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Executive Summary

The impact and cost effectiveness of Nurture Groups in Primary Schools in Northern Ireland

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Executive Summary

Nurture Groups

Nurture Groups are widespread throughout the UK, with an estimated 1,500 currently in operation and registered with the Nurture Group Network. They represent a short-term and focused intervention to address barriers to learning arising from unmet attachment needs. They are a targeted programme, aimed at pupils who have difficulties coping in mainstream classes, who fail to engage in the learning process, and who may otherwise be at risk of underachievement, leading to Special Educational Needs support or the need for education outside of the school setting.

The classic model for Nurture Groups involve classes of about 10-12 children, typically in the first few years of primary school, and staffed by a teacher and teaching/classroom assistant. The aim of the Groups is to provide children with a carefully planned, safe environment in which to build an attachment relationship with a consistent and reliable adult. Children spend the majority of the school week in the Group, receiving highly structured and supported learning experiences, but where possible re-join their mainstream class for registration, assembly, break, lunch and home time. Pupils attend the Group for between two and four terms, after which the ultimate aim is that they can reintegrate into their mainstream class on a full-time basis.

In Northern Ireland, there are a number of established Nurture Groups that have been operating for many years, with some schools self-funding or accessing funds through the Department for Social Development (DSD) Neighbourhood Renewal Investment Fund. The Office of the First Minister and Deputy First Minister announced funding for 20 new Nurture Groups in 2012, through the Delivering Social Change (DSC) Signature Projects. The Department for Education (DE) and DSD are delivering this project, and DE has invested further funds for the continued provision of 10 established Nurture Groups in schools in which funding was coming to an end.

The Present Evaluation

Commissioned by the Department of Education, the objectives of the present evaluation are:

- To assess the effectiveness of nurture provision in improving child social, emotional and behavioural development, and ability to learn, both within the Nurture Group and following reintegration with the mainstream class;
- To assess the cost-effectiveness of nurture provision in achieving its objectives.

There are four elements to the present evaluation:

- Stage 1:an analysis of data for 529 children from 30 primary schools who had previously attended Nurture Groups (the 20 Signature Project schools and the 10 established Nurture Groups) to assess their progress during their time in the Groups and the potential factors associated with the progress made;
- Stage 2: a quasi-experimental trial involving 384 children in total and comparing the progress of those currently attending Nurture Groups in the 30 primary schools (during the 2014/15 school year) with children in 14 matched schools with no Nurture Group provision;
- a cost-effectiveness analysis and economic review of Nurture Group provision; and
- a qualitative process evaluation involving interviews with school principals, Nurture Group teachers and class assistants, mainstream teachers, parents and children as well as observations of the Nurture Groups in practice.

Impact of Nurture Group Provision

This evaluation found clear evidence that Nurture Group provision in Northern Ireland is highly successful in its primary aim of achieving improvements in the social, emotional and behavioural skills of children from deprived areas exhibiting significant difficulties.

Findings from Stage 1: analysis of previous data

Analysis of the data gathered on the 529 children that had previously attended Nurture Groups showed that, on average, they had made consistently large improvements in social, emotional and behavioural development (see **Figures E.1** and **E.2**). This was measured using

the Boxall Profile (see brief description in Box E.1). The size of change in Boxall scores over time is expressed as an 'effect size' (Cohen's d). An effect size of .2 may be considered a 'small' change, .5 is a 'medium change' and.8 or above a 'large' change. In relation to the Boxall Profile, pupils demonstrated significant improvements with regard to the overall developmental strand scale (which assesses the extent to which children exhibit positive attitudes and behaviours) (effect size, d = +1.64) and similarly large reductions in the diagnostic profile (which assesses the level of children's negative behaviours and attitudes) (d = -1.02).

Moreover, these levels of improvement were found to occur for all groups of children, regardless of gender, age, whether there has been social services involvement or the particular stage of the Special Education Needs Code of Practice a child is at on entry to Nurture Group. However, whilst progress was found amongst children from all subgroups identified, there was some evidence that greater progress was being made by: those attending on a full-time basis; looked after children; and by those not eligible for free school meals.

Box E.1: Description of the Boxall Profile

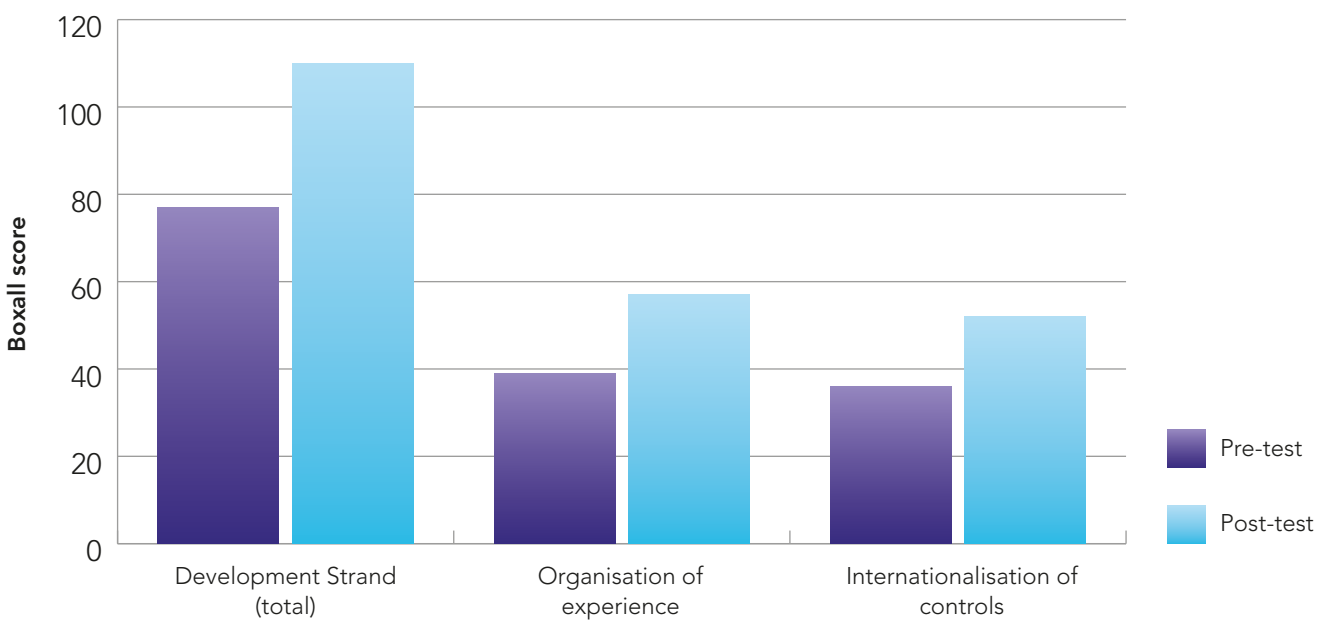
The Boxall Profile is a tool designed for use in Nurture groups. It contains:

- a Developmental Strand which measures aspects of the developmental process in the early years that lays the foundation for being able to function socially, emotionally, behaviourally and academically in school; and
- a Diagnostic Profile which measures behaviours that act as a barrier to full and satisfactory participation in school.

Total scores for both sections can range from 0 to 136.

Positive progress over time on the Developmental Strand is indicated by an increasing score, while positive progress on the Diagnostic Profile is indicated by a decreasing score.

Figure E.1. Mean scores on the Developmental Strand (and associated clusters) at pre- and post-test (increasing scores denote a positive change)



There were also smaller, but significant improvements found in relation to academic attainment in literacy and numeracy (d= +.61 and +.40 respectively; see **Figure E.3**), although no notable change was found in relation to school attendance or suspension patterns (however, it should be noted that any significant change is unlikely to be evident, as pupils at Key Stage 1 are less likely to be suspended).

Figure E.2. Mean scores on the Diagnostic Profile (and associated clusters) at pre- and post-test (decreasing scores denote a positive ca)

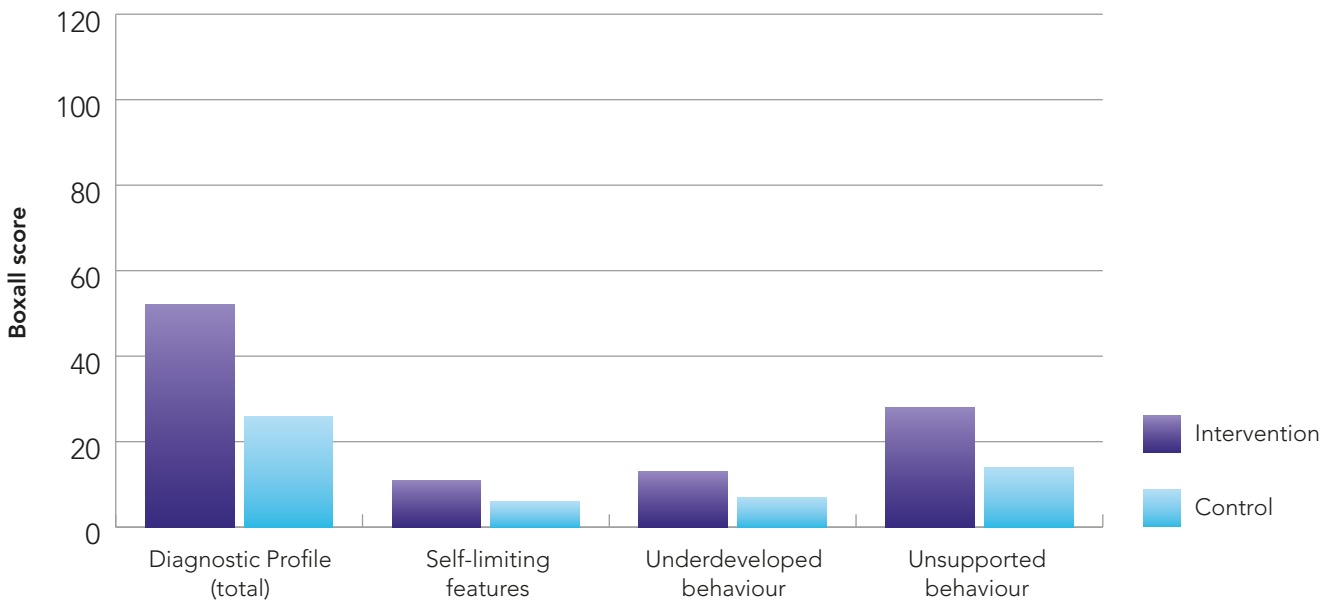
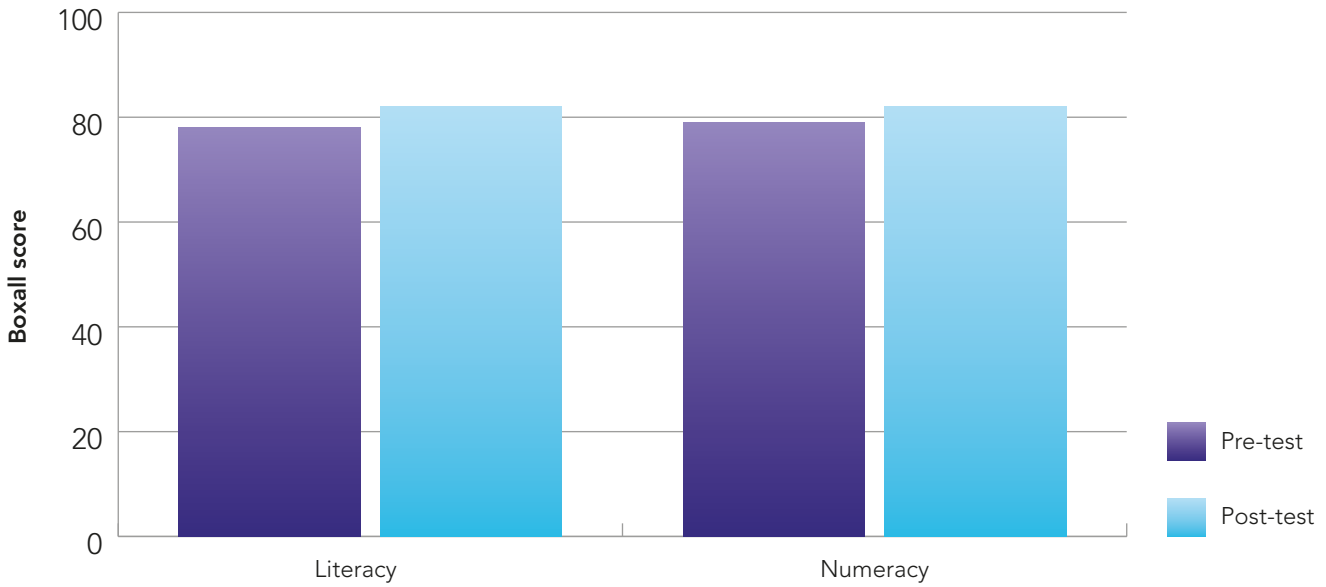


Figure E.3. Literacy and numeracy standardised test scores at pre- and post-test



Whilst these findings were very encouraging, they needed to be treated with some caution given that they are not based upon a comparison with a control group of similar children not attending Nurture Groups. As such, it is not possible to determine how much of these gains made were due to Nurture Group provision and how much would have happened in any case.

Stage 2: Findings from quasi-experimental trial

It is with this in mind that a quasi-experimental trial was undertaken involving 384 pupils, comparing the progress made by those currently attending Nurture Groups in 30 schools during 2014/15 with the progress of similar children attending 14 other matched primary schools not offering Nurture provision. These schools were identified from the list of schools that satisfied the original criteria for allocation of Signature Project funding (i.e., schools with above average proportion of pupils eligible for free school meals, below average attendance, below average attainment at KS1 and KS2 and above average numbers of pupils with a statement of special educational needs).

The level of progress made by children attending Nurture Groups in this stage was found to be very similar, on average, to that found from the analysis of data on children from Stage 1 of the evaluation. Most notably, whilst such Nurture Group children experienced large gains in social, emotional and behavioural skills, there was no evidence of any change found amongst similar children attending the matched control schools that had no nurture provision (see **Figures E.4** and **E.5**). Thus, for example, whilst 77.7% of children who entered Nurture Groups as part of the trial were exhibiting difficult behaviour (as measured by the SDQ total difficulties score), this reduced to just 20.6% at post-test. However, for those children in the control schools, 62.8% of children exhibited difficult behaviour at the start of the year and this remained largely unchanged at post-test (61.9%).

Moreover, when analysing the data from the trial more formally, and controlling for pre-test differences, the gains made by the children attending Nurture Groups remained large and similar in order to those found from the earlier analysis of the past pupil data in Stage 1 (see

Figure E.4. Mean scores on the Developmental Strand (and associated clusters) for the intervention and control groups at pre- and post-test

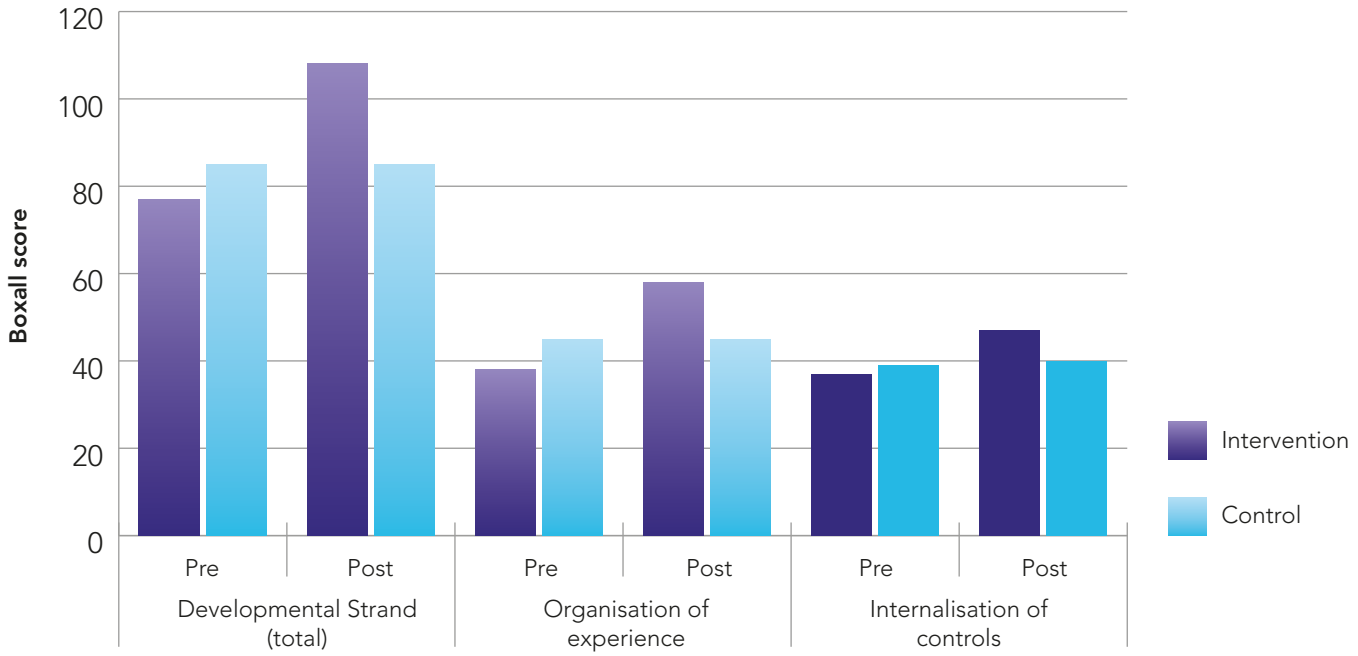


Figure E.5. Mean scores on the Diagnostic Profile (and associated clusters) for the intervention and control groups at pre- and post-test

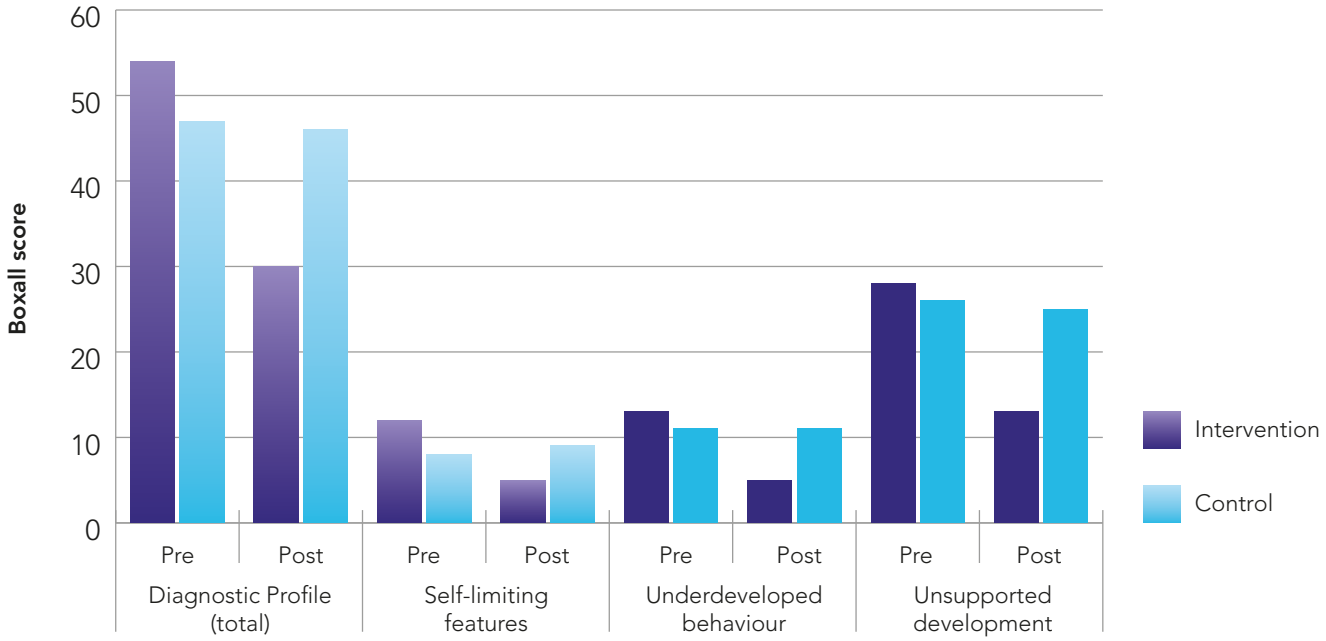
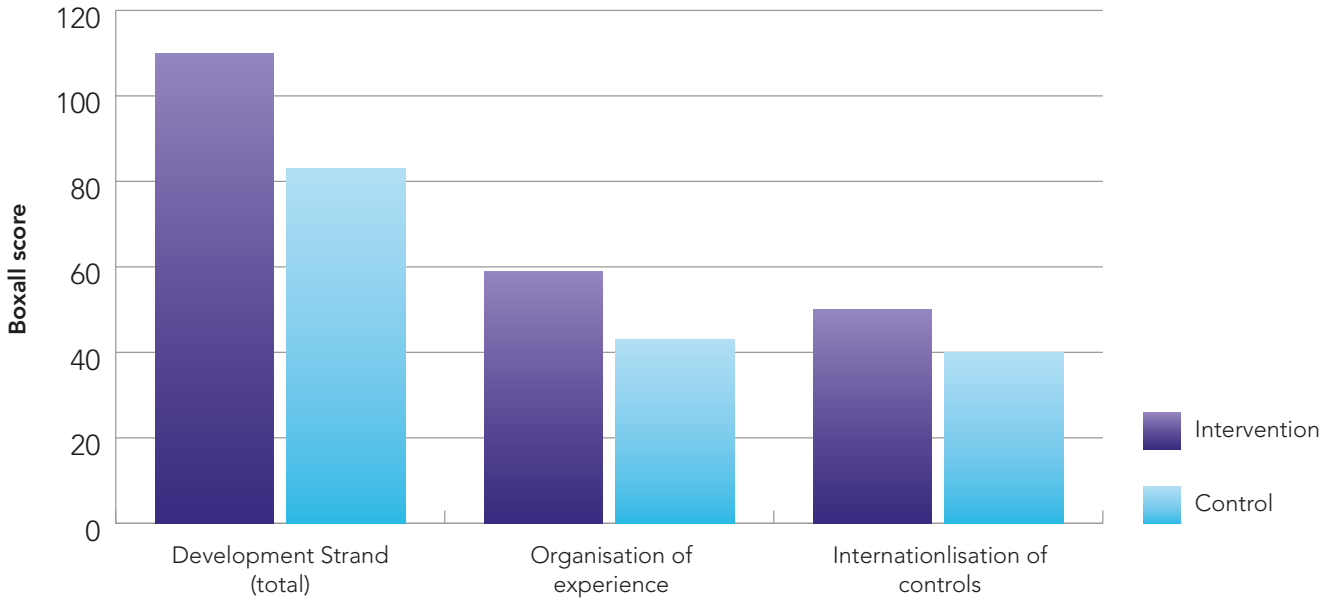
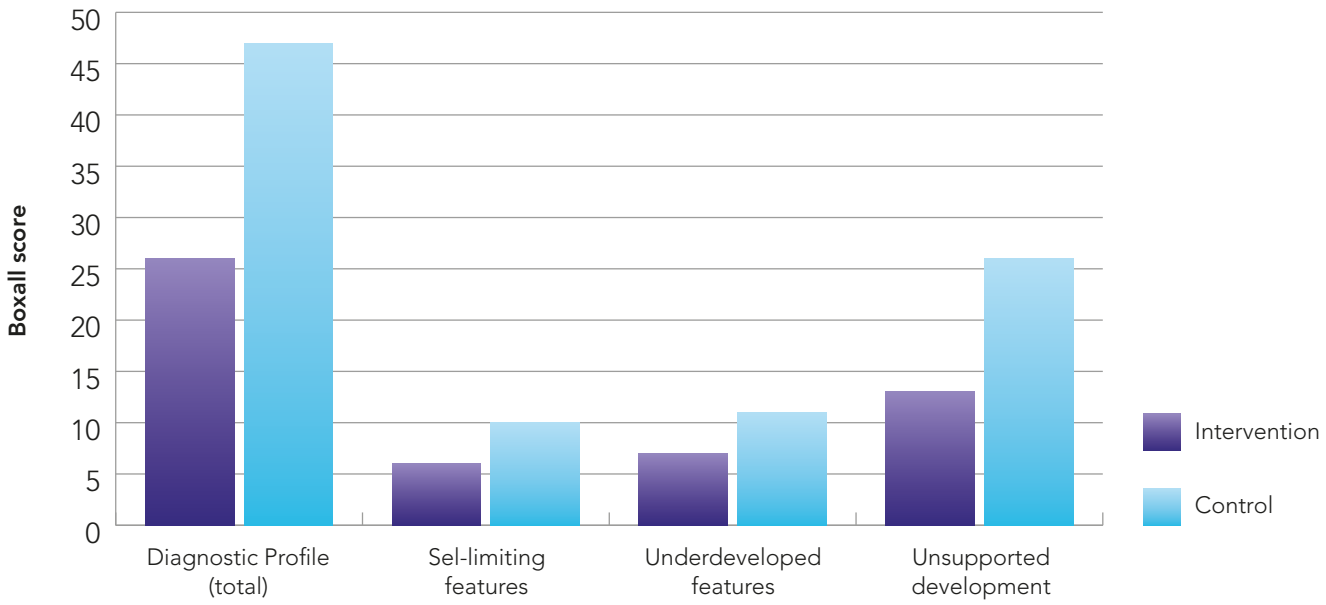


Figure E.6. Adjusted post-test means for Developmental Strand (and associated clusters)



Figures 6 and **7**). In relation to the Boxall profile, for example, the children made large improvements in overall development strand scale (d = +1.35) and similarly large reductions in the diagnostic profile (d = -.90). Similarly, and with regard to the SDQ, they also made notable gains in relation to prosocial behaviour (d = +.93) and reductions in total difficulties scores (d = -1.30). Whilst the trial did not find evidence of improvements in academic attainment in literacy or numeracy, Nurture Group

Figure E.7. Adjusted post-test means for Diagnostic Profile (and associated clusters)



pupils reported significantly greater enjoyment of school compared to pupils in the control group. Therefore it is possible that improvements in academic attainment may be medium to longer-term outcomes of nurture provision that follow once engagement with learning and school in general is achieved. Indeed, this is supported by the qualitative data, where teachers felt that barriers to learning were removed through nurture provision, facilitating pupil engagement in the classroom.

As in Stage 1 of the evaluation, and for the most part, Nurture Groups tended to be equally likely to lead to positive gains regardless of variations in the school's characteristics or the characteristics of the pupils. One exception to this was school size, where an inverse relationship was found between school size and amount of progress, such that pupils in smaller schools tended to make greater gains. The other main exception was in relation to the children's pretest scores, whereby those exhibiting higher levels of social, emotional and behavioural difficulties when entering Nurture Group were more likely to make the greatest gains.

For the most part, the findings from both the analysis of past pupil data and that gained from the quasi-experimental trial (Stages 1 and 2) were largely consistent with existing evidence reported from evaluations of Nurture Groups elsewhere. The one slight area of divergence was in relation to the effects of Nurture Group provision on academic outcomes where the findings were mixed. However, it could be argued that these are more appropriately regarded as medium to long-term outcomes of Nurture Group provision and likely to follow improvements in social, emotional and behavioural outcomes.

One final element to note is the effect of Nurture Group provision on children on the Special Education Needs (SEN) register. Whilst no children in the control group schools showed improvements by moving down the Code of Practice from pre-test to post-test, nearly one in five children attending Nurture Groups (19.5%) did.

Overall, whilst Stage 2 included a control group, a degree of care is required in relation to interpreting the findings. There are some limitations to the methodology, which are considered in detail in the main report, including the non-random allocation of schools and the differences between the control and interventions groups at baseline. Also, whilst the main outcome measure relied on teacher ratings, it was not possible for teachers to be 'blind'

to pupil intervention or control group membership. Factors such as this can have an impact on the robustness of the findings and thus further research involving a proper randomised controlled trial design is therefore recommended in order to gain a more robust estimate of the actual size of the effects of Nurture Group provision.

Finally, and in terms of differing models of delivery, no evidence was found in Stage 2 of the evaluation that the effectiveness of Nurture Groups varied between" full and part-time provision; length of time the Nurture Group has been running; Nurture Group size; or whether the Groups were part of the new Signature Project or within schools already providing Nurture Groups. This latter point is important as Signature Project schools were required to run their Nurture Groups in line with the classic model of delivery, whereas the existing schools were able to continue providing Nurture Groups in more variable ways. These points should be treated with some care however, given that the trial was not sufficiently large to test the effects of these different models of provision. Further research would be required with a larger sample of schools to be able to draw more definitive conclusions.

Cost Effectiveness

The estimated cost per year of reducing one child who is defined as having behavioural difficulties (as measured by the SDQ) to within the normal range is £12,912.41 (known as the incremental cost-effectiveness ratio). However this figure may be an overestimate of the actual cost – a further explanation is provided at pages 70 -72 of the main report.

Comparison with the estimated costs of providing other additional educational services to children with behavioural difficulties in Northern Ireland, suggests that effective Nurture Group provision will present direct savings to the education system (). In particular, the cost of a pupil with behavioural difficulties being provided with just one of the many additional educational resources during their school careers (from Year 3 to Year 12) will cost the education system at least twice as much as it would by addressing those difficulties through effective

Nurture Group provision before the start of Year 3, and considerably higher than this if the child has to avail of alternative full-time education provision and/or attend a special school.

Existing evidence estimates the additional costs to families and educational and social services of children with antisocial behaviour as ranging from £5,960 to £15,282 per year. Whilst it is important to treat these estimates with some caution, they do suggest that investment in Nurture Group provision is likely to pay for itself after just two years for each

child whose problem behaviour is reduced to the normal range.

More generally, it has been estimated that, by the age of 28, the cumulative additional costs to public services for someone with conduct disorder is £62,596 and £16,901 for those with conduct problems. Moreover, and taking a lifetime approach it has been estimated that preventing conduct disorders would save public services £150,000 per case averted. The level of such long-term costs therefore also clearly suggests that the initial investment through Nurture Groups of an estimated £12,912 to prevent conduct problems for each child is therefore likely to be cost-effective and to represent a significant economic return to society.

Stakeholder Perspectives

Interviews with school principals, teachers and parents from Nurture Group schools confirmed that they have largely been established in local areas facing significant social problems, including poverty, social exclusion, mental health issues, alcohol abuse, domestic violence and, in a number of areas, ongoing sectarianism and communal violence. As also noted by interviewees, such a context is also likely to impact upon children, with higher proportions of children on the special educational needs registers and exhibiting emotional and behavioural difficulties, with much of this arising from attachment difficulties within the family. This broader picture is certainly reflected in the baseline trial data, where a large majority (88%) of children attending Nurture Groups in the Signature Project schools were eligible for free school meals and over a third (36%) were known to social services.

Overall, the process evaluation found that Nurture Group provision was very positively regarded and well received by school principals and teachers and by parents and children. Teachers, for example, felt that they could see clear improvements in the children in relation to punctuality, increased attendance and significant reductions in social, emotional and behavioural difficulties. Parents tended to find that Nurture Group staff were very approachable and clearly appreciated the 'open door policies' that schools tended to operate. Moreover, they also felt that they could see positive benefits for their children. As for the children, they tended to find the Nurture Groups much more enjoyable than the mainstream classroom and noted how they had more opportunities to play and make new friends. Some also reported that it made them feel more involved in their lessons and that it had impacted on their behaviour; noting how they tended to feel more confident, calmer and less aggressive.

The introduction of Nurture Groups has not been without its challenges however. For example, teachers noted: the difficulties, at times, engaging

some of the parents; the struggles of keeping the wider staff group on board; and the fact that whilst they found working in Nurture Groups highly rewarding, it was also challenging at times and emotionally draining. Similarly, some parents explained how they were initially anxious when they were first approached regarding their child attending Nurture Group and were concerned about how this might be perceived negatively by others.

Key Components of Successful Delivery

Through interviews, ten key components were identified in relation to the successful establishment and delivery of Nurture Group provision:

1. ***School leadership:*** The importance of leadership, especially in relation to the pivotal role of the school principal. Successful principals tended to be in post for a number of years, have an affinity and significant relationships with the local community and an absolute commitment to bringing about positive change through their schools.

2. ***Recruitment of Nurture Group teachers:*** The importance of looking beyond qualifications and identifying a range of key personal characteristics aligned with the goals of Nurture Group provision, including: firmness, fairness, compassion, empathy, energy, enthusiasm and ability to establish good relationships with other teachers in the school.

3. ***Training:*** The importance of attending the initial training days and the follow-up recall day and how these were valued by teachers not only in relation to the content covered but also the opportunities they provided for networking.

4. ***Identification of children:*** The importance of not just drawing upon baseline assessments but also the expertise from the interdisciplinary Steering Group Committees in identifying children most in need and also most able to benefit from Nurture Group provision. Also noted in this respect was the importance of creating a mixed group of children so that they were not over-represented with particular types of difficulties.

5. ***Careful planning:*** The importance of being clear about what is to be delivered; particularly in terms of spending sufficient time planning and developing an environment and set of activities that align with the Nurture Group ethos i.e. a structured, predictable

and safe approach based around plan and activities that focus on developing social skills and self-esteem such as turn-taking, learning how to listen and eating together. This includes building in sufficient time for liaison between the nurture teacher and mainstream teachers, to ensure that planning in the nurture group was, where possible, in line with mainstream class activities.

6. ***Whole-school approach:*** The importance of ensuring that all school staff understand the Nurture Group approach and are on board to enable effective transition for children between the Nurture Group, mainstream class and wider school environment. One particular method for facilitating this has been the training of additional teachers and classroom assistants to act as further back up for the nurture staff and to ensure that the nurture principles are embedded throughout the whole school.

7. ***Managing transitions:*** The importance of planning carefully, and putting in place, the necessary processes for ensuring the effective transition for children from Nurture Groups back to mainstream classes. This needs to be done in an open and phased way, involving the Nurture Group teacher, mainstream classroom teacher and parents.

8. ***Relationships with parents*****:** The importance of making sustained efforts to engage parents and maintain effective relationships with them. The more that parents are encouraged to visit the Nurture Group, attend coffee mornings, come and play, cook and eat with the children, the more that it is hoped that attachment relationships can be modelled out.

9. ***Engagement in wider Nurture Group networks:*** The importance of teachers engaging in the support provided by the Education Authority and the wider Northern Ireland Nurture Group Network as effective mechanisms for gaining support and encouragement, sharing best practice and learning about new ideas

10. ***Funding:*** The importance of providing a consistent funding framework to ensure that schools are able to develop Nurture Group provision and plan effectively.

Recommendations

Overall, there is clear and convincing evidence that Nurture Groups are:

- well received by schools, parents and children and that they can be successfully developed and delivered across a wide range of schools;
- having a consistent, significant and large effect in improving social, emotional and behavioural outcomes among children from some of the most deprived areas and demonstrating high levels of difficulty;
- successful in improving pupil enjoyment of school in the short term, although longer follow-up is necessary to determine whether such improvements have a knock-on effect on attendance and academic attainment;
- cost effective and have the potential to result in a significant saving to the education system and an even greater return to society by preventing the cumulative additional costs to the family, public services and the voluntary sector associated with anti-social behaviour and conduct problems.

It is therefore recommended strongly that the Department of Education continue to support Nurture Group provision in Northern Ireland. However, this presents a number of challenges and therefore it is also recommended that the Department of Education ensures that:

1. A sustainable funding model is put in place to ensure the longer-term viability of Nurture Group provision and its further expansion across Northern Ireland.
2. Appropriate training is provided that addresses the ten issues identified above, along with a wider mechanism for enabling Nurture Group schools to effectively network

and collaborate to support one another and share best practice.

3. Until further research is available on the effectiveness of different models of delivery, it would be wise for the Department of Education to continue to target the provision of Nurture Groups in schools in the most deprived areas (as measured, for example, by the Multiple Deprivation Measure) and to continue to promote adherence to the classic model of Nurture Group delivery.

4. The development and roll-out of Nurture Group provision is planned in such a way as to enable further research into its implementation and effectiveness, particularly in relation to facilitating the use of randomised controlled trials to ensure the creation of the most robust and unbiased evidence base to inform future planning and decision-making. This should include research with a larger sample of schools to be able to test, more robustly, the possible effects of different modes of delivery and possibly to pilot test different models (Mackay, 2015).

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