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Making it REAL

An evaluation of the Oldham Making it REAL project

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Esmée Fairbairn FOUNDATION

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ncb
National Children's Bureau

THE SUTTON TRUST

Introduction

Parental Engagement Fund

The Sutton Trust working in partnership with Esmée Fairbairn Foundation established the Parental Engagement Fund building on the evidence that engaging parents in their children's learning can have a positive impact on their attainment. The aim of the fund is to increase attainment for disadvantaged children in the early years through the development of more effective parental engagement. In addition, the hope is to improve the sustainability of effective interventions and to identify features of good practice to share with the Early Years sector. The National Children's Bureau (NCB) is one of five organisations that the fund is working with. An evaluation team, (Jelley, Sylva, Karemaker, Eisenstadt) from the Department of Education at the University of Oxford, has worked with NCB, acting as a critical friend, expert advisor and independent evaluator supporting them to develop delivery and demonstrate impact.

Early Childhood Unit (ECU), National Children's Bureau

NCB works across a range of issues affecting the lives of children, championing children's rights, by using evidence to influence government policy, and supporting practitioners to improve outcomes, especially for the most vulnerable and disadvantaged children. ECU is based at NCB and works with local authorities and children's services providing training, resources and projects to support and improve services for young children and their families.

As part of the Parental Engagement Fund, ECU has delivered a family literacy project in partnership with Oldham Council, to help practitioners work with parents and carers to support their children's early literacy development. The University of Oxford worked with ECU to run a feasibility study to evaluate the potential impact of the Making it REAL (Raising Early Achievement in Literacy) programme on child and parent outcomes. This was complemented by an in-depth qualitative review carried out towards the end of the study which involved scrutiny of programme documentation (e.g. training materials, practitioner records) and interviews with a subsample of practitioners and parents about their experiences and perceptions of Making it REAL.

Description of Making it REAL

Making it REAL is inspired by and draws on the evidence from the original REAL project[1] led by Professors Cathy Nutbrown and Peter Hannon at the University of Sheffield, which raised and sustained literacy achievement for children from disadvantaged backgrounds.

ECU provides training and on-going project support delivered in partnership with local authorities, including facilitating network meetings and providing monitoring and evaluation tools to measure impact and reflect on children's progress.

Central to the REAL approach is the ORIM framework, which represents the four ways parents help their children learn. Parents are supported to create more **O**pportunities for learning; to **R**ecognise and value small steps in development; **I**nteract in positive ways and act as a **M**odel of explicit literacy use (e.g. telling children when they are reading a text message or explaining they are reading a notice or the number on a bus).

Four strands of inter-related, emerging literacy are mapped against the framework: Books, Early Writing, Environmental Print and key aspects of Oral Language (rhyme, storytelling and 'language for literacy').

EARLY LITERACY STRANDS

	Env. Print	Books	Writing	Oral language
Opportunities				
Recognition				
Interaction				
Model				

FAMILIES PROVIDE

Teachers and practitioners share this framework, handing over knowledge to families through a series of home visits and group literacy events. Working in this way, thinking through provision for families in each row, column or individual cell allows teachers and practitioners to evaluate their own practice and see what needs to improve. The framework also enables activity to be matched to each individual family and child – looking at the strengths and where gaps in experience and knowledge might be further supported.

Making it REAL in Oldham

A feasibility trial was carried out in Oldham, taking the form of a small-scale, centre-randomised controlled trial. It was deemed *feasibility* in the sense that it was designed to assess whether it was possible to complete all the elements and processes of a randomised controlled trial. This involves examining trial procedures, for example, are settings and families willing to be randomised? Can enough

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[1] http://www.real-online.group.shef.ac.uk/index.html

families be recruited and (crucially) followed up? Will settings stick to protocol? What is the burden of completing the measures? Can data be gathered as preliminary evidence to assess evidence of promise? Ultimately, the aim is to assess the possibility of successfully conducting a larger trial to evaluate impact. Alongside this, the qualitative work highlights the perceptions and experiences of the families and practitioners involved.

A cluster design was adopted because of the nature of the intervention. Nursery settings were allocated to either the intervention or 'alternative treatment' comparison group. In the first year, the comparison settings were trained in delivering a one-off healthy eating intervention as an alternative treatment and incentive for settings and families to take part in the trial, and then received the Making it REAL training in the following academic year. Table 1 summarises the training received and programmes delivered by the settings over the 2 years of the trial.

Table 1. Training received/programme delivered by Intervention and Comparison settings

	Intervention group	Comparison group
Year 1: 2015/2016	N=5 settings Intervention settings receive Making it REAL 2-day training in Autumn 2015 and deliver REAL projects using a model of **4 home visits and 4 group literacy events** from October to July 2016.	N=5 settings Comparison settings receive a healthy eating briefing session in Autumn 2015 and deliver **one healthy eating workshop** before the end of March 2016.
Year 2: 2016/2017	N=4 of the original 5 settings Continuation of Making it REAL programme using the same model of **4 home visits and 4 group literacy events** with a new group of families from October to July 2017.	[received Making it REAL training, but no longer part of data analysis]

Although only 10 settings were involved in the study, this design enabled us to boost the numbers in the intervention group by including two cohorts of families over the 2 year period, and comparing the combined intervention sample with the comparison group.

This cluster-randomised, feasibility trial involved 10 nursery settings in Oldham, 5 of which were randomly allocated to the intervention group and 5 to a waiting list comparison group.

The Evaluation

Practitioners in the settings were responsible for recruiting families they felt would benefit most from the project, focusing on children's literacy development and encouraging take up by families accessing early years pupil premium funding when possible. Each setting aimed to recruit 10 families in each year of the study. Table 2 shows the numbers of families recruited from each setting. (Four of the five intervention settings remained in the study for 2 years, which is why their numbers are higher.)

Table 2. Number of eligible families recruited from each setting

	Setting	Number of families	% of group	% of total
Intervention settings	A	22.0	23.9	15.4
	B	9.0	9.8	6.3
	C	20.0	21.7	14.0
	D	20.0	21.7	14.0
	E	21.0	2.8	14.7
	Subtotal	*92.0*	*100.0*	*64.3*
Comparison settings	F	10.0	19.6	7.0
	G	10.0	19.6	7.0
	H	10.0	19.6	7.0
	I	10.0	19.6	7.0
	J	11.0	21.6	7.7
	Subtotal	*51.0*	*100.0*	*35.7*
	Total	143.0		100.0

Randomisation was conducted at setting level using stratification to ensure that the maintained sector schools in the sample and those with experience of REAL were distributed equally between the two groups.

Staff from the intervention settings attended Making it REAL training (1.5 days), while those from the comparison settings had a short session on delivering a Healthy Eating event. Both groups were also briefed on what was involved in being in the trial, including criteria for recruiting families and data collection procedures. Following the training, the Making it REAL programme was delivered by the trained staff in their settings. Families in the intervention settings were offered 4 home visits and invited to 4 literacy events over the course of an academic year.

Child and family measures were completed by the parent or teacher (as specified) at pre-test in autumn term before the intervention began, and repeated at post-test in the summer term, after the programme had finished. Box 1 provides detail of the measures used. A small subsample of parents and practitioners were interviewed about their experiences of the programme as part of a qualitative review. The findings are presented in the following section.

Box 1. Measures collected from participating families

- **Demographics** – questionnaire to capture basic demographic characteristics of the families
- **Early Years Home Learning Environment Index (HLE)** (Sylva et al., 2010) – parent-report questionnaire assessing the frequency with which a child is engaged in specific cognitively orientated learning and play activities at home. It has 7 items covering:
    - reading together
    - library visits
    - playing with letters/numbers
    - playing with/teaching the order of letters in the alphabet
    - helping to learn numbers/shapes/counting
    - singing songs/poems/nursery rhymes
    - painting/drawing at home
  The HLE activities were rated on a scale 0–7 where 0 is for those that do not occur at all and 7 is occurring very frequently. A total score out of 49 is calculated.
- **Brief Early Skills and Support Index (BESSI)** (Hughes & White, 2015) – a brief practitioner-report rating scale providing a broad perspective on school readiness for children aged 2.5 to 5.5. Each item is scored 1-4, with higher scores indicating a problem. The BESSI has four subscales:
    - Behavioural Adjustment
    - Language & Cognition
    - Daily Living Skills
    - Family Support
- **Emergent literacy subscale** (from the Child Observation Form completed by the practitioner) – four questions on a 5-point scale:
    - How often does the child share a book at home?
    - How often does the child draw/make marks and say what they mean at home?
    - To what extent does the child use environmental print at home?
    - To what extent does the child join in with songs and rhymes at home?

A qualitative review of Making it REAL trial in Oldham

Key Messages

- Practitioners and parents were overwhelmingly positive about both the project itself and its impact for families, children and settings.
- The main challenges faced in the implementation of the REAL project related to scheduling home visits, as these often had to be rearranged with families, followed by recruitment and retention of families
- Practitioners were very positive about the value and usefulness of the REAL training.

The REAL programme seems to have had positive benefits, such as:

- Improved relationships between staff and parents (often attributed to the home visit experience)
- Improved skills and progress for children, including greater confidence, especially in speaking
- Improvement in parental engagement with children's learning and the home learning environment and parental self-efficacy

Figure 1 Parents' Overall Satisfaction with the REAL project

Number of responses	Rating		
	Excellent	Good	Satisfactory
61	45	14	2

Practitioners and parents were overwhelmingly positive about both the project itself and its impact for families, children and settings.

Parents were very positive about the usefulness and impact of the REAL programme for their families. In response to a questionnaire (see Figure 1), more than half the parents rated the programme as "*excellent*", and none rated it as less than "*satisfactory*". Parents made comments such as:

"It's good for the children"
"Great and can't wait for another child to start"
"I'm happy with the work you are doing"
"It was great"
"My daughter loved it"
"Very good, we enjoyed it all"
"So enjoyable and great company"

Parents saw the programme as generally a "*great deal of help*", as they rated it this way 186 times out of 214 answers (86.9%) on the parent questionnaire. It is also worth noting that only two of these 214 answers said that the programme had been no help at all.

Parents were asked if they would recommend participation in the REAL programme to other parents, and this provides the most emphatic proof of parental satisfaction with the programme: there were 49 responses to this question, of which 48 were, "*yes*".

Practitioners also reported benefits from the programme:

> *"It's a fantastic opportunity that means the way children are taught in the future will be different, as it helps prepare them for school"*
> *"[The programme] is based on research that shows it helps children make progress in school"*
> *"Working together to improve outcomes for children is worth doing".*

Practitioners also showed that they understood the basis of the programme, by saying, "It's not who parents are, it's what they do".

This sentiment (from the work of Sylva, Melhuish et al. 2008), underlies the whole of the PEF project, supporting in particular parenting in the face of disadvantage, to support learning in the home environment.

The main challenges faced in the implementation of the REAL project related to scheduling home visits, as these often had to be rearranged with families, followed by recruitment and retention of families.

Challenges faced with regard to recruitment were reported as covering two main areas: the selection of families who both fit the programme criteria (e.g. might benefit from inclusion) and who would be likely to take up the offer if made, and parental concern about the project.

Staff reported initial trepidation about home visits from parents, both from concerns about why they had been selected (stigmatisation) and concerns about what might be involved (parents might, it was said, worry that they would be called upon to read to their children, thus exposing issues around their own literacy). Staff reported that having a launch event, in which parents could participate, helped to "*alleviate concerns about stigmatisation*". Parents' concerns quickly dissipated, as staff reported, "*But after the first one [visit], they couldn't wait for the second".*

Practitioners reported various ways of overcoming the challenges they faced. In terms of recruitment, these included the fact that REAL practitioners were situated in local settings, and working with families they either already knew or would come to know as a result of their daily work. This, respondents reported, "*helped to build relationship and trust with families*". The expert knowledge of practitioners was also useful in the recruitment process itself, as practitioners already knew the families likely to be involved.

Another respondent highlighted the importance of the early home visits for establishing a relationship with the families and of supporting their continuing work in the home learning environment between visits. A practitioner pointed out that parents speaking to other parents about their positive experiences of REAL the year before, made recruitment easier in the second year of the programme.

The challenges for retention were reported to include factors outside the settings' control, such as families moving house or illness. Added to these were the logistical difficulties of scheduling home visits for ten families, around family commitments, and ensuring the families actually participated in these

visits. Staff in the second year of the programme reported that many home visits had to be rearranged, but did go on to say that parents "*were looking forward to more home visits*".

Successes in retention were also reported. These included the benefits which derived directly from the home visits. These benefits included the enjoyment children derived from having their practitioner visit their home.

> *"The happiness displayed by the child helps to retain the parents and other family members who also see the benefit for the whole family, particularly other siblings".*

Practitioners were very positive about the value and usefulness of the REAL training.

Staff saw the REAL training as useful and supportive.

> *"The training gave us a clear understanding and expectations. The ORIM frame helped us plan activities ... The working agreement helped us and parents"*

Staff valued the inclusion of role play in the training, *"I felt the training gave me the knowledge to go and do the visits"*. Staff also valued interaction with other practitioners as a part of the training.

Home visits were cited by parents and staff as having been very helpful.

Staff credited the home visits with an increased willingness on the part of parents to come into the setting, and to interact with staff. Staff also believed that the home visits led to not only an increase in

children's self-esteem and confidence, but also to progress in literacy, as well as increased parental engagement.

Parents were also given an opportunity to say what, if anything, they would change about the home visit part of the programme. 31 responses were received to this question, of which 22 said that no change was necessary. Parents made comments such as:

> "*Nothing, they were very good, my child really enjoyed the teacher coming to our house*"
> "*Really liked the events – learning about the library and what is on there*"
> "*Nothing, I found it extremely helpful*".

Most of the 9 comments from parents about improving the visits (7/9) were about enhancing current practice, including having more home visits (4) or making the visits longer (1).

Practitioners also commented on the value of the home visits, as they allowed staff the chance to:

> "*Giving families the chance to spend time with their children, and sharing our knowledge for parents/families in the home setting*".

Practitioners also mentioned the positive involvement of male carers, "*The dads got warmer during the visit and offered us cups of tea*" and "*We were really surprised: a Dad got down on the floor straight away*".

The REAL programme seems to have had positive benefits, such as:

Improved relationships between staff and parents (often attributed to the home visit experience).

Staff commented: "*I went out into the nursery homes… we built that relationship, so they felt more comfortable*". This teacher made the point that seeing the staff in their home helped children build relationships with staff in a different way that just seeing them in school/in the setting.

For many of the staff and parents, the increase in self-confidence and the relationships with staff were, if not the most important outcomes of the project, then certainly the first ones which came to mind and the ones most often mentioned.

Staff reported that parents were more willing to come into settings, and to discuss things with staff, than they had been before the REAL programme. Parents were also more willing to share "*the wow moments at home*", that is, sharing instances of successful home learning. This sharing helps to build the links between setting and home, and allows staff to have access to additional information about the learning processes of the children in their care.

These increased relationships with parents have given staff more confidence in working with parents, and raised morale among staff.

> "*Staff confidence and morale has gone up. One staff member had been petrified of the home visits – but they have been great. Full of great big smiles – It's emancipated staff – lots of confidence*"

"[F]or me as the reception teacher, I've reaped the benefits after the project has finished, so the children that I've got this year, I'm thinking about three particular children who, when they were in nursery, very rarely spoke, they were very, very shy and they didn't really speak at all...I did home visits, so even though I'm the reception teacher, I went out into the nursery homes and I did the events with the parents, I think we built up that relationship, so they felt more comfortable coming into my class. So for me, that's been a real benefit, in terms of the children's self-esteem, self-confidence - that's been a huge benefit as well, having that close relationships with parents".

This comment leads to the next reported benefit:

Improved skills and progress for children, including greater confidence, especially in speaking.

Several respondents, both parents and staff, commented on the increase in children's self-confidence through participation in the REAL programme; this often manifested through speech and language development.

"We've noticed a big improvement in the children, their confidence; some children, there's one little girl... she wouldn't speak to us and to see her getting up and going to the lady who's doing the story telling... is really a big step for the child, so it's really good" [2]

The increased confidence, particularly with reference to speech, is often linked by staff to the comfort that children feel with staff in the setting as a result of the programme, based on getting to know the parents and staff having built relationships with parents. Staff link these to the children's confidence and building relationships with parents as the best aspects of the programme.

Figure 2 Parental Reports of the Impact of REAL

Activity	Number of responses	Not at all	A little	A great deal
Learning about books	45		11 (24%)	34 (75%)
Making marks, using environmental print	61	1 (1.6%)	10 (16.6%)	50 (83.3%)
Joining in songs	59		6 (10.2%)	53 (89.8%)

One parent said about her children's experience of REAL:

"M and K were very, very quiet at school, very shy, so we thought this would be a good opportunity to bring them out of their selves, teachers coming to my home, and their environment, and it has. Up until about six weeks ago, some of the teachers had never actually heard my daughter speak because she was that shy and now they can't shut

her up, so it's been good to see how much they've come on, it's, it was a bit worrying at one point when she wouldn't speak, so it's a relief and it's been good."

The relationships built by the children are also credited with contributing to their growing confidence and self-esteem, which was in turn linked by staff to better learning outcomes, *"the more secure they feel in themselves, the better the learning is, so... the data has improved".*

A member of staff commented about the REAL project:

"I've really enjoyed it and I've noticed with the nursery children as a whole, I've found them more able to come and speak to me so it's making them settle quicker and the Real project, we're finding the activities are helping them with their everyday life in nursery... Environmental print just as another example, going on their walks, talking about things that are close by, they're then bringing that into nursery when they're on the carpet and talking. Whereas [in the past] they might sit at the back and not talk to us, they're actually talking about the activities we're doing with them and they'll talk about us going into their homes as well, so it gives them a focus of something to talk to us about, rather than us asking them questions all the time."

The value of the programme was suggested by a member of staff:

"The actual enormous [benefit], not just this year, but last year's children; one child didn't speak and his mum was agoraphobic, his mum wouldn't come into school and speak, but she got to know that close circle of the ten families and now he's one of the most confident children in reception and she has no worries coming to school and talking, and I don't think that relationship would've been built with mum if it wasn't for REAL and I don't think her son would've seen his mum speaking to other people and he might have just continued the same habits as mum did, but now, no issues at all and he's not a young lad that you would've just expected him to come out of his shell, we do thank REAL for that."

Improvement in parental engagement with children's learning and the home learning environment and parental self-efficacy.

"Parental engagement with children's learning has improved"

The connection between the home learning environment and events in school was made evident to parents during home visits; this connection allowed parents to "see the big picture", according to staff. This will in turn support parents' knowledge and understanding of their children's learning processes.

Staff often reported parents' increased comfort in coming in the setting and in speaking to teachers. Parents also felt more able to ask questions about learning at home.

One staff member made this link explicit, "*So it's not just about achievements at school; parents will share their [child's] achievements at home as well".* This argues a recognition, on the part of both staff

and parents, of the value of the home learning environment; "*It strengthened the work parents do at home; they tell us it empowered them*".

 "*Some parents didn't know how to play with their children, they lacked confidence in playing, in using everyday resources*". This member of staff clearly highlighted a theme that shows up throughout staff responses (and the wider literature around parental engagement with children's learning (Burke and King-Berg 2005, Siraj and Siraj 2009, Goodall 2017). Parents may lack the confidence to support learning in the home, often because they did not themselves grow up in the types of home learning environments which are best suited to supporting learning. The REAL programme gave parents the tools, ideas and methods for supporting learning. A practitioner pointed out, "*It [the programme] helped the parents realise that they didn't need A levels to help their children with literacy*", so that "*parents are continually telling us they are doing more*"; parents have also realised that they did not need to spend large sums on new equipment to support learning.   Staff report that parents are now asking staff about ideas they have themselves devised to support learning.

In the parent questionnaire, there were 59 responses to the question of whether parents have done new things as a result of REAL. Of these, 54 answered positively, with only five saying that they had not done new things with their children. Parents reported changes, such as:

> *"We enjoyed this project, as we got to learn a lot more, i.e. reading books and writing"*
> *"Learnt a lot"*
> *"It's something different to help my child's learning"*
> *"[I] learned about joining the library and now I visit it once a week with all my children"*
> *"It was very good, I learnt a lot about helping my child"*
> *"It has helped me and my child to learn and to spend time together"*
> *"It is good for adults to help us know how our children learn"*.

Some parental comments clearly show that they have moved to making learning part of their home environment:

> *"We make a shopping list before we go shopping"*
> *"Mark making with different implements, e.g. vegetables; using props to tell a story"*
> *"More painting and singing songs and reading books"*
> *"Reading, writings, going to the library, doing little projects at home"*
> *"Sing more nursery rhymes, make him notice things out more"*.

This increased parental self-confidence has spread beyond working with their own children; at least one parent, on the basis of the confidence gained during the REAL programme, has gone on to further study and training.

Engagement with programme and retention of families in the trial

The Making it REAL model of delivery in this trial involved each family having four home visits and the opportunity to attend four literacy events over the course of the school year. Table 3 shows the number of home visits and literacy events attended by families in the intervention group. The vast majority of families (87.5%) received all 4 home visits as intended. A much smaller proportion (35%) attended all 4 literacy events, although more than half (65%) attended at least 3.

Table 3. Number of home visits and literacy events attended by families in the intervention group

No. of visits/events	Home visits		Literacy events	
	No. of families	Percentage	No. of families	Percentage
0	2	2.5%	5	6.3%
1	0	0%	15	18.8%
2	1	1.3%	8	10%
3	7	8.8%	24	30%
4	70	87.5%	28	35%
Total	80	100%	80	100%

In terms of retaining participants in the trial for the school year and collecting outcome measures, of 143 families in the overall sample, 127 (88.8%) have data at pre- and post-test time points.

Progress on outcome measures

Intervention and comparison groups were compared in terms of the progress they made between pre- and post-test on all measures. (See 'additional notes' for further information on the analyses, which used multilevel regression to take account of clustering.)

The results showed a statistically significant difference in the Home Learning Environment (HLE) Index scores between the two groups, with the intervention group scoring on average 7.80 points more than the comparison group ($p < 0.05$, 95% CI: 1.90 to 13.69). There were no statistically significant effects on any of the BESSI subscales or the Emergent Literacy subscale from the Child Observation Form.

Table 4 shows the outcome measures for the two groups (post-test means, adjusted for relevant covariates), with the significant finding in bold.

In summary, there was a statistically significant difference between intervention and control groups on one of the five outcome measures: after controlling for appropriate covariates and the clustered nature of the data, the analyses showed a significant effect of the intervention on the Home Learning Environment Index.

Table 4. Adjusted post-test means[1], estimates of the effect (with confidence intervals) and statistical significance of difference for all measures

Outcome	Mean (standard error)		Estimate of the intervention effect (95% CI)	Significance
	Intervention group	Comparison group		
Home Learning Environment[2]				
No. of families	**77**	**46**	7.80 (1.90 to 13.69)	$p<.05$
Score	**32.60 (1.85)**	**24.80 (1.95)**		
BESSI[3] Behavioural Adjustment				
No. of families	80	47	-0.13 (-0.48 to 0.22)	ns
Score	1.81 (.11)	1.94 (.11)		
BESSI[3] Language and Cognition				
No. of families	80	47	-0.31 (-.82 to .19)	ns
Score	1.84 (.16)	2.15 (.16)		
BESSI[3] Daily Living Skills				
No. of families	80	47	-0.29 (-.67 to .09)	ns
Score	1.70 (.12)	1.98 (.12)		
BESSI[3] Family Support				
No. of families	80	47	-0.20 (-.56 to .16)	ns
Score	1.74 (.12)	1.94 (.12)		
Emergent literacy subscale				
No. of families	80	46	0.39 (-.37 to 1.15)	ns
Score	3.97 (.24)	3.59(.24)		

[1]post-test means adjusted for covariates in final model; [2]HLE score range: 0 to 49, higher score indicates better outcome; [3]BESSI (all subscales) score range: 1 to 4, lower score indicates better outcome

Discussion

This small-scale, feasibility trial demonstrated that it would be possible to conduct a larger, more robust randomised controlled trial of the Making it REAL programme. The opportunity to carry out a feasibility study enabled several important aspects of trial methodology to be tested and implemented successfully: the target number of settings were recruited, willing to be randomised to intervention or comparison group, and agreed to the data collection; each setting recruited the required number of families; and the majority of settings ensured that families stayed in the trial and completed the outcome measures at post-test, 6 to 8 months after the pre-test. Since these procedural elements of running an RCT went very smoothly in this study, it seems very likely that a larger trial would be possible and lead to a more robust evaluation of the Making it REAL programme.

The study also afforded the opportunity to use some established outcome measures that Making it REAL had not used before. There were promising results on one of these measures: the Home Learning Environment (HLE) Index. A multilevel regression model (accounting for clustering) demonstrated a significant effect of the intervention on HLE scores. This suggests that the Making it REAL programme positively influenced parental behaviours and activities at home. The HLE focuses on parent report of the type and frequency of cognitive learning activities they carry out with their child at home (e.g., reading, counting, and nursery rhymes).

There are, however, some important limitations which must be seriously considered. First, this was a very small trial in terms of the number of settings involved and therefore not sufficiently powered to detect small effects. The nature of the programme (being at setting level) necessitated cluster randomisation, so if a fuller trial is undertaken, it will be important to obtain a substantially larger sample of settings.

A second important limitation was that it was not possible to collect baseline data before randomising settings. Time was limited and randomisation had to happen early enough for the settings to plan ahead for the training. Although the team tried to mitigate against differential recruitment by giving the same, very clear instructions to both intervention and control settings, this may well have led to bias in the sample. The fact that the two groups did not have baseline equivalence is another serious drawback.

Another limitation was that there were settings in the comparison group who had previous experience of delivering the REAL programme. Although they most likely did not have the funding or resource to carry out home visits (thought to be the 'key ingredient' of this programme), they may have been more likely to implement activities similar to REAL in the setting and perhaps talk to parents in different ways – simply because it's the way in which the setting typically operates. This may have led to 'contamination' of the comparison group.

Finally, it is also important to be cautious about the subjective nature of the self-report questionnaire measures on which this study is based. The families and teachers knew they were in the intervention group and may have been subconsciously influenced to complete the measures in a certain way or to portray themselves in the best light.

Next steps

These early-stage results are promising, despite the early stage, feasibility nature of this trial and the limitations in its implementation. The results show some promise of a practitioner-delivered programme to boost the home learning environment of targeted families over the course of a school year. However, the programme needs a much larger, more robust trial to demonstrate impact. This feasibility study demonstrated that this ought to be possible in terms of randomisation of settings, recruitment and retention of families, and completion of outcome measures.

Commentary

A strong evidence base shows that engaged parents and a vibrant home learning environment have a major positive influence on children's early development, yet relatively little is known about how to effectively support families who struggle to provide this. This evaluation found a promising result suggesting there may be an effect of the intervention on the home learning environment. The evidence in the EEF's Teaching and Learning Toolkit suggests that changing parents' behaviour is particularly challenging. The model involves training setting staff to deliver directly to parents which enables the programme to become embedded into the setting, via the staff, rather than relying on external professionals and is therefore a potentially sustainable model. The qualitative report by Dr Janet Goodall reports on positive feedback from settings and families involved in the trial.

Experience from similar trials has shown that recruiting and retaining parents can be challenging and this intervention has been notably successful in recruiting 143 families and retaining 127 (88.8%) throughout. The trial prioritised families eligible for early years pupil premium and those families who the setting felt would benefit most from the programme.

Making it REAL delivered through a series of four home visits and four group literacy events is a practical and sustainable lower cost development of the original RCT evidence-based REAL programme developed by Professor Cathy Nutbrown and Peter Hannon. It is very encouraging to see that there are signs of promising findings on the impact of the home learning environment which encourage further investigation. Several local authority commissioners and early years settings are actively using the approach and it is one that others should consider.

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Additional notes

Costs

For this feasibility trial and study the following funding was used:

- Intervention settings delivering the model of 4 home visits and 4 literacy events received £3000 to deliver the Making it REAL programme with 10 families per year.
- Comparison settings received £500 to deliver the comparison activity (healthy eating event) in the first year and in the second year £2500 to deliver the Making it REAL programme using the model of 2 home visits and 3 literacy events with 10 families.

For more information about REAL and costs of training and projects, please visit:
https://www.ncb.org.uk/what-we-do/our-priorities/early-years/projects-programmes/making-it-real

Research ethics

This study had ethical approval from the University of Oxford's Central University Research Ethics Committee (CUREC).

Analytic strategy

Individual level data in a cluster-randomised trial are said to be 'nested', that is, in this trial families are 'nested' within nursery settings. It is important to take account of this nesting in the analysis because families drawn from the same setting are likely to be more similar to one another than they are to those in other settings (Killip et al., 2004).

The extent of family similarity within clusters (settings) can be qualified by the intra-cluster correlation coefficient (ICC), which is the proportion of variability in an outcome that can be attributed to differences between settings. When it is 0, it can be said that there is statistical independence between families in a cluster, while when it is 1, all observations within a cluster are identical. If the ICC is high, therefore, it is vital to take account of the nested nature of the data in the analysis. One common way to do this is to use multilevel regression analysis.

Data from the quantitative outcome measures were analysed to estimate the effect of the Making it REAL programme on a) the Home Learning Environment (HLE) as measured by parent-report questionnaire; b) children's school readiness as measured by the practitioner-completed BESSI; and c) children's emergent literacy as reported by the practitioners on the Child Observation Form.

The analyses studied the difference in progress made on these measures between the intervention and waiting-list comparison groups over the course of the school year, and were based on an 'intention to treat' design, meaning that even if families didn't have all or any of the home visits, and/or didn't attend all or any events, their associated outcomes would be retained in the main analysis (if they had post-test measures – often families who drop out of the programme, also drop out of the trial).

Multilevel regression models were used to account for the clustered nature of the data. First, an 'empty' or 'null' model was run in order to estimate the intra-class correlation coefficient (ICC), that is, the proportion of variance in the outcome measure that was attributed to differences between schools. Next, the model was built up by testing certain pre-specified covariates in turn to establish their predictive value in the model, including the stratification factors of setting type (maintained or private) and level of REAL experience, and also pre-test score, and child's age and gender. Predictors were dropped from the model if they did not improve model fit or significantly predict the outcome; otherwise they were retained in the final model.

Outcomes

1) Home Learning Environment (HLE) Index

Complete data on this measure were available for 123 families. The intra-class correlation coefficient was 0.2421 indicating that 24.21% of the variability in HLE scores could be explained by differences between settings, and thus meaning that it was essential to take account of the clustered nature of the data. The pre-specified covariates were tested in turn as described above and pre-test HLE score was retained in the final model; none of the stratification variables, nor child age or gender significantly predicted the outcome or improved model fit. The final model therefore included group allocation (i.e., intervention or comparison) and pre-test HLE, and showed a statistically significant difference between the two groups. The estimate of the effect was 7.80 points in favour of the intervention group after controlling for the pre-test score (95% CI 1.90 to 13.69; $p<.05$).

2) BESSI Behavioural Adjustment

The ICC was again fairly high (0.2231=22.31% of variability in scores attributed to differences between settings) and therefore a multilevel model was necessary. The potential covariates were tested as before, and pre-test was retained in the model. The final model indicated that there was no significant effect of the intervention on the BESSI Behavioural Adjustment scores, after controlling for pre-test (estimate: -0.13; 95% CI -0.48 to 0.22; $p=.43$).

3) BESSI Language and Cognition

The ICC for the Language and Cognition subscale was 0.2663 (=26.63% of variability in scores attributable to setting differences). Child age and pre-test significantly contributed predictive power in the model and were therefore retained as covariates. The final model indicated that there was no significant effect of the intervention on the BESSI Language and Cognition scores (estimate: -0.31; 95% CI -.82 to .19; $p=.20$).

4) BESSI Daily Living Skills

The ICC for Daily Living Skills was 0.1890 (= 18.90% of variability in scores attributable to differences between settings). Gender and pre-test were retained in the model as covariates. The final model indicated that there was no significant effect of the intervention on BESSI Daily Living Skills scores (estimate: -0.29; 95% CI -.67 to .09; $p=.12$).

5) BESSI Family Support

The ICC was 0.2409 (=24.09% of variability in scores attributable to differences between settings). Only pre-test was retained in the model as a covariate. The final model indicated that there was no significant effect of the intervention on the BESSI Family Support subscale (estimate: -0.20; 95% CI -.56 to .16; p=.25).

6) Emergent Literacy subscale

The ICC was 0.4068 (=40.68% of variability in scores attributable to differences between settings). Only pre-test was retained in the model as a covariate. The final model indicated that there was no significant effect of the intervention on the Emergent Literacy subscale (estimate: 0.39; 95% CI -.37 to 1.15; p=.28).

In summary, there was a statistically significant difference between intervention and comparison groups on one of the six measures for the whole (analysed) sample, i.e., all eligible families in the trial with pre- and post-test. After controlling for appropriate covariates, the multilevel regression model showed a significant impact of the intervention on the Home Learning Environment index.

Participant characteristics

Demographic characteristics from the baseline questionnaire are summarised in Table 5, both for the whole (randomised) sample and for those with complete data and included in analyses. Because families were recruited after the randomisation of settings, it can be useful to compare the baseline characteristics of the sample in case there were any systematic differences between families recruited from the different centres. Since there was some dropout from the study (11.2%), it's also important to examine the pre-test profiles of those randomised and those retained in the analysed sample.

There were significant differences between intervention and comparison groups on a few baseline variables, namely, child's age (both in the whole sample and as analysed), ethnicity (whole sample only), and on several of the outcome measures (HLE, BESSI Language and Cognition and Family Support subscales, and the Emergent Literacy subscale). This means it is vital to control for pre-test in the analyses, but also that we should be cautious about drawing conclusions from the data since there is evidence that the two groups did not start from a similar baseline.

Table 5. Baseline demographic characteristics of all participants in the trial (as randomised) and those with post-test data (as analysed)

Baseline variable	All families in the trial (as randomised)		Families with follow up data (as analysed)	
	Intervention (n=92)	Comparison (n=51)	Intervention (n=77)	Comparison (n=46)
Child gender (girls)	35 (38.0%)	25 (49.0%)	30 (39.0%)	21 (45.7%)
Child age in months	40.13 (4.90)	41.96 (4.78)	40.32 (5.02)	42.30 (4.70)
Child ethnicity (White European)	27 (29.3%)	18 (35.3%)	22 (28.6%)	14 (30.4%)
Language spoken at home (English)	46 (50.5%)	30 (60.0%)	36 (46.8%)	25 (55.6%)
Pupil Premium funded	17 (27.9%)	11 (28.2%)	16 (31.4%)	11 (30.6%)
Has an older sibling	61 (66.3%)	30 (58.8%)	36 (46.8%)	25 (55.6%)
Outcome measures at baseline				
HLE	23.62 (9.97)	28.54 (11.56)	23.38 (10.15)	28.23 (11.67)
BESSI BA	2.29 (.58)	2.27 (.46)	2.25 (.54)	2.24 (.47)
BESSI L&C	2.82 (.59)	2.31 (.69)	2.80 (.58)	2.31 (.71)
BESSI DLS	2.44 (.59)	2.24 (.67)	2.44 (.57)	2.21 (.69)
BESSI FS	2.27 (.46)	1.99 (.50)	2.29 (.46)	1.96 (.48)
Emergent Literacy	2.66 (.86)	3.18 (1.00)	2.72 (.83)	3.20 (.99)

Note. Values are numbers (valid % in brackets) for categorical and mean (SD) for numerical variables

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