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**Parents' and children's engagement when sharing personalised  
books**

by Natalia Kucirkova

submitted in partial fulfilment of the requirements for the Degree of  
Masters in Research (Education) in the Centre for Research in Education  
and Ed Technology, The Open University

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## **Abstract**

This study aimed to compare parents' and children's engagement during shared book reading of a personalised, non-personalised and a favourite book. A within-subjects comparison of seven native English parents and their children aged between 12 and 33 months was performed, with a multi-method design in order to cross-validate the findings.

Data from parents' questionnaire reports, interviews and field notes, indicated high levels of children's engagement with the personalised books. Video observations showed higher specific engagement levels for children when comparing the personalised with non-personalised book and for parents also with the child's favourite book. There was most correspondence between parents' and children's engagement in the personalised book condition.

The results suggest that personalised books foster a joint, specific engagement in parents and children and this is probably due to the personal information they contain. A multi-method assessment proved to be an effective technique to adequately address the multi-faceted nature of parents' and children's engagement in sharing different types of books.



## Chapter 1: Aims and objectives

### 1.1. The importance of home book reading

Shared book reading (SBR) has been identified as one of the richest and most influential parent-child activities, which directly promote children's development of language (Senechal, 2006) and, by implication, emergent literacy skills (Philips *et al.* 2008) and later achievement at school (Baker *et al.* 1998). It has been found that during book reading, parents use more complex language and a wider vocabulary than during free play (Hoff-Ginsberg, 1991); a modelling task (Sorsby and Martlew, 1991) or mealtime (Munn and Schafer, 1993). When sharing books, parents with their child jointly construct meaning with their child and make sense of the text or pictures in the book. Through capturing children's undivided attention, SBR creates an effective learning context, in which the process of knowledge acquisition becomes a cooperative and collaborative effort between the parent and child. In SBR, parents gradually scaffold children's knowledge (Wood *et al.* 1976) and enhance children's language skills, including: vocabulary (see e.g. Whitehurst *et al.*, 1988); syntactical constructions (Snow and Goldfield, 1983) and use of decontextualized language (Sulzby, 1985a). Since book reading is usually associated with a very positive emotional experience (children sit on their parents' lap, they both have fun and laugh together), SBR is a regular occurrence in many families. The systematic and positive repetition of a productive learning episode further enhances the knowledge and skill acquisition which usually takes place during this type of activity.

Given all these benefits, in most Western European and North American countries, shared book reading has been turned into a 'cultural icon' (Philips *et al.*, 2008, p.82) and has been acclaimed as 'literacy event par excellence' (Pellegrini, 1991, p.380). Early childhood educators refer to shared book reading as 'an effective strategy' for parents to use to increase literacy skills of their children (Martine, 2009, p.54) and promote the belief that introducing children to books from an early age maximises their later school success.

However, not every child is read to regularly at home. In addition to the problem of unequal access to books throughout society, shared book reading is valued and practiced differently across and within families. Numerous research studies have pointed out the need for more frequent and better quality SBR activities among families.

The call for more book reading at home has been picked up by many government interventions and non-government reading programmes. The latter work rests on the premise that providing parents and their children with some developmentally appropriate free reading material increases book reading at home and gives children a better start in life (Dollymanianet, 2000).

Likewise, researchers and scholars have been trying to find ways of increasing the quality of parent-child book reading by devising various methods and techniques that parents can use to enrich this type of activity and engage their children more fully in the process. However, a few, (if any) interventions and SBR research projects have succeeded at effectively targeting both the quality and quantity of home book reading. Both factors are equally important and probably work together to promote learning (see van Kleeck *et al.*, 2003).

A new and promising book reading intervention which could easily and at minimal cost increase the quality as well as quantity of home SBR without losing the richness of this activity, could be one which uses self-made personalised books.

### 1.2. A new approach to shared book reading: using self-made books

It seems reasonable to hypothesise that shared book reading schemes which promote self-made personalised books lead to repeated readings and support lively and appropriate naturally-occurring reading styles in parents.

Self-made books are more socially relevant and more culturally sensitive than those approaches to home book reading which use pre-selected books chosen by the researchers or others deemed expert in early book reading (see studies by e.g. Ada, 1988; Heath, 1982). They are in line with the rationale behind recent educational programs which make use of parents' own 'funds of knowledge' (see Gonzalez *et al.* 2005), and which are believed to lead to positive pedagogical thinking and practice. Encouraging parents to create book material for their children, in their own native language and with their own stories, capitalizes on parents' natural ability and enthusiasm to do something valuable for their children as their first and foremost educators. Self-made books can engage parents who might find it difficult to connect with traditional books and who feel not confident enough to participate in home literacy education (McCaleb, 1995).

Furthermore, whereas the sustainability of most free books schemes relies on the financial support of the government, local community or private funds, encouraging parents to create

their own books supports the use of parents' own resources, which generates a more economically sound home book intervention design.

Anecdotal evidence points towards the popularity of self-made personalised books with parents and pre-school children. Many parents create a book for their babies to show them how they grow or to capture pictures of their friends, favourite toys or siblings (Ziegler, 1992). As a fieldworker and quality assessor of the standard of provision of UK pre-school settings (e.g. Smith *et al.*, 2009), I noticed the occurrence and popularity of the so-called 'experience books', i.e., books made by preschool staff for children, based on experiences or activities children recently participated in. When asked, staff commented about children's independent use of these books and an increased interest and active participation when sharing them with an adult.

Also case reports tend to confirm that books created at home lead not only to parents' active involvement but also children's greater enjoyment and subsequently repeated readings. Pakulski and Kaderavek's case study (2004) which looked at the use of personalised self-created books with children with hearing and language difficulties confirmed that for these children, personalised books made a real difference in their language development.

In the context of 'culturally-sensitive interventions', multicultural and bilingual education promoting the use of home language through self-made books, is becoming very popular in Canada (e.g. The Multiliteracies Project) and in American states with heavy Latino American population (e.g. The Family Writing Project). In these projects, challenging traditional schooling processes and factors like empowerment and respect of parents are fairly new and come into play when encouraging parents to create books for their children.

In a recent study, Bernhard *et al.* (2008) looked at the use of self-made personalised books with bilingual children from an ethnically diverse, low-income community in Miami-Florida. The initiative 'The Early Authors Program' was designed to promote the partnership between parents, children and school by encouraging the use of home language through self-made books where the target child is the protagonist. A formal evaluation of the intervention found that children in the intervention group made larger progress on a range of language measures than the control group. Teachers taking part in the intervention reported high satisfaction and sustainability for the program.

To my knowledge, Bernhard's study is the only study which has formally evaluated the impact of books made by parents on their children's developmental outcome (Bernhard *et al.*,

2008). Unfortunately, this study had a number of shortcomings such as missing data for children's pre-test language scores, no parent-reported children's literacy skills (only teachers' reports), no measure of the provision of home literacy activities and others. Nevertheless, for its specific target group (bilingual children from deprived backgrounds), the study's aim to bridge cultures between home and school has been achieved.

So far as I know, no research has looked at the use of personalised books with monolingual, English-speaking parents and their children. Despite the popularity of personalised books with both parents and children, the naturally occurring parent-child engagement patterns resulting from sharing these have, as yet, not been investigated in great detail. Furthermore, little is known about parents' and children's enjoyment of personalised books as compared to books children are known to enjoy (i.e., children's favourite books). The lack of research data about the factors influencing parents' and children's engagement with personalised books generated the research questions for the present study.

Before the presentation of the study research questions, a specification of the study key terms- 'engagement' and 'personalised books'- is presented.

### 1.3. Definition of terms

#### *1.3.1. Engagement*

From an extensive literature review, no consensus definition of 'engagement' could be identified, with different measures, different terms and different ways used to assess engagement. Few studies (if any) have considered a comprehensive evaluation of parents' and children's engagement when sharing personalised books. In the present study, child's and parent's engagement was measured via several parameters and methods<sup>1</sup> (see Appendix 1, p.53, Table 7 for an overview). These involved observation and coding of the sessions, questionnaire responses from the parents, comments in interviews and my field notes.

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<sup>1</sup> For the sake of clarity and without losing any meaningful information, for parents' interviews and questionnaires, engagement was referred to as enjoyment and comfort and/or confidence (cf. Hynd, 2006).

### 1.3.2. Personalised books

There were three books used for the study. The *Personalised* book was the book written by the parent, with photographs of his or her child's personal events or objects<sup>2</sup>.

A *non-personalised* book was defined as a book created by myself, with photographs depicting the same objects and activities as in the personalised book but with no pictures or text featuring the target child as the protagonist. The books created by myself involved a very precise matching: parent's book was taken as criterion against which 'my book' was created, controlling for story structure, conceptual representation of pictures, and grammatical complexity of the text. This procedure ensured that the two books had the same or almost the same number of words and pictures- a method followed in previous book comparison studies (e.g. Kim and Anderson, 2008). So far as I know, the use of non-personalised books as a direct opposite to personalised books has not been used in previous research. Therefore, the study design was innovative and to some extent, speculative in terms of what constitutes a personalised book and its non-personalised equivalent. The small sample size allowed for a careful design of individual matching books for all participants, as a thorough consideration to all elements of parents' books could be given. So, for example, a photograph of a racing car the child enjoys playing with chosen by the parent would be matched in a non-personalised book with a random picture of a toy racing car, of similar size, colour and same background. The wording accompanying parents' picture would be matched in the non-personalised book by a text of same length and same complexity and very similar content.

The *favourite book* was a book chosen by the parent on the day of observation, according to the instructions: 'Would you like to choose one of your child's current favourite books?'

### 1.4. The study research questions

The research relevant to this study clusters around two main research questions:

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<sup>2</sup> The book was not entirely 'self-made' or 'self-created', as some instructions specifying the book content were given to parents. Also, the final formatting and printing of the books was carried out by myself, thus lessening the parents' full involvement in the book creation process (see section 3.5. for more details).

RQ1:

Is there a difference in children's engagement in sharing a personalised, non-personalised and the child's favourite book?

RQ2:

Is there a difference in parents' engagement in sharing a personalised, non-personalised and the child's favourite book?

Firstly, a crucial issue to examine is the extent to which personalisation of the book plays a role in children's engagement in the SBR event. It is a common sense view that children will be naturally interested in images which feature their own toys and themselves as protagonists. How will this engagement compare to books which are of similar content, feature familiar objects but are not personal to the child? As for parents' engagement with self-made books, parents who are instrumental in the design of books for their children have been found to report a greater sense of involvement, competence and empowerment (Garcia, 2008). From these observations, as well as my own inquiries and the available observations from other colleagues, I hypothesise that parents creating books for their children will show greater levels of engagement when sharing their own books with their children as opposed to reading non-personalised books.

Secondly, how parents' and children's engagement in sharing personalised books compares to their engagement in sharing children's favourite books was of interest. The latter are known to promote child's positive engagement in SBR and are read on a regular basis, as opposed to two novel books, that were based on child's interests and favourite activities.

Thirdly, related to these questions, analyses were conducted to determine the extent to which there are mutual influences between child and parent in sharing the three books. Will parents' engagement be related to child's engagement and if so, how much does it relate to the three book conditions? According to the transactional approach to SBR, parents' engagement should be interlinked and come out as a result of children's levels of engagement with the three books. As such, analysis of both parents' and children's engagement with a previously not investigated type of book is consistent with the study objective of describing the triadic relationship in SBR: parent, child and the book (see section 3.1).

Previous research which motivated the present investigation and helped develop the research questions is reviewed in the literature review below.

## Chapter 2: Literature review

The purpose of this literature review is to situate the importance of the present investigation and establish a benchmark for the principles adopted in its innovative approach to parent-child shared book reading. In the first part of this section, the need for an innovative approach to shared book reading is noted, highlighting the unexplored impact of specific book types on parent-child SBR interaction. This led to the interest in a type of book which seems to address and possibly answer the current concerns and issues around parent-child home book reading involvement. In the second section of the literature review, parents' and children's engagement with personalised books is examined, leading to the hypothesis that the unique properties of personalised books are likely to naturally instil positive engagement in parent-child SBR.

### 2.1. Intervention studies in shared book reading

Cross-cultural SBR research has shown that different parents' reading styles promote different skills in children and that what works for some families may not work for others (see Reese and Cox, 1999). Specifically, among cultural groups, there is a difference in parental beliefs about the appropriateness of home reading before school entry (van Kleeck, 2006). This clearly affects the natural reading style parents use when they read to their children, as well as their willingness to participate in an intervention promoting a specific reading technique (cf. Whitehurst *et al.* 1988). Therefore, SBR intervention programs which promote the use of a specific book reading style in parents, show various levels of success when specific groups are targeted -for example children with language delay (Crain-Thoreson and Dale, 1992) or from non-mainstream culture (Janes and Kermani, 2001).

Similarly, book-gifting schemes which work on the premise that incorporating free reading material into families increases the frequency of home book reading may not always lead to engaging and meaningful literacy experiences. As a matter of fact, comparative SBR research shows that for some families, having to read pre-selected books is perceived as 'punishment' (Janes and Kermani, 2001, p. 460).

Shared book reading is an activity which heavily draws on cultural, family and socio-cultural funds of knowledge (van Kleeck, 2006). Ignoring or suppressing these skills and knowledge and trying to increase its quantity or quality in a given manner alters parents' behaviour in an undesired way, moving the activity far from its positive benefits. There is 'no best' style to read to children' and no 'optimal book' and this has been a central assumption in the

development of the present study, which examines naturally occurring parent-child engagement patterns with a previously not investigated, personalised type of book.

## 2.2. Sharing personalised books: an innovative book type

Despite the obvious importance of specific features of books in evaluating the interaction and response patterns between parents and children, surprisingly little data exists to compare the quality of book reading session across various book types, with some studies not even mentioning the book's level of complexity or reading topic (Pellegrini and Galda, 2003).

There are some research indications that the type of book being read has a considerable impact on the structure, as well as function of the storybook reading session (Potter and Haynes, 2000). The latest research reported by Anderson et al. (2009, April) has shown no effect of book genres on the amount and types of questions asked by parents during the book reading activity. Interestingly, authors found differences between the books within the same genre, lending support for the hypothesis that it is not the book genre but the unique features of books that may elicit specific reading styles in parents. This is in line with Neuman's study (1996) which found that mothers engaged in more cognitively challenging talk when sharing narrative texts and in a more book-focused conversation when reading a highly predictable text. Neuman speculates that the key feature that influences parents' reading styles is the predictability of text, i.e., a specific book characteristic rather than a book category.

There is clearly a continuing need to improve our understanding of the relationship between specific features in children's books and the response they generate in parents and children. As a less researched and known book type, personalised books have a great potential to promote an active and meaningful engagement in shared book reading. In parents and children this engagement is accomplished by parallel but distinct mechanisms and is considered in more detail below.

## 2.3. Personalised books and engagement: children

The design of introducing personalised books to very young children is purposeful in the way it provides a meaningful environment for their parents in which to practice and naturally develop some specific interactive reading techniques (asking children for feedback, using more extra textual talk, drawing on children's knowledge and previous experience etc.), which are known to lead to children's greater engagement and learning gains (see e.g. van



Kleeck *et al.*, 2003). Personalised books which are based on children's previous experiences, inherently offer to parents numerous opportunities to meaningfully link the book life to their children's lives. In the present study, parents were asked to base their children's books on what their children enjoy (i.e., constraining the topics to stories their children know and encountered before). This was a crucial design feature, which enabled the observed SBR interaction to be turned into a learning experience in which prior knowledge is activated, making child's engagement more meaningful and any teaching more effective (Tobias, 1994). Namely, drawing on child's previous experience is vital for supporting child's cognitive development (Tizard and Hughes, 1984) and its importance in knowledge acquisition has been highlighted by theories which conceptualise learning as an internal cognitive process (e.g. King, 1994). According to this approach, new information is connected and integrated with child's prior knowledge and meaningful experiences. Parents, who link children's own personal life to the "book life", not only make the story more vivid but also increase children's understanding and scaffold their knowledge toward a more advanced understanding (see Vygotsky, 1964).

The value of personalisation of reading material has been well established in children's reading comprehension (DeMoulin, 2003). In Bracken's (1982) pioneering work with struggling readers, story comprehension was enhanced by embedding in the standard story some personal information (such as substituting the main character's name by child's name). This made the story more accessible to child's previous knowledge and activated 'cognitive frameworks onto which new knowledge can be mapped', (p.22, Harrison, 2007).

Further, following a series of studies on parent-child attachment and book reading behaviour, Bus (2003) concluded that 'children's commitment and learning depend on the parental ability to bridge the child's world and the world of the book by using their intimate knowledge of the child's personal experiences' (p.12). Books created by parents are, by their nature of creation, full of parents' positive affect and thus more likely than any other book to positively engage their children.

#### 2.4. Engagement through personalised books: parents

There are various reasons why some parents are reluctant to engage in shared book reading. In addition to cross-cultural variability in parents' beliefs of what constitutes appropriate literacy and early teaching at home, researchers identified limited resources, lack of confidence (Persampieri *et al.* 2006) and competency constraints as a barrier to parents' positive engagement in home book reading. Neuman (1996) found that there are differences

in parents' reading ability and that some parents may not enjoy the experience of reading to their child.

Personalised books liberate parents from any constraints they might have regarding their own competence as 'language teachers' (p. 589, Worthy and Rodrigues-Galindo, 2006) and invite them to draw on their previous or current knowledge and experience. Previous research supports this premise: Ada (1988) conducted an intervention study in which Spanish-speaking parents were encouraged to reflect on children's literature stories from their own personal experiences. By reflecting on their experiences, parents who were initially struggling to become involved in the activity were more able to generate discussions with their children. In some more recent studies, Neuman (1996) and Delgado-Gaitan (1994), encouraged parents to link the book content to their own lives. This had a positive effect on the level of parents' interactive behaviour with their children.

Another undoubted reason for greater engagement of caregivers in programmes which encourage parents to be instructive in designing their children's books is the opportunity of ownership of the intervention. In a recent study with Spanish-speaking Canadian families, Garcia (2008) reports that creating books was 'an empowering tool' for parents (p. 47), while in their case study Taylor *et al.* (2008) note that the intervention was successful because 'parents were themselves repositioned as instructors rather than mere observers of their children's education' (p.288).

Before outlining the methods used in this study; a brief note on the theoretical framework within which the study is located is presented.

### 2.5. Theoretical perspectives in the study

Through personalising the book reading material, the present study design assumes a socio-constructionist perspective on learning. Following Vygotsky's theory, the process of gaining knowledge or a skill occurs through relationships and in social contexts. Learning is acquired gradually, by being interrelated with previous knowledge (McCaslin and Hickey, 2001). Personalised books offer the opportunity to build directly upon children's previous knowledge and make the engagement in a learning task more meaningful.

The second theoretical premise which frames the present study is the acknowledgement of multiple or 'transactional' influences in shared book reading (see Fletcher and Reese, 2005; Anderson *et al.* 2009). Each SBR session is unique and needs to be evaluated in light of the

specific characteristics of all three session participants: parent, child and the book. This perspective encompasses the variance in parents' interaction styles resulting from different socio-cultural factors as well as research on differences due to different book genres being read by parents with their children. The transactional position also responds to the criticism levelled at some general recommendations advising parents on how often or how best to read to their children, without considering the type of book being read, children's and parents' language competence and other unique characteristics of SBR sessions (see van Kleeck, 2006).

In the next section, the research techniques and instruments used for data collection and data analysis will be described in detail. A brief empirical and theoretical justification for the instruments selection will be provided and special reference to the ethical aspects of the study will be made.

## Chapter 3: Research Methods

This chapter consists of three parts. In Part A, a set of premises and studies which helped develop the study design and protocol, are outlined. Part B describes the methodology adopted for the study, the data collection criteria and data collected, while part C reports the data analysis procedure.

### PART A: BEFORE DATA COLLECTION

#### 3.1. Focus on all three participants: parent, child and the book

In 1992, Crain-Thoreson and Dale made the intriguing suggestion that child engagement in shared book reading might be independent from parental influence. This was at odds with the majority of SBR research, which considered parents' reading style as the main determining factor in child's response to shared book reading.

Only a few SBR studies have fully considered the contribution of children to the book reading session (van Kleeck *et al.*, 2003). Parents change their interactional styles according to children's response and so do children in response to their parents (see Crowe *et al.*, 2004). It is now acknowledged that it is crucial to 'consider the behaviour of both participants in order to determine instructional strategies that may assist them both' (p. 10, DeBruin-Parecki, 1999).

The idea that child's engagement in book reading could be independent from parents' influence provided basis for a few exploratory studies which looked at child's response to book reading as determined by the book being read (e.g. Robinson *et al.* 1997, Bryan *et al.* 2007). These studies found that- not surprisingly- book familiarity and book topic play major part in children's interest in books reading. There is now enough evidence to indicate that different book genres affect children's response to the session and that parents' behaviour varies considerably across different book genres (Pellegrini *et al.* 1990; Torr and Clugston, 1999). However, very little systematic data exists with regards to the mutually interdependent parent-child--book influence, which exists within each shared book reading session.

Thus, in this study, an attempt was made to acknowledge the three-way influence in SBR and consider the influence of all three participants, namely the one of the parent, the child and the book. This was achieved by analysing the behaviour of both parents and their

children and by considering the mutual correspondence between them as being dependent on the book they read together.

### 3.2. Study sample selection

To start a new line of research, a sample drawn from mainstream culture with typical child development seemed most appropriate. Given that it has been well established that linguistic context has a greater potential to impact on younger than older infants (15 and 18 months, Trehub and Shenfield, 2007) and that mothers produce more talk when reading books to younger than with older children (Heath, 1982, Kang *et al.*, 2009), the study looks at the engagement of children at the earliest stages of their language development (i.e., between the ages of 12 and 36 months).

### 3.3. Outcome variable selection

Given the exploratory design of the present study, several avenues were considered when identifying the appropriate outcome variable. Initially, the possibility of investigating early literacy outcome measures was considered, as 'traditional end results' of a successful shared book reading session. Namely, parent-child shared book reading has been shown to be related to children's oral language development (Senechal, 2006); print awareness (DeBruin-Parecki, 1999) and phonological awareness (Allor and Mccathren, 2003). However, all these early literacy outcome measures are process variables and have to be determined at baseline, i.e., before a new method of analysis is introduced. In order to map change and growth over time, a study of much longer duration than is permitted by this course would be needed to show a significant result. In the limited time available for this study, immediate outcome variables that reflected aspects of the interaction but which could provide a foundation for other skills was seen as appropriate.

The child's engagement is a variable which immediately and selectively assesses the effects of a parent-child reading session and which has been found to be predictive of children's oral language (Crain-Thoreson and Dale, 1992) and associated with reading achievement (Connor *et al.* 2009). Crain-Thoreson and Dale (1992) showed that child engagement related more closely to the quality of the interaction than measures of parental verbal behaviour. Furthermore, the child's engagement was a more predictive measure of the child's later language ability (at age 2.5 and 4.5 years) and knowledge of print conventions (at age of 4.5 years) than the frequency and proportion of child's utterance functions (i.e., questions, responses, statements).

Given children's young age and the nature of investigated mechanisms, the measure of child's engagement needed to be redefined in the present study. Building on previous literature and leveraging the findings of our pilot study, these particular measures of child's engagement were looked at: 1, gestures 2, manipulation of the book; 3, vocal activity; 4, positive engagement; 5, negative engagement and 6, overall duration of the session from the child's point of view. In addition, child's engagement as a 'compact dimension', was assessed via parental questionnaires and the interview. In here, the conceptualisation involved the identification of two dimensions of child's engagement, namely 'active participation' and 'enjoyment'.

As for parents' outcome variable, engagement builds basis for parent's participation in any book reading session. As a matter of fact, a condition sine qua non for a successful shared book reading event is child's, as much as parent's level of participation in the activity. Kaderavek and Sulzby (1998) in their recommendations to evaluators of book reading sessions suggest that the emphasis should be on actualising parents' own potential to engage child in the bookreading activity. The focus is not on instructing parents to read in the 'most beneficial way' as it is the case in most SBR intervention studies (cf. Whitehurst *et al.* 1988), but rather on harnessing parents' potential and considering their interaction style in light of child's engagement or resistance to the bookreading session.

The key argument in the present study is that providing parents with the opportunity to be instrumental in the development of the reading material and link the book event to their children's lives plays a major role in their engagement in the SBR activity (see Pakulski and Kaderavek, 2004; McCaleb, 1995).

## PART B: DATA COLLECTION

### 3.4. Methodology of data collection

The project has adopted a quasi- action research type of investigation methodology, validated through a process of triangulation. The research model (similar to action research methodology) involved a collaboration between the principal investigator of the study (i.e., myself) and parents in creating the personalised books for their children. I was actively engaged in the books creation process, identifying and researching ideas which culminated in the books created by parents and those created by myself for the children. The typical cycle of the action research method of careful planning, taking action, observing, (self-) evaluating and critical reflecting prior to planning the next cycle, fitted well the present study

in that it has provided a basis for a longer and larger project to be undertaken in the near future. The study design was quasi and not fully action research because the focus was not on self-improvement or self-validation of the researcher-as it is in traditional action research (see Schmuck and Perry, 2006) - but rather on finding ways of how to refine the available technology for creating books and empower parents in this process. The term 'triangulation' refers to the process of using multiple sources of information to understand a particular process or event.

The study employed both qualitative and quantitative methods, with data collected via questionnaires, interview, field notes and video coding. The study protocol used is described below.

### 3.5. Study protocol

Parents were first informally approached by me, with a leaflet outlining the research project (copy in the Appendix, p.77-78). This was followed up by a telephone call or email, explaining more fully the details of the study and asking for their participation. The recruitment leaflet and letter asked for participation of a parent who usually reads to the child. This parent was asked to take seven pictures of things, places or activities their child enjoys. Pictures were taken by parents' mobile phones or digital cameras and emailed to me along with some wording parents thought appropriate. These were compiled into a laminated booklet, using the RealeWriter software for which I obtained full licence from the product designers. This software was chosen because it offers an easy-to-use and efficient way of creating picture ebooks, by allowing its users to easily import their pictures or photographs, add text to their stories and print them in various formats.

On the day of the observation, parents were given the booklet they created to share with their child, as well as a novel book, created by myself (the 'non-personalised book'). In addition, parents were asked to choose one of their child's current favourite books. Parents were asked to read the books as they normally would. To control for possible order effects, the three books were presented in counterbalanced order across participants.

Before the video session, parents were given a questionnaire to complete (see Appendix 9, p. 68-72) and were interviewed while responding to open-ended questions. After the reading session, parents were given a short post-session questionnaire and were probed to elaborate on their ratings. The conversations were audio-recorded. In an endeavour to understand issues around children's favourite books, at some point during the visit, I asked

the parent or the child (depending on child's language ability) to show me his or her favourite books. Field notes were recorded on a regular basis, usually after each home visit.

The instruments of data collection and the rationale behind their selection are considered below.

### 3.6. Data collection instruments

#### *3.6.1. Questionnaires*

In previous studies on parent-child shared book reading, questionnaires have been widely used (e.g. Stadler and McEvoy, 2003; Senechal, 2006). The major advantage of questionnaires is that they are less time-consuming than interviews (both to administer and transcribe) and are less open to misinterpretations (providing direct statements and written documentation of responses). Another advantage of questionnaires is that they provide pre-defined categories generating structured and comparable data which facilitates coding and comparisons. Further, responding to pre-defined categories often leads participants to believe that they are more likely to remain anonymous and thus feel more comfortable to provide more extreme and less socially desirable answers (Kumar, 2002). On the other hand, the inflexible nature of questionnaires means that often, important information is lost or not gained because of the inability to probe responses.

The questionnaire used in the present study allowed collection of sensitive personal data (such as parent's age or education level), as well as precise numerical data (e.g. frequency of reading per week, age of the first book introduced to the child etc.). The questions were chosen to encompass all possible proximal as well as distal influences on children's experience of home book reading. Information was collected on usual reading practices (how often, when and where parents read with their child); type of books parents provide their child with; frequency of library visits; subscriptions to magazines as well as more distal factors shaping home SBR, such as parents' ethnicity and main language spoken in the home (see Appendix for the full questionnaire). In the post-observation questionnaires, parents were asked to rate on a scale of 1 to 4 their own and their children's engagement and enjoyment of the three different books (where 1= not at all; 2= not much; 3= a bit, and 4= a lot).



### 3.6.2. Interviews

The interview technique is a common method for collecting data in social research. Depending on how much in-depth information the interviewer wants to gain, the structure of the interview varies from very structured to semi- or unstructured (or from less specific to more open-ended questions, Punch, 2005). The interview enables the researcher to clarify ambiguities, gain new insights and examine the issues from a broader, different perspective. However, the drawback of interviews is that they are time-consuming and a potentially intrusive technique, especially if tape-recorded.

To avoid possible biases from the interview process, in the present study, questions were kept simple and parents were reassured that the taped material would not be used in any other way than for research purposes. The questions used in the interview were compiled from previous studies investigating parent-child shared book reading and to follow up answers given in the questionnaire. Parents were asked to explain their ratings of engagement and enjoyment and elaborate on their responses. Parents were also interviewed (and recorded) about their usual reading practices, their beliefs about the importance of reading for children and child's general interest in books. In a more informal way (i.e., not tape-recorded), parents were asked about the books they have at home and the type of books their children enjoy reading. The purpose of the interview was to clarify parents' responses, allow the topics to be discussed more freely and provide material for further investigation, shifting the research away from pre-defined concepts.

At the home visit, children (or their parents) were asked whether they would like to keep their personalised book. All responded positively, which allowed for additional post-visit data collection. Approximately one month after the visit, parents were contacted to comment on their child's interest in the book. Parents were asked whether the child has looked at the book since, and if so how often, with whom and whether they noticed anything unusual in his response to the book (all follow-up interview questions are provided in Appendix 11, p.75-76). These interviews were conducted either in person or over telephone and were tape-recorded with the verbal permission of the respondents. For one parent the questions were emailed and he replied in written text.

### 3.6.3 Video observations

Video observation is a powerful research tool in social research in that it supports the assessment of interactions by producing detailed image data. The images can be accessed

as many times as needed, and can be viewed by more than one observer (advantageous over in-situ observation). However, being videotaped may affect participants' natural behaviour and thus lead to erroneous conclusions. To make parents as comfortable as possible and less aware of the camera presence, parents were videotaped in their homes, in a natural setting where they feel most comfortable and can be most informally observed. Parents were reassured that their behaviour would not be judged in any way and they could start, stop or finish the recording whenever they wished. For some parents, the camera was left running in the room and the parent started reading the target books when s/he and the child felt ready. With some parents who indicated they didn't mind my presence, I offered to stay in the room while videotaping. Great care was taken to adhere to what could be called ethnographic principles of participant observation (see Hammersley and Atkinson, 2007), with recording actual behaviours as they occur, in participants' natural environments. An ethnographic perspective added to the study the need of building rapport with participants and admitting researcher reflexivity. At some point of the home visit, I played with the child, using the child's own toys, to familiarise her/him to my presence. Although building rapport with participants is a lengthy and often not successful process, in the present study it was shortened and facilitated by the personal relationships which began during the recruitment process. The principle of reflexivity implied recognition of my own influence on the phenomena under study and being aware of the biases resulting from my researcher role and presence. I tried to make parents as comfortable as possible by revealing my own experience of book reading at home and presenting myself as a student who wants to learn how to make reading an enjoyable and engaging session. Always before starting the video observations, I chatted to the parent and assured him or her that their reading behaviour will not be graded for effectiveness or judged in any way as there is no best style to read to children and I want to see their natural reading strategies.

#### *3.6.4. Field notes*

A research diary was kept throughout the study duration, with field notes being made before, during and/or after the home visits. The research diary was intended to clarify any emerging themes, with field notes used to expand and explain quantified questionnaire and video observation data. In addition, the research diary was meant to help with any theoretical or methodological decisions in future studies. At the same time, the research diary was used to report my reflections, get some perspective and thus make easier sense of all the events as they occurred.

#### 3.7. Study participants

Parents and children were recruited to meet these eligibility criteria: 1, the parent is a native English speaker; 2, the child has typical language development and is aged between 1 and 3 years. Participants were recruited by using my personal contacts and gradually building up a network of contacts by asking parents who agreed to participate to identify potential participants. This procedure resulted in a sample of seven parents and seven children (referred to later as PC1, PC2, PC3, PC4, PC5, PC6 and PC7).

### 3.7.1. Parents' and children's demographic characteristics

Parents reported no concerns about children's cognitive or language development and at the home visit, all children appeared to be within normal limits of development. The children were aged between 12 and 33 months, with a median of 22 months. Four children had older siblings; three children were an only child. Table 1 provides an overview of parents' and children's demographic characteristics.

Table 1 Descriptive statistics: Parents' and children's demographic characteristics

Variable	Frequency count		
Parent Gender	Male (N)	Female (N)	
	2	5	
Parent speaks to child in language other than English	Yes (N)	No (N)	
	1	6	
Parent's age	Age band 30-40 years (N)	Age band 40-50 years (N)	
	6	1	
Parent's highest academic qualification	A levels (N)	University degree (N)	Postgraduate degree (N)
	1	2	4
Child gender	Male (N)	Female (N)	
	3	4	
Child has siblings	Yes (N)	No (N)	
	4	3	
Child's age	Minimum (months)	Maximum (months)	
	12	33	

A full sample profile, based on information obtained from questionnaires and assessment of shared book reading provision at home is provided in Appendix 3 (p. 57-59) because of space constraints.

### 3.8. Ethical considerations

The participants in this study were children all below the age of three years old. As such, it was important to gain parent's consent prior to any data collection and a full CRB disclosure for the principal investigator of the study (i.e., myself). Before data collection, parents were informed about the nature of the research and were given three documents: a letter, a Parents' Information Leaflet and a Consent Form (copies in Appendix 8, p.67). At the home visit, parents were asked about their willingness to take part and give consent for them and their child to participate and to be video/audio-recorded. It was made clear that parents could withdraw their consent at any time with no negative consequences. In order to ensure data confidentiality and participants' anonymity, parents and children were assigned participant numbers; all computer data records used participant numbers rather than names. The link between names and participant numbers was kept in a secure location separate from the data. Questionnaires and interviews were anonymised and parents' identity was not revealed. Any notes made by the researcher were kept in a locked cabinet and any video or audio data were held securely with access restricted to the research team who needed to enter their user name and password to access the data. After the completion of the study, the documents were securely disposed. The project followed BERA's Revised Ethical Guidelines for Educational Research (2004) and was approved by The Open University Human Participants and Materials Ethics Committee.

## PART C: DATA ANALYSIS

### 3.9. Methodology and procedure of data analysis

Information from questionnaires was entered into the SPSS package, version 14.0 for Windows to perform some descriptive and simple analyses with numerical data.

For interview data, taped conversations were transcribed and then analysed using theme analysis. Traditional qualitative data analysis procedure was followed, with coding, finding categories, clustering and identifying themes (Hammersley and Atkinson, 2007). Once the themes were established, frequency counts indicating the commonality of a theme were

calculated (see Neale and Nichols, 2001) and corresponding quotations were used to support the themes.

To analyse video data, the Focus II software was chosen because it facilitated the detailed analysis of the video clips through the annotation of coding categories and additional comments. The programme helped to improve and refine the initial coding system which was devised to match the research questions for the project. Both event and time sampling were considered before a decision was made in favour of event sampling which fitted better the study's aim to record behaviours as they occur rather than pre-determined time intervals.

To measure the reliability of the coding procedure, six video sessions were viewed independently and re-coded by a second coder. The sessions were chosen randomly, across each parent-child pair (i.e., of a total of 21 sessions). Cohen's weighted Kappa was used as a measure of agreement; values of 0.60 and above were accepted. All items were reliable at or above 0.85 level. Any disagreements were resolved through discussion to arrive at a final rating used for data analyses.

## **Chapter 4: Results**

This chapter is concerned with parents' and children's specific engagement with the three target books of the study. First, analysis of children's engagement is looked at, followed by results of parents' engagement. Section 4.3. focuses on the mutual relationship between parents' and children's engagement.

Several parameters of engagement with the three books were examined. Parental ratings of engagement (i.e., questionnaire data), were coupled with parents' comments during semi-structured interviews. This was combined with inferences from the in-situ observation of the sessions (i.e., field notes analysis) and analysis of data obtained from exhaustive coding of video observations. Findings from each analysis will be now reported in turn.

### 4.1. Children's engagement

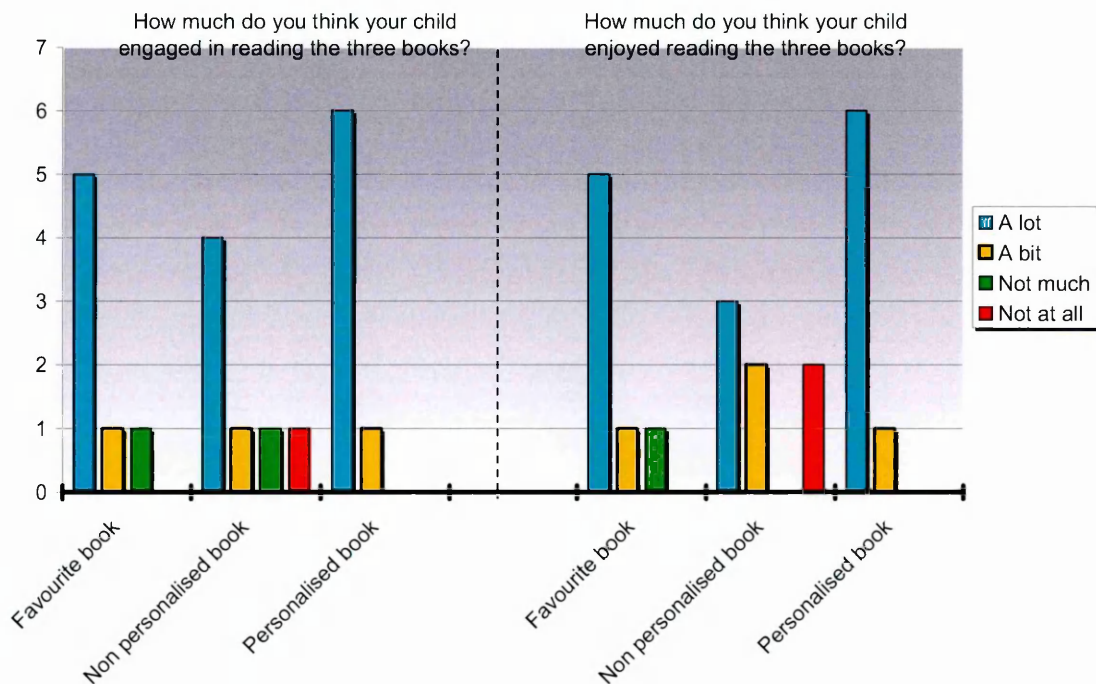
#### *4.1.1. Children's engagement: parents' ratings*

First, parents' ratings for the questions: *How much do you think your child enjoyed reading the three different books? and How much do you think your child engaged in reading our and*

*your book?*<sup>3</sup> were looked at. The data were examined for normality and variance. Skewness ranged from .798 to 2.646 and kurtosis -.57 to 7.000. The Shapiro-Wilk test for normality was for all variables below  $p \leq 0.05$  level, indicating that the data were not normally distributed.

As can be seen from the graph in Figure 1, there was a trend in the data for the highest engagement ratings of 4 to be given by more parents about the personalised book and lowest for the non-personalised book. The distribution of ratings for the comfort and enjoyment when sharing the favourite book was similar. However, Friedman test revealed no statistical difference in reported child engagement across the three books (comfort/ confidence: Friedman statistic=3,  $df=2$ ,  $p=.223$ ; enjoyment: Friedman statistic: 4.58,  $df=2$ ,  $p=.101$ ).

Figure 1: The number of parents who gave each level of rating about their child's engagement



#### 4.1.2. Children's engagement: analysis of parents' interviews

<sup>3</sup> The prompt 'How confident and how comfortable was he or she when reading the three books?' was used to clarify the second question for some of the parents.



In the semi-structured interviews, parents were asked to give their reasoning in support of the ratings of their children's engagement levels. All parents said they noticed a change in their children's response to the three books. In their talk, parents spoke about varying excitement and interest levels they noticed in their children when reading the books and spontaneously mentioned various reasons for why there might have been a difference in children's engagement with the three books. A theme analysis was conducted on these data and several themes in parents' accounts were identified. Themes which referred specifically to the reasons for differences parents noticed in their child's response to the books are shown in Table 2, including the raw data which reflect the response patterns of the respondents. Examples from parents' accounts are grouped under corresponding themes and percentage of parents who made comments fitting a specific theme category are added in the 'theme' column.

Table 2: Themes apparent in parents' accounts during semi-structured interviews

Theme	Parents' comments illustrating the themes	Frequency count
Child as protagonist	A parent commenting on child's greatest engagement with the personalised book: <i>'He did very well with all the books but probably our book the most because he thought he was in there...'</i> (PC3)	57% (4 out of 7 parents)
Novelty	<i>'He was definitely more engaged with the two new books, he's more interested in the new ones, he likes the photos.'</i> (PC4)	57% (4 out of 7 parents)
Familiarity	<i>'The difference was all about pictures and familiarity of things. He liked the book I made because it was all about things he's familiar with'</i> (PC1)	86% (6 out of 7 parents)
Recognising things	<i>'She was interacting more with our book because she recognised it's her and has a recollection, could put it in context you know being with daddy'</i> (PC2)	57% (4 out of 7 parents)
Frequency of reading	Parent commenting on non-personalised book: <i>'You know the book you made-she would need to read it more so that she can learn, she's very used to her favourite book,...(....) if we read it over and over she would understand and interact more'</i> (PC6)	57% (4 out of 7 parents)
Format	<i>'Maybe it's the different format...second time he read it he got used to it and didn't mind the format'</i> (PC4). Parent explaining child's non-engagement with the non-personalised book at	71% (5 out of 7 parents)

Because of the various reasons for their children's interest and excitement levels with the three books, parents' comments clearly demonstrate important qualitative differences in children's engagement. Most positive engagement was noted with the personalised book, where according to parents, the importance of 'child as protagonist' and the familiarity of topic and pictures led to the child's recognition of things and thus greater engagement.

#### 4.1.3. Children's engagement: analysis of field notes

Parents' comments were cross-referenced with field notes. Some field notes that describe examples of child's response to the three books are provided below, see Appendix 5 (p. 63-64) for more:

*When K. (child's name, PC7) saw her bowl of cereals she likes to have for breakfast, she touched her tummy and said: "yum, yum, yum". She even pretended to 'eat the cereals from the book'. This was in the personalised book.*

*When reading the favourite book: C. (child's name, PC2) was sitting still and did not say a single word, not made a single gesture when mum was reading her favourite book. What a very much one-sided shared book reading!*

*When J. (child's name, PC1) saw the picture of birthday cake in the personalised book, he started imitating blowing candles. He had the same reaction when he saw a picture of birthday cake in the book I made for him as I included a picture of birthday cake too. But he was more excited with the picture of his mum's as it had some cars on top-he loves cars and this made him even more excited.*

The field notes were concerned with any observed differences in child's overall engagement in each session. A difference in children's engagement was clearly evident, especially when comparing child's response to the personalised and non-personalised book. A simple theme analysis identified that with the personalised book, child's engagement was most intensive, with the greatest amount of gestures, talk and unusual, spontaneous responses. To provide a greater insight into the observed differences, a careful analysis of video observations was carried out. In here, quantitative estimates of child's engagement in the three book conditions were yielded.



#### 4.1.4. Children's engagement: video analysis

All videos were coded for the following aspects of engagement:

- 1, gestures (i.e., the frequency of pointing to the book);
- 2, manipulation of the book (i.e., the duration of touching or holding the book in seconds);
- 3, vocal activity (i.e., the amount of verbal utterances of children);
- 4, positive engagement (the amount of laughs or smiles during the session);
- 5, negative engagement (the occurrence of any signs of negative emotions such as anger, frustration or anxiety) and
- 6, overall duration of the session from the child's point of view (i.e., from the point when the child started responding to the book).

A full description and specification of the coding categories is provided in Appendix 2 (p.54-56). Following extensive video data coding, means and standard deviations were calculated (see Table below).

Table 3 Means and standard deviation values for video observation variables: children

Variable	Favourite book	Non-personalised book	Personalised book
<b>Frequency of behaviours observed</b>			
Gestures	M=5.0; SD= 4.4	M=10.1;SD=11.8	M=12.6; SD= 8..1
Vocal activity	M=7.6; SD= 7.1	M= 13.7; SD=15.2	M= 26.1;SD=17.2
Positive engagement	M=1.4; SD=1.4	M=1.3; SD=1.9	M=3.9; SD=3.2
Negative engagement	M=2.3; SD=1.8	M=1.9; SD=2.7	M=1.3; SD=0.9
<b>Duration in seconds</b>			
Duration of the session overall	M= 171.4 SD=134.3	M=213.3 SD=113.7	M=300.8 SD=124.3
Manipulation of the book	M=40.7 SD= 70.9	M=53.3 SD= 60.6	M=154.1 SD=114.1

For several variables, the standard deviation was greater than the mean value. This indicates that these distributions were not normal and this was supported by looking at the kurtosis and skewness values, with much of the non-normality attributable to kurtosis (values ranging from -2.408 to 4.187). The Shapiro-wilko normality test indicated non-normal distribution (i.e.,  $p \leq 0.05$ ) for these variables: gestures with non-personalised book; negative and positive engagement with non-personalised book and negative engagement with personalised book. Subsequent analyses (i.e., ANOVA or Friedman test) were therefore run separately for each variable, depending on whether the distribution was normal or not. For variables where significant ANOVA or Friedman effects occurred, pairwise post-hoc comparisons were conducted. For data analysed with repeated measures ANOVA, pairwise t-test was used. For

non-parametric data, Wilcoxon signed rank was computed for intergroup comparisons. Results for these analyses are reported in Table 4. Significant results with  $p \leq 0.05$  are highlighted in bold.

Table 4 ANOVA, Friedman test and post-hoc results of video observation variables: children

Variable	Friedman test statistic / ANOVA F value	p- value	Pairwise comparisons: Wilcoxon signed rank test/ t-test
Gestures	Friedman test statistic=1.92	p=.382	N/A
Vocal activity	<b>ANOVA F=6.57</b>	<b>p=.012</b>	Paired sample t-test FB & PB t (6)= -3.6, p=.110 FB & NB t(6)=-1.26, p=.255; PB & NB t(6)=2.22, p=.069
Positive engagement	<b>Friedman test statistic=5.81</b>	<b>p=.055</b>	Wilcoxon signed-rank test NB & FB Z=-.38 p=.705 PB & FB Z=-1.78, p=.074; <b>PB &amp; NB Z=-2.06, p=.039</b>
Negative engagement	Friedman test statistic=2.33	p=.311	N/A
Duration in seconds			
Duration of the session from child's point of view	ANOVA F=2.23	p=.151	N/A
Manipulation of the book	<b>ANOVA F=3.93</b>	<b>p=.049</b>	Paired sample t-test FB & PB t (6)=-2.09, p=.083 FB & NB t (6)=-.36, p=.734; <b>NB &amp; PB t(6)=-2.45, p=.050</b>

Note: 1 For ANOVA, Mauchly's test for sphericity was greater than  $p < 0.05$  and therefore the analysis for 'sphericity assumed' is reported.

As can be seen from Table 3, the analysis revealed that there was a statistically significant difference in children's engagement for three variables: vocal activity ( $F= 6.57$ ,  $df=2$ ,  $p=.012$ ); positive engagement (Friedman test statistic=5.81,  $df=2$   $p=.055$ ) and manipulation of the book ( $F=3.93$ ,  $df=2$ ,  $p=.049$ ). Post-hoc comparisons showed that there was a higher frequency of children's positive engagement ( $p=.039$ ) and longer duration of child's manipulation of the book ( $p= .050$ ) with the personalised than with the non-personalised book. Child's greater vocal activity with the personalised than with the non-personalised book was very close to significant ( $p=.069$ ).

The previous analyses involve the overall frequency or durations of behaviours. As the sessions were of different lengths it was decided to investigate differences in the proportion of these behaviours according to the length of the sessions (formula in Appendix 6, p.65).

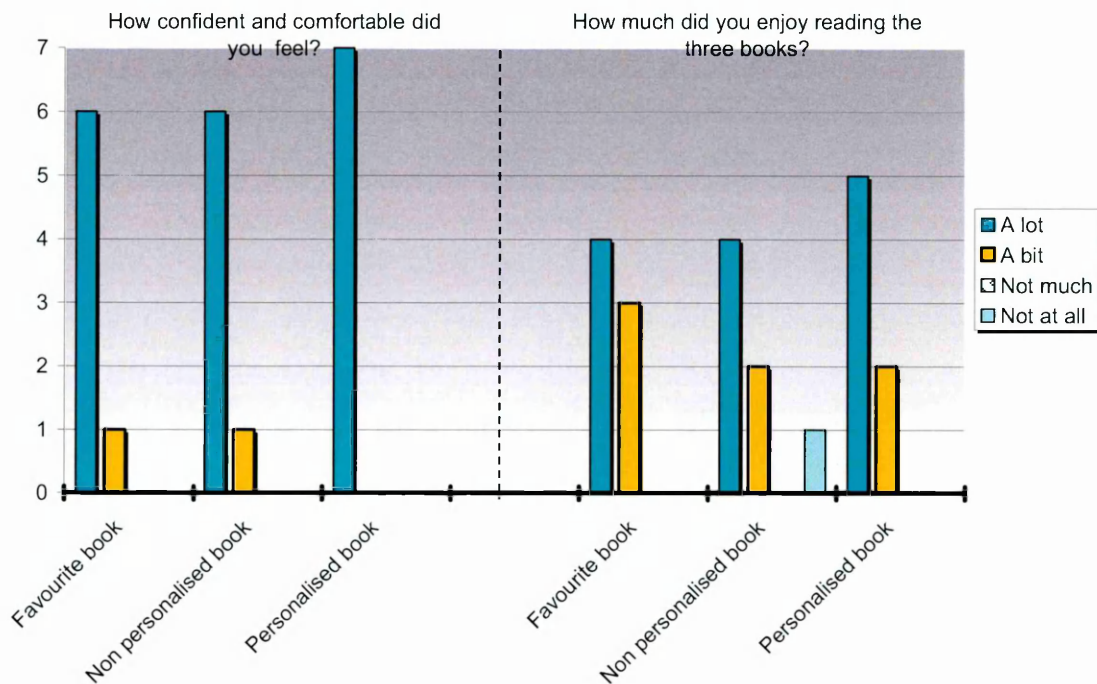
The Friedman test was used to compare the three book conditions. Significant effects ( $p < 0.05$ ) were found for two variables: manipulation of the book (Friedman statistic=5.852,  $df=2$ ,  $p=.054$ ) and positive engagement (Friedman statistic= 5.810,  $df=2$ ,  $p=.055$ ). Pairwise comparisons between the three types of book were performed and revealed that there was a significantly higher proportion of manipulation of personalised as opposed to non-personalised book ( $p=.018$ ) and the proportion of positive engagement with personalised versus non-personalised book ( $p=.042$ ). Marginally significant was the proportion of positive engagement between favourite and non-personalised book ( $p=.066$ ). This means that the proportion of time children spent on holding/ and turning the pages and physically interacting with the personalised book was significantly higher than with the non-personalised book, even when the overall duration of the session was taken into account. Also, relative to the overall duration of the reading session, there were more instances of positive engagement with the personalised than with the non-personalised and favourite book among children.

#### 4.2. Parents' engagement with the three books

##### *4.2.1. Parents' ratings of engagement*

In the post-observation questionnaire, parents were asked to rate their engagement with the three different books they had read. Two questions addressed this subject: *How much engaged, (how comfortable and confident) did you feel when reading the three different books today?* and *How much did you enjoy reading the three different books today?* Parents' answers are summarised in Figure 2.

Figure 2: The number of parents who gave each level of rating about their own engagement



As can be seen, parents' ratings for how 'engaged' they felt were remarkably similar across the three different book conditions. The assumptions for inferential testing could not be met for these data (Skewness ranged from -3.74 to 2.64, kurtosis from -2.8 to 7 and Shapiro-Wilk test for normality was for all variables below  $p \leq 0.05$  level). Friedman statistic for parents' enjoyment of the three session was  $=1.36$ , with  $p=.504$  and for parents' comfort and confidence of reading the three books  $F=1$ , with  $p=.607$ . This indicates that statistically, there is no direct relationship between parents' ratings and the type of book they read. However, from inspection of the graph presented above, one can estimate the level of variability in parents' ratings: the highest, most positive ratings, were assigned to reading the personalised book, with lower ratings given for positive engagement with the non-personalised book (one parent rating the reading session as 'not at all' enjoyable). Similarly, parents rated their engagement in reading personalised book higher or as high as the favourite book and higher than the non- personalised book. This observation was corroborated by data from semi-structured interviews.

#### 4.2.2. Parents' engagement : analysis of parents' interviews

In comparison with the explanations parents gave for their children's ratings of engagement, parents' accounts about their own engagement were shorter and with less detail. Theme analysis of these interviews revealed that although parents enjoyed reading all the three books, there was a difference between them. As one parent summarised '*I enjoyed them all*



*three but differently*' (PC2). As for where the differences lie, a few common themes emerged among parents. Two parents identified the personalised book as a preferred option, mostly because it *'was really nice to look at because I knew he would recognise things and his toys and stuff'* (PC3). The reason for why two parents were less engaged with the favourite book was articulated by one mother: *'you know I read it so many times so it takes the enjoyment a bit out of it to be honest'* (PC7). Notable less engagement in reading the non-personalised book was in three parents' views due to children's decreased interest in this book: *'I was engaged a lot with his favourite and his book but not with the one you made because of his engagement'* (PC 3). As a matter of fact, overall, from all parents' answers it appeared that any difference in their engagement was mainly a reflection of their child's engagement. As one parent put it: *'all my ratings are based on how he responded, his interest in the books'* (PC1).

This theme of 'mutual engagement' or inter-dependence of parent's and child's engagement in sharing the three different books encouraged further analysis and is considered in section 4.3.

Very few field notes included observations of any differences in parents' engagement across the three books and therefore not reported here. Several aspects of parents' behaviour were considered in detail in the video analysis, reported next.

#### 4.2.3. Parents' engagement: video analysis

A slightly modified coding framework developed for children's engagement was applied to the parents' response to the three books (details in Appendix 2, p.54-56).

Once the video analysis was completed, descriptive statistics for the variables were calculated for each category (see Table 5).

Table 5 Means and standard deviation values for video observation variables: parents

Variable	Favourite book	Non-personalised book	Personalised book
<b>Frequency of behaviours observed</b>			
Gestures	M=5.9; SD=5.7	M=2.4; SD=3.1	M=6.9; SD=9.4
Vocal activity	M=21.1; D=14.9	M=44.0; SD=30.2	M=58.7; SD=24.4
Positive engagement	M=.86; SD=1.2	M=1.6; SD=1.6	M=4.0; SD=2.3
Negative engagement	M=.14; SD=.38	M=.29; SD=.49	M=0; SD=0
<b>Duration in seconds of behaviours observed</b>			
Duration of the session overall	M=122.9 SD=78.89	M=196.3 SD=121.2	M=269.6 SD=104.7

Manipulation of the book	M=163.6 SD=144.5	M=234.0 SD=131.6	M=281.3 SD=93.2
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Shapiro-Wilko test for normality and examination of skewness and kurtosis showed that following variables were not normally distributed: gestures for FB, NB and PB ( $p = .210$ ,  $p = .022$  and  $p = .010$  respectively) and negative engagement for FB and NB ( $p = .001$ ). Therefore, the Friedman test was only applied to the 'gestures' and 'negative engagement' variables. For the remaining variables, ANOVA repeated measures were used to analyse the differences between the favourite, non-personalised and personalised book. The results of these and post-hoc analyses are in the table below, with statistically significant results (i.e.,  $p \leq 0.05$ ) indicated in bold.

Table 6: ANOVA, Friedman test and post-hoc results of video observation variables: parents

Variable	Friedman test statistic / ANOVA F value	p- value	Pairwise comparisons: t-test
Gestures	Friedman statistic=2.38	$p = .304$	N/A
Verbal engagement	<b>F=5.51</b>	<b><math>p = .020</math></b>	<b>FB and NB <math>p = .038</math>, FB and PB <math>p = .019</math> NB and PB <math>p = .312</math></b>
Positive engagement	<b>F=5.70</b>	<b><math>p = .018</math></b>	FB and NB $p = .310$ <b>FB and PB <math>p = .047</math> NB and PB <math>p = .039</math></b>
Negative engagement	F= 2.00	$p = .368$	N/A
Duration of the session (from parent starts reading till parent stops paying attention to the book)	<b>F=3.89</b>	<b><math>P = .050</math></b>	FB and NB $p = .266$ <b>FB and PB <math>p = .058</math> NB and PB <math>p = .041</math></b>
Manipulation of the book	F=1.80	$P = .207$	N/A

There was a statistically significant difference for following measures of parents' engagement with the three books: verbal engagement ( $F = 5.5$ ,  $df = 2$ ,  $p = .02$ ); positive engagement ( $F = 5.7$ ,  $df = 2$ ,  $p = .18$ ) and overall duration of the session ( $F = 3.9$ ,  $df = 2$ ,  $p = .05$ ). Post-hoc comparisons showed that there were significantly more instances of parents' positive engagement when reading the personalised book as compared to reading the non-personalised ( $p = .039$ ) and favourite book ( $p = .047$ ). Also, when reading the personalised book, the session was significantly longer than the non-personalised ( $p = .041$ ) and favourite book session ( $p = .058$ ). In addition, parents were significantly more verbal with the personalised as opposed to the

favourite book ( $p=.019$ ). With the child's favourite book, parents talked less than with the non-personalised book ( $p=.038$ ).

These differences did not hold true when the overall duration of session was controlled for, i.e., comparison of mean proportions relative to the overall duration of session.

To collect more detail on the specific nature of engagement with the personalised book, parents were contacted for a follow-up interview to find out more about their and their child's engagement with the personalised book. Due to space restrictions, these additional data are available in the Appendix 5 (p.63-64). In summary, the follow-up interviews further validated the finding that according to their parents, children are positively engaged when sharing the personalised book, with parents reporting repeated and positive book interactions post-visit.

#### 4.3. Parent's and children's engagement: interdependence between scores

An issue which emerged from the interviews (typified by parent's comment: '*my engagement was guided by my child's engagement*'), was the interdependence between parents' and their child's engagement. The possibility of influences of parents' engagement on child's interest and vice-versa corresponds to the theoretical speculation of a three-way influence in SBR (Fletcher and Reese, 2005; Anderson *et al.*, 2009). Therefore, to complete the analyses, parents' and children's levels of engagement were investigated for interdependence in each book condition. First, for the data obtained from questionnaire responses, bivariate correlations using Spearman's coefficient of correlations were calculated. No significant correlations were found between parents' ratings for their own and their children's levels of engagement. Second, difference scores were calculated for the data obtained from questionnaires (see Appendix 4, p.60-62 for more details). From this 'mismatch analysis' it was clear that there was no 'perfect match' across all conditions for any of the parent-child pairs. There were differences in parents' ratings of their or their child's enjoyment of the individual sessions as well as their or their children's comfort and confidence when reading the three books. Interestingly, none of the parents rated their child's engagement same as theirs in all three book conditions. Most discrepancies between parents' and child's ratings were in the enjoyment of reading child's favourite book (5 mismatches) and least in the engagement with the favourite book and in the enjoyment and engagement of personalised book (only 1 mismatch in each).

To add to the interdependence analysis, parents' and children's scores obtained through video analysis were investigated for match or mismatch in each book condition. Spearman's

correlations were calculated to measure how each measured aspect of parents' and children's behaviours are related over each book condition (variables where the association was significant are entered in Table 12, Appendix 4, p. 60). The pattern of correlations did not show a trend for one single set of behaviour being significantly correlated in either of the conditions. Rather, it was the 'book condition' which determined the amount of associations (be it positive or negative) between a specific set of parents' and children's behaviours. Most instances of statistically significant correlations between parents and children were in the personalised book condition (10 variables), as opposed to six in NB and five in FB condition.

Thus, the inspection of mutual interdependence of scores suggests that there was more correspondence in the questionnaire scores when considering the type of book rather than each parent-child pair. Scores obtained from video observations indicated that parents' and children's engagement levels were most related to each other in the personalised book condition.



## Chapter 5: Discussion

The discussion contains three main parts. In part A, the results are summarised and evaluated in light of the research questions, relevant literature and the methods adopted to obtain them. In part B, future research directions are outlined, along with a discussion on the study's strengths and limitations. Part C presents a brief conclusion, written in the form of an epilogue.

### PART A

#### 5.1. Summary of results

This section provides an overview of parents' and children's engagement with the three different types of books.

##### *5.1.1. Children's engagement with the three books (RQ1)*

Although statistically not significant, in the parents' questionnaire ratings, there was a strong tendency towards higher ratings for the child's engagement with the personalised book. In the interviews, parents talked about children's varying degrees of excitement and interest in the three books, with greatest engagement shown for the personalised book. A difference in children's engagement with the three books was also present in the field notes, with some unequivocal examples of children's very positive response to the personalised book. Comprehensive video analysis revealed that children showed significantly more instances of positive engagement and longer physical manipulation with the personalised than with the non-personalised book. These significant differences also occurred in an analysis of proportion of behaviours relative to the overall duration of the session.

##### *5.1.2. Parents' engagement with the three books (RQ2)*

Analysis of parents' self ratings of engagement revealed no statistically significant difference among the three sessions. A tendency towards greater positive engagement with personalised books was evident in parents' interviews, with the majority of parents reporting child's levels of interest as the most influential factor in their own engagement. Video analysis showed that parents were more positively engaged (i.e., smiled and laughed more) with the personalised than with the non-personalised and favourite book. Their engagement

lasted most with the personalised book and the amount of talk was greater in the personalised than with the child's favourite book.

Investigation of interdependence between parents' and children's results showed greatest correspondence in parent-child behaviour for the personalised book condition.

## 5.2. Evaluation of the study results in light of literature

A reasonably consistent message in parents' questionnaires, interviews and field notes was child's greatest engagement levels in the personalised book session. With the video observations, both parents' and children's specific engagement levels were higher and statistically significant when comparing the personalised and non-personalised book condition. Parents' and children's engagement 'corresponded' most when they shared the personalised book.

The study is unique in three aspects: 1, by directly comparing personalised versus non-personalised books; 2, by including children's favourite books as a comparison group and 3, by looking at the mutuality between parents' and children's engagement levels. Each aspect will be briefly addressed in turn.

To begin with, this is the first study to look specifically at the importance of personalised features in books and their impact on the parent-child interaction. This was achieved by a precise match between the books employed for the analysis, namely a book containing child's favourite things which were personal to him or her and a book containing the same things without being personal to the child. Given that parents and children were more engaged with the personalised than non-personalised book (which only differed by the fact that they were either personal to the parent-child dyad or not), we can conclude that factors like book novelty, alternative book format and book topic did not play a decisive role in children's and parent's engagement.

More specifically, according to the video analysis, the overall mean length of the session with personalised book was the longest, i.e., there were more opportunities for all measured behaviours to occur more frequently. It is therefore encouraging to find that it was the duration of child's rather than parent's physical manipulation of the book which was the longest in the personalised book condition. Child's control of the session is likely to lead to future independent reading (see Christie, 1991) and the potential of personalised books to foster this behaviour early on merits further investigation.

Further, when accounting for the overall duration of the book session, there was a statistically significant difference between the occurrence of positive engagement in sharing the personalised versus non-personalised for children and for their parents also for favourite book. Again, with a longer session, there were more opportunities for positive as well as negative engagement to occur and it is reassuring to find that with the personalised book, there were more smiles and laughs rather than instances of parents' and children's negative engagement.

In sum, children at the first stages of their language development showed more instances of positive engagement with the personalised book (more laughs and smiles), in addition to (or as a result of) longer physical manipulation of the book and greater vocal activity. This is the first report and a novel finding of children's greater engagement while sharing a book containing pictures of their personal objects in comparison with a book of the same format, complexity but non-personal information. The importance of personal material seems to be crucial for children's greater positive interest in a book, given that personalised books were perceived as more attractive and enjoyable as their non-personalised parallels.

Second, an important design feature of the study is the use of the favourite book as an additional comparison condition. This was not matched in content with the other two books but provided a comparison condition where children's engagement levels would be expected to be very high. There were two intentional design choices that guided this decision. First, it was an opportunity to look at the importance of parents' ownership of the intervention in their engagement in SBR. The researcher asked parents to choose one of children's current favourite books, instead of choosing it for them. This was a rather innovative design feature (i.e., not widely used in the SBR research) but guided by the rationale that it is difficult for an outsider to establish which book is child's favourite (see Wilkinson, 2005). Asking parents to choose the third book to read gave parents the opportunity to select two books of the study: i.e., the favourite and personalised book. As such, any difference between parents' engagement with the personalised and favourite book as opposed to non-personalised book can be (among others) attributed to factors like 'ownership of intervention' and the importance of parents being instrumental in the choice of the book they read with their child. The parents reported to be less positively engaged with the non-personalised than with the personalised book (only four parents stated they enjoyed sharing this book a lot, two a bit and one not at all), with the video analysis confirming these results and extending them also to the child's favourite book. This is an important finding and encourages research with more diverse samples where this difference might be even more pronounced. Notably, if in a

sample where SBR engagement is generally high (as found in the assessment of parent-child home SBR provision, see Appendix) and a non-personalised book is considered less enjoyable and less interesting by parents, then in a family where shared book reading is not a well-established routine, the non-personalised book is likely to be even more disliked. Therefore, the frequently found low engagement in book interventions of parents and children who have little SBR experience at home might be explained by the fact that the books these parents are asked to read are not the ones they would have selected to read with their child and are not personally meaningful to them. In this sense, the study adds to the current debate about the importance of 'intervention ownership' in SBR research (Anderson *et al.* 2009), by expanding it to the importance of books being personally meaningful to parents.

The second reason for using favourite books as the third book condition was the opportunity to see the effects of engagement with personalised book as compared with a well-established benchmark for positive SBR engagement. Per se, all three books used in the study were based on children's current interests (or favourite things, toys or activities), 'setting the stage' for child's positive engagement. The fact that there was a difference in children's engagement with them allows us to argue that in fostering child's engagement in book reading, there are some aspects which are even more important than following child's interests (cf. studies on interest-based model of reading Fink, 2008).

The third unique and strong aspect of the present study is its acknowledgement of a three-way influence in a shared book reading session: the parent, the child and the book. Great care was taken to ensure that detailed information on all three key participants was available and considered in the analysis of engagement. The study found that parents and children seemed to be 'more in tune' when reading the personalised as opposed to non-personalised and familiar book. Given that both outcome measures (parent's and child's engagement) were assessed concurrently with each other, it is impossible to determine the direction of the effects, and no causal interpretations regarding the direction of parent's and child's engagement can be made. However, by finding a difference in both parents' and children's engagement with the three books for different aspects of parents' and children's engagement and by carefully considering the characteristics of the book they shared, the study contributes to the discussion on interrelated influences in parent-child engagement in SBR. Interestingly, although parents might have felt that their response to the books was a reflection of their children's reaction (according to interview analysis), a comparison of the ratings parents associated with their own and with their children's engagement did not match for all conditions. Thus, the mechanisms which underlie parents' and children's engagement

in shared book reading seem to be separate from each other or at least when reading favourite, personalised and non-personalised books. Such a finding raises important questions about the role of book characteristics in encouraging parent-child engagement in SBR. The result fits well with some theorizing about child's engagement being independent from parental influence (see Crain-Thoreson and Dale, 1992) and studies which suggest that 'the type of books parents read to their young children and the reading behaviours they use may be key variables' to understand the role of SBR in children's literacy development (p.504, Stadler and McEvoy, 2003). In a study of a most similar nature to the present research, Ortiz and colleagues (2001) found no significant association between observed parent variables (e.g. enthusiasm, number of questions asked per minute, positive feedback) and child's interest in reading. Their study, however, does not consider book characteristics, which makes it difficult to establish a comparison line to the present findings. The present study shows that it might well be the book characteristics which account for most of the variance in parent-child engagement in shared book reading. Further, the study shows that if this book is personal to parents and their children, it has a great potential to solicit a joint, positive response from both participants, although possibly through mechanisms which are distinct for parents and children.

The implications of the multi-method data collection approach used in the study are evaluated below, in relation to the results obtained.

### 5.3. Evaluation of the study results in light of the study research methods

The literature review identified engagement as a complex variable, operating through various and separate mechanisms in parents and children sharing personalised books. To understand its multi-faceted nature, a multi-method framework was used<sup>4</sup>. To my knowledge, a multimethod approach to assessment of parent-child engagement in book reading has not been employed before, with studies looking either at child's tendency to initiate the book reading session (aspect measured via follow-up interviews in the present study) or child's engagement once the activity has begun (measured via video analysis in here). As Ortiz (2001) writes 'surprisingly few studies have incorporated both of these aspects of interest'

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<sup>4</sup> This conclusion was reached after considering other two possibilities: less advanced multivariate statistics and more sophisticated methods. Simple statistical methods are not well suited to study process and complex variables such as 'engagement' (see Ortiz *et al.*, 2001) and complex statistical techniques could not be used in the present study because of the small sample size. However, in a larger-scale study, it would be invaluable to use advanced statistical modelling and study in greater detail the associations and interrelationships among various components of parents' and children's engagement in sharing personalised books.

(p.266). The present study is therefore innovative and unique in combining methods from both a quantitative and qualitative tradition of data collection and analysis.

The particularities of individual research methods in assessing parents' and children's engagement, are briefly presented below.

Results from the questionnaire ratings were statistically non-significant. A non-significant result might mean that either there is no difference between the three conditions or that the sample was too small to detect a difference. Given the significant results obtained through different research techniques in this study, the latter seems more applicable to the present data. It is possible that with the questionnaire method and only seven study participants, the anonymous nature of questionnaires was lost. A caveat which needs to be borne in mind here is that participants' tendency to provide socially desirable answers is usually greater in self-reported data. Given that shared book reading is a highly socially desirable activity, parents might have felt the need to report generally high engagement levels for each book condition, making it difficult to detect a difference. Also, with only seven participants and a survey technique, this study did not have the power to detect a difference which in fact exists in regard to parents' perceptions of their and their children's engagement with the three books.

As for the particularities of the interview technique and the present findings, the interviews provided an insight into parents' ratings and were useful in detecting a difference in parents' perceptions of their own and their children's engagement with the three books. In comparison to the rating format of questionnaires, interviews proved to be very suitable to elicit answers for complex questions, such as parents' perceptions of differences in children's engagement. Parents spontaneously mentioned various reasons for why they think there was a difference in children's engagement and when talking about their own engagement with the books, parents' accounts generated a theme, which encouraged further analysis and directly related to the theoretical framework informing the present study- namely the possibility of mutual engagement among parents, children and specific book characteristics.

The data generated through video coding needs to be considered in light of two caveats. First, one should consider that in a real reading session, all individual measures of observed engagement work in unison and are dependent on each other. Therefore, it would be useful to analyse not only the amount but also the direction of individual parent's and child's engagement behaviours. Second, the data generated through video analysis was characterised by large standard deviations in comparison to mean values, which makes the

latter open to question. Although this is an often cited statistical problem in the SBR literature (Korat and Or, 2010), methodological alternatives should be investigated in future studies. For example, the use of eye-tracker measurement would lead to greater precision of children's visual attention during the story encounter and lead to more precise results.

The field notes became especially meaningful and useful when attempting to decide whether and which session was in some respect different than the others. The research diary as a whole proved to be a valuable tool in a study of considerable development, helping to clarify certain methodological questions for the present as well as the planned PhD study.

Overall, the multi-method approach to parent-child engagement turned out to be a good methodological choice, as it increased the 'richness' of the data and enabled a detailed detection of changes in participants' responses to one or the other book. A detailed description of a novel finding is invaluable in improving existing theories about SBR and promotes the use of an innovative design which features personalised books. Last but not least, a detailed description can be efficiently deployed to form a compelling story about the data.

## PART B

### 5.4. Study limitations

Clearly, the participant pool of the present study is an important limitation. The fact that the study was conducted in a particular research setting and research context places limitations on how much the study findings can be generalised to wider populations. Firstly, the sample was small which may have prevented several important trends from attaining significance. Secondly, the sample was homogenous in terms of parents' engagement in SBR provision at home. The advantage of such a homogenous sample is its ability to explain variance across different book conditions (i.e., its suitability for a within-subjects rather than between-subjects design). Future studies with larger and more heterogenous sampling would make the phenomenon about personalised books clearer, as they would allow the use of more advanced statistical methods which can control for various demographic and individual parent and child characteristics.

The study was limited in terms of duration. A study of longer duration could elucidate the long-term relationship between parent-child SBR engagement with personalised books and child's later developmental outcomes (e.g. language development). On the evidence of

previous research (McDonnell *et al.* 2003), it would be reasonable to expect that children's behaviour will change as a result of repeated readings of the same book. No studies have been conducted to investigate repeated readings of personalised books and possible changes in children's immediate response and more long-lasting outcomes.

#### 5.5. Study implications and future directions

One future research avenue would be to conduct an utterance type analysis of parents' and children's vocal activity (i.e., investigating the type of verbal responses rather than its amount as it was the case here). Another important future direction for research with personalised books is to establish how specific parents' engagement behaviours affect their children's response. Crain-Thoreson and Dale 1992 and later Ortiz *et al.* 2001 found no association between parents' type of behaviour and child's engagement in reading. It would be interesting to see whether this finding persists also when parents and children share books with personal content.

Self-created personalised books address the major key factors of successful book reading interventions: they foster competent readers and writers and are culturally, linguistically and developmentally sensitive (Manz *et al.*, 2010). They can be easily and cheaply produced and sensitively adjusted to child's current interests and needs. The present study found that in comparison to children's favourite and non-personalised books, personalised books can foster a more successful SBR interaction-as measured by parents' and child's greater engagement in the session. As such, support for further research for the use and creation of personalised books is worth to be continued.

#### PART C

Let me close with the words of one of the parents whose child asked to keep both the personalised and non-personalised book after my visit. I was interested in what the child's response to the books was after one month. Her mother told me: '*She looked at both but the one with her things is her favourite. You know, she knows that they are hers, that there is a story behind them. You know her sandpit where she makes sandcastle, her new red shoes, (...) she's got history behind them.*' (PC7). During the follow-up interview, this parent, along with another three participants of the study, mentioned that their child's interests have changed since I last visited them and that they are thinking of creating a book on their child's current interests and favourite activities. This was an encouraging comment, since that is exactly that I had hoped to accomplish



with the present study-to investigate parents' and children's engagement in personalised books and through this investigation, to promote their repeated use.

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## Appendix 1

**Table 7 Measures of child's engagement: overview**

Reported behaviour-Questionnaires	
Parent's view on child's overall engagement	-question: How much do you think your child engaged in reading the three books today? (How confident and comfortable he or she was when reading the three books?)
Parent's view on child's positive engagement	-question: How much do you think your child enjoyed reading the three different books?
Reported behaviour- Interviews	
Can you tell me more about your ratings? How do you think one session differed from the other in terms of your child's engagement?	
Observed behaviour-Video observation	
1, <i>Gestures</i> : Pointing/ Touching	
2, <i>Manipulating the book</i>	
3, <i>Vocal activity</i> : Child's communicative performance	
4, <i>Positive engagement</i> : Enjoyment of the session	
5, <i>Negative engagement</i>	
6, <i>Duration of the session</i>	
Observed behaviour-Field notes	
Descriptions/ vignettes taken from my <i>field notes</i> relevant to child's engagement	Did the child go back to any of the book after the video observation finished?
	Did the child seem more engaged with one book more than the other?
	Any issues I noticed during the visit/observation which might have significantly affected child's response?
Follow-up behaviour	
<i>Extra information</i> regarding child's engagement with personalised books , received from parents <i>post-visit</i>	Asking the parent at follow-up (via email or telephone call):  1, Has your child read the book since I last visited? 2a, Who initiated the sessions ? 2b, When during the day did this happen? (morning/ lunchtime/ evening?) 2c, How often? (Every day/ every 2-3 days/ once a week or was it an one-off event?) 2d, Why do you think your child was interested in the book? (please list as many reasons as possible)  If not- Why do you think this was the case? (Was it the format/ topic/ ring-bound/anything else?)  3, Has there been anything unusual or interesting you noticed in your child's response to the personalised book?

## Appendix 2

**Table 8 Video coding framework, scoring child's engagement**

Variable	Definition	Details/ example	Scoring
1, <i>Gestures</i> : Pointing/ Touching	-the number of times the infant points or touches a picture/a line of text or the whole page (see Murphy, 1978)	Accidental touching or playing, chewing and ,eating' is not counted as pointing. Also, turning pages, simply holding the book and interacting with flaps of flip-flap books is considered separately (see Manipulating the book)	- frequency count obtained for each child in each book session
2, Manipulating the book	-the time duration of child's physical engagement with the book	Includes all times when the child is 'in control of 'the book', i.e., turns the pages or flaps and/or holds the book in his hands. The beginning of the count is the instant when the child starts holding the book and the end is when the parent takes over or the session ends (as per definition for variable 6). All separate instances of this behaviour need to be added together for each book session per child	-in seconds per session
3, <i>Vocal activity</i> : Child's communicative performance	- total number of vocal responses (see Crowe <i>et al.</i> 2004)	For younger babies, vocal utterances include nonverbal sounds and slurred or simplified versions of ordinary words. Imitating animal sounds in response to questions like 'which animal is this?' also counts here. For older toddlers, all of the above plus simple words. For the more verbal ones, a sentence counts as one vocal response.	-frequency count for each child in each book session
4, <i>Positive engagement</i> : Enjoyment of the session	-total number of smiles and laughter (see Hynd, 2006)	Any smile or laughter observed during each reading session counts towards the indicator	-frequency count for each child in each book session
5, <i>Negative engagement</i>	-total number of yawns, restless movements, looks away from the book and furtive exists	Any sign of no interest in the book or discomfort with the reading session counts as 'one' for each child per session	-frequency count for each child in each book session
6, <i>Duration of the session</i>	-overall duration of the session	-beginning of the session was the moment the child started paying attention to the book, end of the session was when the child stopped paying attention to the book (i.e., no visual attention, no physical interaction with the book).	-in seconds per session



		For sessions which are interrupted and later continued, the time intervals are added together. Duration only from the child's perspective counted. Therefore, for sessions, where the parent stopped interacting with the book but the child continued (e.g. mother stopped reading but child was still looking at the pages or took the book to play with it), the time was added to the overall duration of the session. When the parent started or finished reading the book earlier or later than the child, this did not affect 'child's' duration of the session.	
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**Table 9 Video coding framework: scoring parents' engagement**

Variable	Definition	Details/ example	Scoring
1, <i>Gestures</i> : Pointing/ Touching	-the number of times the parent points or touches a picture/a line of text/ a letter or the whole text (cf. Whitehurst et al. 1988)	Accidental touching, turning pages, simply holding the book and interacting with flaps of flip-flap books is not considered here (see Manipulating the book 2)	- frequency count obtained for each parent in each book session
2, Manipulating the book	-the time duration of parent's physical engagement with the book	Includes all times when the parent is 'in control of 'the book', i.e., turns the pages or flaps and/or holds the book in his hands. The beginning of the count is the instant when the parent starts holding the book and the end is when the child takes over or the session ends (as per definition for variable 6). All separate instances of this behaviour need to be added together for each book session per parent	-in seconds per session
3, <i>Vocal activity</i> : Parent's communicative performance	- total number of vocal responses	All verbal utterances count here, including imitating animal's sounds and providing backchannel responses (e.g. "yeah, uh-huh").  A sentence counts as one vocal response.	-frequency count for each parent in each book session
4, <i>Positive engagement</i> : Enjoyment of the session	-total number of smiles and laughter	Any smile or laughter observed during each reading session counts towards the indicator	-frequency count for each parent in each book session
5, <i>Negative engagement</i>	-total number of yawns, restless or	Any sign of no interest in the book or discomfort with the reading session	-frequency count for

	harsh movements, looks away from the book and furtive exists	counts as 'one' for each parent per session	each parent in each book session
6, <i>Duration of the session</i>	-overall duration of the session	-beginning of the session was the moment the parent takes the book in his hands or starts paying attention to the book. End of the session was when the parent stopped paying attention to the book (i.e., no visual attention, no physical interaction with the book). For sessions which are interrupted and later continued, the time intervals are added together. For sessions, where the child stopped interacting with the book but the parent continued (e.g. child stopped paying attention to the book but the parent still looked at the pages or was reading it on his own while trying to engage the child), the time was added to the overall duration of the session.	-in seconds per session

### Appendix 3

#### Parent's and children's experience of SBR at home : data reported by parents

Initial questionnaire given to parents during the home visit contained a set of questions in a 'tick box' format. The questions were chosen to encompass all aspects of home reading provision and were based on theoretical considerations and past research (see Evans et al. 2000). Questionnaire questions dealt with the amount of time parents provide their children with reading; TV viewing and other reading-related activities (e.g. library visits). A summary of the aspects measured as part of the home reading environment assessment is provided in the table below. As can be seen, the response patterns were similar across participants, often fitting the same category. Therefore, although there were more response options provided in the questionnaire (e.g. various possible frequencies of reading), only those for which parents gave an answer are provided are included in Table 10.

Table 10 Descriptive characteristics: Parent-child shared book reading book exposure

Variable	Frequency count		
	Frequency of reading	7-9 times per week (N)	More than 10 times per week (N)
	3	4	
Using computer	Yes (N)	No (N)	
	5	2	
Member of local library	Yes (N)	No (N)	
	5	2	
Provide child with other activities linked to reading	Yes (N)	No (N)	
	5	2	
Magazine subscription	Yes (N)	No (N)	
	3	4	
Reading ranking	Very high (N)	Quite high (N)	
	4	3	
First book introduced	Younger >6mths	Betw.6-12 mths	Betw. 1-2 years
	4	1	2

Out of all activities parents do with their child, reading was ranked 'very highly' by four and 'quite high' by three parents. In all families visited, reading to children was a clearly established routine, with all parents regularly reading to their child at bedtime, some in the

mornings ( N=4) and some *'anytime during the day'* (N=2). In addition to regular reading, library outings, watching of educational programs and purposive computer use (mostly to watch CBeebies), some parents provided their children with additional literacy activities. Examples included home-created matching cards (PC6); electronic toys with letters (PC 2,3, PC5, PC6); matching puzzles (PC 1, PC3, and PC5) and using an iPOD application with children's pictures, sounds and letters (PC2).

All parents reported that their children engage in shared book reading at home a lot and that they regularly ask (or non-verbally indicate) to be read to. Six children were described as enjoying reading a lot, one child a bit. For this child, the parent (PC5) reported a short-lived enjoyment of book reading: *'I tend to find what happens she will sit with you for a minute or two and then she will want to go and then come back and continue. But she participates a lot like pointing at the pictures, shouting a lot with this book (...)'* All parents reported that they enjoy reading to their child a lot and usually feel very confident and comfortable when reading to him or her. During the interview, parents listed a variety of reasons for the importance of reading for children. Their comments included following reasons:

*'I think reading to him is important because it gives him a good start when he goes to school...'*; (PC1)

*'it helps develop language and how to speak, helps develop motor skills as well, you know the page turning and that'*; (PC3)

*'because whatever you do in life you can't really get without reading'*; (PC 4)

*'it stimulates them to start with, further down the line it opens up the mind to more interests they might have'*. (PC5)

Parents seemed to enjoy reading themselves, with various hours of free time they can dedicate to this activity. At the interview, most of them expressed the wish to pass their passion for reading onto their children, mostly *'because if he enjoys books now he would enjoy books when he learns to read, see it as something fun, not something he has to do (...)* I want him to enjoy it (PC4)'.

Parents were also asked about the type of books they provide their children with, the origin of books they have at home and what influences their choice when they buy them. Parents who mostly buy their children's books cited 'the fun element' as the most important criterion

influencing their choice: *'Something I think he would think is fun'*(PC3), as well as appearance of familiar characters *'some of the books she really enjoys are character-linked'*(PC1) and those with *'pictures or things which are easy for her to relate to'* (PC6). Questions on parents' own interest in reading included subscription to magazines, average amount of hours spent on reading for pleasure and type of books being read. As expected, responses for the latter questions varied, with some parents citing fictional and some parents factual books as their favourites. Some parents reported having more time to read (approx 8 hours per week, N=1; approx. 3 hours per week, N=3), some less (less than one hour per week, N=1) and all talked at length about their passion for reading.

Only one parent has created a book for her child before, based on her daughter's pictures, with the aim to *'share story of her life'* (PC6). All other parents have not thought about making their own book before, the most cited reason overall (N=6) was : *'It never crossed my mind'*. When prompted about more reasons, one parent mentioned: *'I suppose because it's quite expensive .I know the way you created it isn't but a proper book is not cheap.'*(PC1).

## Appendix 4

### Mutual engagement analysis

Table below presents the 'mutual engagement' analysis. Looking across the table rows, mutual engagement across participants can be estimated; reading across the table columns, mutual engagement across the three conditions can be assessed. All scores are based on ratings parents provided in the post-observation questionnaires, rating their own and their children's engagement in the three book conditions. Negative values indicate that parents' ratings were higher than their children's ratings, while positive values indicate that children's ratings were higher. A score of 0 indicates a perfect match between parents' and children's ratings.

**Table 11: Interdependence between parents' and children's engagement, frequency counts**

Participant number	Enjoy. FB	Enjoy NB	Enjoy PB	Comfort FB	Comfort NB	Comfort PB	Mismatches across participants
1	1	0	0	0	0	0	1
2	0	-1	0	0	0	0	1
3	0	0	0	0	-1	-1	2
4	-1	1	1	0	0	0	3
5	-1	-2	0	-2	-3	0	4
6	1	0	0	0	0	0	1
7	1	-1	0	0	-1	0	3
<b>Mismatches across conditions</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>Number of mismatches</b>

Note: 2 Enjoy= enjoyment; Comfort= ratings for how comfortable and confident parents or children felt; FB= favourite book; NB= non-personalised book; PB= personalised book

Table 12 shows correlations between parents' and children's video analysis scores. Only significant correlations within conditions are reported (comparisons between conditions were not considered in the present analysis).

**Table 12 Interdependence between parents' and children's engagement, video scores correlations**

Book session	Variables with significant correlations	Spearman's rho / p-value
Favourite book	Parents' and children's vocal activity	rho=.962/ p=.001
	Parents' manipulation of book and duration of session from the child's point of view,	rho=.955 / p=.001

	Parents' positive engagement and overall duration of the session	rho = .808 / p= .028
	Overall duration of the session from the parent's and child's point of view	rho= .782 / p= .038
	Parent's pointing and child's verbalisations	rho=.826/ p=.022
Non-personalised book	Parent's amount of pointing and child's amount of positive engagement	rho=-.761, p=.047
	Parent's verbalisations and child's negative engagement	rho=-.803, p=.030
	Parent's verbalisations and child's positive engagement	rho=.791, p=.034
	Parent's verbal engagement and the duration of session from child's point of view	rho=.991, p=.001
	Parents' manipulation of the book and child's verbalisations	rho=.755, p=.050
	Parent's manipulation of book and duration of session from child's point of view	rho=.782, p=.038
Personalised book	Overall duration of session for both	rho=.782/ p=.038.
	Manipulation of book for both	rho=.782/ p=.038.
	Parents' vocal activity and children's manipulation of the book/duration of session	rho=.836, p=.019
	Parents' vocal activity and child's positive	rho=.839, p=.018

	engagement	
	Parents' manipulation of book and child's vocal activity	rho=.818/ p=.024
	Parent's manipulation of book and child's amount of pointing	rho=.782/ p=.038.
	Parents' manipulation of the book and duration of session from child's point of view	rho=.782, p=.038
	Parent's positive engagement and child's number of pointing	rho=.860, p=.013
	Parent's amount of pointing and child's positive engagement	rho=-.953, p=.001
	Parent's overall duration and child's amount of pointing	rho=.771, p=.043



## Appendix 5

### Children's engagement with the personalised book : additional follow-up analysis

As it emerged from the vide observations, I went back to the interview transcripts and conducted further analysis of the data, based on the results obtained from the video analysis. I found that two parents' comments matched the findings of the video analysis. When conjecturing about differences in her daughter's response to the three books, one mother commented: *'She was more verbal with our book, she pointed a few things out. With the favourite book she normally listens to so it was the sort of normal reaction we got, something she's normally not verbal with.'*(PC2). Another parent said: *'She pointed a lot more at the pictures of her things, she seems to be more engaged in pictures she recognises'* (PC7)

I also went over my field notes again and found some specific examples of children's response to reading the personalised book. These are provided in Table 7.

**Table 13 Child's engagement with personalised book: field notes excerpts**

Theme	Field notes excerpt
Evoking unusual emotional responses	<i>The mother carefully opened the first page of the book she made for Rebecca (fictional child's name). There was a picture of Rebecca's cat on the first page. When Rebecca saw it, she started screaming of joy and gave the cat a 'kiss', kissing the book.</i>
Children connecting real life to book life	<i>C. seemed puzzled. Next to her, on the sofa, there was the same Iggle Piggle as in the book. She kept switching her gaze between the real object and the picture and seemed very confused.</i>
Children connecting real life to book life (2)	<i>PB was the book Z. picked up after the reading with mum finished and went to his toy box as if he was looking for the toys appearing in the book.</i>
'My book!'	<i>While chatting to her mum, C. proudly took the PB , pressed it against her chest and said: 'My!'</i>

To conduct a more systematic and objective evaluation of children's engagement with the personalised book, all parents were contacted for follow-up interview, in which they were asked about their child's engagement with the personalised book post-visit. All seven parents

said that, after one month, their child has re-read the book at least two times. In five cases, the sessions were initiated by the child alone, in two instances parents said it was 60% of time their child's and 40% of time their initiation. In one family, the child asked to keep both the personalised and non-personalised book. I was therefore especially interested what her response to the books was after one month. Her mother told me: *'She looked at both but the one with her things is her favourite. You know, she knows that they are hers, that there is a story behind them. You know her sandpit where she makes sandcastle, her new red shoes, (...) she's got history behind them.'* (PC7). Another parent (PC6) said her daughter looks at the book quite regularly (three or four times per week), and the enjoyment seems to come from her recognising things are hers. This mother said: *'She does recognise them [pictures in the book] because she took the picture of the horse and took it to the garden and she got on the horse herself holding it and then she got off the it and left it on the horse. It's really quite good, we were quite impressed with that !'*. In one family (PC1), both child's older siblings as well as father who did not participate in the study, have looked at the book with the child. Four parents (PC1, PC4, PC5 and PC 7) mentioned their child's interests have changed since I last visited and they are thinking of creating a book on their child's current interests and favourite activities.

## Appendix 6

### Formula for calculating proportion of time versus each variable

$$\frac{\textit{manipulation of the book}}{\textit{duration of the session}} \times 100$$

and for all remaining variables

$$\frac{\textit{target variable}}{\textit{duration of the session}} \times 60$$

## Appendix 7

### Protocol for visits:

Arrival → introduction to the child → clarifying any issues (leaflet, letter) → signing consent forms → observation of home books provision\* → asking mother to choose one of child's favourite books → video observation (PB book, our book and child's favourite book- counterbalanced for each dyad) → break → interview → debriefing, thank you, handing questionnaire and self-stamped envelope

\* can be also done at the end of observation

For asking to see the books provision:

Asking the child (although probably the mother will respond):

*Would you like to show me your books?*

For asking to read the Favourite Book

Asking the mother

*Would you like to choose one of XY's favourite books and read it as you normally do?*

For asking to read the Personalised Book

Asking the mother

*Here is the book you sent to me, would you like to read it with XY?*

For asking to read the non-personalised Book

Asking the mother

*Here is another book about another child's interests; would you like to read this one now with XY?*

## Appendix 8

Research on **“Parent-child shared book reading: making it personal”**

undertaken by Natalia Kucirkova

MRes student, CREET



The Open University

### Parent/Guardian consent

Please fill in **your** and **your child’s name** and tick the boxes to indicate that you and your child agree to take part in the project.

I, .....,  
agree and give my consent for me and my child, .....

- a)  to participate in the research project entitled: **“Parent-child shared book reading: making it personal”**,
- b)  to be video recorded during the observations at home,
- c)  to be audio recorded during the observations at home and if selected, during an interview
- d)  to use the information provided via questionnaires for the purpose of the study

In giving my consent I acknowledge that:

1. I have read the Parents Information Letter and Leaflet provided.
2. I have understood, the procedures required for the project and the time involved.
3. I understand that my participation in this study is completely voluntary.
4. I understand that I can withdraw from the study at any time, by letting know the Principal Investigator Natalia Kucirkova, either in writing or verbally.
5. I understand that my involvement is strictly confidential and no information about me or my child will be used in any way that reveals my or his/her identity.
6. I understand that information I provide can only be used for educational or research purposes including publication.
7. I understand that if I have any concerns or difficulties, I can contact the researcher, Miss Natalia Kucirkova, tel.: 07910594681 or email: [n.kucirkova@open.ac.uk](mailto:n.kucirkova@open.ac.uk). If I wish to talk to someone else about the project, I can contact the researcher’s supervisors Prof David Messer at [d.j.messer@open.ac.uk](mailto:d.j.messer@open.ac.uk) or Dr Denise Whitelock at [d.m.whitelock@open.ac.uk](mailto:d.m.whitelock@open.ac.uk)

Signature -----

Date -----

Appendix 9



The Open University

Parent-Child Shared Book Reading: making it personal  
Research Project undertaken  
by Natalia Kucirkova

PARENT'S QUESTIONNAIRE

Q1. Is English your first language?

Yes  No



Q2. Do you read or speak to your child in a language other than English?

Yes  No



Which language?.....

Q3. Do you think reading to children is important? Why? (please give us as many reasons as you wish, continue overleaf if necessary)

.....  
.....

Q4. When did you start reading to your child on a regular basis?

- I'm not reading to him/her on a regular basis yet (too young)
- Younger than 6 months
- Between 6-12 months
- Between 1-2 years
- Between 2-3 years

**Q5. Who usually reads to your child? (please tick all which apply)**

- Me
- My partner
- Someone else- who?.....

**Q6. How often does this happen? (how often you or someone else reads to your child?)**

- I've never read to my child before
- 1-3 times per week
- 4-6 times per week
- 7-9 times per week
- More than 10 times per week

**Q8. When do you usually read to your child?**

- At bedtime
- In the morning
- During meal
- Other → Please tell us when.....

**Q9. Does your child ever ask you to read to him/her?**

- Yes     No

↓  
Please provide more detail-when does this happen, what type of books?

.....

**Q10. Do you ever use computer with your child?**

- Yes     No

↓

What for?.....

**Q11. How often does your child watch TV?**

- Every day-how many hours?.....hours
- Once or twice per week-how many hours per session?.....
- Once or twice per month
- Never

**Q12. Are you a member of the local library?**

- Yes     No



**How often do you tend to go to library?**

- Less than once per month
- Once per month
- Once per week
- More than once per week

**Does your child go with you to the library?**

- Rarely
- Sometimes
- Almost always

**Q14. Are there any other activities that you provide your child with which are related to reading?**



**Q15. Where do you get (did you get) most of your child's books from?**

Received from friends/ family

You or your partner bought them



**Q16. How do you choose books you buy for your child? What influences your choice? (please give us at least two reasons)**

.....  
.....

**Q17. Do you like reading yourself?**

Yes  No



Please provide more detail-what type of books you like, when do you usually read?

.....

**Q18. Do you subscribe to any printed journal or newspaper?**

Yes  No

**Q19. Please circle the highest level of qualifications that you have been awarded**

GCSE (or O levels, usually examinations at 16)

A levels (usually examinations at 18)

Degree

Postgraduate degree

**Q20. What is your child's age?**

**Q21. I would be grateful if you would indicate your age by ticking the appropriate box.**

**Less than 20 years**

**20-25 years**

**30-40 years**

**40-50 years**

**Q22. Does your child have siblings?**

**Yes**  **No**



Please provide their ages: .....

**◇◇◇ THANK YOU VERY MUCH FOR YOUR TIME AND ALL HELP WITH MY RESEARCH ◇◇◇**

Appendix 10

Parent-Child Shared Book Reading: making it personal  
Research Project undertaken  
by Natalia Kucirkova

**PARENT'S QUESTIONNAIRE (Part B)**



**Q23. How much did you enjoy reading the three different books today?**  
Please tick the appropriate box

	A lot	A bit	Not much	Not at all
Child's favourite book				
all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your book	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our book	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q24. How much do you think your child enjoyed reading the three different books?**

	A lot	A bit	Not much	Not at all
Child's favourite book				
all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your book	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our book	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q25. How much 'engaged' (how comfortable and confident) did you feel when reading the three different books?**

	A lot	A bit	Not much	Not at all
Child's favourite book all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your book	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our book	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q26. How much do you think your child engaged in reading our and your book? (How confident and how comfortable was he or she when reading the three books?)**

	A lot	A bit	Not much	Not at all
Child's favourite book all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your book	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our book	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Appendix 11

### Post-visit questions

1, Has your child read the book since I last visited? If YES



2a, Who initiated the sessions(?)

2b, When during the day did this happen? (morning/ lunchtime/ evening?)

2c, How often? (Every day/ every 2-3 days/ once a week or was it an one-off event?)

2d, Why do you think your child was interested in the book? (please list as many reasons as possible)

If NOT



2e, Why do you think this was the case? (Was it the format/ topic/ ring-bound/anything else?)

3, Has there been anything unusual or interesting you noticed in your child's response to the personalised book?

4, How do you think these books could be made better? Do you have any advice for me how to make this idea into a project which would appeal to more parents and their children?

**What is the project about?**

This research wants to understand how children participate in storybook reading. In particular, we would like to investigate how different types of books promote early reading skills and the child's enjoyment of book reading.

Parent-child shared book reading will provide the focus of the study with specific books being shared between the parent and child. We want to investigate how books which are personally meaningful to the children affect the nature of the interaction.

**Why use shared book reading?**

Preschool parent-child shared book reading has been identified as a home literacy activity which directly promotes language development, literacy skills, and a positive orientation to books. Early childhood researchers refer to shared reading as "the literacy event par excellence" (Pellegrini, 1994), one of the richest and most important activities in the home learning context.

**Why take part in the project**

In addition to being involved in a project of intrinsic value, you will benefit from this study by learning more about picture book reading and your child's engagement with novel books.

**What type of information will be collected?**

In order to create books which are personally meaningful to your child, you will be asked to take a series of pictures from your child's environment. The topic will be given to you but there are no limits to your creativity. We will provide you with a digital camera or you can use your own mobile phone camera which you have at home. The researcher will help you by printing and laminating your pictures, creating a short picture booklet to be shared with your child.

On a date convenient to you, the researcher will bring the book to your home, along with a picture book created by us, new to you and your child. You will be asked to share these two books with your child. Because the researcher won't be able to capture the whole spectrum of behaviour observed in situ, we would like to video and audio tape the sessions. The tapes, as well as any information collected via questionnaires and interviews will be used only for the analyses and treated in strictest confidence.

The researcher will follow OU research guidelines throughout the research project including the handling of the data collected. These guidelines include the Open University Data Protection Code of Conduct, the Open University Research Ethical Guidelines and the British Education Research Association Ethical

**Guidelines.**

**Who can take part?**

If your child is between the ages of 12 and 36 months and you are a native English speaker, we would love to hear from you! Please feel free to pass this leaflet onto anyone who might be able to help us.

**Will the information be confidential?**

All the data collected during the project will be treated as confidential and will be kept anonymous during and after collection. Real names will not be included in the final report or any published work. The interviews will be anonymised and your identity will not be revealed. Any notes made by the researcher will be kept in a locked cabinet at the Open University and any video or audio data will be transferred to the Open University's (OU) secure server as soon as possible. You can request access to any information that is collected and held about your child or request that it is destroyed up to the date of data analysis and reporting.

**What if you decide to withdraw from the project?**

You and your child will be taking part in this project voluntarily and you have the right to withdraw from the project at any time. There will be no negative consequences if you do not wish to continue with the project.

### **What to do next?**

If you are interested in our project and fulfil the eligibility criteria, please contact Natalia Kucirkova on her email or telephone number and we will be in touch shortly.

### **About Our Organisation and Us**

The mission of the Open University is to be open to people, places, methods and ideas. Through academic research, pedagogic innovation and collaborative partnership it seeks to be a world leader in the design, content and delivery of supported open and distance learning. The Open University is by far the largest higher education institution in the UK measured by student numbers (180,000).

### **What will be the project results used for?**

Results of the project will be used for Natalia Kucirkova's Masters Dissertation and any other research leading from this work. You can receive a report (online or

hard copy) of the project results on request.

### **Who can I contact if I wish to take part/have any queries?**

If you would like further information about the project, please contact:

Natalia Kucirkova  
The Open University  
CREET/ Briggs 246  
Milton Keynes MK7 6BJ  
United Kingdom  
[n.kucirkova@open.ac.uk](mailto:n.kucirkova@open.ac.uk)  
07910594681



### **What other source of help is available?**

If you feel uncomfortable in discussing any issue with the researcher, you can contact her supervisors who can answer any questions or clarify any issues. Their contact details are as follows:

Prof David Messer:  
[D.J.Messer@open.ac.uk](mailto:D.J.Messer@open.ac.uk)

Dr Denise Whitelock :  
[d.m.whitelock@open.ac.uk](mailto:d.m.whitelock@open.ac.uk)

Alternatively, the National Literacy Trust provides a plethora of resources and publications on the benefits of book reading:  
<http://www.literacytrust.org.uk/familyreading/parents/resources.html>



Acknowledgement: Mother and daughters reading book © Getty Images

## **Parent-Child Shared Book Reading: making it personal**

**Research Project undertaken by Natalia Kucirkova**



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