ROUND-UP

THE ROLE OF ASPIRATIONS, ATTITUDES AND BEHAVIOUR IN CLOSING THE EDUCATIONAL ATTAINMENT GAP

The relationship between poverty and educational attainment is not fully understood. How can the educational attainment gap be narrowed? Which interventions have successfully improved educational outcomes and which require more supporting evidence?

This paper:
- examines whether the development of children's and parents' attitudes, aspirations and behaviours (AABs) for education affect attainment; and
- considers whether interventions focused on a specific set of AABs can reduce the attainment gap.

Key points
- It was not possible to establish a clear causal relationship between AABs and children's educational outcomes. A significant factor was the quality of evidence available – which currently offers only limited support for the impact of most interventions aiming to improve outcomes through AABs.
- Whilst there have been many attempts to address the AABs of poorer children and their parents, few have explicitly attempted to raise attainment or been robustly evaluated. This, along with questionable assumptions about low aspirations among poorer children and parents, has supported a proliferation of 'hopeful' interventions with unknown effectiveness in enabling disadvantaged children to realise their ambitions.
- The existing evidence supports the use of interventions focused on parental involvement in children's education to improve outcomes. The immediate focus should be on rolling out and closely monitoring such interventions.
- There is mixed evidence on the impact of interventions focused on extra-curricular activities, mentoring, children's self-belief and motivation. Further development of such interventions should be trialled alongside evaluations of their effectiveness.
- There is little or no evidence of impact for interventions focused on things like addressing children's general attitudes to education or the amount of paid work children do during term time. Such interventions might be pursued for other reasons, but the evidence does not currently support their use to raise attainment.

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APRIL 2012

INTRODUCTION

There is a widely held belief amongst politicians, policy-makers and practitioners that the educational outcomes of poorer children can be improved through interventions focused on raising aspirations, changing attitudes to schooling and addressing 'disengaging' behaviours (AABs).

There is much anecdotal evidence supporting these beliefs, and previous work for the Joseph Rowntree Foundation (JRF) indicated that AABs may have an important part to play in explaining some of the attainment gap. However, there is currently little real understanding of the relationship between AABs and educational outcomes. Policy and practice has been without a robust evidence base to inform the development and implementation of well-designed, evidence-led interventions.

The research

This paper summarises key messages from the following research in JRF's Education and Poverty programme (all published by the Joseph Rowntree Foundation, York)

Cummings, C., Laing, K., Law, J., McLaughlin, J., Papps, I., Todd, L. and Woolner, P. (2012) *Can changing aspirations and attitudes impact on educational attainment? A review of interventions.* York: JRF

Gorard, S., See, B. H. and Davies, P. (2012) *The impact of attitudes and aspirations on educational attainment and participation.* York: JRF

Kintrea, K., St Clair, R. and Houston, M. (2011) *The influence of parents, places and poverty on educational attitudes and aspirations.* York: JRF

This comprehensive evidence review, alongside new research looking at the role of aspirations, aims to fill this gap by:

1 examining if the development of children's and parents' AABs affects educational outcomes; and
2 considering whether a set of interventions focused on a specific set of AABs reduces the attainment gap between poorer children and their more affluent peers.

These findings are important, particularly in the current economic climate, as they provide a firm evidence base that will help policy-makers, practitioners and researchers spend their budgets on interventions that are most likely to make a difference.

What do we know about poverty and educational outcomes?

Whilst children living in low-income households are far from being a homogenous group, and many are successful in school, it is well documented that children growing up in poorer families tend to have lower levels of educational attainment and participation in post-compulsory education than their more privileged peers.

Previous JRF research (Goodman and Gregg, 2010) and DfE statistics (DfE, 2011) show that the 'attainment gap' begins to emerge early in children's lives, even before entry into school, continues throughout childhood and culminates in there being a considerable gap at age 16 and beyond. For example:

• By age three, there is a significant gap in cognitive test scores between children in the poorest fifth of the population compared with those from more affluent backgrounds.

- The attainment gap at age five grows during the primary school years, so that (i) the highest early achievers from low-income households are overtaken by lower-achieving children from more affluent backgrounds by age seven; and (ii) by age eleven, about three-quarters of children from the poorest fifth of families reach the expected level at Key Stage 2, compared with 97 per cent of children from the most affluent fifth.
- Although the gap between the richest and poorest children has started to fall over the last decade, the gap at GCSE level remains large, with the latest DfE figures indicating that pupils eligible for free school meals are almost half as likely to achieve five or more A*–C grades at GCSE as those who were not eligible (30.9 per cent compared with 58.5 per cent).
- Poorer children are half as likely to go on to study at university as their more affluent peers.

Successive UK governments have expressed a commitment to narrowing the attainment gap, on the basis that educational outcomes are a strong determinant of later life chances. They are also a route through which governments have aimed to encourage social mobility, reduce poverty, enable young people to reach their potential, and develop the international competitiveness of the UK economy. However, whilst some progress has been made in improving the educational outcomes of poorer children, policy-makers and practitioners have been unable to deliver improvements to the extent hoped for.

The result has been a proliferation of 'hopeful' or innovative approaches based on the widespread belief that raising aspirations, changing attitudes to schooling and addressing 'disengaging' behaviours will result in improved educational outcomes for children from low-income households. This has been reflected in policy shifting away from a sole reliance on an 'improvement through teaching' approach towards a broad range of other types of provision: from pre-school parenting programmes that aim to help poorer parents give their children a better start in life, through to initiatives intended to raise educational aspirations in secondary school children (such as Aim Higher).

Whilst there is much anecdotal evidence supporting these initiatives' rationale, there is still limited understanding of the relationship between AABs and educational outcomes. There are also questions as to whether the initiatives introduced so far have actually been successful in improving outcomes. As a result, much policy development and practice has been done without the benefit of robust evidence.

The importance of aspirations, attitudes and behaviours

Previous work undertaken for JRF by the Institute for Fiscal Studies and the University of Bristol (Goodman and Gregg, 2010) aimed to clarify the nature of the existing evidence. Their comprehensive analysis concluded that the AABs of children and their parents *may* play an important role in explaining the significant gap between different socio-economic groups in educational attainment and in participation in post-compulsory education. It also highlighted three major areas in which future policy and practice could make a contribution to reducing educational inequalities:

- **Parents and the family home:** Improving the home learning environment and helping parents from poorer families to believe their own actions and efforts can lead to improved outcomes.
- **Children's attitudes and behaviours:** Raising families' aspirations, reducing children's behavioural problems and engagement in risky behaviours, and helping poorer children believe their own actions and efforts can lead to improved outcomes.
- **The school's approach:** Allocation of funding towards pupils from the poorest backgrounds and direct teaching support to children falling behind.

However, these conclusions were made with an important caveat. Whilst factors such as attitudes, relationships, perceptions of self and others and a belief in personal competence ('self-efficacy') may be important in helping understand the nature of the attainment gap, the study noted that the precise part these factors play remained uncertain. This was because, whilst the analysis in the report was based on rich data, it was not derived from robust intervention trials and therefore could not make claims about causality or effectiveness. The report noted that higher quality data was required to make definitive conclusions about how the attainment gap might be reduced.

Goodman and Gregg stressed that links between AABs and educational outcomes might not be as straightforward as they seem. For example:

- What might look like 'low aspirations' may often be high aspirations that have been eroded by negative experience.
- What looks like 'parental disengagement' may actually be the result of a high level of commitment to their child's education, which is not matched by the capacity to provide effective support or by the ability of schools to work effectively with parents.

This research also highlighted that, whilst there appears to be an *association* between AABs and outcomes, the implications of this are unclear. In some cases, it may be that outcomes helped shape AABs. In others, there may have been a mutual association between outcomes and AABs because both were shaped by the same set of factors. Whilst some interventions changed AABs *and* outcomes, these changes could have been the result of unknown factors. Put simply, misplaced conclusions could be drawn if the exact nature of what activity caused what result was not known.

Other recent research for JRF (Kintrea *et al.*, 2011) challenged the widespread presumption that poorer children and their parents have low aspirations. It found that poorer children (along with their families) often have high aspirations and that many want to go to university or get professional, managerial and skilled jobs. Indeed, in some places, the local labour market would be unable to provide the opportunities if all young people were to achieve their goals.

The research found little evidence of unrealistic aspirations among poorer young people and their families. It also found little evidence of fatalism among people faced with depressed local labour markets, nor of beliefs that not working was acceptable. Indeed, it indicated that most poorer young people attached great importance to school and that their parents did what they could to support them.

However, the study stressed that the real difficulty for many children was in knowing *how* to fulfil their ambitions. Rather than raising aspirations in order to raise attainment, there is a real need for children and parents to be offered support to learn more about educational and career options so they can make more informed decisions about their future.

Evidence on improving educational outcomes

The evidence reviews in this programme aimed to determine if AABs have a causal relationship with educational outcomes *and* if/how far policy and practice interventions focused on changing AABs can reduce the educational attainment gap between the richest and poorest children.

The focus here was on a specific range of interventions that aimed to improve outcomes. This is not to say other types of interventions are not important in their own right, or that they do not have any impact. Some initiatives are focused on improving outcomes through other means or on addressing attitudes and behaviours with more specific goals in mind, such as improving behaviour or reducing truancy. However, the focus here was on the potential importance of AABs (and specifically aspirations, self-belief and valuing school) as a means of improving outcomes.

The most striking finding is perhaps a negative one. JRF's programme was unable to establish a clear causal relationship between AABs and educational outcomes. As a result, it calls into question 'received wisdom' and the resulting routine support for intervening in this area to 'drive up standards' and 'narrow the gap'.

A significant factor in reaching this conclusion was the quality of evidence available. This, in part, reflected the standard of evidence the programme demanded. Whilst a lower benchmark might have yielded different conclusions, this standard was considered appropriate given the significant cost of educational provision and the questionable ethics of using unproven interventions on children during such a critical period in their lives. This conclusion leads to three main points:

1. Whilst there have been many interventions aimed at addressing the AABs of poorer children or parents, few have been explicitly aimed at raising attainment.

2 Much of the evidence that is available is of a very mixed nature. This is primarily because of how previous interventions and evaluations have been designed and implemented. Predictably, where evaluations were small scale, process-orientated, poorly-resourced or 'bolted-on' during the life of interventions, or used inappropriate research tools, the resulting evidence was weak and inconclusive.

3 The evidence that is currently available offers only limited support for the impact of most interventions aimed at AABs on attainment or participation.

This does not mean that nothing can be done. Detailed analysis of the existing evidence reveals three broad levels of effectiveness. This has significant implications for policy-making, practice and evaluation.

- Even when demanding standards were applied, interventions focused on parental involvement in children's education demonstrated evidence of impact on raising attainment. This suggests that an immediate focus for both policy and practice should be on developing a full cost-effective model of delivery of this type of intervention and ensuring detailed ongoing monitoring.

- There is some evidence of a relationship between outcomes and interventions focused on addressing participation in extra-curricular activities, mentoring, and also on improving self-confidence. However, this is not sufficiently compelling to recommend roll-out at this stage. This suggests that further development of these kinds of interventions should be subject to full-scale trials alongside well-designed evaluations to determine effectiveness.

- There is little or no evidence improved outcomes from interventions focused on things like addressing children's general attitudes to education or the amount of paid work children do during term time (e.g. a paper round). This does not mean that such interventions may not be valuable in their own right or that they do not have any impact on the educational experience or personal circumstances of children and young people. However, the available evidence is clear that these kinds of interventions should not be undertaken in the belief that they will make a contribution towards raising attainment or participation through changing attitudes, aspirations or behaviour.

  This distinction of three 'levels' of evidence is important. In the current economic climate, it is perhaps more important than ever that policy-makers and practitioners seeking to raise educational attainment and participation in post-compulsory education know which interventions:

  1 have a strong evidence base and should therefore be scaled up and rolled out;
  2 are 'promising' but need more supporting evidence; and
  3 should not be pursued in order to raise outcomes.

This will provide them with a firm foundation on which to focus resources on developing and implementing interventions that are most likely to make a difference to children living in low-income households.

Interventions that work: real evidence of impact

Parental involvement

The area with the most promise for the immediate future is parental involvement in children's education ('parent' here is taken to include adult carers and guardians). This programme of work found there to be a 'reasonable case' that parental involvement in their children's education has a causal influence on children's school readiness and subsequent attainment.

It is on this basis that the recommendation is made for moving straight to the development and implementation stage, based initially on existing parental involvement interventions that have been shown to be effective.

Four broad areas of intervention in this area can be identified:

1 improving at-home parenting;
2 involving parents in school;
3 engaging parents in their children's learning and in their own learning; and
4 aligning school-home expectations.

Each type of intervention works differently in terms of location, numbers involved, who is responsible for the organisation of the intervention and the nature and duration of parental involvement. The interventions reviewed were mainly concerned with pre-school children or those transferring to primary school. They were noticeably focused on the mother as parent, although, where evidence on the role of fathers exists, their involvement could also be an important factor. Few interventions to date have considered differing impacts for sub-groups such as ethnic minorities. In addition, many programmes had high drop-out rates as a result of the intensity of the programme. This underlines the importance of detailed and ongoing evaluation, as different contexts and characteristics of participants may affect the likelihood of improving outcomes.

The key features highlighted as supporting successful parental involvement interventions include:

- ensuring parents are willing/able to put in the necessary time and effort;
- parents and facilitators who genuinely collaborate, maintaining a two-way exchange of information;
- flexible models of working in partnership with parents in different contexts;
- using facilitators from the same community as the parents;
- well-structured programmes with a high level of ongoing support for parents to minimise drop-out rates; and
- interventions working beyond the school and home, and making use of other settings.

As already noted, the question that remains is which aspects of different models of parental involvement are the 'active ingredients' in improving educational outcomes. Given the nature of such interventions, these are often difficult to isolate. However, the evidence suggests that impact comes not so much from changing parents' AABs by themselves, but rather from giving parents better information and access to appropriate support and advice. This is important for the following reasons:

- Where parents are from poorer backgrounds themselves, or have not been successful in education, they may lack the practical knowledge that enables them to support their children, for example, with homework or making plans for their future.
- 'Negative attitudes' may reflect poorer children's lack of confidence in their own ability to succeed in a system organised around a middle-class ethos that they (and their parents) do not relate to; this does not mean that they feel education does not matter (or their parents do not care).
- Poorer children and parents may not be aware of the full range of possibilities open to them or understand the routes that need to be taken to secure certain occupations or routes into post-compulsory education.

As a consequence, interventions seeking to involve parents by simply directing resources into raising their aspirations in order to raise outcomes are unlikely to be successful. Indeed, given that poorer children (and their parents) generally have high aspirations and positive attitudes to education already, attempting to raise these further misses the point that high aspirations alone are not enough. It is more likely that success will result from interventions that enable and encourage parents actively to engage with their child's learning and the education system more generally. Box 1 describes some well-evidenced parenting interventions.

This does not mean that existing initiatives in this area should simply be rolled out and then left to run. As noted above, there are specific areas where further work is needed before assumptions can be made about the effectiveness of interventions in different contexts or with different groups (two of the initiatives in Box 1 were set in the US, for example). This means that the delivery of interventions should be refined on an ongoing basis, with any changes being clearly based on findings from robust monitoring and independent impact evaluation. This will enable further changes to be made over time, taking account of other evidence as it emerges, to ensure interventions continue to improve outcomes and also remain cost-effective.

Impact of parental involvement on participation in post-compulsory education
There is a much weaker case that parental involvement has a causal influence on children's participation in post-compulsory education. Again, this is mainly due to insufficient evidence rather than evidence showing a lack of impact. It is important, therefore, to recognise that whilst parental involvement may have an impact on post-compulsory education participation rates, it should not be assumed that this is the case.

However, the evidence suggests that activities focused on seeking to increase participation in post-compulsory education would support and strengthen the impact of more generic parental involvement interventions if introduced in combination. Indeed, doing so might make it possible to determine:

- what particular aspects of such interventions are successful;
- what types of interventions might work best for children of different ages and in different areas; and
- what the most cost-effective models of practice might be.

It might be appropriate to undertake a more focused search for more evidence on this issue, commissioning additional research where needed.

Box 1 – Examples of parenting interventions

Home instruction for parents of pre-school youngsters was a US programme which aimed to increase parental involvement and enhance school readiness for children aged between 3 and 5. Parents worked with their child for 20 minutes per day using a curriculum of role playing with weekly activity packs including storybooks and equipment for studying maths and science. The curriculum was designed to encourage the development of language, problem solving, logical thinking and physical, emotional and social skills. The main findings (Nievar *et al.* in Cummings *et al.* (2012)) were that it:

- produced a more enriched home environment (reading materials etc.);
- resulted in a significantly higher level of parenting 'self-efficacy'; and
- produced maths scores significantly higher than for the control group (although it did not have the same impact on reading scores).

The Houston parent-child development centre project was a two-year US project targeting Mexican-American parents. It started when children were aged one and aimed to improve school ability via a series of home visits, family workshops and education-focused classes for parents about child development and childcare. Results (Johnson (1990) in Cummings *et al.* (2012)) showed that:

- At age two and three, children demonstrated significantly better mental development (based on IQ measures) than the control sample and stayed at or near national average whilst the control group's scores fell on average by eight points.
- The project resulted in more stimulating home environments than in the control sample.

The family literacy initiative involved several family literacy programmes in England and Wales. Parents and children aged three to six took part in a 12-week course of accredited basic skills instruction for parents and early literacy development for young children. It also included parent and child sessions which encouraged pre-reading and early reading skills. It found that:

- Gains were made in vocabulary, reading and writing and maintained after two years.
- Parents became better equipped to support children in reading and writing.

Promising interventions: More limited evidence of impact

The evidence is more mixed for interventions focused on areas such as extra-curricular activities, mentoring, children's self-belief and rewards for positive behaviour or attitudes. In many cases, this reflects the fact that the evaluations undertaken on these types of intervention did not produce sufficiently robust evidence, as opposed to evidence that these interventions do not work.

Whilst potentially promising, these interventions should therefore be trialled on a wider scale and robustly evaluated to determine their effectiveness before any decision about wider roll-out is made. It also strongly suggests that innovative interventions in these areas should continue to be developed, but that they should also be subject to rigorous piloting and evaluation before claims are made about their effectiveness.

The remainder of this section discusses extra-curricular activities and mentoring, as these are areas which the evidence suggests are either most promising or close to being ready for scalable trials and evaluation.

Extra-curricular activities

Involvement in extra-curricular activities is widely believed to lead to improved educational outcomes. However, it is not proven that such activities produce benefits in themselves or that participation in them necessarily results in improved educational outcomes, as there have been few robust evaluations. Whilst there is some evidence supporting their effectiveness, it is far from clear why observed improvements in attainment might have occurred. This area of intervention is therefore promising but in need of more evidence.

Extra-curricular activities fall into three main categories:

- non-academic activity-based interventions;
- study support; and
- multi-strand extra-curricular interventions.

Extra-curricular activities are normally, though not exclusively, school-based (for example, after-school clubs). As they can take place outside normal school hours and are usually voluntary, participation is generally on a self-selecting basis. In addition, the type of extra-curricular activities offered may determine the likelihood of engagement and success and, of course, it is possible that parents and children may not perceive the activities on offer to be relevant to their lives (Wikeley *et al.*, 2007). In combination, these factors could affect the characteristics or circumstances of participants and this might have an impact on how far effectiveness can be measured.

However, it is possible that choosing to participate in an activity may in itself have a positive impact. It could also allow parents and children to develop positive relationships with a broad range of other adults and children through their shared interests. This has potentially positive benefits for participants in terms of impacts on self-esteem, educational aspirations and attainment.

A case could be made, tentatively due to the limited volume and quality of research, that interventions that are closer to 'the classroom' (such as study support) might be more promising and may have greater benefit for poorer pupils. However, there is debate over whether activities (such as sports clubs) based on school premises enable participants to make better connections with school learning, by linking completing schoolwork with participation in other activities, for example. It is possible that there are potential benefits to poorer children taking part in activities that are separate from school-based provision, as this might enable some to experience success, associate these activities with school and become more engaged in school than they might otherwise have been (see Hirsch, 2007).

These arguments for and against different aspects of extra-curricular activities partially explain why interventions in this area intended to improve educational outcomes have not been effective. Another aspect is that many interventions in this area have focused on addressing other issues, such as truancy, bad behaviour and self-confidence but with an implicit assumption (rather than an explicit expectation) that this will lead to improved outcomes.

The evidence indicates that extra-curricular activities needs further, more rigorous investigation since, like parental involvement, these activities could have a potentially positive impact on participation in post-compulsory education as well as attainment. However, any proposed initiatives need to be carefully designed with (i) explicit criteria for success or failure and (ii) clearly specified methods of intervention, both of which can be rigorously tracked in sufficiently scaled trials before any decision can be made about their effectiveness in improving outcomes.

This is not to say interventions focused on extra-curricular activity ought not to be implemented for other reasons, as raising attainment is not their only goal. Rather, it is intended to clarify that interventions need to have a clear set of intended outcomes which can be assessed and that claims of effectiveness around raising attainment are appropriate.

Mentoring

Whilst there is some evidence that mentoring has an impact on attainment, there is not sufficient evidence on particular models to determine how or why. As with extra-curricular activities, this is a promising area of intervention, but in need of more evidence.

There is a broad range of mentoring interventions. Some are informal in nature, whilst others are more structured programmes. Some have a very specific focus on raising attainment, whilst others have more general aims such as improving behaviour or preventing truancy. Different mentoring schemes involve many different people, including: peers, teachers, family members and external professionals or role models.

The core principle of mentoring schemes, however, is that a relationship is established (whether on a short-term, ad-hoc, or long-term basis) between a mentor – who is perceived to have greater relevant knowledge, wisdom, or experience – and a mentee. Box 2 describes two examples of evidenced mentor schemes.

The appeal of mentoring appears to be that it enables less able, younger or poorer children to develop relationships with older, more experienced children or other mentors. The belief is that those being supported will benefit from the experience and so their educational attainment will improve, in the short or long term. It has also sometimes been used within activities intended to persuade secondary age children from low-income households to think about going on to participate in post-compulsory education.

The range of practices claiming to produce positive outcomes in mentoring arrangements includes:

* careful recruitment, screening and matching of mentors – the potential impact of self-selection of mentors needs to be borne in mind when designing interventions;
* strategies to lengthen mentoring based on needs;
* support and training for mentors in creating effective relationships;
* clear guidelines for mentors on relationship-building and how to work with mentees; and
* funding to support the development of programme infrastructure, and paced growth to ensure the support needed to continue development.

The problems faced by evaluations of mentoring include the variety of different models used, the flexibility that often characterises their delivery and the lack of robust evidence about whether the activity has had any impact. Indeed, in some interventions, it is not always clear if the main beneficiary is the mentor or the mentee.

Peer-mentoring, involving children of all ages, is one commonly used model where children can be both mentors and mentees. However, the evidence in this area has not been conclusive. Some recent research (Tymms *et al.*, 2011), reported after this review was undertaken, found some evidence of effectiveness of peer tutoring, but concluded that much more detailed work was needed to understand what explained the impact. This is currently being developed for a larger-scale trial.

It is important that proposed interventions in this area are developed based on what has already been shown to be effective, with trials of sufficient scale and duration to enable robust evaluation of whether the trialled approach has been effective; and to disentangle which aspects of the approach are key to any success. Only then can it be determined if mentoring can be pursued as a scaled-up evidence-based intervention.

Again, it is important to stress that mentoring interventions may well have a range of other important benefits, not solely improving outcomes directly.

Next steps in developing interventions

JRF's research programme has highlighted substantial issues with the evidence base for the effectiveness of interventions aiming to improve the educational outcomes of poorer children. The implications of the findings also highlight methodological issues for future interventions and evaluations.

Considerable gaps remain in the evidence base, either because of a lack of well-designed interventions looking at the relationship between AABs and outcomes or because evaluations have not been sufficiently robust or integrated into the design of interventions from the start. It is clear that little progress is likely to be made through further 'hopeful' interventions or poorly designed evaluations.

Future interventions need to be developed using the best evidence available and to be explicit about the new knowledge they seek to generate. They also need to be evaluated robustly, to go beyond the process-oriented, poorly-resourced or 'bolted-on' evaluations that have often taken place in the past. This does not imply that all evaluations must be large-scale randomised control trials. Indeed, robust evaluations can come in different forms.

Reflecting the complexity of AABs and their contexts, interventions evaluated through exploratory and flexible designs using a range of methods will sometimes be necessary. In contrast, for many practitioners with innovative ideas, the initial stages of evaluation may be small-scale, and possibly primarily qualitative in nature, but then require working in partnership to develop evaluations of sufficient scale to determine effectiveness.

In other cases, such as when the concepts are complex or difficult to measure, this may mean that methods other than standard quantitative measures of success are more appropriate. In many cases to date, evaluations have been undertaken using simplistic and inappropriate research tools, which have undermined their conclusions about effectiveness. A range of detailed and sophisticated research tools are needed for the evaluation of a range of complex and difficult-to-measure concepts – particularly when evaluating change over time. For example, clearly defined terms and more sophisticated ways of measuring what is meant by 'positive attitudes', 'aspirations', 'locus of control' and 'valuing school' by both parents and children. There needs to be a means of corroborating (or contrasting) parent/child perspectives with school/teacher perspectives.

Awareness of the need for robust evaluation (and of how this can be done) must be raised amongst policy-makers and practitioners. This will ensure that the evaluation challenges of initiatives seeking to change underlying conditions, practices and relationships with schools are not avoided in favour of narrowly-focused programmes which appear easier to evaluate, but which may not yield compelling results. This strongly supports the idea that practitioners and evaluators/researchers need work closely from the outset.

Regardless of the nature of proposed interventions, the conclusions of JRF's programme of work are that they should be:

- developed on the basis of the best available evidence, as opposed to anecdote or belief;
- explicit in defining the criteria for success/failure and what change is anticipated;
- accompanied by high-quality evaluations which are built into the design from the outset;
- evaluated using detailed, appropriate and robust research tools; and
- supported by the collection of data to estimate the costs of delivery and impact.

Conclusions and recommendations for policy and practice

To deliver on successive governments' commitment to reducing the educational attainment gap, it is critical that our education system, with its unique role in enabling young people to gain knowledge and develop skills, maximises the impact it has for the poorest children. Particularly when the spending of public funds is under intense scrutiny, it is essential that what is done with schools is based on the best available evidence. This will ensure that government gets the best return on investment in education and young people are helped to achieve their true potential.

JRF's education and poverty programme set out to (i) examine whether development of children's and parents' AABs affects educational outcomes; and (ii) consider whether a specific set of interventions reduces the attainment gap between poorer children and their more affluent peers. The original intention was that if a causal relationship was found and successful interventions identified, then clear guidance on policy and practice solutions could be provided. However, despite the robust review process, the programme was unable to establish conclusively a strong causal relationship between AABs and the educational outcomes of children from poorer backgrounds. A significant factor was the quality of evidence available.

The conclusions offer some firm recommendations about interventions aimed at raising attainment amongst the poorest children:

- The immediate focus should be on rolling-out and monitoring the implementation of interventions where there is already good evidence, particularly in the area of parental involvement. Interventions in this area should have a clear focus on providing information, support and advice to parents and children, rather than continuing to seek to raise aspirations which are already generally high.
- There should be significant support for the further development of interventions such as participation in extra-curricular activities and mentoring, where the current evidence is promising but not yet compelling.
- There should also be support for innovative interventions. This should be focused on ensuring they can be trialled at sufficient scale before any claims are made about their effectiveness.

These findings also have implications for the development of a comprehensive, robust evidence base in future. It should ensure that:

- all proposed interventions are developed in light of the best evidence currently available, however tentative, and that they have high-quality well-designed evaluations integrated into their design from the outset;
- detailed, appropriate and robust research tools and guidance are developed and that information about these and how they can be used is accessible to policy-makers, practitioners and evaluators; and
- effective and ongoing dissemination of the up-to-date evidence base happens and involves policy-makers, practitioners and the educational research community.

About this paper

This paper builds on previous JRF work highlighting the links between children's and parents' aspirations, attitudes and behaviours and the educational achievement gap between richer and poorer children.

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