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## **Effects of a book gifting programme on literacy outcomes for foster children. A randomised controlled trial evaluation of the Letterbox Club in Northern Ireland**

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## **Abstract**

The poor educational outcomes of children in care is a significant concern internationally. Whilst there have been many interventions developed to address this problem, very few of these have been rigorously evaluated. This article presents the findings of a randomised controlled trial that sought to measure the effectiveness of a book gifting programme (the Letterbox Club) that aims to improve literacy skills amongst children aged 7-11 years in foster care. The programme involves children receiving six parcels of books sent through the post over a six-month period. The trial, which ran between April 2013 and June 2014, involved a sample of 116 children in Northern Ireland (56 randomly allocated to the intervention group and 60 to a waiting list control group). Outcome measures focused on reading skills (reading accuracy, comprehension and rate) and attitudes to reading and school. The trial found no evidence that the book-gifting programme had any effect on any of the outcomes measured. Drawing upon some of the emergent themes from the accompanying qualitative process evaluation that sought to determine foster carer/child attitude towards and engagement with the parcels, it is suggested that one plausible reason for the ineffectiveness of the Letterbox Club, as intimated by carers and children (rather than explicitly explored with them), is the lack of support provided to the carers/children in relation to the packs received. Reflective of an ecological model of children's development, it is recommended that for book-gifting programmes to be effective they need to include a focus on encouraging the direct involvement of foster carers in shared literacy activities with the children using the books that are gifted.

## **1. Introduction**

Nationally and internationally, statistical information collated by governments and children's organisations is consistent in highlighting the gap in educational achievement and attainment between those in out of home care compared with their peers and that the gap begins at a young age, persists over time and worsens the older the child becomes (Vinnerljung, Oman, & Gunnarson, 2005; Liabo, Gray, & Mulcahy, 2012; Flynn, Marquis, Paquet, et al., 2012; Forsman & Vinnerljung, 2012). Across the four nations that comprise the UK, for example, the most recent data reveals that while there has been some modest success in narrowing the gap against key indicators of educational performance (attendance, absenteeism, exclusions/expulsions, achievement in statutory key stage attainment scores and end of school qualifications), children and young people in out of home care generally still fair worse than the child population as a whole (DfE, 2015; Welsh Government, 2015; The Scottish Government, 2015; Department Health, Social Services & Public Safety Northern Ireland, 2015). In England in relation to 16 year olds and their formal educational qualifications, for example, there is 'a difference of 40.1 percentage points between the rates of looked after and non-looked after children achieving 5+ A\*-C GCSEs and equivalents including English and mathematics' (DfE, 2014, p. 10). Further afield in the United States (Trout, Hagaman, Casey, et al., 2008) and Canada (Courtney, Flynn, & Beaupré, 2013; Brownell, Chartier, Au, et al., 2015), figures also indicate a similar level of underachievement for this group. Importantly, we also know from other international studies that the picture remains the same even once socio-economic background and cognitive functioning are controlled for (Vinnerljung, Berlin, & Hjern, 2010; Vinnerljung, Öhman, & Gunnarson, 2005) and that the pattern regarding the widening of the gap with age is reflected in a range of other countries, including Sweden (Tordön, Vinnerljung, & Axelsson, 2014).

In light of these concerns there has been a concerted effort to ameliorate the situation. One core strand of activity has focused on legal developments. In England, for example, the law has recently been changed through the introduction of the Children and Families Act (2014) with the result that Local Authorities (charged with the delivery of services to children and young people) are now placed under a national legal obligation to promote the educational achievement of those in their care. In practice what this means, as outlined in the accompanying statutory guidance (DfE, 2014), is that: educational placements have to be found before moving a child; existing educational provision has to be maintained wherever possible; a suitable educational placement has to be found within 20 days post placement if provision has to change; and that all children are the subject of what is known as a personal education plan (PEP) and/or education, health and care (EHC) plan. Furthermore, care leavers – those of 16 years plus – are entitled to a range of financial and practical supports that extend into adulthood. Similar measures are in place for this group of young people in other countries including Canada (Flynn & Tessier, 2011) and the United States of America (Knoke, 2009).

Second, a wide range of policy and practice initiatives have emerged both nationally and internationally designed specifically to tackle educational under achievement (Connelly, Forrest, Furnivall, et al., 2008; Bowyer & Wilkinson, 2013; Dfe, 2013; 2014; Pecora, 2012; Ferguson & Wilkow, 2012; Forsman & Vinnerljung, 2012). Recently published reviews in this area (Tideman, Vinnerljung, Hintze, & Isaksson, 2011; Winter, Connolly, Bell, & Ferguson, 2011; Forsman & Vinnerljung, 2012; Liabo, Gray, & Mulcahy, 2013) highlight a wide range of activity with interventions that are targeted variously at: the child (such as book gifting, additional tutoring, provision of additional activities and/or targeted financial support); their carer/supporting professionals (including, for example, training to increase the

awareness and practice of reading support); and/or the school systems and processes (including identification, assessment, monitoring and management systems). However, it is also the case that despite this wide ranging activity, very little of it is accompanied by robust evaluations of effectiveness (Forsman & Vinnerljung, 2012; Liabo, Gray, & Mulcahy, 2013).

Of focus in this article is one particular intervention – book gifting – that has proven to be a popular response in a number of countries. Book gifting programmes aim to encourage children’s engagement in reading through the distribution of free books. Book gifting interventions vary in terms of: the mode of delivery (through the post or left with a family by a professional such as a health visitor); the number and type of books gifted, the target age group (0-5 years olds, 7-11 year olds or older); the use (or not) of instructional manuals for parents/carers; and their intended outcomes. A recent literature review carried out by Burnett et al. (2014) indicates that the overarching aim of book gifting programmes is to increase and improve children’s literacy skills. Book ownership, reading for pleasure, enjoyment of books and book sharing (reading with parents/carers) are identified as important contributory factors in the development of literacy skills that book gifting schemes aim to support. A review of research on book gifting schemes (Burnett et al., 2014) and a review of early literacy programmes that include single studies of book gifting schemes (Slavin, Lake, Chambers, Cheung, & Davis, 2010) both indicate that, with notable exceptions such as the research by Jakobsen (2012) and Jakobsen & Calmar Anderson (2013) on a book gifting scheme in Denmark that targeted migrant children and found positive effects, there are few robust evaluations that use experimental designs. Furthermore, the evidence that does exist indicates varying levels of effectiveness and impact. There are currently no studies that consider the effectiveness of book gifting schemes for children in out of home care. It is within this context that this article makes an important contribution by reporting the findings of a trial

that examined the effectiveness of one such book gifting intervention that aimed to raise the literacy skills of all foster children in Northern Ireland between the ages of 7-11 years old and between April 2013 and June 2014.

## **2. The Letterbox Club**

The Letterbox Club (<http://www.letterboxclub.org.uk/>) is a book gifting intervention that provides direct support to children in foster care aged 7-11 years to improve their educational outcomes. The intervention comprises once-monthly personalised parcels posted between May and October of each year to children in their foster homes. Parcels comprise a brightly coloured envelope (with different colours depending on the age group targeted – in this study blue for ages 7 – 9 years and red for 9 -11 years) which is personally addressed to the child at their foster carers home and which has, as its contents: a personalised letter; two books (one fiction and one non-fiction which have been selected by a panel at Booktrust); stationery items (for example pencils, exercise book, stickers); and a mathematics game (comprising puzzle sheets/practice papers, games with a die/plastic coins for example). The parcels are delivered between May and October each year and over the six-month period it is anticipated that children will have built up their own collection of books and related items consisting of a range of books including non-fiction (biology, history), activity-based, fun based, story based books as well as a book of poems and other items (Winter, Connolly, Bell, & Ferguson, 2011). As a book gifting scheme directed at the child, the intervention does not rely on, expect or demand foster carer involvement and, as such, there is no manual or guidance for carers about how and in what ways they/the child should engage with the parcel.

Designed initially as a small scale project by its founder, Rose Griffiths, early pilot work with two Local Authorities in England (Leicester and Suffolk) from 2003 – 2006 provided the

platform from which a partnership with Booktrust, the national charity that runs Bookstart and other book-gifting schemes, was established. This was followed by a successful bid for a national pilot for 2007 - 2008, funded by government. In this period Booktrust received financial support from the Department for Children, Schools and Families to extend its programme to 1,600 children. Subsequently, and in 2009, the Letterbox Club opened to every Local Authority in the UK. In the same year The Letterbox Club was introduced as a pilot scheme in Northern Ireland, where it has been funded through a partnership between the charities Booktrust and the Fostering Network's Fostering Achievement Scheme since that time.

Previous evaluations of the Letterbox Club, which in total have included 852 children, note positive findings (Griffiths, Comber, & Dymoke, 2010; Griffiths & Comber, 2011; Griffiths, 2012). Gains in literacy were made for those in receipt of the Letterbox Club over and above the expected age related standardised norm. Qualitative feedback indicated that the materials were well received and engaged with by the vast majority of children. However, as noted in a follow up secondary data analysis of the Letterbox Club in Northern Ireland (Winter, Connolly, Bell & Ferguson, 2011) all findings in relation to the Letterbox Club should be viewed with caution because the evaluations have been largely undertaken by the programme developers and have focused simply on differences between pre and post test reading scores, with no inclusion of a control group. As noted earlier, in a context where the government is increasingly demanding robust evidence of programme effectiveness in decisions about funding priorities and in the absence of any robust evaluation of the Letterbox Club, this article makes an important contribution to our knowledge by reporting the findings of a randomised controlled trial of the Letterbox Club with all children, aged 7 -11 years, in out of home foster care placements in Northern Ireland between April 2013 and June 2014.

### **3. Method**

A randomised controlled trial was undertaken involving all children in foster care in Northern Ireland aged 7-11 years. The primary aim of the trial was to ascertain whether the Letterbox Club was effective in improving the reading skills (specifically: reading rate, accuracy and comprehension) and enjoyment of reading (both recreationally and academically) amongst the children. In addition, the trial also sought to assess whether the programme was having differential effects for particular subgroups of children in relation to: their gender; their age; the type of care they were in (kinship foster care or non-relative foster care); and their initial levels of achievement at pretest. Accompanying the trial was a qualitative process evaluation that involved in-depth interviews with 20 children and 12 foster carers and that sought to determine their engagement with and attitude towards the parcels from the moment the Letterbox Club parcels arrived at the foster carers home. As part of the process evaluation the programme director, Rose Griffiths, was also interviewed. The research study achieved multi-staged ethical approval: regionally through Office for Research Ethics Committees Northern Ireland (ORECNI); internally within the University where the research team was based; and then by the research governance team in each of the five Health and Social Care Trusts that cover Northern Ireland.

The trial initially sought the participation of all children in foster care in Northern Ireland aged 7-11 years. This was made possible as Fostering Network Northern Ireland, who deliver The Letterbox Club, maintain a complete list of all children in foster care. Normally, all children would automatically be enlisted in the programme and would receive the parcels. However, and for the purposes of the trial, half of the children were randomly selected to receive the parcels as usual and half acted as a wait-list control group. These latter children began receiving the parcels as soon as post-testing for the main trial was completed.

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A flow diagram summarizing the recruitment and flow of children through the trial is provided in Figure 1. There were 151 children on The Fostering Network's database due to receive the Letterbox Club parcels beginning in May 2013. All were approached to seek their consent to be involved in the randomised controlled trial and 116 children were eventually included. In each case, opt-in consent was sought from the child's social worker and their birth parents were also contacted and provided with the ability to opt-out of the trial. Beyond this, informed consent was also sought from the child and foster carer. As indicated in Figure 1, of the 151 eligible children, multileveled consent was secured from 116. Of the 35 children who were not included seven social workers did not give permission, all because the child had severe special needs and would not be suitable to participate. Nine birth parents opted out but reasons were not recorded. The remaining 19 children who were not involved in the study included foster carers and/or children who did not wish to be involved in testing. Reasons were varied and included childhood turmoil, special educational needs, placement moves and/or recent bereavement in the foster family/birth family. There was a small number of children who had recently moved placement and where, at the time the study was commencing, no current placement address was available.

Overall, and with 116 participants, the trial was sufficiently powered (80%) to detect a minimum effect size of  $d = .47$  ( $\alpha = .05$ , estimated adjusted  $R^2 = .60$ ). Based on

anticipated effect sizes of between .20 and .30, the trial was therefore underpowered, with its power to detect effect sizes in this range varying from 22% to 43%. As described above, the total sample size was limited by the number of children in foster care in Northern Ireland. As such, it was not possible to increase the power of the trial by recruiting a larger number of children. Alongside this it should be noted that the trial was not sufficiently powered for the further analysis of the differential effects of the programme on differing subgroups of children. As such, these further analyses should be treated as exploratory only and any findings interpreted with caution.

Prior to randomisation, the 116 children were stratified according to age, gender and type of care. They were then individually randomly allocated from within each strata to either the intervention or control group. Randomisation into the intervention (56 children) or control group (60 children) was carried out blind by someone from outside the study using the random selection function in SPSS for each stratum. At the pre-test stage and in five homes, there was more than one child receiving a parcel. Ethically, it was decided to treat each of these five homes as one unit for the purposes of random allocation. This explains the slight difference in numbers in the control and intervention groups. As can be seen from Table 1, the two groups were well balanced in terms of gender, age, school year and type of care. In total 49.1% of participants were male, with 50.9% female. There were differences between the two groups in relation to their location across the five Health and Social Care Trusts. However, these differences were small and there is no reason to believe that these will have introduced any notable biases into the trial.

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The Neale Analysis of Reading Ability (Neale, 1997; Neale, Christophers, & Whetton, 1989), a standardised reading test, was used to measure literacy outcomes for the trial (reading rate, accuracy and comprehension). The Elementary Reading Enjoyment Scale (known as the ‘Garfield Test’) was used to measure the children’s attitudes to recreational reading and academic reading (Graham, Berninger, & Abbott, 2012). In addition, the children were asked two single questions: “Do you like school?” and “Do you like reading?” with the option, in each case, of reply “not really”, “a little” or “a lot”.

Data in relation to these outcome measures were collected at pre-test from all 116 children randomised to the two groups at pre-test. Initial pre-test data collection took place over a four-week period between April and May 2013. All children were tested in their foster carers’ homes by a small team of fieldworkers who were trained in the application of the Neale Analysis of Reading Ability scale and the other measures. Descriptive statistics for each of these measures are provided in Table 2. As can be seen, the two groups were well-matched with no statistically significant differences found between the two groups in relation to any of these measures. In addition, it can be seen from the mean standardised scores for the three reading outcomes that the overall levels of attainment for children in foster care were notably lower than the expected population mean of 100.0.

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Following pre-test, the intervention group received their first parcels at foster carers' homes at the start of June 2013 and received their last parcels in November 2013. The control group did not receive their parcels in this time but carried on as normal. Between November and December 2013 post testing on all the children took place, again within a four-week time period. By this time, and as indicated in Figure 1, five children had dropped out of the study leaving a total sample of 111; a retention rate of 96%. Between January and June 2014 the control group children received their once monthly parcels.

It is important to note that as a book gifting scheme delivered directly to children, and with no requirement for foster carer involvement, there is no manual that accompanies the Letterbox Club parcels to guide children and/or foster carers about how, when and with what degree of frequency they should engage with the parcel contents. The procedure therefore involved no foster carer training/awareness raising sessions. It was simply the case that the parcels were filled, labelled and delivered to all foster children of eligible ages – a process coordinated and overseen by Fostering Network in conjunction with Fostering Achievement. As such, there was no need to measure fidelity to the programme, beyond noting that all children in the intervention group received their parcels as planned.

#### **4. Trial results**

The main analysis for the trial consisted of linear regression (for continuous outcome variables) and binary logistic regression for the single question measures (where responses

were re-coded into two categories: “a lot” and “either not really or a little”). Each regression model included the child’s post-test score as the dependent variable and the child’s pre-test scores and the dummy variable indicating whether they were in the intervention or control group added as independent variables. The exploratory analysis of the differential effects of the programme for differing subgroups was undertaken by extending these models by adding two additional independent variables representing the respective contextual variable and the interaction between that variable and the dummy variable representing the child’s membership of the intervention or control groups. Full details regarding the main regression models fitted are provided in the Appendix.

A summary of the findings from the trial is provided in Table 3. As can be seen, the trial found no evidence that The Letterbox Club had any effects on the children’s reading outcomes or their attitudes to reading or school more generally. Furthermore, the additional exploratory sub-group analysis found no clear nor statistically significant evidence that the programme was differentially effective in relation to the children’s: age; gender; type of care; initial levels of achievement at pretest; whether they had participated in additional private tutoring during the period of the intervention; and whether they had participated in additional Letterbox Club activities during the period of the intervention, namely the summer scheme and events held at local libraries.

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While the findings of the process evaluation are reported in detail elsewhere (Mooney et al., forthcoming) some of the emergent themes are drawn on in the discussion that follows and that seeks to provide further insight into and explanation of the findings.

## **5. Qualitative research findings**

In making sense of these findings it is important to consider what theory of change underpins the intervention and whether findings from the trial and its associated qualitative element support this theory of change or not. With regards to the theory of change, it is notable that an explicit logic model is absent. There is, for example, no manual or instructions for the children or the foster carers regarding how to use the packs that are gifted. For the carers, whilst many were enthusiastic and committed to helping their children, they often were not clear about how to do this. This is illustrated in the following comments from one of the foster carers interviewed:

To be honest the reading progress has been so slow [and] I've been up at the school and things. I wouldn't have asked for the packs or anything and probably wouldn't have taken them because sometimes it [feels like] just too much work and (Natalie) just doesn't [seem to] want it.

Another carer, in response to a question about whether there were reading routines around the family home, beyond individual night time reading by some family members:

*Victor and Violet (Carer):* Naw

*Victor:* Free time

*Violet:* Listen to him- free time! He goes to school each day and he thinks that's enough! Do you not know how difficult that is even! (all laugh) to get him to sit down and do reading here?! No chance!

However, whilst there was no manual or explicit theory of change, it was clear from the programme developer that a crucial component to the intervention is the concept of ownership: that is that children's personal ownership of books will lead to an increase in their interest in and motivation to engage with books which, in turn, will lead to improved reading

skills as manifest in increased scores. In an interview with Dr Rose Griffiths where, she reflected on the design of the Letterbox Club materials, she indicated that the delivery model was based on a similar scheme personally known to her historically, when books were not so cheap and accessible and where ownership was at the core of the scheme. In this context the concept of ownership was based on three assumptions: first, the idea that children in care are ‘book deprived’ such that they have limited access to books; second that children are ‘book hungry’ in that the gift of a book taps into an unmet need; and third that they are inherently ‘book grateful’ such that their natural curiosity at receiving attractive gifts in the form of books will lead to a personal engagement in the materials without the support of others being necessary.

Findings from our qualitative data suggest that children in foster care placements are often (although not always) living in homes where books are actually readily available and to which they have access. Ironically, they are often not ‘book deprived’ but ‘book burdened’. In this sense, almost all the children asked stated that they had ‘lots of books’. In addition to the Letterbox Club materials, children indicated that many of their other books were bought as presents, as one child stated: ‘My mummy bought me loads of them and I got them for all my birthdays and for Christmas and everything’. For some children therefore they felt indifferent to the book gifting process as indicated below:

*Mark:* Yeah, they keep giving me more

*JM:* Do you like getting more?

*Mark:* Well I have loads of them now all over there, see?

Furthermore, in these homes and other homes with fewer books, our findings suggest that children in foster placements have access to books and stories through the use of a range of electronic media, such as iPad, computers and Kindles. It cannot therefore be assumed that lack of books equates with lack of reading opportunities. In addition, our qualitative findings possibly suggest that being ‘book grateful’ – that is responding to the gift of books by engaging in reading – may actually be related to level of pre-existing interest, ability and/or readiness to engage. For example our findings indicated that for those children already keen to read, they were able to pick out and identify books which they did enjoy and which they did find inspiring. As one child, (Helen) commented, for example: ‘I liked *The Finger Eater* because it was scary’. In addition to mixed feelings about individual books, children who

appeared keen to read noted that there were a number of different responses to the level of texts provided. Some, like Jill in the comment that follows, felt that the packs were pitched at too young an age: ‘umm I liked the... not like the reading books...but like the not reading books and like the other stuff I got. The reading books were too babyish’.

Lastly in relation to children being ‘book grateful’ our qualitative findings tentatively indicated that children were not merely ‘grateful’ at receiving a gift and therefore engaged but that engagement was related to their opinions on the content and the quality of the book gift received. We found that almost all children had some books that they did not like for a variety of reasons including: having the book already; not liking the particular story or subject area; receiving a book pitched at the wrong level; receiving books as gifts at other times; and owning book already. All of these had the potential to interfere with the notion that being grateful led to natural curiosity that then led to increased engagement.

## **6. Discussion and conclusions**

There are three key points to draw out in conclusion in relation to this present study. The first is that the lack of robust evaluations of the type reported here is remarkable given the clear government concern with children in care and also the now pervasive policy discourse on outcomes. The systems that govern the management, planning and care of this group of children are premised on a concern for ‘outcomes’ and government maintained databases now collate a wide range of information around a series of outcome measures. Growing attention has therefore been given to documenting the placement, health, educational, social and employment outcomes for this group of children through longitudinal research designs (Davies & Ward, 2011). And yet, despite this concern with data and outcomes, there is a dearth of research using robust experimental designs that seeks to determine the effectiveness of interventions. Surely, an inherent aspect to government commitment to secure equality and social justice for this group of children involves a concern to establish what interventions do make a positive difference and in what ways? This present study represents a good example of the importance of undertaking rigorous evaluations. Whilst The Letterbox Club has established itself as a popular intervention for foster children – one that has been rolled out across the UK – this has occurred in the absence of evidence from any trials. Indeed the evidence of the only randomised controlled trial presented here suggests that the intervention is actually having no discernible effect as it currently stands in relation to improving the children’s educational outcomes. Given that this is the only trial of the Letterbox Club

replication studies and/or studies using a modified version of the Letterbox Club would be helpful.

Second, and supporting the previous point, the findings from this present study also highlight the importance of developing theoretically-informed interventions that are also underpinned by a better and more contextualised understanding of the position and experiences of foster children. The lesson from the development of The Letterbox Club is that, whilst representing an essential catalyst, good intentions are not enough. In the present case, this popular, attractive and well-loved intervention stands to make greater impact on outcomes if underpinned by a clear theory of change that is empirically and theoretically based and that supports foster carer engagement. As reported earlier, while lack of support for carers was not an area explicitly focused on in this research study, it was noted from the qualitative findings that many of the carers involved in the Letterbox Club were enthusiastic and competent, however lacked the knowledge about what to do and when to do it.

Recent findings around tutoring in Canada (Flynn *et al.*, 2012) have shown that gains in reading can be made in a relatively short space of time when this approach is used. In this instance Canadian carers and university students were used to deliver a tutoring approach which showed statistically significant and practical gains for the intervention group. Similarly, paired reading is an approach which has gleaned positive results for this group of children. Osborne, Alfano and Winn (2010), reporting on a study in the UK found that children made average gains of twelve months in their reading ages when this approach was used. Here carers were trained to work alongside the children in their care, however such findings need to be treated with caution as a control group was not used in this study. A Swedish study (Tordön, Vinnerljung and Axelsson, 2014) that also had no control group that replicated this British study, found similar results. In the Swedish study children made gains of 11 months over the course of the intervention.

Thus, taking all of this into consideration, it would be highly beneficial for the programme providers to take a step back and develop a clear logic model that sets out an explicit theory of change informed, in this case, by an ecological model of the children's development that places their learning within a broader social context. More specifically, and for The Letterbox Club, there is a clear role for the foster carer who could be encouraged to engage in and help facilitate a paired reading approach would be one which may help the programme achieve the

aims which it has set out (Osborne, Alfano and Winn, 2010; Tordön, Vinnerljung and Axelsson, 2014). In this type of approach, carers would be trained in paired reading and would be given a 'reading handbook' which they could use during training and during the programme implementation. This type of approach would take into account holistic models of learning and ecological approaches to interventions by having defined, workable roles for those involved. Here, the training delivered to the carer would allow the carer to use their expertise in order to work closely with the individual child and their needs.

This leads on to our third point which is that there is a need to engage in the design and evaluation of further interventions that are premised on a better, and more contextualised, understanding of this group of children and young people and that recognises and accounts for the significance of their relationships, especially their carer relationships. This will avoid the tendency to strive for the creation of 'silver bullet' interventions; those that are relatively cost light, low intensity and promise quick-fix solutions to complex problems. Unfortunately, there is a danger with the discourse and enactment of evidence-based practice that the focus fixes simply on producing evidence of which interventions work, and thus can command the label of being an "evidence-based programme", and those that do not. Such an approach would result in evaluations such as this one leading to the premature end of what remains a promising programme with the potential to be effective. The programme is promising precisely in the fact that it has already established itself as a well-regarded and embedded intervention. The key challenge therefore is to explore how this solid foundation can be built upon to ensure that the intervention itself becomes effective. This, in turn, raises an important point regarding the role of researchers and the need to move beyond one-off summative evaluations towards developing more collaborative and sustained models of working where research and practice inform one another in an iterative and formative process. As Tordön, Vinnerljung, & Axelsson, (2014) have remarked, poor school performance in out-of-home care can be improved if children are given reasonably adequate support. We should therefore be asking if anything can be done to strengthen what is an extremely well intentioned, well received and well-loved intervention rather than contributing to its demise.

In conclusion and by way of taking all these points forward it is our intention, in relation to the Letterbox Club, to combine parcel delivery with training for foster carers and the provision of accessible guidance regarding the importance of and practicalities involved in reading with foster children. In this new style of intervention, the outcomes will be focussed

not only on literacy development, but on child-carer relationships and on the time and experiences they can share together. This move away from child-targeted intervention and solely academic outcomes would allow for a move towards a child-centred intervention, which is aimed at both child and carer and which, subject to another randomised controlled trial, may prove to strengthen educational outcomes for this group of children. We hope, as Vinnerljung (unpublished paper delivered at colloquium, University of Ottawa, March 2015) urges us, to move beyond ‘mapping misery’ to contributing, as Griffiths has done with the Letterbox Club, to making lasting change and improving the outcomes for children and young people in out of home care.

## **Appendix**

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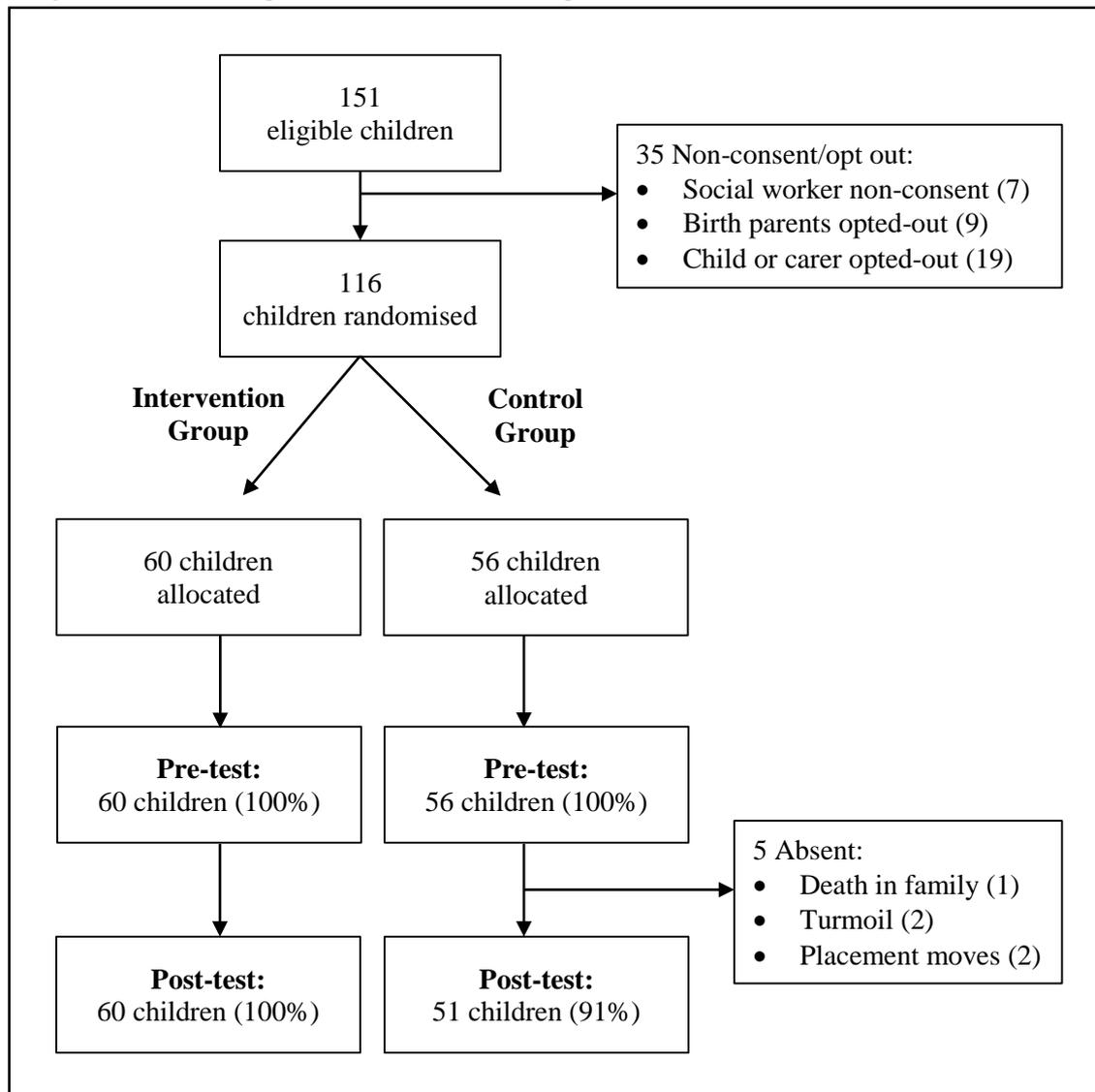
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Figure 1. Flow Diagram of Children Through the Trial



*Table 1. Characteristics of the Sample*

		Intervention Group		Control Group		Total	
		n	(%)	n	(%)	n	(%)
Gender <sup>a</sup>	Boys	28	(50.0)	29	(48.3)	57	(49.1)
	Girls	28	(50.0)	31	(51.7)	59	(50.9)
	Total	56	(100.0)	60	(100.0)	116	(100.0)
School Class <sup>b</sup>	P4 (7-8 years)	27	(48.2)	29	(48.3)	56	(48.3)
	P6 (9-10 years)	29	(51.8)	31	(51.7)	60	(51.7)
	Total	56	(100.0)	60	(100.0)	116	(100.0)
Type of Care <sup>c</sup>	Foster Care	37	(66.1)	41	(68.3)	78	(67.2)
	Kinship Care	19	(33.9)	19	(31.7)	38	(32.8)
	Total	56	(100.0)	60	(100.0)	116	(100.0)
Health & Social Services Trust <sup>d</sup>	Belfast	16	(28.6)	11	(18.3)	27	(24.1)
	Northern	12	(21.4)	11	(18.3)	23	(19.8)
	South-Eastern	3	(5.4)	11	(18.3)	14	(12.1)
	Southern	7	(12.5)	17	(28.3)	24	(20.7)
	Western	18	(32.1)	10	(16.7)	28	(23.3)
Total		56	(100.0)	60	(100.0)	116	(100.0)

<sup>a</sup>p=.858, Chi-Squared=.032, df=1; <sup>b</sup>p=.999, Chi-Squared<.0005, df=1;  
<sup>c</sup>p=.795, Chi-Squared=.067, df=1; <sup>d</sup>p=.018, Chi-Squared=11.869, df=4

Table 2. Outcome Measures at Pre-Test by Group<sup>a</sup>

		Intervention Group (n=56)	Control Group (n=60)	Total (n=116)
Reading Accuracy <sup>b</sup>	Mean (SD)	90.0 (14.7)	92.3 (11.3)	91.2 (13.1)
	Range	69-127	69-121	69-127
Reading Comprehension <sup>c</sup>	Mean (SD)	91.1 (15.0)	92.9 (13.5)	92.0 (14.2)
	Range	69-119	69-130	69-130
Reading Rate <sup>d</sup>	Mean (SD)	94.1 (15.3)	96.7 (12.9)	95.4 (14.1)
	Range	69-128	73-124	69-128
Recreational Reading <sup>e</sup>	Mean (SD)	30.5 (5.3)	29.8 (6.7)	30.1 (6.0)
	Range	18-40	12-40	12-40
Academic Reading <sup>f</sup>	Mean (SD)	30.3 (5.9)	30.7 (6.4)	30.5 (6.1)
	Range	17-40	12-40	12.40
“Do you like School?” <sup>g</sup>	Not really	3 (5.4%)	4 (6.7%)	7 (6.0%)
	A little	22 (39.3%)	21 (35.0%)	43 (37.1%)
	A Lot	31 (55.4%)	35 (58.3%)	66 (56.9%)
	Total	56 (100.0%)	60 (100.0%)	116 (100.0%)
“Do you like reading?” <sup>h</sup>	Not really	2 (3.6%)	5 (8.3%)	7 (6.0%)
	A little	25 (44.6%)	23 (38.3%)	48 (41.4%)
	A Lot	29 (51.8%)	32 (53.3%)	61 (52.6%)
	Total	56 (100.0%)	60 (100.0%)	116 (100.0%)

<sup>a</sup>Reading accuracy, comprehension and rate measured using Neale Analysis of Reading Ability. Recreational reading and academic reading attitudes measured using Elementary Reading Attitude Survey (alpha-.814 and .797 respectively).

<sup>b</sup>p=.33, t=.98, df=114; <sup>c</sup>p=.50, f=.68, df=114; <sup>d</sup>p=.32, t=1.01, df=114; <sup>e</sup>p=.57, t=.58, df=114;

<sup>f</sup>p=.69, t=.39, df=114; <sup>g</sup>p=.75, Chi-Squared=.11, df=1; <sup>h</sup>p=.87, ChiSquared=.03, df=1.

*Table 3. Effects of The Letterbox Club on Reading Skills and Attitudes*

Outcome	Post-test Adjusted Mean Scores (with Standard Deviations)		Sig.	Effect Size (d) (with 95% CI) <sup>a</sup>
	Intervention Group	Control Group		
<i>Reading Skills</i>				
Reading Accuracy	92.15 (15.14)	91.15 (14.26)	.812	+.068 [-.296,+432]
Reading Comprehension	91.48 (16.05)	91.97 (15.35)	.796	-.031 [-.395,+333]
Reading Rate	97.83 (14.04)	100.98 (13.06)	.062	-.233 [-.598,+133]
<i>Reading Attitudes</i>				
Recreational Reading	29.58 (7.36)	30.39 (6.68)	.746	-.115 [-.480,+249]
Academic Reading	29.78 (7.22)	30.45 (6.75)	.567	-.096 [-.460,+268]
Like School <sup>b</sup>	55.2%	65.4%	.289	-.198 [-.564,+168]
Like Reading <sup>b</sup>	58.6%	61.3%	.763	-.056 [-.420,+308]

<sup>a</sup>For the last two outcomes, this was calculated using p value (calculated from chi-square statistic) and sample size.

<sup>b</sup>Post-test adjusted percentages of children reporting that they liked school/reading “a lot”

Table 4. Regression Models Used to Estimate Post-Test Adjusted Mean Scores/Percentages for Intervention and Control Groups (coefficients with standard errors)<sup>a</sup>

Independent Variables (All Pre-Test Scores)	Dependent Variable (Post-Test Scores)						
	Reading Accuracy	Reading Comp.	Reading Rate	Recrtnl Reading	Acad Reading	Like School	Like Reading
Constant	91.147 (1.002)	91.974 (1.275)	100.982 (1.127)	30.388 (.805)	30.451 (.789)	.638 (.295)	.462 (.279)
Intervention	.355 (.487)	-.490 (1.892)	-3.153 (1.672)	-.389 (1.195)	-.672 (1.171)	-.429 (.432)	-.111 (.413)
Reading Accuracy	.626 (.134)	.693 (.171)	.283 (.151)	.109 (.108)	.000 (.106)	.032 (.038)	.043 (.038)
Reading Comp.	.356 (.119)	.324 (.151)	.248 (.134)	.070 (.095)	.108 (.094)	-.240 (.034)	-.030 (.033)
Reading Rate	.009 (.062)	-.096 (.078)	.339 (.069)	-.051 (.049)	-.061 (.048)	-.017 (.018)	-.014 (.017)
Acad. Reading	.476 (.190)	.419 (.241)	-.083 (.213)	.221 (.152)	.351 (.149)	.032 (.054)	-.013 (.052)
Recrtnl Reading	-.361 (.189)	-.354 (.240)	.076 (.212)	.179 (.151)	.115 (.148)	.064 (.055)	.100 (.053)
Like School	1.176 (1.791)	1.641 (2.278)	4.229 (2.014)	.784 (1.439)	1.517 (1.410)	.948 (.497)	.009 (.495)
Like Reading	-4.272 (1.828)	-2.245 (2.325)	-.786 (2.055)	.668 (1.468)	.523 (1.439)	.277 (.510)	.371 (.499)
Adjusted R <sup>2</sup>	0.723	0.609	0.600	0.212	0.237		
-2 Log Likelihood						130.571	139.591
Cox and Snell R <sup>2</sup>						0.160	0.089

<sup>a</sup> Linear regression for the first five models and binary logistic regression for the latter two.

<sup>b</sup> Dummy variable coded "0" for control group and "1" for intervention group.