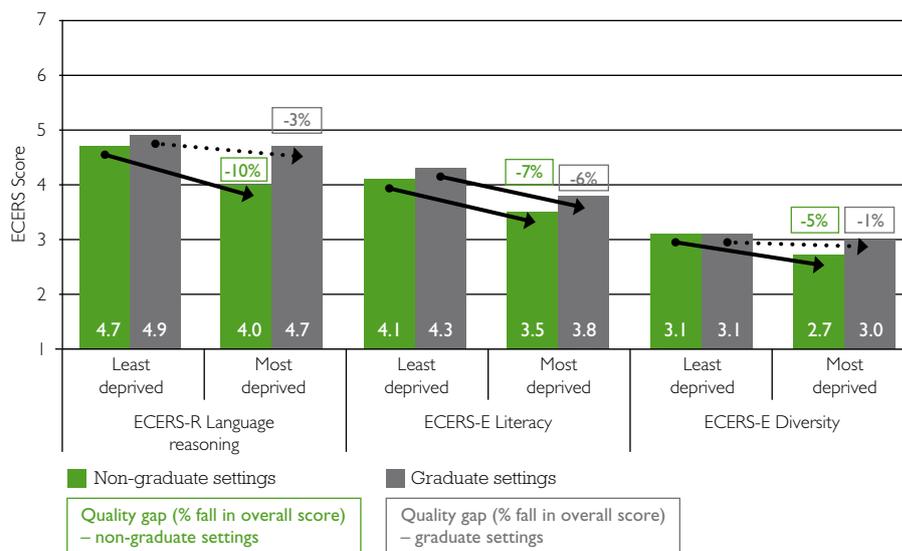
70 Blanden and others (2014).

71 Stewart and Gambaro (2014).

and provision for diversity and specific individual needs, all of which are critical to the development of school-readiness in the broadest sense.

These findings are illustrated in **Figure 4**, focusing on three selected ECERS subscales relating to support for children’s language reasoning skills, literacy, and diversity. One possible implication, highlighted by the researchers, relates to the social mix of settings. The strongest associations between quality and disadvantage in the PVI sector were identified for the deprivation measure based on the users of each setting (as opposed to area in which the setting is based) suggesting that it is *most* difficult to achieve high quality-rated provision when catering for large proportions of disadvantaged children. Together with evidence that a mixed environment is beneficial for poorer children’s outcomes, while posing no negative impact for their affluent peers,⁷² these findings point to the need for more work on the potential role of improved social mix within both the PVI and school sectors.

Figure 4: Mean scores on selected ECERS subscales for graduate and non-graduate PVI settings⁷³



Number of settings non-graduate/graduate: Language-reasoning (640/285), Literacy (285/155), Diversity (285/155). Significant differences at $p < 0.05$ or greater are shown by a solid line (dashed lines denote non-significant differences). Percentage change is calculated as a proportion of the overall maximum score (i.e. 7).

Within the private and voluntary sector, early years settings with a graduate member of staff scored more highly on all quality measures in the ECERS study. Supplementary analysis from Ofsted, included in the same project, shows that the most highly graded settings had both a graduate and a high proportion of staff qualified to

72 Sylva and others (2010).

73 Figure taken from Mathers and Smees (2014).

Level 3 (A Level or equivalent standard). Thus having a well-qualified staff team is associated with higher quality in all private and voluntary settings, whatever the level of advantage or disadvantage of their intake of children. However, only *graduate* leadership is associated with a narrower quality gap between those settings located in the most and least deprived areas.

Childhood disadvantage, however, is not only about income, important though that is. While the Index of Multiple Deprivation captures aspects of disadvantage beyond income, it does not enable us to look in any detail at other subgroups such as children with disabilities, those with special educational needs or looked after children. There is not sufficient evidence about the extent to which these groups are accessing early years education and childcare provision and the quality of that provision, although we do know that just 11% of local authorities report sufficient provision for disabled children and children with special educational needs.⁷⁴ The parliamentary inquiry into childcare for disabled children found 41% of families with disabled children aged three and four are unable to access the full 15 hours' free entitlement to early years education and childcare provision, because of a lack of suitable places.⁷⁵ Furthermore 86% of parent carers who responded to the inquiry reported paying above-average childcare costs, and 72% of families with disabled children have cut back or given up work because of childcare difficulties.

3.2 The importance of early language development

The marked attainment gaps already apparent when children begin school have long-standing and often permanent effects, and yet relatively little attention has been given to understanding how mechanisms designed to address and reverse these differences might be built into design of the delivery, funding and regulation of early years education and childcare.

This contrasts with the approach to formal schooling at primary and secondary level, in which a range of complementary mechanisms are in place to secure the quality of provision. These include a detailed curriculum, supported by evidence about effective practice; continuous assessment by teachers and the use of external examinations for both performance measurement and accountability purposes; and significant investment in teachers' pay, training and continuous professional development. None of these is systematically in place for early years education and childcare. It is worth considering how these approaches might be applied to early years provision, and particularly whether evidence suggests that they could improve sustained population-level returns on the significantly increased public investment in the sector.

⁷⁴ Butler, Lugton and Rutter (2014).

⁷⁵ HMSO (2014).

The Nuffield Foundation's areas of interest include a strong focus on children's language development, particularly speaking and listening skills and other aspects of their oral language. Research consistently points to early oral language skills as among the strongest predictors of educational success, and as providing a vital foundation for school-readiness and effective learning across other domains. Receptivity to language begins soon after birth, and most children learn to use and understand a wide array of words and language skills in their first two years. Language proficiency at age two predicts children's performance on entering primary school: children who enter school with poorly developed speech and language skills are at risk of literacy difficulties and educational underachievement.⁷⁶

One of the Foundation's current projects is exploring whether – as early as age one and two – vocabulary knowledge in particular is a good indicator of later reading and language outcomes.⁷⁷ Once children start school, teachers' ratings of pupils' language skills correlate strongly with progress in mathematics and literacy, but also with other domains including social, physical and creative development, suggesting that language plays a foundational role for the widest definition of child development.⁷⁸ Overall we see support for the development of oral language as one of the most central roles that early years education and childcare can play.

One intervention to improve a range of foundational language skills has already been developed and evaluated with positive results. Now known as the Nuffield Early Language Intervention, the programme is delivered by teaching assistants and targets children in nursery and reception who show weakness in their oral language skills. The programme focuses on improving children's narrative skills, vocabulary knowledge and listening skills. Children take part in a mix of group and individual sessions, and the programme also includes training in phonological awareness and letter-sound knowledge to supplement the reading instruction children receive in their mainstream classrooms.

A randomised controlled trial in 15 schools and their feeder nurseries across Yorkshire showed that after 30 weeks, children who had received the intervention had improved expressive language skills, including the use of vocabulary, grammar and narrative skills. Their letter-sound knowledge and phoneme awareness also improved, indicating the foundations of phonics were in place, possibly as a result of supplementing the oral language work with training in these pre-reading skills for the past ten weeks. After six months, the children in the intervention group had maintained their progress and actually outperformed the control group in reading comprehension. The design of the study enabled the authors to conclude that these gains in children's ability to read for meaning were entirely attributable to gains in their oral language skills.

⁷⁶ Snowling and others (2011).

⁷⁷ Duff and others (2015).

⁷⁸ Snowling and others (2011).

Following the positive evaluation, the Foundation worked with the researchers and the communication charity I CAN to scale up the programme and deliver it through a network of licensed trainers. A further, more comprehensive evaluation is being carried out with funding from the Education Endowment Foundation. This model of iteratively developing interventions which draw on strong scientific foundations, and developing and testing them further is, we think, essential if social interventions are to produce improved outcomes. However there are likely to be particular challenges in developing, testing and implementing interventions to improve outcomes in the context of a fragmented early years sector, and the Foundation is keen to identify ways of addressing this; we return to this in Chapter 4.

The Foundation is already funding a number of studies to deepen our understanding of speech and language development, and possible interventions that might promote them. Two projects are exploring the promotion of particular activities and approaches that parents can undertake in supporting their children's language development. Another project is developing and trialling a new assessment of sensitivity to speech rhythms as a potential screening device for early literacy difficulties. We are also starting to fund equivalent work exploring the foundational skills for arithmetical development that may be facilitated by interventions, and are keen to encourage further work in this area (details of all these projects can be found in the Appendix). We are also interested in finding ways of supporting parents to promote their children's language development, and the potential for early years education and childcare settings to facilitate this.

3.3 Other approaches to improving outcomes for children

Cognitive skills are only part of the picture in assessing those aspects of early years education and childcare that may affect outcomes for children. There is extensive evidence that a range of other developmental attributes – such as emotional resources, social and relationship skills, self-control and readiness to learn – are linked to success at school and in later life.⁷⁹ Indeed these non-cognitive skills may have not only an independent but an amplifying role: for example, a marginal improvement in cognitive skills for a child has a low effect on the probability of staying on at school if social skills are poor, but the effects are very high if combined with strong social skills.⁸⁰

So it seems that strong oral language skills are critical both in enabling young children to access the formal curriculum *and* as a foundation for a wider array of non-cognitive skills. What we can say is that both language and cognitive skills, and these broader social and emotional attributes are distinct domains, and that based on current knowledge, we should assume that good quality early years settings will pay attention to both. Indeed, other Nuffield-funded work tentatively suggests that 'soft skills'

⁷⁹ Boyd and others (2005); Garcia (2014).

⁸⁰ Carneiro and others (2006).

and emotional well-being also help lay the foundation for school-readiness and the development of cognitive skills.⁸¹

In any case, evidence suggests that outcomes for children can be improved where early years settings identify as early as possible where oral language skills may be lagging behind, and take steps to intervene appropriately. Central to this is an understanding of the cause of language delay for the individual. For some children it might be due to limitations of language and communications background: aspects of the home environment shown to be important predictors of language development include the number of books and toys available in the home, frequency of visits to the library, and (negatively) the amount of television on in the home.⁸² But for a significant proportion of children, probably around 7%, there may be more intrinsic learning difficulties, particularly one or more specific and diagnosable speech and language difficulties.⁸³

A Foundation-funded study led by Professor Penny Roy at City University London showed that young children from disadvantaged areas who attend pre-school provision regularly had significantly higher language performance than those who do not.⁸⁴ The study also found that the majority of those children entering primary school without the most basic speech, language and attention skills expected for their age had had no contact with clinical services. The research team developed and tested a battery of assessments that can be used to help providers to understand better whether language delay in particular children is due to limitations of their language environment, or to intrinsic language-learning difficulties. This could provide a useful platform for developing more targeted interventions in future.

One implication of a focus on early language development is that state funding for early years education and childcare at age three may be too late from a child development point of view. Quality for this age group is critical but is typically more expensive than for older ages and in any case, provision for this age group is commonly provided by the informal and private and voluntary sectors where on average quality is lower. There is limited evidence about what children of this younger age group need and how best to provide it in practice.

3.4 Impact of early years education and childcare on outcomes for families

State investment in a rapid expansion of provision was intended to yield a 'double dividend' by increasing maternal employment as well as improving children's outcomes. Families where parents work experience significantly lower risk of child poverty, which

⁸¹ Scott and others (2014).

⁸² Schoon and others (2010).

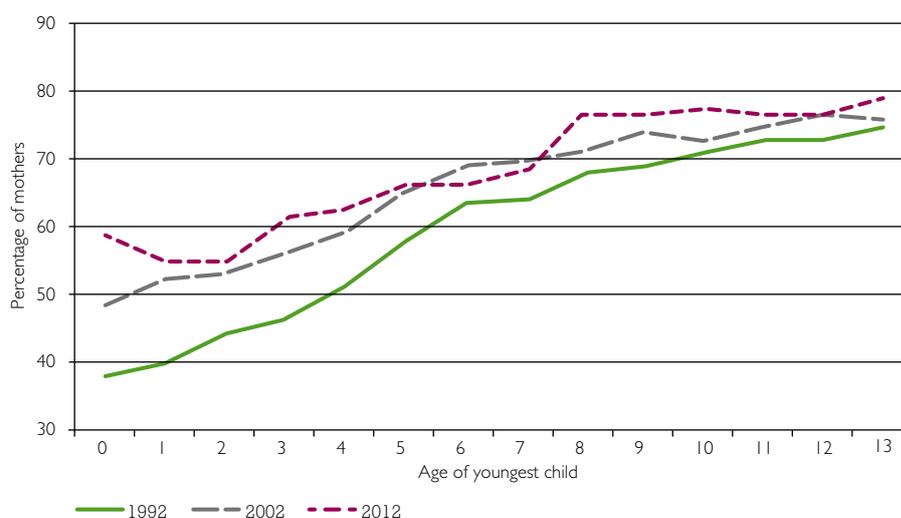
⁸³ Bercow (2008); Lindsay (2012).

⁸⁴ Roy and Chiat (2013); Roy, Chiat and Dodd (2014).

has an important independent effect on child welfare and outcomes. In addition, mothers who are able to work, or return to work, greatly reduce their 'motherhood pay penalty'. The period spent outside the labour market following childbirth leads to a long-term reduction in the earnings of mothers compared to women with no children, and the longer the break, the larger the gap.⁸⁵ There are also implications for maternal well-being and its knock-on effects for children; for example mothers in employment (both single mothers and those with partners) have lower levels of depression.⁸⁶

In their chapter on state support for early childhood education and childcare in the 2014 Green Budget, researchers from the Institute for Fiscal Studies (IFS) found that there has been a medium-term trend for rates of maternal employment to rise, especially for pre-school children (as shown in **Figure 5**). While this has coincided with the large increase in government spending to support the use of formal early years education and childcare provision in the UK, this is not to say that the relationship is causal.⁸⁷

Figure 5: Maternal employment by age of youngest dependent child in household in 1992, 2002 and 2012⁸⁸



Source: Labour Force Survey, April–June 1992, 2002 and 2012, for mothers aged 16–64 living in the UK.

The UK's maternal employment rates lag behind the OECD average. An international review undertaken by IPPR suggests that early years education and childcare provision is a key factor driving these international differences.⁸⁹ Countries with greater enrolment rates in publicly funded or provided pre-school settings also have higher maternal employment. There are a number of potential explanations for

⁸⁵ Thompson and Ben-Galim (2014).

⁸⁶ Harkness (2012); Harkness and Skipp (2013).

⁸⁷ Brewer, Cattán and Crawford (2014).

⁸⁸ Figure reproduced with permission. Brewer, Cattán and Crawford (2014), p.175.

⁸⁹ Thompson and Ben-Galim (2014).

the relationship including the increased availability, affordability and accessibility of provision. The IPPR review focused on the role of affordability and linked this to an analysis of the complex and varying barriers that different subgroups of mothers may face in entering or re-entering work.

The review suggested that affordable childcare has the potential to increase the maternal employment rate by between five and ten percentage points, as well as having an impact on the potential number of hours for work. It also suggested that higher maternal employment rates are associated with countries where 30 or more hours are subsidised, and where subsidies keep childcare costs to around 10% of family income. In the UK the figure is currently closer to 30% for full-time dual-earner couples and 20% for 1.5-earner couples, on median incomes. Given the mix of universal and means-tested support available for childcare, families at different points in the income distribution face very different childcare costs. For dual-earning families, childcare costs bite hardest for those on middle incomes.⁹⁰

The underlying studies did not necessarily provide firm evidence of causality, and wider socio-demographic and cultural changes may also have played a part, although at least one international study has found that the availability of public childcare accounts for a greater proportion of the variation in maternal employment rates than other factors such as educational attainment, economic affluence or attitudes towards gender and work. Nevertheless, it seems unlikely that further increases of as much as 10 percentage points can be achieved *solely* through greater public subsidy of childcare. Recent evidence in the UK illustrates this point.

A strand of the ESRC–Nuffield-funded work described earlier considered the impact of increased free provision on UK maternal employment patterns as well as children's attainment. Its initial findings suggest that expanding the proportion of three-year-olds receiving the free entitlement by ten percentage points could lead to an increase in maternal employment rates of 0.4 percentage points, although the estimates are more imprecise than those for child outcomes due to small sample sizes in the datasets (Labour Force Survey) used.⁹¹ Amongst mothers whose *youngest* child is offered a free part-time early education place, a ten percentage point increase in the proportion of three-year-olds leads to a rise in employment of 0.6 percentage points, with most of these mothers moving into part-time work of fewer than 30 hours per week. These are positive results, but they can hardly be seen to have transformed the labour market participation of mothers of young children, despite quite large increases in the proportion of children taking up places (around 50 percentage points). However, when the relatively small difference in the 'dose' of the amount of free childcare offered – 15 hours a week for one term – is taken into account, the effects are more promising.

⁹⁰ Alakeson and Hurrell (2012).

⁹¹ Blanden and others (2014).

Finally, work funded by the Foundation has shown that family decisions about women's participation in paid work are not only about whether early years education and childcare provision is available and affordable. Women's employment patterns vary according to the relationship status of the mother; employment status of a partner; the age and number of children (especially the youngest child), family income and employment policies such as flexible working rates and paid parental leave.⁹² In particular, there is evidence of a marked dichotomy in women's subsequent labour market patterns following birth, according to whether or not they stay in work through and after maternity leave.⁹³ Mothers with good access to maternity leave, especially those in the public sector, were more likely to return to work quickly. The evidence is that the pay penalty for mothers is greater the longer the gap in employment, and there is a greater negative impact of family separation on mothers' finances compared with fathers' (meaning that longer-term child outcomes may be affected if their mothers separate from their fathers).⁹⁴ If maternal employment and the associated benefits for family incomes are a public policy concern, it would seem important to find ways of increasing the proportion of mothers who remain in the labour market through and after maternity leave.

Family decision-making

Much greater research and policy attention must be focused on the ways in which early years education and childcare can be made to work better for families. Such provision should enable parents to return to the workforce or increase their hours if they choose, but it may have other effects as well. For example, high quality provision can play a role in complementing the home learning environment, providing a socialising environment alongside input from other adults with experience and expertise in education and child development.

An understanding of how structural (such as cost, working patterns, socio-demographic factors) and other 'soft' factors (beliefs and preferences) influence family decision-making about work and childcare trade-offs is important in the design of work incentive schemes. These vary for different groups of mothers, with factors such as parental employment patterns, maternal education and skill levels and the age of youngest children. For example, 37% of the mothers of under-threes who are not in work say they do not want to do so because they have responsibilities for family care.⁹⁵ This falls to 25% among mothers with a youngest child aged between three and four and to 15% among mothers of children aged between five and fifteen.

We also know that cost is not the only factor in choosing informal childcare, which is typically in the form of grandparents. Preferences for the involvement of close relatives in the care of young children to provide emotional warmth and continuity

⁹² Thompson and Ben-Galim (2014).

⁹³ Brewer and Paull (2006).

⁹⁴ Brewer and Nandi (2014); Fisher and Low (2012).

⁹⁵ ONS (2012).

of care, and questions about the suitability of childcare, or all-day care for the youngest age groups, also play a part in the decision. Parents are also less inclined to use formal care at times of the day or week that they felt were more akin to 'leisure' time for their children.⁹⁶

So an assessment of how well early years education and childcare meets the needs of families requires a comprehensive understanding of what influences their decisions about provision. Obtaining such an understanding is challenging, as parents are likely to need to believe (or have others believe) they have made decisions purely on the basis of what is best for the children. In reality, decisions are influenced by a host of factors, including necessity, cost, convenience and what seems possible and affordable, as well as what is best for the child. It is difficult for surveys, particularly those that ask about decisions that have already been made, to get to the bottom of the reasoning behind those complex decisions simply by asking questions.⁹⁷

Early years education and childcare that helps working parents' own needs has to support them in achieving an appropriate work-life balance. A study undertaken by Susan Harkness and Amy Skipp found that paid work that allowed lone mothers to achieve a satisfactory balance between work and childcare responsibilities had a much more significant effect on reducing the risk of depression in lone mothers than income provision alone.⁹⁸

Work-family conflict is more likely in families with young children, as well as families with more children or children with a disability. Lower job and life satisfaction, dissatisfaction with the couple relationship, and poorer mental health are some of the factors associated with work-family conflict. Many of these factors, such as couple conflict or parental depression, are associated with a negative impact on parenting and are therefore also likely to impact the home learning environment.⁹⁹ The potential of early years settings to add value by offering provision in a way that reduces some of the potential stressors as well as providing support for the home learning environment appears to be a relatively under-explored area.

3.5 Wider public policy implications

The increase in public funding for early years education and childcare has largely been driven by a growth in number of places, coupled with some additional help for parents to improve affordability. However, substantial cuts to local authority budgets potentially leave many early years services vulnerable, with some commentators estimating that real spending per child on early education, childcare and Sure Start

⁹⁶ Bryson and others (2012).

⁹⁷ Thompson and Ben-Galim (2014); Brewer and others (2014).

⁹⁸ Harkness and Skipp (2013).

⁹⁹ Burnett and others (2012); Reynolds and others (2014).

services has fallen by as much as a quarter in the past five years.¹⁰⁰ In this final section we draw on the evidence discussed in this report to highlight some key public policy issues that require greater attention.

The balance between state funding for universal provision and a more targeted approach focused on the most disadvantaged

Our reading of the evidence is that there may be different answers to the question of how to balance the higher costs of universal provision compared to an approach targeted on help for disadvantaged families, depending on whether shorter- or longer-term outcomes are considered.

Work by IPPR and others suggests there is an economic and social case for greater state investment, with universal provision the ultimate goal, not least because of the potential for improving social cohesion and removing social inequalities. But this would be expensive and potentially inefficient, given the high levels of 'dead-weight' identified in the ESRC–Nuffield-funded project, by which we mean that in a system of universal provision, the state would be subsidising provision that parents are currently paying for anyway.

The state of the current evidence base for further expansion is not strong and it seems to us that the immediate priorities should be to make better use of existing money and to renew efforts to build on the evidence base. The evidence we do have points repeatedly to the importance of high quality provision – both what is happening in settings and how they are organised – in achieving positive outcomes, particularly for disadvantaged groups. And the recent report of the House of Lords Select Committee on Affordable Childcare recommends the government considers the case for greater targeting of resources towards these groups. Yet the rapid expansion seen over the last 20 years has not given adequate consideration to these quality factors, with the result that too much provision is of poor quality.¹⁰¹

Given the state of the evidence, an initial focus on developing and testing high quality interventions for application with more disadvantaged groups may be the most sensible short-term strategy for early years education and childcare. We also need to improve our understanding of who is best placed to deliver interventions that have demonstrable outcomes, especially given the recent focus on two-year-olds. Crucial to this is the extent to which we have enough evidence about what constitutes 'high quality interventions' and 'clear outcomes', and how these relate to quality of staff. We also need to better understand the contribution of other factors, including the mix of children from different backgrounds in a given setting, how to improve the outcomes for more disadvantaged groups, and whether the answer varies according to the form of disadvantage. Similarly, there may be unintended consequences for take-up with a targeted rather than universal approach – for example if it could be demonstrated

¹⁰⁰ Stewart and Obolenskaya (2015). Note that this calculation is based on under-fives in England only.

¹⁰¹ Blanden and others (2014); House of Lords (2015).

that a universal approach improves take-up by normalising the acceptability of using childcare, including for disadvantaged groups.

The design of the funding system as a lever for improving quality

Current funding arrangements are complex and confusing for both providers and users. This needs to be addressed, but attention also needs to be given to the incentives that these arrangements embody. To date, funding mechanisms have been used to improve targeting to disadvantaged children, and to improve affordability and work incentives for parents. There is some evidence¹⁰² that targeting for disadvantaged groups is yielding some results, although with more evidence about how to improve quality provision, the approach could be refined.

Funding mechanisms focused on work incentives are not as effective as they could be given that high 'marginal deduction rates' erode work incentives, as they result in a high rate of benefit or tax credit loss for each extra pound earned as mothers increase their hours or move from benefits to work. And we do not know enough about how the current incentives differentially affect subgroups of parents.

Dr Kitty Stewart and colleagues argue that mechanisms that channel money directly to providers for improvements in quality have the greatest potential.¹⁰³ Funding could, for example, be directed towards process factors linked to children's oral language development, with settings encouraged to implement interventions targeted at the specific needs of their children through additional funding. A better understanding of the structural and process factors associated with improved outcomes for children would be needed to tailor regulatory and funding frameworks to support quality. For example, regulatory frameworks can be clearer about expectations for staff qualifications, and funding can be linked accordingly.

But first we would ideally need to know much more about what factors are important in explaining the link between workforce qualifications and quality. What is it about being a graduate that makes a difference: the richness of their oral language skills; their understanding of child development; or their management and leadership skills? And is the type of higher education course they have undertaken important? These are important questions if we are to understand how graduates are to be best deployed, and the extent to which quality gains might be made through promoting Level 3 qualifications, and through changes to wider pay and conditions. Similarly, we know that on average, private and voluntary settings are of lower quality than maintained ones, but we know next to nothing about variations within this, or what other factors, beyond staff qualifications, are relevant.¹⁰⁴ We also need to know more about effective models of continuous professional development and support for improving quality following initial training.

¹⁰² Gambaro, Stewart and Waldfogel (2013); Stewart and Gambaro (2014).

¹⁰³ Gambaro, Stewart and Waldfogel (2013).

¹⁰⁴ Mathers and Smees (2014); House of Lords (2015).

It would also be helpful to understand the interdependence between factors in order to manage trade-offs between, for example, staff ratios and staff qualifications. As we have seen so far, factors do not operate in isolation. For example, a loosely specified curriculum requires a well-trained workforce to deliver it; well-qualified staff are more likely to be able to achieve good or better outcomes for children at higher ratios than less-well-qualified staff.¹⁰⁵

The role of the regulated mixed market

Arguably, the measures of quality applied by Ofsted are too narrowly focused on structural factors and fail to capture the wider process factors (such as approach to oral language, cooperation and independence skills) that are known to be linked to quality and outcomes. In addition, while the current framework charges local authorities with responsibility for overseeing sufficiency of provision, they are increasingly left without the necessary levers to ensure universal availability of affordable, flexible places in high quality early years settings. The balance between different types of provider does not appear to produce a consistently high quality service. Maintained provision is generally delivering better quality, especially in deprived areas, but it doesn't always offer the flexibility and hours that many working parents need. Private and voluntary settings are more plentiful and flexible but there remain questions about their quality and affordability.

This raises questions about whether it is possible to develop and test blended models which draw on the combined strengths of the maintained and PVI sectors, although it is hard to see how this could be facilitated in practice. The reduced responsibilities of local authorities makes it harder for them to take on a coordinating role in relation to sufficiency and quality. If future developments are to be led by the PVI sector with minimal input from local authorities or other intermediaries, we need to know more about what an effective sector-led model might look like.

The capacity of the early years system to generate and use effective evidence

We welcome the recent expansion in the scope of the Education Endowment Foundation to fund work to test effective early years interventions, and are working with them to ensure that the limited funding for research is well coordinated. But there is limited scope for effective large-scale intervention trials – especially those which blend the best of what the maintained and private and voluntary settings have to offer – in a sector that is dominated by small private and voluntary providers, highly fragmented, and without the intermediary bodies or structures (such as local authorities) that would help to organise more ambitious initiatives. The challenges for scaling up or rolling out evidence-based improvements in quality are significant.

¹⁰⁵ Stewart and Gambaro (2014).



This raises questions about how to improve the quality of provision, and about the best model for developing and testing interventions. Both are important, and any solutions need to be applicable to the current mixed market model. Furthermore, the transition between pre-school and formal schooling is virtually uncharted territory for interventions and deserves greater attention.

Chapter 4: Research priorities for the Nuffield Foundation's programme, *Early Years Education and Childcare*

The Nuffield Foundation is launching a new programme, *Early Years Education and Childcare*. This brings together and extends our interests in 'Foundations for Learning' (within our *Education* programme) and 'Early Years' (within our *Children and Families* programme). The new programme has five themes and will be jointly overseen by the Director of Education and the Director of Social Research and Policy. The programme is designed to address themes and questions informed by our synthesis of findings from previous projects we have funded and our engagement with grant holders, policy-makers and practitioners across sectors.

In this chapter we summarise the rubric for the new programme so that the connections with the existing evidence base and wider public policy questions are clear. The full rubric is available on our website at www.nuffieldfoundation.org/apply-for-funding, and may be amended or updated in future.

4.1 Programme themes

1. Educational attainment and child development outcomes

How are process and structural aspects of quality in early years education and childcare related to short- and longer-term outcomes? How do these vary by age or other factors? We are especially keen to encourage rigorous trials or pre-trials for intervention projects focusing on both cognitive and developmental factors, including language, literacy, numeracy, self-control, emotional development, social and relationship skills, physical activity and movement, and the relationships between these. Special attention needs to be given to interventions and approaches that are appropriate for under-threes. In addition, we have a particular interest in interventions which identify and support children facing different types of disadvantage.

2. Tackling social disadvantage

In line with the Foundation's wider concerns, we are interested in understanding the extent to which variations in starting point at school entry are underpinned by structural differences such as poverty and family structure. Could one reason why it seems difficult to reduce socio-economic gradients amongst children be that the households they are born into are becoming more unequal in their material and

non-material resources? And if so, what are the implications for the role that early years provision might play?

We want to know more about the issues relating to the availability of early years places, how they are filled and by whom. What are the characteristics of different types of provision and how do these relate to outcomes? Relevant issues include intake composition, parental choice, admissions policies, and planning for places. Why is take-up lower among some groups of children who might be considered disadvantaged or at risk in terms of their cognitive, communicative, or language skills, or their social or behavioural development? How can their needs best be met in early years settings, and in particular what can be learned from those settings which already cater effectively for disadvantaged children with either mixed or targeted intakes? Does the socio-economic or other mix of intake in early years settings affect delivery and outcomes, and if so how? And how relevant is the type of setting – do integrated settings such as children’s centres better meet the needs of some groups compared to other childcare settings?

Given the apparent potential for gains to be lost if interventions are not sustained, we also need to understand much better the challenges surrounding transition from early years to formal schooling – both the *institutional* transition from one setting to another and the *curricular* transition from the reception year to Key Stage I.

3. Parental and family context

We are interested in the potential effects of early years education and childcare on the parental and family context in its own right, as well as its potential to improve children’s outcomes. What is the scope for provision to improve outcomes for children and families simultaneously, by offering training, education and employment for the parents as well as education and childcare for the children?

In particular, we want to know more about the potential to better integrate early years education and childcare with home visiting and parenting programmes that may have an impact on the wider home learning environment. We will be encouraging projects which explore the role of parents and informal carers in enhancing and extending the work of formal settings, with potential benefits for improving the home environment. We are also keen to develop a more dynamic understanding of the factors which may be *causally related* to parental behavioural responses, for example parental labour market decisions, and take-up and choice of different kinds of early years education and childcare.

4. Wider societal impacts

What are the costs and benefits of early years provision and how are these distributed across different sections of society? This includes employers and other beneficiaries as well as families with children under five.

5. Public policy mechanisms for early years

Markets and delivery mechanisms

How does the private and voluntary sector operate and what drives its costs? How responsive is it to changes in unmet demand and funding streams, and how is quality delivered within it? How could we improve quality in all settings, while maintaining the flexibility in hours of the private and voluntary sector? We are also keen to develop and test models for improving the continuity between early years and Key Stage I. And we want to know more about issues relating to the scaling up or rolling out of interventions and other programmes in a highly fragmented sector.

Funding and regulation

We want to understand the balance between supply- and demand-side funding, and produce evidence for the effects of different funding strategies on outcomes. How can funding mechanisms be better tailored to ensure high quality provision? How are funding streams allocated at local and national level, and what are the most effective ways of using targeted funding such as the Early Years Pupil Premium? We are also interested in how regulatory mechanisms can better assess process as well as structural quality and support improvements in both. What is the scope to use funding mechanisms to better incentivise providers to improve outcomes, tackle disadvantage, and meet wider family needs?

Staffing models

We want to know more about the apparent link between graduates and quality, with a view to identifying how graduates might best be deployed. We also want to consider how best to deploy non-graduate staff and how best to develop their skills. We need more evidence on the role of continuous professional development across all skill levels and we are interested in the potential for improved coordination with staff in primary schools. The wider context of reward, recognition and progression for early years professionals is also worthy of further exploration.

These questions and challenges are not exhaustive and we welcome proposals on other research questions under these themes.

4.2 Types of project

We recognise the need for a range of project types to tackle our priority themes and questions, and we welcome the contribution of different disciplines. Our emphasis is on empirical work, particularly:

- The use of large datasets to understand state of play at the population level and the factors that may be associated with or causally related to outcomes of interest.
- Development work to turn basic science into deliverable and testable interventions.
- Controlled trials to establish whether those interventions can be effective and can be scaled up.

The types of research we think will make a valuable contribution to addressing our research priorities are set out below.

1. **Reviews and synthesis**, including formal meta-analysis as well as other systematic and narrative reviews of empirical research. Projects may also include policy reviews and international comparisons, both of which may be complemented by stakeholder interviews or case studies.
2. **Data collection and analysis** designed to help us understand more about the state of play, what it is achieving in terms of outcomes and what factors seem most important in yielding positive outcomes. This work is likely to involve a combination of purely descriptive work and more explanatory analysis that aims to identify factors which are causally related to those outcomes, and the mechanisms at play. Examples of descriptive work could include the studies of prevalence (e.g. take-up by disadvantaged groups, the deployment of staff with different qualifications); exploration of processes (e.g. how budgets are used, such as how schools allocate their Early Years Pupil Premium funds) or analyses of outcomes (how do different social groups fare on the Foundation Stage Profile). Such studies are likely to involve secondary analysis of existing administrative and survey data, but given significant gaps in such data for the early years sector, primary data collection may also be justified.
3. **Pre-trial development work**. We frequently receive applications for evaluations of interventions that are not yet ready to be formally tested. We expect interventions to be based on strong evidence, for example about: the scale and nature of the problem that the intervention seeks to address; the causal mechanisms at the heart of any programme design; the practicality of implementing the proposed intervention in the chosen setting; the potential effect sizes; and the feasibility of conducting an evaluation of sufficient scale and

rigour to provide convincing evidence of effectiveness. We therefore offer grants to support the conceptualisation and design of novel early years interventions and take the concept through to the initial pilot phase, *provided that* there is the potential for the work to progress to decisive control trials. We usually expect pre-trial development work to be undertaken separately and independently from formal large-scale control trials to establish (cost) effectiveness. We also expect applicants to set out why any particular concept or approach – as opposed to others that may be available or in development – warrants further development and testing.

4. **Controlled trials and evaluations**, where there is a particularly creative and original intervention idea which has already been subjected to formal pre-trial development work. We will consider funding large-scale control trials where the evaluation has a strong design and where there are good prospects for plausible implementation at scale. Our funding for such work might take place in collaboration with the Education Endowment Foundation and we have already undertaken exploratory discussions with them.
5. **Research translation**. We are conscious that the early years sector has relatively limited capacity for developing, testing and adopting evidence based programmes and a fairly limited data infrastructure on how the system operates and the outcomes it achieves. We are therefore interested in projects which explore whether and how these capacity constraints might be addressed.

4.3 Final word

The process of synthesising and discussing the implications of evidence for early years education and childcare, both at the Foundation's symposium in July 2014 and in the production of this report, has been enjoyable as well as invaluable in shaping our thinking. We hope this report has successfully achieved its aim of stimulating new research ideas from those who are thinking about how they might contribute to the evidence base. We also hope that it will be a useful resource for policy-makers and for practitioners in different parts of the early years sector. We are keen to continue to engage with other funders, not just to limit duplication of effort but also to stimulate opportunities for collaborative funding. In short, we hope the report will stimulate thinking and dialogue between policy-makers, researchers, practitioners and funders about an exciting long-term vision for early years education and childcare.

Appendix

Early years and foundation stage grants 2009–14

| LEAD RESEARCHER AND INSTITUTION | GRANT AMOUNT AND DURATION | PROJECT TITLE, DESCRIPTION AND LINKS TO FURTHER INFORMATION |
|--|-------------------------------|---|
| <p>Caroline Bryson Bryson Purdon Social Research</p> | <p>£61,400 2009–2010</p> | <p>The role of informal childcare This study combined a literature review with secondary analysis to draw together good quality evidence on the subject of informal childcare, and to highlight the gaps in that evidence. http://www.nuffieldfoundation.org/role-informal-childcare</p> |
| <p>Professor Penny Roy City University London</p> | <p>£120,492 2009–2010</p> | <p>Is language as poor as it looks? Assessment of language potential in socio-economically disadvantaged preschoolers A study to explore whether language delay – which is more common among pre-schoolers from poorer socio-economic backgrounds – is due to limitations of the child's language environment or to intrinsic language-learning difficulties. http://www.nuffieldfoundation.org/language-poor-it-looks</p> |
| <p>Naomi Eisenstadt University of Oxford</p> | <p>£3,550 2009–2011</p> | <p>Sure Start book This small grant assisted with the research costs of Providing a Sure Start, published in 2011. The author, Naomi Eisenstadt, is former director of the Sure Start Unit. The book explains the history of the programme, its benefits and pitfalls, and offers lessons for the future for early years services. http://www.nuffieldfoundation.org/news/new-book-offers-insight-developing-services-young-people</p> |
| <p>Professor Margaret Snowling University of York</p> | <p>£240,708 2009–2012</p> | <p>Can pre-school training of oral language skills improve children's response to reading instruction? A randomised controlled trial (RCT) This study involved an RCT and developed the Nuffield Early Language Intervention, an evidence-based oral language intervention for children in nursery and reception who show weakness in their oral language skills. The programme is delivered over 30 weeks by teaching assistants in groups of three or four children. http://www.nuffieldfoundation.org/nuffield-early-language-intervention</p> |
| <p>Kate Groucutt and Sandra Mathers Daycare Trust (now named Family and Childcare Trust) and University of Oxford</p> | <p>£79,672 2011–2012</p> | <p>Identifying 'quality' in childcare This project assessed the relative strengths of different measures of quality applied in nurseries and pre-schools. It compared Ofsted inspections based on the Early Years Foundation Stage with other quality assessments such as ECERS (Early Childhood Environment Rating Scale) and ITERS (Infant Toddler Environment Rating Scale), as well as quality assurance schemes. Focus groups were also carried out with parents, providers and local authorities to explore how these different measures are understood. http://www.nuffieldfoundation.org/identifying-quality-childcare</p> |

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| <p>Dr Kitty Stewart London School of Economics</p> | <p>£99,825 2011–2013</p> | <p>The childcare puzzle: Improving quality and affordability?</p> <p>This project examined existing UK data on the quality and cost of care received by children from different social backgrounds, and used this as a basis for comparing early years education and childcare provision in the UK with that in other comparable (in terms of mix of private and public provision) countries. It focused in particular on how other countries ensure that good quality care is accessible to children from lower-income families. One aim was to suggest policy options for the UK which would go beyond simply 'spending more' to improve the quality and accessibility of provision for children from lower-income families.</p> <p>http://www.nuffieldfoundation.org/childcare-puzzle-improving-quality-and-affordability</p> |
| <p>Professor Ruth Lupton London School of Economics</p> | <p>£363,583 (total Foundation grant) 2011–2015</p> | <p>Social policy in a cold climate</p> <p>This project examines the effects of the major economic and political changes in the UK between 2007 and the present day, particularly their impact on the distribution of wealth, poverty, inequality and social mobility. It was jointly funded with the Joseph Rowntree Foundation and Trust for London. There was a strand of work on early years policy led by Dr Kitty Stewart.</p> <p>http://www.nuffieldfoundation.org/social-policy-cold-climate</p> |
| <p>Graeme Cooke IPPR</p> | <p>£68,129 2012–2013</p> | <p>Childcare: A national strategic priority?</p> <p>This project examined current provision of childcare across the UK to assess what approach to its funding and supply would achieve the best social and economic outcomes in future. It involved a comparative study of OECD countries on the link between childcare and key social and economic goals, and economic modelling to assess the feasibility and affordability of policy options.</p> <p>http://www.nuffieldfoundation.org/childcare-strategic-national-priority</p> |
| <p>Dr Silke Fricke University of Sheffield</p> | <p>£206,744 2012–2015</p> | <p>Oral language intervention for children with English as an additional language</p> <p>A study to adapt and evaluate an oral language intervention (the Nuffield Early Language Intervention) for children with English as an additional language, using an RCT.</p> <p>http://www.nuffieldfoundation.org/oral-language-intervention-children-english-additional-language</p> |
| <p>Dr Andrew Holliman Coventry University</p> | <p>£46,484 2012–2015</p> | <p>Pre-school screening for literacy difficulties: A new test of speech rhythm sensitivity</p> <p>A study to explore whether pre-school, pre-literate sensitivity to speech rhythm is predictive of early reading development. It will produce and validate an assessment of speech rhythm suitable for this group of children and will assess the children's literacy after one year.</p> <p>http://www.nuffieldfoundation.org/pre-school-screening-literacy-difficulties-new-test-speech-rhythm-sensitivity</p> |
| <p>Sandra Mathers University of Oxford</p> | <p>£32,723 2012–2015</p> | <p>Quality and inequality: Do children in deprived areas experience lower quality pre-school provision?</p> <p>The project explores whether early years settings and schools located in disadvantaged areas – and those servicing disadvantaged three- and four-year-olds – offer comparable quality to those serving the more advantaged. It also considers the drivers of quality, to explore which kind of providers are able to offer good quality in deprived areas.</p> <p>http://www.nuffieldfoundation.org/deprivation-and-quality-preschool-provision</p> |

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| <p>Dr Danielle Matthews University of Sheffield</p> | <p>£194,230 2012–2015</p> | <p>Does promoting parents' contingent talk with their infants benefit language development?</p> <p>A controlled intervention study exploring whether promoting parents' 'contingent talk' benefits children's language development, particularly for children at risk due to social disadvantage. (Contingent talk refers to talk between carers and infants about objects within the child's immediate focus of attention.)</p> <p>http://www.nuffieldfoundation.org/does-promoting-parents-contingent-talk-benefit-infants-language-development</p> |
| <p>Professor Kate Nation University of Oxford</p> | <p>£150,016 2012–2015</p> | <p>Infant vocabulary measures as predictors of reading skills in later childhood</p> <p>A study exploring the extent to which reading skills during early school years are a reflection of vocabulary development during the first two years of life. The project will follow up primary school pupils whose vocabularies were assessed in a previous study between 10 and 24 months of age.</p> <p>http://www.nuffieldfoundation.org/can-infant-vocabulary-measures-predict-later-reading-skills</p> |
| <p>Paul Johnson Institute for Fiscal Studies</p> | <p>£300,000 (total grant) 2012–2017</p> | <p>The Green Budget chapter 8 (state support for early childhood education and care)</p> <p>This chapter summarised the economic rationale for state intervention in childcare and the existing evidence on effectiveness. It provided a critical appraisal of the government's recent childcare reforms and estimated the costs of extending free nursery entitlement.</p> <p>http://www.nuffieldfoundation.org/ifs-green-budget-1</p> |
| <p>Dr Jo Blanden University of Surrey</p> | <p>£125,413 2013–2015</p> | <p>Evaluating the impact of nursery attendance on children's outcomes</p> <p>A quantitative study to investigate the impact of nursery education on children's cognitive and social development, focusing on the expansion in nursery education since 1998. The study is analysing large datasets including the MCS, NPD and Early Years Census.</p> <p>http://www.nuffieldfoundation.org/impact-nursery-attendance-childrens-outcomes</p> |
| <p>Professor Charles Hulme University College London</p> | <p>£232,140 2015–2016</p> | <p>Evaluating a parent-delivered language enrichment programme for disadvantaged pre-school children</p> <p>A study to adapt and evaluate an oral language intervention (the Nuffield Early Language Intervention) for children, but with the intervention delivered by parents rather than teaching assistants. The study will use an RCT.</p> <p>http://www.nuffieldfoundation.org/evaluating-parent-delivered-language-enrichment-programme</p> |
| <p>Dr Jo Van Herwegen University College London</p> | <p>£139,564 2015–2016</p> | <p>Improving preschoolers' number foundations: The Preschool Number Learning Scheme</p> <p>A study exploring pre-schoolers' Approximate Number System (ANS) abilities: the ability to estimate and compare quantities at a glance, without counting them. The study will explore whether games developed by the PI help to improve the ANS abilities of children at risk for mathematical learning difficulties.</p> <p>http://www.nuffieldfoundation.org/improving-preschoolers-number-foundations</p> |

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