

Role of Children's Interests in Early Literacy and Language Development

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The relationship between children's interests and early literacy and language development was examined in 31 studies including 4,190 toddlers and preschoolers. A number of parent-completed, investigator-administered, and child-completed interest measures were employed by the study investigators to measure either the children's personal or situational interests or a combination of both. A number of different phonological, print-related, reading-related, and language outcome measures were administered to the study participants. Results showed that the different children's interest measures were related to nearly all the study outcomes. The relationships between children's interests and the literacy and language outcomes were moderated by a number of study- and child-related variables that helped identify the conditions under which children's interests influenced the study outcomes. The findings are discussed in terms of how children's interests can be incorporated into early literacy and language learning experiences and activities.

The manner in which young children's personal and situational interests (Renninger, Hidi, & Krapp, 1992) were related to their early literacy and language development was the focus of the meta-analysis described in this *CELLreviews*. Personal interests include a child's preferences, likes, favorites, and so forth, that engage him or her in desired activities (DeLoache, Simcock, & Macari, 2007). Situational interests refer to the interestingness of persons, objects, activities, and so forth, that evoke prolonged child attention or engagement (Chen, Darst, & Pangrazi, 2001). Bronfenbrenner (1992) described personal interests as person factors and situational interests as environment factors that in combination invite and encourage child learning and development.

Print motivation (Whitehurst & Lonigan, 1998), topical interests (Hare & Devine, 1983), shared interests (Laakso, Poikkeus, Eklund, & Lyytinen, 2004), and situational interests (Hidi & Anderson, 1992) among other terms have been used to describe the role young children's interests play in shaping and influencing early literacy-related learning (e.g., Nwokah & Gulker, 2006; Pruden, Hirsh-Pasek, Golinkoff, & Hennon, 2006; Rowe & Neitzel, 2010). According to Whitehurst and Lonigan (1998), "A child who is interested in literacy is more likely to facilitate shared reading interactions, notice print in the environment, and spend more time reading once he or she is able" (p. 854).

The purpose of this meta-analysis was to determine if personal or situational interests or both were related to variations in young children's early literacy and language abilities. Children's interests were coded in a number of different ways and related to the phonological awareness, print-related, reading-related, and language development of the children in the studies included in the meta-analysis. This permitted a determination of which kinds of child interests measured in which kinds of ways were related to which kinds of early literacy and language outcomes.

SEARCH STRATEGY

Studies were identified using "interest" or "child* interest" or "child interest" or "print motivation" or "choice" or "novelty" AND "literacy" or "communicat*" or "language*" (as well as specific types of literacy and language construct terms; e.g., phonological awareness, letter-sound awareness,

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rhyme detection) AND “*infant*” or “*toddler*” or “*preschool*” as search terms. Both controlled vocabulary and natural language searches were conducted (Lucas & Cutspec, 2007). Psychological Abstracts (PsychInfo), Educational Resource Information Center (ERIC), MEDLINE, Academic Search Premier, and Dissertation Abstracts International were searched. These were supplemented by Google Scholar, Scirus, and Ingenta searches as well as a search of an extensive EndNote Library maintained by our Institute. Hand searches of the reference sections of all identified journal articles, book chapters, books, dissertations, and unpublished papers were also examined to locate additional studies. Studies were included if the correlations between the interests measures and child outcomes were included in the research reports.

SEARCH RESULTS

Participants

Twenty six studies were located that included 31 samples of children (Appendix A). The 26 studies included 4,190 child participants. The number of participants in the individual studies ranged between 20 and 1,254 (Mean = 135). The average age of the children ranged between 14 and 83 months (Mean = 52). The samples were equally divided in terms of males (50%) and females (50%). Child developmental status was reported in 18 studies. The studies included typically developing children (10 studies), children at-risk for family and socio-environmental reasons (6 studies), a mixture of typically developing and at-risk children (5 studies), and children that had identified disabilities (2 studies). The studies were conducted in the United States (18), Finland (5), the Netherlands (3), the United Kingdom (2), Australia (1), and Canada (1), or included children from three different countries (1).

Appendix B includes selected characteristics of the children's parents or primary caregivers. In those studies reporting the background characteristics of the children's parents, their average age was 30 years (Range = 18 to 63). The parents had completed less than high school (19%), high school (34%), some college (32%), undergraduate degrees (11%), or graduate degrees (5%). Ethnicity was reported only in studies conducted in the US. Most of the participants were Caucasian (58%), African American (24%), or Latino (16%). Some of the children were Asian American (0.47%), Native American (0.41%) or another ethnicity (1%).

Interest Measures

Appendix C includes information about the interest measures used in the studies. Parent surveys, investigator observations, and interviews (either parent or child) were used to measure children's interests. Study-specific, investigator-developed measures were used in 17 investigations. Scales, surveys, and measures developed by other investigators were used in 14 studies (e.g., Foy & Mann, 2003; Harter & Pike,

1984; Peeters, Verhoeven, van Balkom, & de Moor, 2009; Whitehurst, 1993). The different interest measures assessed reading-related interests (N = 19 studies) and/or general literacy-related interests (N = 12 studies).

The ways in which interests were measured in each study were examined to determine if they assessed personal or situational interests or a combination of both. The operationally defined differences between the two types of interests described by Renninger et al. (1992) were used to determine the types of interest measures used in the studies. An assessment procedure was considered a personal interest measure if it was obtained prior to the study outcomes and the focus of assessment was one or more person-characteristics that included indices of individual child preferences, likes, favorites, and so forth (e.g., a child asking a parent to read to him or her; child spending time looking at books on his or her own). An assessment procedure was considered a situational interest measure if the focus of assessment was the likelihood that some aspect of literacy-related materials or activities would be engaging to a child (e.g., enjoys listening to stories; gets excited upon entering the children's section of the library). An assessment procedure was considered a combination of personal and situational interests if indices of both types of interests were used to measure child interests (e.g., repeatedly looks at his or her favorite books; finds new nursery rhymes or songs entertaining). The studies included 19 personal interest measures, seven situational interest measures, and a combination of both types of measures (5 studies).

Outcome Measures

The studies included phonological awareness (rhyme production, alliteration, phoneme detection, etc.), print-related (alphabet knowledge, letter-sound awareness, print concepts, etc.), reading-related (word naming, comprehension, achievement), and language (vocabulary, expressive language, receptive language) outcome measures. A number of studies used composite literacy, phonological awareness, and language outcome measures. The majority of studies that investigated the relationship between child interests and phonological awareness used a composite literacy measure. Most studies investigating print-related, reading-related, and language outcomes used subdomain measures. The particular measures and constructs for all the outcomes used in the studies are shown in Appendix D.

Method of Analysis

The zero-order correlation coefficient was used as the effect size between the interest and outcome measures. The pooled weighted average correlation between the interest and outcome measures and their 95% confidence intervals (CI) were used as the estimated sizes of effect. A 95% confidence interval that does not include zero indicates that an average effect size differs significantly from zero at the $p < .05$ level. As a general rule of thumb, an average correlation ef-

fect size between 0.10 and 0.25 is considered small, an effect size between 0.26 and 0.40 is considered medium, and an effect size greater than 0.40 is considered large. Parenthetically, these ranges translate into Cohen's *d* effect sizes of 0.20 – 0.52, 0.54 – 0.87, and larger than 0.88 respectively (Dunst, Hamby, & Trivette, 2007).

SYNTHESIS RESULTS

Appendix D includes the effect sizes for the relationships between the child interest and outcome measures in the 31 studies. The average effect size between all interest measures combined and all outcome measures combined was 0.21 (95% CI = .20 - .23). The average effect size was small but nonetheless statistically significant as evidenced by a confidence interval not including zero.

Figure 1 shows the average effect sizes and 95% confidence intervals for the relationships between the personal, situational, and combined interest measures and the study outcomes. The average effect sizes were small and ranged between 0.19 and 0.27. All the averages were statistically significant as evidenced by confidence intervals not including zero.

The relationships between the different measures of children's interests and the four different categories of study outcomes constituting the focus of investigation are shown in Table 1. The interest measures were significantly related to the measures in each of the four outcome categories with the average effect sizes ranging between 0.16 and 0.24. None of the confidence intervals included zero indicating that all the average effect sizes were statistically significant.

Each of the outcome categories except phonological awareness included large enough numbers of effect sizes to assess the differential relationship between child interests and specific types of literacy and language outcomes. The results are shown in Table 2. All of the average effect sizes except for name/age writing (which was assessed in only two studies) were statistically significant as evidenced by confidence intervals not including zero. The average effect sizes for the reading-related outcomes were small to medium, followed by the language outcomes (small effect sizes), and the print-related outcomes (small effect sizes).

In most of the studies, the interest and outcome measures were obtained when the children were the same ages. In a number of studies, the interest measures were obtained at one age and the outcome measures were obtained when the children were older (see Appendix D). Figure 2 shows the average effect sizes and 95% confidence intervals for the concurrent and predictive relationships between the child interest measures and the four categories of outcome measures. The strength of the relationships between the interest and phonological awareness, print-related, and reading-related outcomes was greater when the interest and outcome measures were obtained concurrently. The strength of the relationships with the language outcomes was much the same

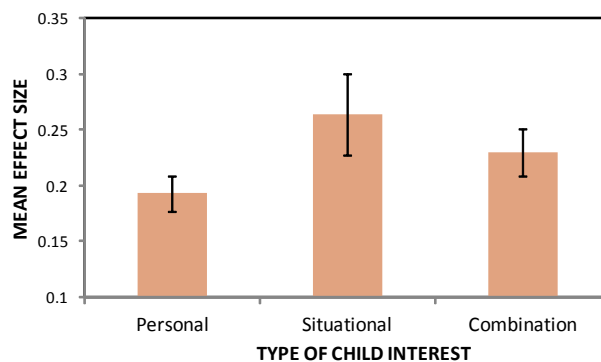


Figure 1. Average effect sizes and 95% confidence intervals (error bars) between the different types of interest measures and the study outcomes.

Table 1

Average Weighted Effect Sizes and 95% Confidence Intervals for the Relationships Between Children's Interests and the Study Outcomes

Outcomes	Number		Average Effect Size	95% Confidence Intervals
	Studies	Effect Sizes		
<i>Phonological</i>	11	30	.16	.13 – .19
<i>Print-Related</i>	16	47	.21	.19 – .23
<i>Reading</i>	13	47	.24	.22 – .26
<i>Language</i>	25	65	.22	.20 – .25

Table 2

Average Weighted Effect Sizes and 95% Confidence Intervals for the Relationships Between Children's Interests and Specific Types of Literacy and Language Outcome

	Number		Average	95%
		Effect	Effect	Confidence
Outcomes	Studies	Sizes	Size	Interval
<i>Print-Related</i>				
Alphabet Knowledge	8	11	.14	.08 – .20
Letter-Sound Awareness	8	18	.14	.10 – .18
Name/Age Writing	2	4	.01	-.10 – .12
Print Concepts	6	10	.26	.22 – .30
<i>Reading-Related</i>				
Word Recognition	7	14	.32	.28 – .35
Story Comprehension	3	12	.25	.21 – .29
Reading Achievement	7	25	.21	.17 – .25
<i>Language</i>				
Expressive	10	22	.21	.17 – .25
Receptive	18	32	.19	.16 – .23

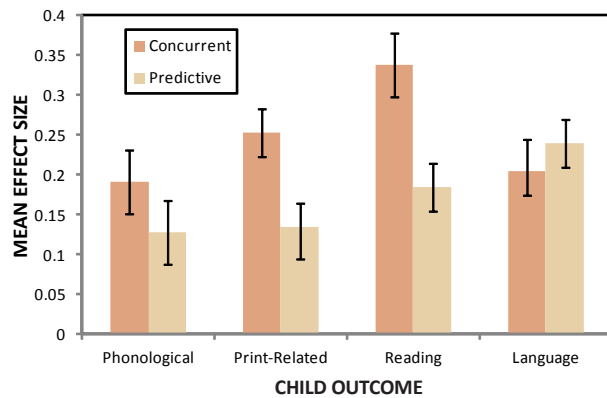


Figure 2. Average effect sizes and 95% confidence intervals for the concurrent and predictive relationships between the child interest and study outcome measures.

whether the interest and outcome measures were obtained at the same or different times. All the average effect sizes were statistically significant as evidenced by confidence intervals not including zero.

The extent to which the relationships between the interest and outcome measures were moderated by study or child variables is shown in Table 3. The results showed that the relationships between the interest and outcome measures were affected by year of publication, type of publication, interest assessor, and child condition. Studies published before 2006 had larger effect sizes compared to more recently published studies. Examination of the studies found that the interest measures generally were better operationalized in earlier studies. Peer reviewed publications had smaller effect sizes compared to non-peer reviewed research reports. Parent-completed and investigator-administered interest measures had larger effect sizes compared to child-completed measures. The effect sizes in studies of only typically developing children tended to have larger effect sizes compared to studies that included either at-risk children or children with disabilities. The fact that only two studies included children with identified disabilities makes the results from the analyses suspect.

DISCUSSION

Results from the meta-analysis described in this *CELL-reviews* indicated that variations in young children's interests were related to differences in almost every literacy and language outcome measure in the studies included in the research synthesis. Despite the fact that the sizes of effect between the interest and outcome measures were generally small, the results, taken together, demonstrate that young children's interests contribute to their literacy and language learning. The findings are consistent with assertions made by others who have argued that young children's interests are one set of factors that contribute to early literacy and language development (e.g., Deckner, 2002; Ortiz, Stowe, & Arnold, 2001; Whitehurst & Lonigan, 1998).

Table 3
Moderators of the Relationships Between the Child Interest and Outcome Measures

Moderators	Number		Average Effect Size	95% Confidence Interval
	Studies	Effect Sizes		
<i>Years of Publication</i>				
Before 2000	12	66	.27	.25 – .29
2000-2006	8	39	.23	.21 – .26
2007-2010	11	84	.14	.12 – .16
<i>Type of Publication</i>				
Peer Reviewed	24	140	.19	.17 – .20
Non-Peer Reviewed	7	49	.27	.21 – .30
<i>Focus of Interest Assessments</i>				
Reading Specific	20	87	.20	.18 – .22
Literacy-Related	13	102	.23	.21 – .25
<i>Child Age (Months)</i>				
< 48	12	61	.17	.14 – .20
48 – 60	13	65	.23	.21 – .25
> 60	11	63	.22	.20 – .23
<i>Interest Assessor</i>				
Child	3	11	.14	.07 – .20
Parent	25	160	.27	.20 – .23
Investigator	4	18	.21	.15 – .27
<i>Type of Measure</i>				
Parent Survey	23	146	.21	.19 – .22
Interview (Parent or Child)	5	25	.32	.28 – .37
Investigator Observations	4	18	.21	.15 – .27
<i>Child Condition</i>				
Typically Developing	17	118	.23	.21 – .24
Typical/At-Risk	12	67	.17	.15 – .20
Disability	2	4	.12	-.02 – .28

The fact that the different ways in which interests were measured did not generally matter in terms of the sizes of effects with the study outcomes deserves comment to place the findings in conceptual and operational context. Although interests can be conceptualized as either a person or environment factor, or as a general literacy or reading-specific construct, none of these distinctions proved to make much of a difference in terms of explaining variations in the study outcomes. This was due, in part, to the fact that in most of

the studies included in the meta-analysis, investigators rarely operationalized interests as either a person or environment factor. As a result, it was somewhat difficult to know exactly what the focus of the interest measures used in the studies was. It was for this reason that we focused our analyses on the overall influences of children's interests on the study outcomes to discern the relationship between interests and early literacy and language learning (Tables 1 and 2). One research implication from this meta-analysis is the need for better defined and operationalized interest measures in future studies in order to determine how different interest indicators are related to and influence child language and literacy skills.

Implications for Practice

The major implication for practice from this meta-analysis is incorporating children's interests into the activities (formal or informal) used as sources of early literacy and language learning opportunities. This includes both the assessment procedures used to identify children's interests and the types of activities used as interest-based learning opportunities.

There are a number of different assessment scales and procedures for identifying young children's interests (see e.g., Jetton & Alexander, 2001; Raab, 2005; Raab, Swanson, Roper, & Dunst, 2006). There are also a number of different methods and procedures for identifying everyday activities that can be used as sources of interest-based child literacy and language learning opportunities (see e.g., Chandler et al., 2008; Dunst & Shue, 2005; Horn & Jones, 2005; Shue & Dunst, 2005). Based on research and practice on everyday interest-based child learning opportunities, optimal benefits are more likely realized when there is a good match between children's interests and the activities used as sources of interest-based child learning opportunities (Dunst et al., 2001; Dunst, Trivette, & Masiello, 2011). This indicates that explicit attention should be paid to which activities provide the best opportunities for interest-based learning (Neitzel, Alexander, & Johnson, 2008). For example, for a child who enjoys listening to stories, shared reading episodes might be good activities to engage him or her in literacy and language learning opportunities. In contrast, for a child who enjoys rhymes, nursery rhymes might be an activity of choice for promoting early literacy and language learning. Regardless of the type of learning opportunities, incorporating child interests into the activities will more likely have language- and literacy-enhancing characteristics and consequences.

Nearly all the *Center for Early Literacy Learning* (www.earlyliteracylearning.org) practice guides and other assessment- and intervention-related materials (*CELLcasts*, *CELLpops*, etc.) were developed with an emphasis on the methods and procedures being interest-based. The results from the studies included in this *CELLreviews* as well as the results from other studies (Raab & Dunst, 2007) were the sources of evidence for the interest-based *CELL* practices.

The *CELL* materials should therefore prove useful to both parents and practitioners for providing young children interesting, engaging, and development-enhancing literacy and language learning opportunities.

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Appendix A
Background Characteristics of the Child Participants

Study	Number	Child Age (Months)		Gender		Ethnicity	Percent	Child Condition
		Mean	Range	Male	Female			
Almy (1949)	106	83	NR	59	47	Caucasian	100	Typical
Baroody (2007)	58	56	48-60	28	30	Caucasian	76	Typical, At-risk
						African American	14	
						Latino	10	
Baroody et al. (2007)	100	59	NR	51	49	Caucasian	69	At-Risk
						Latino	17	
						African American	9	
						American Indian	5	
Bracken & Fischel (2008)	233	52	48-59	NR	NR	Latino	43	At-Risk
						African-American	43	
						Caucasian	5	
						Other	8	
Collins (2010)	80	54	48-64	42	38	Caucasian	96	At-Risk
						African-American	4	
Curenton & Justice (2008)	45	53	37-62	27	18	Caucasian	96	Typical, At-Risk
						Native American	4	
DeBaryshe (1992, 1995) Sample 1	60	47	26-60	27	33	African American	77	Typical, At-Risk
						Caucasian	23	
DeBaryshe (1992, 1995) Sample 2	56	38	26-56	30	26	African American	66	Typical
						Caucasian	34	
Deckner et al. (2006)	55	27	27-28	26	29	Caucasian	82	Typical
						African American	16	
						Asian- American	2	
Farver et al. (2006)	122	45	39-49	57	65	Latino	100	Typical, At-Risk
Frijters et al. (2000)	95	69	63-76	53	42	Caucasian	100	Typical
Hood et al. (2008)	143	64	NR	79	64	Caucasian	NR	Typical
						Asian	NR	
						Indigenous	NR	
Laakso et al. (2004) Sample 1	82	42	NR	44	38	NR		Typical
Laakso et al. (2004) Sample 2	74	42	NR	39	35	NR		At-Risk
Lyytinen (1998)	108	14	NR	62	46	NR		Typical
Mason (1980)	38	48	NR	NR	NR	NR		Typical
Mason et al. (1992)	127	60	NR	NR	NR	Caucasian	87	Typical
						African American	12	
						Asian	1	
Meyer et al. (1990) Sample 1	274	60	NR	NR	NR	Caucasian	NR	Typical
						African American	NR	
						Hispanic	NR	

Appendix A, *continued*

Study	Number	Child Age (Months)		Gender		Ethnicity	Percent	Child Condition
		Mean	Range	Male	Female			
Meyer et al. (1990) Sample 2	264	60	NR	NR	NR	Caucasian		Typical
						African American		
						Hispanic		
Moon & Wells (1979)	20	39	36-60	NR	NR	NR		Typical, At-Risk
Payne et al. (1994)	236	54	45-65	130	106	Caucasian	43	At-Risk
						African American	47	
						Latino	8	
						Asian American	2	
Peeters et al. (2008) Sample 1	62	72	NR	33	29	NR		Typical
Peeters et al. (2008) Sample 2	40	72	NR	23	17	NR		Cerebral Palsy
Roberts et al. (2005)	72	18	NR	33	39	African American	100	Typical
Samuelsson et al.(2005); Byrne et al. (2006)	1,254	59	47-71	574	680	NR		Typical
Sonnenschein et al. (1996)	35	58	NR	NR	NR	African American	NR	Typical, At-Risk
						Caucasian	NR	
						Mixed	NR	
Torppa et al. (2007) Sample 1	90	48	48-72	40	50	Caucasian	100	Typical
Torppa et al. (2007) Sample 2	96	48	48-72	46	50	Caucasian	100	At-Risk
Van der Schuit et al. (2009)	48	54	36-60	35	13	NR		Intellectual Disabilities
Weigel et al. (2006, 2010)	85	50	NR	40	45	Caucasian	93	Typical
						Latino	2	
						Other	2	
						Asian American	1	
						Pacific Islander	1	
						Multi-ethnic	1	
Wells(1981, 1985); Wells et al. (1984)	32	60	NR	16	16	NR		Typical

NOTE. NR = Not reported.

Appendix B
Background Characteristics of the Children's Parents

Study	Age (Years)		Parent Education	Percent	Country
	Mean	Range			
Almy (1949)	NR	NR	NR		USA
Baroody (2007)			< High School	19	USA
			High School	33	
			Some College	24	
			Associates degree	10	
			Bachelor's degree	9	
			Graduate degree	5	
Baroody et al. (Baroody et al., 2007)	NR	NR	< High School	36	USA
			High School	64	
Bracken & Fischel (2008)	NR	18-44+	<High School	27	USA
			High School	36	
			Some College	27	
			Advanced	10	
Collins (2010)	NR	NR	NR		USA
Curenton & Justice (2008)	30	19-51	< High School	12	USA
			High School	53	
			Some College	16	
			College	19	
DeBaryshe (1992, 1995) Sample 1	27	20-45	< High School	18	USA
			High School	69	
			College	7	
DeBaryshe (1992, 1995) Sample 2	NR	NR	< High School	11	USA
			High School	53	
			College	18	
Deckner et al. (2006)	33	21-42	High school	25	USA
			College	75	
Farver et al. (2006)	32	20-50	< High School	NR	USA
			High School	NR	
			College	NR	
Frijters et al. (2000)	NR	NR	NR		Canada
Hood et al. (2008)	NR	NR	NR		Australia
Laasko et al. (2004) Sample 1	30	NR	< High School	NR	Finland
			High School	NR	
			Some College	NR	
			Associates	NR	
			College Graduate	NR	
Laasko et al. (2004) Sample 2		NR	< High School	NR	Finland
			High School	NR	
			Some College	NR	
			College	NR	

Appendix B, *continued*

Study	Age (Years)		Parent Education	Percent	Country
	Mean	Range			
Lyytinen (1998)		20-42	High School	5	Finland
			Some College	77	
			College	18	
Mason (1980)		NR	NR		USA
Mason et al. (1992)		NR	NR		USA
Meyer et al. (1990) Sample 1		NR	NR		USA
Meyer et al. (1990) Sample 2		NR	NR		USA
Moon & Wells (1979)		NR	NR		United Kingdom
Payne et al. (1994)	NR	NR	< High School	51	USA
			High School	64	
			Some College	46	
			College	9	
Peeters et al. (2008) Sample 1	37	23-47	NR		Netherlands
Peeters et al. (2008) Sample 2	37	25-52	NR		Netherlands
Roberts et al. (2005)	26	14-63	< High School	28.4	USA
			High School	28.4	
			>High School	43.2	
Samuelsson et al. (2005); Byrne et al. (2006)	NR	NR			Australia Scandinavia USA
Sonnenschein et al. (1996)	NR	NR	NR		USA
Torppa et al. (2007) Sample 1	NR	NR	NR		Finland
Torppa et al. (2007) Sample 2	NR	NR	NR		Finland
Van der Schuit et al. (2009)	38	NR	NR		Netherlands
Weigel et al. (2006, 2010)	34	NR	High school	7	USA
			Some College	36	
			College	25	
			Graduate	32	
Wells (1981, 1985; Wells et al. 1984)	NR	NR	NR		United Kingdom

NOTE. NR = Not Reported.

Appendix C
Methods Used to Measure Children's Interests

Study	Measure	Type of Interest	Type of Measure	Main Focus
Almy (1949)	Investigator-developed procedure	Personal	Parent Interview	Reading-related materials
	Investigator-developed procedure	Situational	Parent Interview	Literacy-related activities
	Investigator-developed procedure	Combination	Parent Interview	Reading-related activities
Baroody (2007)	Children's Interest Measure (Baroody et al., 2006)	Personal	Child Ratings	Literacy-related activities
Baroody et al. (2007)	Children's Interest Measure (Baroody et al., 2006)	Personal	Child Ratings	Literacy-related activities
Bracken & Fischel (2008)	Family Reading Survey (Whitehurst, 1993)	Combination	Parent Survey	Reading-related activities
Collins (2010)	Investigator-developed questionnaire	Personal	Parent Survey	Reading-related activities
Curenton & Justice (2008)	Literacy Related Activities Questionnaire (Bennett et al., 2002)	Personal	Parent Survey	Literacy-related activities
DeBaryshe (1992, 1995) Sample 1	Investigator-developed survey	Combination	Parent Survey	Reading-related activities
DeBaryshe (1992, 1995) Sample 2	Language, Reading and Family Survey (Whitehurst et al., 1991)	Combination	Parent Survey	Reading-related activities
Deckner et al. (2006)	Investigator-developed rating scale	Situational	Investigator Observations of Shared Reading	Reading-related activities
Farver et al. (2006)	Home Literacy Environment Questionnaire (Lonigan & Farver, 2002)	Personal	Parent Survey	Literacy-related activities
Frijters et al. (2000)	Pictorial Scale of Child Competence and Acceptance (Harter & Pike, 1984)	Personal	Child Ratings	Literacy-related activities
Hood et al. (2008)	Home Literacy Environment Questionnaire (Foy & Mann; 2003; Senachal et al., 1998)	Personal	Parent Survey	Reading-related activities
Laakso et al. (2004) Sample 1	Investigator-developed rating scale	Situational	Investigator Observations of Shared Reading	Reading-related activities
Laakso et al. (2004) Sample 2	Investigator-developed rating scale	Situational	Investigator Observations of Shared Reading	Reading-related activities
Lyytinen (1998)	Reading Habits Questionnaire	Personal	Parent Survey	Reading-related activities
	Reading Habits Questionnaire	Situational	Parent Survey	Reading-related activities
Mason (1980)	Investigator-developed survey	Situational	Parent Survey	Reading-related activities
Mason et al. (1992)	Parent Questionnaire (Mason et al. 1983)	Combination	Parent Survey	Literacy-related activities
	Parent Questionnaire (Mason et al. 1983)	Combination	Parent Survey	Reading-related activities
Meyer et al. (1990) Sample 1	Investigator-developed questionnaire	Personal	Parent Survey	Literacy-related activities
Meyer et al. (1990) Sample 2	Investigator-developed questionnaire	Personal	Parent Survey	Literacy-related activities
Moon & Wells (1979)	Investigator-developed scale	Personal	Parent Interview	Literacy-related activities
	Investigator-developed scale	Situational	Investigator ratings	Literacy-related activities
Payne et al. (1994)	Stony Brook Family Reading Survey (Whitehurst, 1992)	Personal	Parent Survey	Reading-related activities
Peeters et al. (2008) Sample 1	Investigator-developed questionnaire	Personal	Parent Survey	Reading-related activities
Peeters et al. (2008) Sample 2	Investigator-developed questionnaire	Personal	Parent Survey	Reading-related activities
Roberts et al. (2005)	Investigator-developed questionnaire	Situational	Parent Interview	Reading-related activities
Samuelsson et al. (2005), Byrne et al. (2006)	Home Literacy Environment Questionnaire (Griffin & Morrison, 1997)	Combination	Parent Survey	Reading-related activities
Sonnenschein et al. (1996)	Investigator-developed scale	Situational	Parent Interview	Reading-related activities
Torppa et al. (2007) Sample 1	Investigator-developed scale	Personal	Parent Survey	Literacy-related activities

Appendix C, *continued*

Study	Measure	Type of Interest	Type of Measure	Main Focus
Torppa et al. (2007) Sample 2	Investigator-developed scale	Personal	Parent Survey	Literacy-related activities
Van der Schuit et al. (2009)	Home Literacy Environment Questionnaire (Peeters et al. 2009)	Personal	Parent Survey	Reading-related activities
Weigel et al. (2006, 2010)	Investigator developed parental literacy personal habits questionnaire	Personal	Parent Survey	Reading-related activities
Wells (1981, 1985; Wells et al., 1984)	Investigator-developed scale	Situational	Parent Interview	Literacy-related activities

Appendix D
Effect Sizes for the Relationship Between the Child Interest Measures and Study Outcomes

Study	Interest Measure		Study Outcomes		Child Age (Months)	Effect Size (r)
	Type of Child Interest	Child Age (Months)	Construct	Outcome Measure		
Almy (1949)	Personal	83	Reading	Reading Achievement	83	.17
	Situational	83	Reading	Reading Achievement	83	.26
	Combination	83	Reading	Reading Achievement	83	.26
Baroody (2007)	Personal	56	Phonological Awareness	Rhyme Detection	56	.09
		56	Print-Related	Name/Age Writing	56	.02
		56	Print-Related	Letter Naming	56	.27
		56	Print-Related	Letter-Word Awareness	56	.28
		56	Language	Expressive Language	56	-.08
		56	Language	Receptive Vocabulary	56	.02
Baroody et al. (2007)	Personal	59	Print-Related	Alphabet Knowledge	59	.31
		59	Language	Receptive Vocabulary	59	.03
Bracken & Fischel (2008)	Combination	52	Literacy	Literacy Composite	52	.17
		52	Print-Related	Alphabet Knowledge	52	.20
		52	Print-Related	Letter-Word Awareness	52	.16
		52	Print-Related	Print Concepts	52	.17
		52	Language	Receptive Vocabulary	52	.23
Collins (2010)	Personal	54	Language	Receptive Vocabulary	54	.03
		54	Language	Receptive Vocabulary	56	.21
		54	Reading	Word Naming	54	.42
		54	Language	Expressive Language	56	.29
Curenton & Justice (2008)	Personal	53	Print-Related	Alphabet Knowledge	53	.21
		53	Print-Related	Print Concepts (conventions)	53	.30
		53	Print-Related	Print Concepts (symbols)	53	.18
DeBaryshe (1992, 1995) Sample 1	Combination	47	Language	Receptive/Expressive	47	.26
DeBaryshe (1992, 1995) Sample 2	Combination	38	Language	Receptive/Expressive	38	.33
Deckner et al. (2006)	Situational	27	Print-Related	Alphabet Knowledge	42	.34
		27	Print-Related	Print Concepts	42	.19
		27	Language	Expressive Language	30	.40
		27	Language	Expressive Language	42	.27
		27	Language	Receptive Vocabulary	30	.04
		27	Language	Receptive Vocabulary	42	.16
Farver et al. (2006)	Personal	45	Language	Receptive Vocabulary	45	.38
Frijters et al. (2000)	Situational	69	Phonological Awareness	Phonological Awareness Composite	69	.09
		69	Print-Related	Letter-Sound Awareness	69	.24
		69	Language	Receptive Vocabulary	69	.07
Hood et al. (2008)	Personal	64	Phonological Awareness	Rhyme Detection/ Alliteration	64	.04
		64	Phonological Awareness	Rhyme Detection/ Alliteration	71	-.01
		64	Phonological Awareness	Rhyme Detection/ Alliteration	84	.11

Appendix D, *continued*

Study	Interest Measure		Study Outcomes		Child Age (Months)	Effect Size (r)
	Type of Child Interest	Child Age (Months)	Construct	Outcome Measure		
Hood et al. (2008), <i>continued</i>	Personal	64	Print-Related	Letter-Word Awareness	64	.06
		64	Print-Related	Letter-Word Awareness	71	-.03
		64	Print-Related	Letter-Word Awareness	84	.00
		64	Print-Related	Alphabet Knowledge	71	-.07
		64	Print-Related	Alphabet Knowledge	84	-.02
		64	Reading	Word Recognition	71	-.09
		64	Reading	Word Recognition	84	-.02
		64	Language	Receptive Vocabulary	71	.13
Laakso et al. (2004) Sample 1	Situational	14	Print-Related	Alphabet Knowledge	42	.02
		24	Print-Related	Alphabet Knowledge	42	.34
		14	Language	Expressive/Receptive	42	.28
		24	Language	Expressive/Receptive	42	.21
Laakso et al. (2004) Sample 2	Situational	14	Print-Related	Alphabet Knowledge	42	.04
		24	Print-Related	Alphabet Knowledge	42	-.03
		14	Language	Expressive/Receptive	42	.18
		24	Language	Expressive/Receptive	42	.15
Lyytinen et al. (1998)	Personal	24	Phonological Awareness	Phoneme Detection	24	.09
		24	Language	Expressive (Vocabulary)	24	.13
		24	Language	Expressive (MLU)	24	.10
	Situational	24	Phonological Awareness	Phoneme Detection	24	.16
		24	Language	Expressive (Vocabulary)	24	.20
		24	Language	Expressive (MLU)	24	.04
Mason (1980)	Situational	48	Reading	Word Recognition	48	.25
		48	Reading	Word Recognition	56	.18
Mason et al. (1992)	Personal	60	Language	Expressive/Receptive	60	.16
		60	Reading	Reading Achievement	60	.15
		60	Reading	Reading Achievement	69	.04
		60	Reading	Reading Achievement	72	.17
		60	Reading	Story Comprehension	72	.05
		60	Reading	Reading Achievement	81	-.02
		60	Reading	Story Comprehension	81	.17
		60	Reading	Reading Achievement	93	-.09
		60	Reading	Story Comprehension	93	.14
		60	Reading	Story Comprehension	105	.07
	Combination	60	Language	Expressive/Receptive	60	.24
		60	Reading	Reading Achievement	60	.40
		60	Reading	Reading Achievement	69	.38
		60	Reading	Reading Achievement	72	.43
		60	Reading	Story Comprehension	72	.04
		60	Reading	Reading Achievement	81	.30

Appendix D, *continued*

Study	Interest Measure		Study Outcomes		Child Age (Months)	Effect Size (r)
	Type of Child Interest	Child Age (Months)	Construct	Outcome Measure		
Mason et al. (1992), <i>continued</i>	Combination	60	Reading	Story Comprehension	81	.12
		60	Reading	Reading Achievement	93	.29
		60	Reading	Story Comprehension	93	.18
		60	Reading	Story Comprehension	105	.42
Meyer et al. (1990) Sample 1	Personal	69	Print-Related	Letter/Word Naming	69	.44
		69	Print-Related	Letter Sound Awareness	69	.22
		69	Reading	Word Recognition	69	.38
		69	Reading	Story Comprehension	69	.41
		81	Print-Related	Letter/Word Naming	81	.31
		81	Reading	Story Comprehension	81	.32
Meyer et al. (1990) Sample 2	Personal	69	Print-Related	Letter-Sound Awareness	69	.27
		69	Print-Related	Letter/Word Naming	69	.36
		69	Reading	Word Recognition	69	.42
		69	Reading	Story Comprehension	69	.28
		81	Print-Related	Letter/Word Naming	81	.22
		81	Reading	Story Comprehension	81	.21
Moon & Wells (1979)	Personal	60	Literacy	Literacy Composite	60	.27
		60	Language	Receptive Vocabulary	84	.20
		60	Reading	Word Recognition	84	.38
		60	Reading	Reading Achievement	84	.28
	Situational	39	Literacy	Literacy Composite	60	.43
		39	Language	Receptive Vocabulary	84	.40
		39	Reading	Word Recognition	84	.33
		39	Reading	Reading Achievement	84	.40
Payne et al. (1994)	Personal	54	Language	Receptive/Expressive	55	.22
		54	Language	Receptive Vocabulary	55	.21
		54	Language	Expressive Language	55	.18
Peeters et al. (2008) Sample 1	Personal	72	Language	Receptive Vocabulary	72	.03
Peeters et al. (2008) Sample 2	Personal	72	Language	Receptive Vocabulary	72	.04
Roberts et al. (2005)	Situational	30	Language	Receptive Vocabulary	36	.00
		30	Language	Receptive Vocabulary	60	.24
		30	Language	Receptive Language	48	.34
		30	Language	Receptive Language	60	.20
		30	Language	Expressive Language	48	.44
		30	Language	Expressive Language	60	.36
		30	Reading	Reading Achievement	48	.38
		30	Reading	Reading Achievement	60	.08
Samuelsson et al. (2005), Byrne et al. (2006)	Combination	59	Phonological Awareness	Phonological Awareness Composite	59	.22
		59	Print-Related	Print Concepts	59	.26
		59	Language	Expressive/Receptive	59	.29

Appendix D, *continued*

Study	Interest Measure		Study Outcomes		Child Age (Months)	Effect Size (r)
	Type of Child Interest	Child Age (Months)	Construct	Outcome Measure		
Sonnenschein et al. (1996), <i>continued</i>	Situational	58	Phonological Awareness	Phonological Awareness Composite	58	.36
		58	Phonological Awareness	Phonological Awareness Composite	70	.29
		58	Print-Related	Print Concepts	58	.51
		58	Print-Related	Print Concepts	70	.46
		58	Reading	Reading Achievement	58	.14
		58	Reading	Reading Achievement	70	.48
Torppa et al. (2007) Sample 1	Personal	24	Phonological Awareness	Phonological Awareness Composite	54	.02
		24	Phonological Awareness	Phonological Awareness Composite	66	.00
		24	Phonological Awareness	Phonological Awareness Composite	78	.00
		24	Print-Related	Letter-Sound Awareness	54	-.09
		24	Print-Related	Letter-Sound Awareness	66	-.02
		24	Language	Expressive Language	42	.16
		24	Language	Expressive Language	66	.15
		24	Language	Receptive Vocabulary	42	.09
		24	Language	Receptive Vocabulary	60	.20
		24	Reading	Reading Achievement	78	-.12
		48	Phonological Awareness	Phonological Awareness Composite	54	.08
		48	Phonological Awareness	Phonological Awareness Composite	66	.10
		48	Phonological Awareness	Phonological Awareness Composite	78	.25
		48	Print-Related	Letter-Sound Awareness	54	.13
		48	Print-Related	Letter-Sound Awareness	66	.14
		48	Language	Expressive Language	66	.27
		48	Language	Receptive Vocabulary	60	.36
		48	Reading	Reading Achievement	78	.16
		60	Phonological Awareness	Phonological Awareness Composite	66	.35
		60	Phonological Awareness	Phonological Awareness Composite	78	.40
		60	Print-Related	Letter-Sound Awareness	66	.37
		60	Language	Expressive Language	66	.49
		60	Language	Receptive Vocabulary	60	.44
		60	Reading	Reading Achievement	78	.35
Torppa et al. (2007) Sample 2	Personal	24	Phonological Awareness	Phonological Awareness Composite	54	.13
		24	Phonological Awareness	Phonological Awareness Composite	66	-.02
		24	Phonological Awareness	Phonological Awareness Composite	78	.13
		24	Print-Related	Letter-Sound Awareness	54	.13
		24	Print-Related	Letter-Sound Awareness	66	.13
		24	Language	Expressive Language	42	.18
		24	Language	Expressive Language	66	.11
		24	Language	Receptive Vocabulary	42	.09
		24	Language	Receptive Vocabulary	60	.11
		24	Reading	Reading Achievement	78	.13

Appendix D, *continued*

Study	Interest Measure		Study Outcomes		Child Age (Months)	Effect Size (r)
	Type of Child Interest	Child Age (Months)	Construct	Outcome Measure		
Torppa et al. (2007) Sample 2, <i>continued</i>	Personal	48	Phonological Awareness	Phonological Awareness Composite	54	.23
		48	Phonological Awareness	Phonological Awareness Composite	66	-.03
		48	Phonological Awareness	Phonological Awareness Composite	78	.04
		48	Print-Related	Letter Sound Awareness	54	.06
		48	Print-Related	Letter Sound Awareness	66	.09
		48	Language	Expressive Language	66	.16
		48	Language	Receptive Vocabulary	60	.20
		48	Reading	Reading Achievement	78	.08
		60	Phonological Awareness	Phonological Awareness Composite	66	-.01
		60	Phonological Awareness	Phonological Awareness Composite	78	.04
		60	Print-Related	Letter Sound Awareness	66	.07
		60	Language	Expressive Language	66	.16
		60	Language	Receptive Vocabulary	60	.12
		60	Reading	Reading Achievement	78	.02
Van der Schuit et al. (2009)	Personal	54	Language	Receptive Language	54	.03
		54	Language	Expressive Language	54	.18
		54	Reading	Word Naming	54	.22
Weigel et al. (2006, 2010)	Personal	50	Print-Related	Print Concepts	50	.27
		50	Print-Related	Name/Age Writing	50	.12
		50	Language	Expressive Language	50	.25
		50	Language	Receptive Language	50	.18
		50	Print-Related	Print Concepts	62	.29
		50	Print-Related	Name/Age Writing	62	.05
		62	Print-Related	Print Concepts	62	.25
		62	Print-Related	Name/Age Writing	62	-.14
		62	Language	Expressive Language	62	.07
		62	Language	Receptive Language	62	-.06
Wells (1981, 1984, 1985)	Situational	42	Phonological Awareness	Phonological Awareness Composite	60	.56
		42	Language	Receptive Vocabulary	60	.43
		42	Language	Receptive Language	60	.60
		42	Language	Expressive/Receptive	84	.44