CHILDFORUM EARLY CHILDHOOD NETWORK, NEW ZEALAND

Talking With Children When Using Prams While Shopping

Ken Blaiklock

NZ Research in Early Childhood Education Journal
Volume 16, 2013, pp. 15 - 28

Children's language development is influenced by the amount and quality of interactions that they are immersed in. This study investigated the frequency of parent-child interactions that occur when parents accompany young children in prams while moving between shops. Overall, minimal levels of interaction were observed between parents and children aged 0-3 years. Most children were transported in prams where they faced forward and could not see their parents, making interaction more difficult. Language interactions may be facilitated in prams where children face towards their parents but only a small number of prams with this design were observed. Support for the value of being able to face towards parents was seen in the higher frequency of language interactions that occurred when young children were transported in supermarket trolleys. Greater parental awareness of the importance of one-to-one language exchanges could increase the value of shopping excursions as a time for parent-child interaction.

Original Research

Talking With Children When Using Prams While Shopping

Ken Blaiklock
Unitec Institute of Technology

Abstract

Children's language development is influenced by the amount and quality of interactions that they are immersed in. This study investigated the parent-child interactions that occur when parents accompany young children in prams while moving between shops. Overall, minimal levels of interaction were observed between parents and children aged 0-3 years. Most children were transported in prams where they faced forward and could not see their parents, making interaction more difficult. Language interactions may be facilitated in prams where children face towards their parents but only a small number of prams with this design were observed. Support for the value of being able to face towards parents was seen in the higher frequency of language interactions that occurred when young children were transported in supermarket trolleys. Greater parental awareness of the importance of one-to-one language exchanges could increase the value of shopping excursions as a time for parent-child interaction.

Key words: Language acquisition; parent-child interaction; child-directed speech.

Introduction

Parent-child interactions in a range of settings are crucial for the development of language skills. This study examined the nature of interactions that occur in a particular context, namely when children are being transported in prams while accompanying their parents who are out shopping. (The term "pram" is used to refer to what are also known as "pushchairs" "baby buggies" and "strollers".) The study investigated the amount of interaction in these situations and also examined whether interaction was affected by the design of the pram. Most prams are designed so that a child is seated facing forward but some prams allow a child to face towards a parent. Facing towards a parent may facilitate opportunities for interaction.

The importance of interaction for developing language skills

Language development occurs at a rapid pace during the first years of a child's life. The ability to learn language has a biological base but is also highly dependent on the communicative interactions that a child is immersed in (Fernald & Weisleder, 2011). From the time that a child is born, parents can respond in meaningful ways to a child's vocalisations. As a child begins to form words and sentences, parents can interpret and expand on what is said. The way that parents interact with a child makes a difference to the rate at which the child acquires language. There are large variations, however, in the amount and types of language that children are exposed to in different families.

Variations associated with socio-economic status have been found in several studies. Hart and Risley (1995) found that parents in wealthier families talked to their children more than did parents in poorer families. Detailed observations were made for an hour each month for a total of 42 families during the time that children were aged from 1 to 3 years. On average, professional parents were found to speak nearly three and a half times as many words to their children compared to parents in families that received welfare benefits. The amount of words spoken to children was highly correlated with their language skills at ages 3 and 9 years.

Hoff (2003) also found socio-economic related differences in family language interaction patterns. The differences, however, were smaller than in Hart and Risley's (1995) study. Mothers with college degrees were found to use about 25% more words when addressing their 2-year-olds than was the case for high-school educated mothers. The amount of speech directed to children was correlated with the rate of vocabulary growth.

Although the above studies found differences between families in different socio-economic categories, they also found considerable variation between families within each category. The quality of parent-child interaction can vary according to a range of communicative features that impact on children's language development. Hoff (2006) provided a useful review of these features and noted that most studies in this area have analysed interactions between mothers and children. Much less research has looked at the role of fathers. Among the effects identified by Hoff were the following:

1. Effects of Quantity and Quality of Child-Directed Speech

As discussed above, studies have found associations between the amount of speech addressed to a child and the development of the child's language skills. Hoff (2006) pointed out that it is not just the amount of speech that a child is exposed to but also the quality of the speech. For example, some repetition of sentences directed at infants can be useful, especially where the mother makes small changes to the sentences in ways that highlight particular words.

More talk from an adult may mean that a child is exposed to more meaningful sentences and a richer vocabulary. Hart and Risley (1999, as cited in Hoff, 2006) reported that most families provided young children with a similar amount of "regulatory" talk that related to daily routines and directions. Where families differed most was in the quantity of "non-regulatory speech" that immersed children in more sophisticated language and narratives about present and past events.

Rowe (2012) found the effects of different types of parent language varied according to the age of the child. At age 18 months, the quantity of parent language was the greatest predictor of child vocabulary one year later. This may be because more input was linked with frequent exposure to a variety of words. At age 30 months, once children had already learned a basic vocabulary, the diversity and complexity of vocabulary used by a parent was the variable most associated with later child vocabulary. At age 42 months, parent use of decontextualised language (e.g., making links and talking about past and future events) became the most important feature of parent talk that explained child vocabulary knowledge one year later.

2. Effects of Maternal Responsivity and Contingency

Infants show more rapid language growth when their mothers respond sensitively and provide verbal replies that are contingent on the child's early vocalising. It is likely that contingent replies are easier for the infant to interpret meaningfully (Hoff, 2006).

3. Effects of Joint Attention

Joint attention, when both mother and infant are focused on the same object or action, is associated with growth in language skills. Maternal input is particularly effective when it follows a child's lead rather than attempts to redirect what a child's attention is focused on (Hoff, 2006). Infants have been found to learn words more easily when an object they are looking at is labelled (Tomasello & Farrar, 1986).

4. Effects of the Communicative Functions of Maternal Speech

Language that encourages a child to respond (e.g., a comment or question that cues the child to verbalise) has a more positive effect on language development than language that focuses on directing a child's behaviour. The importance of two-way conversation was emphasised in a recent study of families with children aged from 0 to 4 years old. Zimmerman et al. (2009) found that back and forth conversations were six times more effective at promoting children's language skills than were adult monologues.

Settings for adult-child language interactions

The setting in which interaction takes place can affect the way that adults talk with a child. Numerous studies have shown that adults use more complex

language when reading to children than in everyday conversations (e.g., Dickinson & Tabors, 2001; Weizman & Snow, 2001). Talking about books provides adults with opportunities to use rich vocabulary, recall past events, and make links with other experiences. Such ways of talking have benefits for children's language development (Cunningham & Zibulsky, 2011). Another setting in which adult-child interactions have been studied is during mealtimes. Families differ in the use of language at mealtimes and in the way that contributions from young children are supported. These differences have been shown to relate to children's vocabulary development (Dickinson & Tabors, 2001).

One setting that has received very little attention is the parent-child interactions that occur when children are being transported in prams while shopping. It appears that only one study (Zeedyk, 2008) has investigated this topic. Zeedyk recruited 57 volunteers to carry out observations in 54 towns and cities in the UK. The observers were asked to find a non-obtrusive site on their local high street and to record information about parent-child groups that walked past them (for children up to 3 years of age). Information was collected about the gender of the parent, estimated age of the child, type of interaction between parent and child, if any, and orientation of pram (or to note if the child was walking). The orientation of the pram was classified as "parent-facing" if the child was facing back towards the parent, or "forward-facing" if the child was facing forward and therefore could not see the parent who was walking behind the buggy.

A sample total of 2722 parent-child pairs were observed in Zeedyk's (2008) study. Forward-facing prams made up 62% of the observations while parent-facing prams were seen 13% of the time. The remaining observations were of children being carried (4%) or walking (21%).

Excluding children who were sleeping, parents were found to be speaking to their children during 13% of the observations for under one-year-olds, 17% of the observations for one year olds and 35% of the observations for two-year-olds. Nearly half of parents were observed to be talking to their children when walking with them (47%) or carrying them (46%). If using a pram, parents were observed to be talking 25% of the time with parent-facing prams but only 11% of the time with forward-facing prams (which were nearly five times as common than parent-facing prams).

Children were more likely to be vocalising when their parents were talking to them. The under one-year-olds were found to be vocalising during 5% of the observations, compared to 15% for the one year olds and 38% for the two-year-olds. Of children who were not sleeping, 12% of children in forward-facing prams were vocalising compared to 17% of children in parent-facing prams.

To further investigate the link between interaction and orientation of pram, Zeedyk (2008) carried out an experimental study involving 20 mother-infant

pairs. Mothers were asked to take their child for one 15 minute journey in a forward-facing pram and one 15 minute journey in a parent-facing pram. Audio recordings were made of parent-child interaction, and infant heart rate was monitored as an indication of stress. Mothers were found to talk twice as much to their children when using a parent-facing pram. They were also more likely to use varied and interesting language. A small difference in heart rate was found, possibly indicating that a parent-facing orientation may have reduced infant stress levels.

No investigations have been carried out in New Zealand into the type of prams that are utilised or the ways that parents interact with children when using prams. The purpose of the current study was to carry out observations of parents and children in settings where prams were likely to be used, to evaluate the nature of interactions that occurred and to examine whether interactions were related to the orientation of the pram.

Method

I carried out observations in three locations in Auckland. Two locations were in large suburban shopping malls, with the third location being in an older suburb where a large number of shops still existed along the "main street" of the area. (This location was similar to the "High Street" locations that were used in the Zeedyk, 2008, study).

Twelve 30-minute observations were conducted in each of the three locations. Most observations were carried out on weekdays within the period from 10:30 a.m. to 3:00 p.m., a popular time for parents with young children to be shopping and a time when older children were likely to be at school. Permission for observations in the shopping malls was sought and given by management of the malls. Observations were made in an unobtrusive manner and no information that personally identified any person was collected. The type of information collected was similar to the data gathered for Zeedyk's (2008) study.

At each shopping mall, observations were carried out in two locations where there was high pedestrian traffic as people moved between shops within the confines of the mall. At each location I was able to observe inconspicuously while seated, apparently reading a newspaper or drinking a cup of coffee. Observations in the suburban main street shopping area were made from a parked car because this was the most convenient way of gaining a good view of the area.

As adults with children approached, I was able to note the type of pram that was being used and could observe whether interactions were occurring. The following information was recorded:

- Gender of adult

- Number of children with adult
- Estimated age of child (0-1 year; 1-2 years; 2-3 years)
- Mode of Transport (forward-facing pram, parent-facing pram, supermarket trolley, walking, or being carried)
- Child's behaviour (vocalising or talking to parent, crying, quiet but awake, asleep)
- Adult (talking or not talking to child)

The observational method used was a form of time sampling (Podmore, 2006) with each adult-child pair being observed for approximately 10 seconds. An interaction was recorded as occurring if it was observed at any point during this interval. The brevity of the time period means that each observation only provided a "snap-shot" of behaviour for any adult-child pair. Nevertheless, the total number of observations recorded in a particular area provides an indication of the frequency of interactive behaviours in that setting.

Ideally, observations of each adult-child pair would be made for a longer duration but this was not possible within the constraints of the current study. The information that I collected was the same information that would be available to any other member of the public casually observing in these locations. More extensive observations of individual adult-child pairs would provide a clearer picture of interaction patterns but would require informed consent from all participants and would be impractical in the context of public shopping areas. The estimation of child age category was made on the basis of my experience as a parent and early childhood professional. It is acknowledged, however, that there are limitations on the accuracy of year-group judgements that can be made from a short observation, especially for children in the months near their birthdays.

Because observations were made of people moving in both directions, it is possible that some adult-child pairs were observed more than once during a particular 30-minute observational period. It is also possible that some adult-child pairs were observed on more than one day. Some "doubling up" of who was observed would not invalidate the procedures as the observations would still provide samples of adult-child interactive behaviour in those locations.

Results and discussion

A total of 582 adult-child pairs were observed over the three locations. Most observations were of adults with only one child. However, in about 10% of cases, adults were accompanied by two children aged less than three years. In these cases, a separate adult-child observation was recorded for each child. Table 1 reports the numbers of observations for each age group.

Table 1: Location and Age Groups of Children for All Observations

Age (years)	*Shopping centre 1*	*Shopping centre 2*	*"High Street"*	*Total*
<1	77	114	24	215 (37%)
1-2	80	107	17	204 (35%)
2-3	67	81	15	163 (28%)
Total	224	302	56	582

Over a third of observations were for children aged less than 12 months, with a similar number of observations for 1-year-olds. A smaller proportion of 2-year-olds were observed. Children were much more likely to be accompanied by a female adult than a male. Seventy percent of observations were with a single female compared to 8% with a male. In 22% of observations, children were accompanied by more than one adult. (A male and female accompanied children on 14% of occasions and two females on 8% of occasions.)

The adult accompanying a child may not have always been a parent. Other relatives or caregivers may also have been involved in looking after the children. However, for the purposes of this study, the adults with the children will be referred to as "parents".

The range of different transport modes is reported in Table 2. Overall, 65% of children were in forward-facing prams compared to just 4% (all aged less than 1 year-old) who were in parent-facing prams. About 10% of children were transported in supermarket trolley seats, about 10% were carried, and about 10% (mostly 2-year-olds) were walking.

The findings indicate parent-facing prams are uncommon, especially for children aged more than 12 months. Because the observations were carried out in only three locations, it is possible that parent-facing prams are more widely used in other areas. Nevertheless, the findings suggest that a forward-facing orientation is a common design for prams in New Zealand.

Zeedyk's (2008) British study also reported very high usage of forward-facing prams. Overall, 62% of children were observed to be in forward-facing prams compared to 13% in parent-facing prams (21% were walking and 4% were carried). While Zeedyk found that very few children over 1 year of age were in parent-facing prams, 34% of under 1-year-olds were in this type of pram. This is a much higher proportion than in the current study where only 11.5% of

under 1-year-olds were in prams that allowed them to face towards their parents.

Table 2: Frequency of Different Modes of Transport

Age (years)	*N*	*Forward-facing pram*	*Parent- facing pram*	*Super-market trolley*	*Carried*	*Walking*
<1	215	147 (68%)	25 (11.5%)	5 (2.5%)	38 (17.5%)	0
1-2	204	142 (69.5%)	0	32 (15.5%)	24 (12%)	6
2-3	163	90 (55%)	0	24 (15%)	0	49 (30%)
Total	582	379 (65%)	25 (4%)	61 (10.5%)	62 (10.5%)	55 (9.5%)

Tables 3 and 4 provide information on what children and adults were doing for different age groups and when using different modes of transport.

Table 3: Frequency of Behaviours for Different Age Groups

Age (years)	*N*	*Sleeping*	*Crying*	*Child vocalising or talking*	*Parent talking*
<1	215	22 (10%)	0	1 (0.5%)	7 (3%)
1-2	204	3 (1.5%)	2 (1%)	8 (4%)	13 (6.5%)
2-3	163	1 (0.5)	1 (0.5%)	7 (4%)	10 (6%)
Total	582	26 (4.5%)	3 (0.5%)	14 (2.5%)	30 (5%)

Table 4: Frequency of Behaviours for Different Modes of Transport

Transport Mode	*N*	*Sleeping*	*Crying*	*Child vocalising or talking*	*Parent talking*
Forward-facing pram	379	22 (6%)	2 (0.5%)	3 (1%)	2 (0.5%)
Parent-facing pram	25	3 (12%)	0	1 (4%)	2 (8%)
Supermarket trolley	61	0	0	5 (8%)	15 (24.5%)
Carried	62	1 (1.5%)	1 (1.5%)	2 (3%)	5 (8%)
Walking	55	0	0	5 (9%)	7 (13%)
Total	582	26 (4.5%)	3 (0.5%)	14 (2.5%)	30 (5%)

Only a small number of children (4.5%) were observed to be sleeping. The observations also reveal that there were minimal levels of interaction between parents and children at all ages. Overall, parents were observed to be talking to their children on only 5% of occasions and children were seen to be vocalising to parents on 2.5% of occasions.

These levels of interaction are markedly lower than found in Zeedyk's (2008) British study. Zeedyk (2008) found children to be verbalising on 19% of occasions and parents to be talking to their child (excluding those who were sleeping) on 22% of occasions. In situations where children were walking, the current study found that only 9% of children and 13% of parents were talking. The comparable figures in Zeedyk's study were 50% and 47% respectively.

The results would appear to suggest that British parents engage in more interaction when shopping with their young children than do New Zealand parents but such a conclusion cannot be made on the basis of the two studies. Methodological differences may have contributed to the disparity in the results. Observations in the British study were carried out by volunteers who were asked to record "information about each parent-child group that passes your

site during the observational session" (Zeedyk, 2008, p. 29). The length of time for the observation of each group was not specified. This may have led to differences between observers, with some recording at the specific moment that the group passed by, while others recorded behaviour for a lengthier period of time. Longer observations would be more likely to show the occurrence of interactions. In the current study, each observation was for approximately 10 seconds which may have been considerably less than for some of the British observations. Differences in the location of observations between the studies may have also influenced findings. Observations in the British study were all in "High Streets" whereas most observations in the current study were in shopping malls. The differences in observation methods and settings needs to be noted when comparing the results of the studies.

An important finding in Zeedyk's (2008) study was that parents were more likely to talk to their children when using a parent-facing pram than when using a forward-facing pram. Omitting instances when children were sleeping, parents were observed to speak to children 25% of the times when using parent-facing prams compared to only 11% of the times when using forward-facing prams. Children were also more likely to be vocalising when in a parent-facing pram (17%) than when in a forward-facing pram (12%). A follow-up experimental study carried out by Zeedyk (2008) found that mothers talked more than twice as much to their children when using a parent-facing pram than when the same group of mothers used a forward-facing pram. Zeedyk's findings, along with other research on the importance of adults talking with young children (e.g., Hoff, 2006; Rowe, 2012), suggest that prams that face towards a parent will provide more opportunities for parents to interact with their children and thereby will help to facilitate language development.

The small number of parent-facing prams found in the current study, along with the low levels of interaction that were seen, make it difficult to make comparisons between types of prams in relation to frequency of communication. It is interesting to note, however, that parents were seen to be talking to their children on two of the 25 occasions that parent-facing prams were observed. The same number of parents (i.e., two) were seen to be talking with their children when using forward-facing prams but this was for a total of 379 observations (see Table 4). These findings support the notion that interaction is facilitated when parent and child are facing each other. Further support for this idea is seen in the observations for children in shopping trolleys. Shopping trolleys allow children to be nearer in height to their parents' level and to face directly towards them. In the current study, these situations showed the highest levels of interaction of all the modes of transport with 24.5% of parents, and 8% of children, talking during the times they were observed.

Awareness of the value of parent-facing prams for facilitating communication increased greatly in Britain following the release of Zeedyk's (2008) research.

The suggestion that the commonly accepted practice of using forward-facing prams may not be ideal for children was a surprise to many who assumed that a child who faced forward was best able to learn from observing the world. Zeedyk provided a different perspective. She emphasised that young children are more likely to learn when a familiar adult mediates what they see, talks with them and helps them to make sense of the surroundings. Zeedyk (2008, p. 2) concluded, "that infant development is best nurtured when their parents are emotionally and cognitively available to them, able to respond to the subtle bids that they make for attention and comfort. Buggies that face away from parents do not promote such conditions; indeed they are likely to interfere with parents' ability to tune in quickly to infant's needs and interests."

Zeedyk's research was publicised in some media reports as suggesting that forward-facing prams could cause stress and trauma to children (National Literacy Trust, n.d.a). In fact, Zeedyk made only cautious suggestions in this area. A small experimental study she carried out, comparing mother and infant behaviour when using different types of prams, found that children had slightly lower heart rates when in parent-facing prams. Zeedyk noted, however, that the findings suggesting this related to stress levels were "tentative and relatively weak" (2008, p. 26).

More recently, an Australian academic, Catherine Fowler, was reported in a New Zealand newspaper as saying that forward facing prams are "cruel" and "selfish" and could be "terrifying" for children ("Forward facing prams cruel: Professor", 2011). The article suggested young children could be bombarded by stimulus in forward facing prams but made no mention of the significance of parent-facing prams for enhancing language interactions. Although the current study was not designed to gather information on stress levels, observations were made of whether children were crying, one indicator of stress. Only a small number (0.5%) of children who were in forward-facing prams were observed to be crying. This result suggests that children are seldom showing obvious signs of distress when transported in forward-facing prams. More detailed measures, however, are needed before conclusions could be made on this topic.

The extensive publicity in Britain about Zeedyk's (2008) research appears to have increased parents' knowledge of the benefits of being able to interact with their children in prams. Manufacturers of prams have responded by promoting the value of adult-facing prams in Britain (National Literacy Trust, n.d. b)

The low numbers of adult-facing prams that were observed in the current investigation suggest that many parents in New Zealand may not be aware that pram orientation is a significant issue. This is not surprising, given the lack of information that is available in New Zealand on this topic. For example, the website (www.plunket.org) of Plunket (the largest provider of health and development services for children under five) provides much information on

parenting and child development but makes no mention of the significance of orientation of prams. An article in a popular guide to parenting (Smith, 2009) noted that some prams have reversible handles that allow the parent to see the baby but no comment was made about the benefits of this for adult-child interaction. The national consumer organisation in New Zealand recently published a review of children's prams (Fredrikson, 2011). Again, no mention was made of the value of parent-facing prams for promoting interaction. The websites and stores of major retailers of children's prams in New Zealand do not appear to provide information on the significance of using adult-facing prams. The few parent-facing prams that are available are generally much more expensive than most of the forward-facing prams

A parent-facing pram allows for more easy communication between a parent and child. The parent is able to see the child and can more easily hear the child's vocalisations. The parent can observe where the child's attention is directed and can talk with the child about what is happening. Such "joint attention" episodes are facilitated with the use of a parent-facing pram as are the back-and-forth conversations that have been shown to best promote language development (Hoff, 2003; Zimmerman et al., 2009). Support for the value of face-to-face orientation was seen in the findings of the current study where parent-child interaction was found to be more likely when children were being transported in supermarket trolleys than when they were in forward-facing prams.

Although parent-facing prams may have advantages for communication, parents should also be encouraged to interact with children when using forward-facing prams. In the current study, a possible reason for the generally low levels of interaction that were seen is that the observations were made while parents and children were moving between shops. Parents may have felt that it was unnecessary to communicate with children in these "transit" times but may have been more inclined to talk with children while in shops, especially when paused to look at particular items. (The quieter environment found within many shops may be more conducive to talking than in the street or open parts of shopping malls). However, it is also possible that parents may not always be aware of the value of making use of the one-to-one interaction opportunities that occur when accompanying children in prams.

Shopping excursions are an ideal time to converse with young children, whatever type of pram they are being transported in. Shopping provides opportunities for parents to engage in episodes of "joint attention" and talk with children about new and interesting things that are seen. While communication may be easier when using a parent-facing pram, parents can still have valuable language interactions with children when using forward-facing prams. Occasionally pausing to bend down to make face-to-face contact with the child can extend on the benefits of these interactions. The crucial importance of adult-child communication for promoting language development

means that parents should make full use of opportunities to interact with their children throughout the day and in a wide range of settings.

References

Cunningham, A. E and Zibulsky J. (2011). Tell me a story: Examining the benefits of shared reading. In S. Neuman & D. Dickinson (Eds.), *Handbook of early literacy research*, *Volume 3* (pp. 396-411) New York: Guilford.

Dickinson, D. K. & Tabors, P.O. (2001). *Beginning literacy with language*. Baltimore: Paul H. Brookes.

Fernald A and Weisleder A (2011). Early language development is vital to developing fluency. In S. Neuman & D. Dickinson (Eds.) *Handbook of early literacy research*, *Volume 3* (pp. 3-19) New York: Guilford

Forward facing prams cruel: Professor. (2011, August 22). *New Zealand Herald*: 2

Frederikson, B. (2011, September). Kids on the move. *Consumer,* pp. 18-20.

Hart, B. & Risley, T. R. (1995). *Meaningful differences in the everyday experiences of young American children*. Baltimore, MD: Paul H. Brookes.

Hoff, E. (2003). The specificity of environmental influence: Socioeconomic status affects early vocabulary development via maternal speech. *Child Development, 74*: 1368-1378.

Hoff, E. (2006). How social contexts support and shape language development. *Developmental Review, 26:* 55-88.

National Literacy Trust (n.d. a). *Campaigning for conversation: The impact of Talk to Your Baby's research on baby buggies*. Retrieved from http://www.literacytrust.org.uk/assets/0000/2597/campaigningforconversation.pdf

National Literacy Trust (n.d. b). *Buggy research: Manufacturer's responses*. Retrieved from http://www.literacytrust.org.uk/talk_to_your_baby/resources/1576_buggy_research-manufacturers_responses

Podmore, V. (2006). *Observation: Origins and approaches to early childhood research and practice.* Wellington: New Zealand Council for Educational Research.

Rowe, M. L. (2012). A longitudinal investigation of the role of quantity and quality of child-directed speech in vocabulary development. *Child Development, 83,* 1762-1774.

Smith, L. (2009). Pushed for choice. *Little treasures. Pregnancy and birth: Your complete guide to having a baby in New Zealand,* pp. 100-102.

Tomasello, M. & Farrar, M. (1986). Joint attention and early language. *Child Development, 57*, 1454-1463.

Weizman, Z. O., & Snow, C. E. (2001). Lexical input as related to children's vocabulary acquisition: Effects of sophisticated exposure and support for meaning. *Developmental Psychology, 37*, 265-279.

Zeedyk. S. M. (2008). *What's life in a baby buggy like?: The impact of buggy orientation on parent-infant interaction and infant stress*: National Literacy Trust. Retrieved from http://www.literacytrust.org.uk/talk_to_your_baby/resources/1555_whats_life_in_a_baby_buggy_like

Zimmerman, F.J., Gilkerson, J., Richards, J.A., Christakis, D.A., Xu, D., Gray, S., & Yapanel, U. (2009). Teaching by listening: The importance of adult-child conversations to language development. *Pediatrics 124*: 342-349.

ABOUT THE AUTHOR

Ken Blaiklock is a senior lecturer at the Unitec Institute of Technology in Auckland. He teaches courses on human development and the acquisition of language and literacy skills. His research interests focus on language and assessment issues.