‘Talk, talk and more talk': parental perceptions of young children's information practices related to their hobbies and interests

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Abstract

Introduction. This article explores parental perceptions of young children's everyday life information practices related to their hobbies and interests.

Method. Thirty-one parents of children between the ages of four and eight years old completed a survey about their children's hobbies and interests. Questions were related to the nature of the children’s activities and the ways in which children seek, use, and share information related to their hobbies and interests.

Analysis. Survey responses were analysed for common themes in information seeking, information use and information sharing. Information practices of children with intense interests were compared with information practices of children with more typical hobbies and interests.

Results. Findings indicate that young children exhibit a heavy reliance on interpersonal interactions for information seeking and information sharing, while information use is more likely to be an individual activity. Children with intense interests did not engage in information practices of a different nature from those with more typical hobbies and interests.

Conclusion. The findings of this study indicate that children as young as four years of age engage in observable information practices related to their hobbies and interests. Additional research is needed to better understand young children's everyday life information practices.

Introduction

Children grow and develop in many ways mentally, physically, and emotionally over the course of their lives. Many of these areas of development are related to the ability to engage with and understand information, including cognitive abilities, language development, and literacy (Byrnes and Bernacki, 2013; Spink and Heinstrom, 2011). While information behaviour itself has been postulated to emerge in early childhood, at some point between the ages of three and four years old (Spink and Heinstrom, 2011), research on children’s information seeking and use has almost solely focused
on children nine years of age and older (Case, 2007; Shenton, 2004; Spink and Heinstrom, 2011). This focus on children in middle childhood and adolescence can be seen in research exploring the ways in which children engage with information in both classroom and everyday life settings. McKechnie has highlighted the importance of investigating the ways in which information seeking and use emerges in young children, stating:

*As human thought and behavior changes and matures through life, it is reasonable to assume that human information behavior also develops as one proceeds through childhood and adolescence into adulthood. Through examining emerging information behaviors in children... it may be possible to uncover developmental information behaviors which underlie and set the foundation for more mature adult information behavior.* (McKechnie, 2005, p. 375-376)

**Problem statement and significance**

The comparatively little attention paid to children in early childhood is a major gap in the literature on children's information seeking and use. Because of the many ways in which children are developmentally different from adolescents and adults, it is important to understand the information practices of children as a group distinct from these older populations. The value in examining the ways in which information practices emerge and develop cannot be overstated. By gaining an understanding of the ways in which children seek and use information in order to satisfy their own curiosities, parents, librarians, teachers, and others who work with children will be better able to assist them in their pursuit of information. This applies not only in relation to children’s individual interests but also in more formal learning environments such as the classroom. The research reported here will begin to address this gap by investigating the information practices of children between the ages of four and eight years old related to their hobbies and interests, as reported by their parents.

**Terminology**

In this article, the phrase *engagement with information* is used to refer to *'the interactions between people, the various forms of data, information, knowledge, and wisdom that fall under the rubric of information, and the diverse contexts in which they interact'* (Todd, 2003, p.27, emphasis in original). While Todd’s definition is given to the phrase information behaviour, researchers in library and information science are increasingly distinguishing between different approaches to the study of this interaction by using diverse terms such as *information behaviour*, *information practices*, *information activities*, and *information habits*. The phrase *engagement with information* is used here as an all-encompassing term that includes research that uses any of these or other terms related to the ways in which children and information interact, while the term *information behaviour* is used when referencing prior research that has used this term. As this study takes a practice-based approach
to studying children’s engagement with information, *information practices* is used in reference to the context of this study.

**Literature review**

**Information needs and seeking**

Abbas and Agosto (2013) provide a thorough review of the literature to date on children and young people’s information needs and seeking in everyday life contexts. A small selection of the literature included in that review is briefly addressed here.

Previous research indicates that these populations have a variety of information needs that may or may not prompt information seeking. These information needs may be related to their schooling, while others come about in relation to their everyday lives (Agosto and Hughes-Hassell, 2005; Meyers, Fisher and Marcoux, 2009). Information needs may also be self-generated, that is, prompted by the child themselves, or imposed by another person such as a teacher or parent (Gross, 2006). Children’s information needs may be related to a variety of aspects of everyday life, including social relationships, consumer information, and hobbies, sports, and other personal interests (Agosto and Hughes-Hassell, 2005; Meyers et al., 2009). Additionally, children and young people may seek information to help them cope with problems they encounter as they go about their daily lives (Lu, 2010; Meyers et al., 2009). Researchers have also noted that children and young people may seek both objective and subjective information (Shenton and Dixon, 2003a) in order to meet their information needs.

It has been demonstrated in the literature that even at young ages, children make use of a variety of information sources in meeting these diverse information needs. Young children rely heavily on other people, particularly their parents, as sources of information in their everyday lives (Shenton and Dixon, 2003c). Electronic sources of information are also used by young children in seeking information. For example, the single child observed in Agarwal’s (2014) case study used touch devices to search for information as early as three years of age. Young children have also reported using computers, television, and movies to find information related to subjects of interest (Havigerová and Haviger, 2014). Other non-electronic sources of information used by young children include books, magazines, and the natural environment (Havigerová and Haviger, 2014). In the school library setting, visual images on book covers were an important feature aiding young children in the selection of books to meet their needs (Cooper, 2002). These studies indicate that young children are able to make use of information sources that are suited to their skills, abilities, and needs.

**Differences in the information behaviour of children and adults**

Several examples of the ways in which children’s engagement with information is different from that of adolescents and adults can be found in the literature. These
differences can be seen in the ways in which children understand the concept of information itself. For example, Shenton and Dixon (2003b) explored children's understanding of the concept of information by interviewing children between the ages of four and eighteen years old, and found that children around the age of six years old were able to express an understanding of the concept, while younger children typically could not express an understanding verbally. Later research using a questionnaire to investigate the ways in which children eight to ten years of age understand this concept found that children's understandings reflected an understanding of information as consisting of facts about a topic, meeting a need, requiring action in order to be accessible, being put to some use, or found in particular sources (Shenton, Nesset, and Hayter, 2008).

While Shenton et al. (2008) do not fully explicate the ways in which children's definitions changed as a factor of age (perhaps because all of the children were in the same school year), Shenton and Dixon (2003b) note that the definitions provided by the children in this study increased in complexity as children aged. Not only do children's explicit definitions of information change as they get older, but so too do the ways in which they categorise information. For instance, Cooper (2004) found that how children, in kindergarten to grade four, categorise information was initially based on personal experience, gradually becoming more abstract, socioculturally based, and consistent with adult categorisations as the children got older. An example of this is seen in kindergarten children's blending of fiction and non-fiction categories, which is replaced by fourth grade with typical distinctions between fiction and non-fiction (Cooper, 2004).

The ways in which children engage in information seeking also changes as children grow older. For example, Spink, Danby, Mallan and Butler (2010) examined the Web searching behaviour of four- and five-year old children and found that these children engaged in activities similar to those of adults such as generating search queries, browsing, and making relevance judgments, but these activities were different in ways related to children's limited abilities and literacy skills. Bilal and Kirby (2002) compared the Web searching behaviour of children in the seventh grade with those of adults in graduate school and found that adults were more successful at Web searching, with children engaging more in browsing behaviour than adults. Additionally, the adults in Bilal and Kirby's (2002) study exhibited more focus and completed the study in less time than the children. Cooper (2002) noted that children engaged in browsing behaviour more often than searching when using electronic CD-ROMs as compared to adults, and children were better able to search with concrete rather than abstract representations of information. As these studies highlight, children's information seeking and use can be quite different from that of adults and even adolescents, meriting study of children as a distinct population.

**Information and information practices**

Few models of children's engagement with information have been developed, and
those that have been put forward focus on action-oriented information seeking in response to specific information needs such as a class assignment (e.g., Shenton and Hay-Gibson, 2011a, 2011b). This is despite the fact that both passive and active information seeking have been identified as important elements of the everyday life information practices of adults (Erdelez, 1999; McKenzie, 2003; Wilson, 1999). In addition, many models of information behaviour focus primarily on information seeking (e.g., Bates, 1989; Krikelas, 1983; Kuhlthau, 2004). However, engagement with information encompasses much more than simply seeking information. Therefore, the information practices framework (Savolainen, 2008) is used to guide considerations of children's engagement with information in this study. This framework emphasises the social and other contextual factors in which engagement with information occurs (Savolainen, 2007, p.121), rather than viewing this engagement from a purely cognitive perspective.

Information practices include information seeking, information use, and information sharing (Savolainen, 2008; see Figure 1). Information seeking practices can take many forms, including active seeking, active scanning, non-directed monitoring, and information seeking by proxy (McKenzie, 2003). Information sharing involves 'giving information to others to be shared' (Savolainen, 2008, p.183), while information use involves the ways in which people 'wield information to orient their action' (Savolainen, 2008, p.149). Information practices are comprised of information actions, which are specific 'bodily' and 'mental and discursive activities' that individuals engage in in order to seek, use, or share information (Savolainen, 2008, p.64). Individuals’ life experiences and stock of knowledge influence their information practices, as do contextual factors such as interest in and significance of the project at hand and time available for these pursuits (Savolainen, 2008).
In addition to the information practices framework, a conceptualisation of information as 'all instances where people interact with their environment in any such way that leaves some impression on them – that is, adds or changes their knowledge store' (Bates, 2010, p. 2381) guided this study. These broad conceptualisations of what constitutes information and information practices are being used quite purposefully. An understanding and appreciation of the ways in which children engage in the learning process that are different from the ways employed by adults is necessary in the study of children's information practices. Since research on information practices has generally focused on adult populations, studies of children's information practices should not unduly restrict conceptualisations of these practices to those exhibited by adults. To do so would be to indicate a failure to appreciate the important differences between children and adults.

**Serious leisure framework**

Stebbins's (2007) serious leisure framework has been used to study individuals' engagement in leisure activities, defined as 'uncoerced activity undertaken during free time' (Stebbins, 2009, p. 610). Leisure activities have been identified as an area of interest within information science as they can often be heavily information-dependent, and scholars have advocated for the use of the serious leisure perspective in examining information seeking and uses that emerge within this context (Hartel, 2010a; Stebbins, 2009). The serious leisure perspective categorises free-time
activities into casual leisure, ‘immediately, intrinsically rewarding, relatively short-lived pleasurable’ activities; project-based leisure, ‘short term, reasonably complicated, one-shot or occasional, though infrequent, creative undertaking’; and serious leisure, ‘the systematic pursuit of an amateur, hobbyist, or volunteer core activity’ (Stebbins, 2009, p.618).

Casual leisure and serious leisure are of primary importance to this study. Researchers have used the serious leisure perspective to study the information behaviour of investors (O’Connor, 2013), backpackers (Chang, 2009), food bloggers (Cox and Blake, 2011), photographers (Cox, 2013), music record collectors (Margree, MacFarlane, Price, and Robinson, 2014) and gourmet cooks (Hartel, 2010b). In each of these studies, engagement with information was viewed through the lens of the serious leisure framework in conjunction with theories of information behaviour, such as Savolainen’s (1995) model of everyday life information seeking or Hjørland and Albrechtsen’s (1995) domain analysis. No research has been conducted to date using the serious leisure framework to examine children’s information seeking and use.

**Children’s hobbies and intense interests**

As previously mentioned, everyday life information seeking research has indicated that older children and adolescents engage in information seeking in response to their own personal interests (Agosto and Hughes-Hassell, 2005; Meyers et al., 2009; Shenton and Dixon, 2003a). These interests can include sports, hobbies, or other leisure activities (Agosto and Hughes-Hassell, 2005; Meyers et al., 2009). Children’s hobbies and interests have been identified as important areas of study in disciplines outside of library and information science, including psychology (McHale, Crouter and Tucker, 2001) and recreation and leisure studies (Kleiber, 1999), as the development of such interests are a normal part of child development and contribute to happiness (Chaplin, 2009) and adjustment (McHale et al., 2001). Hobbies and interests have been identified as an important area of study for researchers of information seeking and use (Hartel, 2010a; Stebbins, 2009), but little research has explored young children’s information practices in relation to their hobbies and interests. By exploring this area of everyday life information practices, our understanding of the ways in which children begin engaging with information in response to self-generated information needs can be enhanced.

Children's free-time activities are considered to be a normal part of child development. Research in psychology has also examined the development of intense interests in children, in which children ‘become fascinated with particular categories of objects or activities’ and ‘display a passionate, sometimes bordering on obsessive, attraction to items in their interest category’ (DeLoache, Simcock and Macari, 2007, p. 1579). DeLoache et al. have developed four criteria that must be met in order for an interest to be considered intense. These criteria require that the interest be ‘relatively long lasting’, ‘shown in several different contexts’, ‘directed toward multiple
objects/activities within the category of interest' and 'independently noticed by people outside the immediate family' (DeLoache et al., 2007, p. 1579). Based on the descriptions of intense interests provided by DeLoache et al. and Johnson, Alexander, Spencer, Leibham and Neitzel (2004), it appears that intense interests share many similarities with hobbies as described in the serious leisure perspective. These include active efforts to learn more about the topic of interest and sustained engagement with activities centering on that topic. DeLoache et al. (2007) have posited that children who display intense interests in young childhood may be more likely to engage in serious leisure activities as adults.

An example of the potential for intense interests to be rich in information practices can be seen in the following description of a child’s intense interest:

A 4-year-old boy’s interest in dinosaurs began when he was 18 months of age. He constantly looked through books (fiction and nonfiction) about dinosaurs, identifying and comparing them. He peppered his parents with detailed questions about dinosaurs—how they lived, what they ate, how they hunted, and so on. He spent hours playing with hundreds of plastic dinosaur figurines, organizing them into elaborate scenes. He also drew countless pictures of the different types of dinosaurs. The boy’s mother was supportive of his interest and learned a lot about dinosaurs herself. Twice the whole family drove 120 miles to visit the Natural History Museum in Washington to see and learn more about dinosaurs. (DeLoache et al., 2007, p. 1582)

Intense interests appear to be just that, hobbies or interests that are intense or extreme in their manifestation. The description above of a child’s intense interest in dinosaurs includes several examples of information seeking, including the use of books, asking questions of others, and visiting a museum, as well as the use of information in activities such as art and play. However, the extent to which information seeking and other information practices related to intense interests are different from those related to hobbies is unknown.

**Research questions**

Previous research has demonstrated that children in middle childhood and adolescence engage in information seeking and use related to their personal interests, but the extent to which children in early childhood engage in similar information practices has been relatively unexamined. This research study explores parents’ perceptions of the information practices of their young children related to their hobbies and interests. Specifically, the study seeks to answer the following questions related to children’s information practices:

1. In what ways, if any, do parents perceive that their children seek information related to the child’s hobbies and interests?
2. In what ways, if any, do parents perceive that their children use information related to their hobbies and interests?
3. In what ways, if any, do parents perceive that their children share information related to their hobbies and interests?
4. In what ways, if any, do parental perceptions of the information practices of children with intense interests differ from those of children who engage in more typical hobbies and interests?

**Method**

**Participants**

The participants of this study were parents and caregivers of children between the ages of four and eight years of age. Parents and caregivers, rather than the children themselves, were selected as participants due to the exploratory nature of this study. Parents and other adults who play central roles in the lives of children have been used in previous research on children's information behaviour (e.g., McKechnie, 2000; Walter, 1994), as well as research on children's intense interests (e.g., DeLoache et al., 2007). Parental reports of children's actions can provide information on behaviour that is not easily observable by researchers, and also help to reduce the effects of researcher observation (Bornstein, 2014). Additionally, the use of parental reports has the advantage of being based on observations of children that have taken place over an extended period of time and in a variety of situations and contexts (Bornstein, 2014). Parents may be well-positioned to report on their children's information practices as they are often directly involved as mediators of information seeking (Booth, 2006; Gross, 2006) or as sources of information themselves (Shenton and Dixon, 2003c). Additionally, young children may rely on their parents to help them overcome intellectual, physical, and administrative barriers to accessing information (Harris and McKenzie, 2004).

Participants were recruited through an email sent by a local daycare centre administrator on behalf of the researcher to parents of children attending the centre. Additionally, an invitation to participate in the survey was posted on the researcher's personal Facebook profile and shared using a snowball sampling method. Responses were collected from April to October 2014 from participants in Canada and the United States of America.

**Procedure**

Parents were asked to complete an online survey about their children's hobbies and interests and other related activities using Qualtrics survey software. Before the survey was disseminated, a small group of individuals pilot-tested the survey questions and minor revisions were made. Approval was obtained from the researcher's institutional review board. When beginning the survey, participants were first shown a message explaining the purpose of the research study. Participants indicated their consent to participate by ticking a box on this first screen before being shown the survey questions. The survey included questions that focused on three main areas of interest: basic demographic information about the child and his or her
family; the child's current hobbies and interests, including the criteria for intense interests as outlined by DeLoache et al. (2007); and the ways in which parents perceive their children seeking, using, and sharing information related to their hobbies and interests (see Appendix for a full list of survey questions). Definitions of information seeking, use, and sharing were not provided in order to elicit responses reflective of parents' understandings of these concepts and the ways in which these activities might be evident in their children's lives. At the end of the survey, participants were shown a message thanking them for their participation.

Data analysis

Qualitative methods have been suggested as the best way to examine engagement with information in everyday life settings (Savolainen, 2005). In order to address the research questions outlined above, several stages of data analysis were used. First, parents' responses to the survey questions concerned with the ways in which their children seek, use, and share information were analysed using open and axial coding (Glaser and Strauss, 1967). Secondly, parents' responses to the survey questions regarding their children's hobbies and interests were analysed using the intense interest criteria outlined by DeLoache et al. (2007) in order to determine the existence of these interests in the children represented by the survey responses. Finally, the described information practices of children with intense interests were then compared with the described information practices of children with more typical hobbies and interests to determine if differences between these two groups of children exist.

Findings

Participants

Thirty-one parents and caregivers of children between the ages of four and eight years old completed the study, including twenty-seven mothers, two step-mothers, one aunt, and one father. Twenty-seven of the participants identified as being white, one participant identified as African American, one participant identified as Asian, one participant self-identified as mixed black-and-white, and one participant self-identified as White/Asian. Family income levels ranged from under $20,000 per year to over $150,000 per year, with a modal income level of $50,000 - $69,999. The children included seven four-year-olds, four five-year-olds, seven six-year-olds, four seven-year-olds, eight eight-year-olds, with one participant preferring not to provide the age of the child; twenty-one of the children were female and nine were male, with one participant preferring not to provide the gender of the child.

Information seeking

Twenty-eight parents described ways in which their children find new information related to their hobbies and interests. These included interpersonal interactions, use of documents and media sources, visits to various institutions, and sources internal to
the child. Table 1 lists the specific reported ways of finding information within these categories, with examples drawn from the survey responses. Parents were able to describe as many ways of seeking information as they wanted; therefore, the column showing the total number of participants reporting ways of finding information does not add up to the total number of participants. On average, parents described two different ways in which their children find new information.

<table>
<thead>
<tr>
<th>Ways of seeking information</th>
<th>No. of participants</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interpersonal interactions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asking questions of others</td>
<td>13</td>
<td>‘asking questions’</td>
</tr>
<tr>
<td>Talking with friends</td>
<td>6</td>
<td>‘talking to his friends’</td>
</tr>
<tr>
<td>Observing others’ activities</td>
<td>3</td>
<td>‘observe other kids playing’</td>
</tr>
<tr>
<td>Engaging with siblings’ activities</td>
<td>2</td>
<td>‘his brother’s activities’</td>
</tr>
<tr>
<td>Talking with family members</td>
<td>1</td>
<td>‘usually she will hear about new news or information through… family’</td>
</tr>
<tr>
<td>Talking with peers at school</td>
<td>1</td>
<td>‘she also gets a some new information from peers at school who talk about the same topics’</td>
</tr>
<tr>
<td>Talking with teachers</td>
<td>1</td>
<td>‘talks to… teachers’</td>
</tr>
<tr>
<td><strong>Documents and media sources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Books</td>
<td>13</td>
<td>‘she gets all of her information almost entirely through books’</td>
</tr>
<tr>
<td>Internet</td>
<td>13</td>
<td>‘searches on the internet’</td>
</tr>
<tr>
<td>Television</td>
<td>8</td>
<td>‘TV shows like JR Vets and Wild Krats’</td>
</tr>
<tr>
<td>Instruction manuals</td>
<td>1</td>
<td>‘he likes to look at… instructions for his Transformers to find out how to transform them’</td>
</tr>
<tr>
<td><strong>Internal sources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Imagination</td>
<td>3</td>
<td>‘she relies heavily on her imagination’</td>
</tr>
<tr>
<td>Trying new things</td>
<td>1</td>
<td>‘trying new things’</td>
</tr>
<tr>
<td><strong>Institutions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library</td>
<td>3</td>
<td>‘we go to the library often’</td>
</tr>
<tr>
<td>School</td>
<td>2</td>
<td>‘attending school exposes her’</td>
</tr>
<tr>
<td>Art gallery</td>
<td>1</td>
<td>‘went to an art gallery’</td>
</tr>
<tr>
<td>Humane society</td>
<td>1</td>
<td>‘we go to the Humane society once a week’</td>
</tr>
</tbody>
</table>

Table 1: Reported ways of seeking information

There were no apparent age differences in the ways in which parents described their children engaging in information seeking across the four categories shown in Table 1. However, only parents of four- and five-year-old children described observing others’ activities as a way of seeking information. Also, parents of children between the ages of six and eight years old were more likely to describe their child using the internet to find information than parents of four- and five-year-old children.
Eleven parents noted ways in which they help their children find new information, with parents of four- and five-year-old children being more likely to describe assisting their children in information seeking than parents of older children. Parents described facilitating their children’s access to information online by conducting searches for them (for example, one parent stated ‘she will have me Google animals’); helping them conduct searches themselves (another parent stated ‘she only needs my assistance if she is Googling items’); by visiting websites with their children (such as one parent who stated ‘we go to University games from the web site that we look at together to see when the lacrosse and basketball teams are playing’); and, in one case, ‘opening up her account on Netflix’. Parents also described purchasing information sources for their children, including books and apps, and helping them in accessing these sources by reading to them. In addition, parents took their children to institutions where the children were able to engage in information seeking, including the library, the humane society, and the art gallery.

Only one of the parents described how she and her spouse attempt to restrict or otherwise control their child’s access to information. The mother of a five-year-old girl stated that she and her spouse ‘very minimally endorse or present [her daughter] with information related to the Disney princesses because she gets so much of that on her own and through friends at school’. This same mother also indicated that her child does not find new information online as ‘we don’t let her use computers yet’.

Although not specifically asked to distinguish between active and passive information seeking, three parents used language that reflects this distinction. For example, one mother stated that she ‘provides [her child] with info offline’, as opposed to her child actively seeking out such information himself. Other parents described their children’s information seeking activities in terms of information encountering, with one mother stating that school ‘exposes’ her child to new information, and another stating that her child ‘happens upon items’ of new information about her hobbies and interests.

**Information use**

Twenty-two parents reported that their children use the information they find about their hobbies and interests. Table 2 lists the ways in which parents reported that their children use information. As with the question about information seeking, parents were able to describe as many ways in which their children use information as they wanted, so the number of participants in each row does not add up to the total number of participants. On average, parents described one to two ways in which their children use information.

<table>
<thead>
<tr>
<th>Ways of using information</th>
<th>No. of participants</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporating into free-time activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play</td>
<td>8</td>
<td>‘she takes the information and</td>
</tr>
</tbody>
</table>
Parents of children of all ages described their children using information related to their hobbies and interests. Parents of four- and five-year-old children were more likely to state that their child uses information in their play. There were no other apparent age differences in the ways in which parents reported their children using information.

Five of the parents described ways in which they help their children use the information they find. The mother of a child who has an interest in dogs stated ‘I have to take her to the humane society to visit the dogs’ as a way in which she helps her child use the information she finds. Another mother described helping her daughter make princess gowns and tiaras, saying:

*She may need help designing a new outfit for her princess gown. She has ideas of how it looks but can't always accomplish the finished product on her own. I may help her to cut ribbons or buy jewels for tiaras/scepters she makes.*

Two mothers with daughters who enjoy dance described helping their children ‘practice’ dance moves. Another mother described reminding her daughter of

<table>
<thead>
<tr>
<th><strong>Table 2: Reported ways of using information</strong></th>
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<tbody>
<tr>
<td><strong>Physical activity</strong></td>
</tr>
<tr>
<td><strong>Drawing</strong></td>
</tr>
<tr>
<td><strong>Story development</strong></td>
</tr>
</tbody>
</table>

**Other**

| **Sharing information with others**           | 5 | 'she mentions it at dinner time when it's a particularly interesting fact' |
| **Making purchases**                         | 3 | 'once he finds out what each skylanders does he then asks to buy them' |
| **Planning attendance at future events**     | 2 | 'she uses the information to either find events or activities that are of interest to her that she wants to do' |
| **Informing subsequent information seeking** | 1 | 'she takes the information and appropriates it into... questions asked' |
| **Implementing new ideas**                   | 1 | 'implementing ideas' |
| **Trying new things**                        | 1 | 'trying new things to see if they are interesting' |
| **Identifying animals**                      | 1 | 'when we see a dog in the public or at the Humane Society she can identify what kind of dog it is' |
information she had previously found as a way in which she helps her child use
information, saying ‘she has once asked me what a particular animal eats again. She
forgot’.

**Information sharing**

Parents were asked to describe how their children shared information about their
hobbies and interests with others. Table 3 lists the specific ways in which parents
described their children sharing information. As with information seeking and
information use, parents were able to describe as many ways of information sharing
that they wanted and, therefore, the column showing the total number of participants
reporting each way of sharing information does not add up to the total number of
participants. Twenty-six parents described ways in which their children share
information. Parents described an average of two ways in which their children share
information.

<table>
<thead>
<tr>
<th>Ways of sharing information</th>
<th>No. of participants</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sharing found information</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talking to others</td>
<td>21</td>
<td>'she talks about it to anyone who will listen'</td>
</tr>
<tr>
<td>Text messaging</td>
<td>1</td>
<td>'texting'</td>
</tr>
<tr>
<td>Pretend play</td>
<td>1</td>
<td>'in pretend play'</td>
</tr>
<tr>
<td><strong>Sharing information sources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pictures</td>
<td>1</td>
<td>'shows pictures'</td>
</tr>
<tr>
<td>Reading aloud</td>
<td>1</td>
<td>'reads to me'</td>
</tr>
<tr>
<td>Collectable cards</td>
<td>1</td>
<td>'all the kids in his class collect cards (skylanders)'</td>
</tr>
<tr>
<td><strong>Sharing information creations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drawings</td>
<td>4</td>
<td>'she draws pictures of what she learns'</td>
</tr>
<tr>
<td>Crafts</td>
<td>4</td>
<td>'making crafts'</td>
</tr>
<tr>
<td>Written stories</td>
<td>4</td>
<td>'he attempts to write stories'</td>
</tr>
<tr>
<td>Oral stories</td>
<td>2</td>
<td>'she likes to tell stories about princesses'</td>
</tr>
<tr>
<td>Pictures and video</td>
<td>1</td>
<td>'she likes to take pictures and also asks me to record a video with my iPhone to share with grandparents'</td>
</tr>
<tr>
<td>Toys</td>
<td>1</td>
<td>'he loves to show his toys and the things that he makes'</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inviting others to join in activities</td>
<td>2</td>
<td>'often invites others to join her'</td>
</tr>
<tr>
<td>Physical activity</td>
<td>1</td>
<td>'shows us her new moves, turns she's perfected'</td>
</tr>
</tbody>
</table>

Table 2: Reported ways of sharing information

In describing how their children share information, parents' responses fell into four
categories: sharing found information, sharing information sources, sharing
information creations, and other. Sharing found information involved the children providing information to other people that had been found as a result of prior information seeking. Parents stated that their children shared information with parents, siblings, extended family, friends, classmates, teachers, strangers, and, as two parents stated, ‘anyone who will listen’. Sharing information sources involved the children sharing sources of information, such as books and pictures, with other people, rather than solely the information these sources contained. Sharing information creations involved the children sharing things, tangible or intangible, that they had made using found information, such as drawings or stories.

Parents of children of all ages described their children sharing found information and information creations. However, older children were more likely to create written stories, while creating oral stories was only mentioned by the parents of four- and five-year-old children. Sharing information sources was described only by one mother of a six-year-old boy and two mothers of eight-year-old girls.

Only one parent indicated that her child required assistance in sharing information with others. This mother stated that her five-year-old daughter needed help entering the ‘password for my phone so she can get to the camera app. I will help her attach the pictures (or video) once she takes them to send as a message’. This mother also stated that her child required assistance in accessing the art supplies needed to create information objects, saying ‘I may need to get art supplies out so she can draw/create’.

One parent expressed her belief that ‘internet and social media are not appropriate’ for her child’s age group as a venue for information sharing.

As with information use, one parent stated that information sharing involved further information seeking for her child, specifically that she ‘asks how to spell words so she can write them down to tell her story’.

**Information practices of children with intense interests**

Based on the descriptions of children’s hobbies and interests provided by parents, intense interests were evident in six of the thirty-one children. Table 4 indicates the age, gender, and interests of these six children.

<table>
<thead>
<tr>
<th>Age</th>
<th>Sex</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Female</td>
<td>Princesses</td>
</tr>
<tr>
<td>6</td>
<td>Male</td>
<td>Skylanders (video game series)</td>
</tr>
<tr>
<td>6</td>
<td>Female</td>
<td>Horseback riding</td>
</tr>
<tr>
<td>7</td>
<td>Male</td>
<td>Tae Kwon Do</td>
</tr>
<tr>
<td>8</td>
<td>Female</td>
<td>Dogs</td>
</tr>
<tr>
<td>8</td>
<td>Female</td>
<td>Lego</td>
</tr>
</tbody>
</table>

Parents of children with intense interests stated that their children found new
information in ways that were consistent with parents of children with more typical hobbies and interests: asking questions of others, accessing the internet, reading books, and watching television shows. However, the mother of the girl who has an intense interest in dogs specified that her daughter finds new information by ‘asking questions from other dog owners and humane society staff’. This was a unique way of seeking information, in that no other parent described their child seeking information from people other than family, friends, teachers, and peers at school.

Parents of children with intense interests also stated that their children used information about their interests in ways that were consistent with parents of children with more typical hobbies and interests, including sharing information with others, incorporating it into activities such as drawing, making crafts, writing stories, and engaging in physical activities, making purchases, and planning attendance at future events. However, the mother of the girl who has an intense interest in dogs stated ‘when we see a dog in the public or at the humane society she can identify what kind of dog it is’. This way of using information was unique to this child. In addition, the mother of the girl who has an intense interest in princesses indicated that her daughter uses information to inform future information seeking, stating ‘she takes the information and appropriates it into... questions asked’, another unique way of using information.

Parents of children with intense interests stated that their children shared information in ways that were again consistent with parents of children with more typical hobbies and interests. Parents described their children sharing found information through interpersonal interactions. Parents also described their children sharing information sources, including collectible cards, and information creations, including stories, drawings, and crafts. None of the parents of children with intense interests described ways of information sharing that were distinct from those of children with more typical hobbies and interests.

**Summary of findings**

Parents perceived that their children make use of a variety of ways to find new information about their hobbies and interests. Documents and media sources such as books and the internet were commonly reported by parents as means through which their children find new information, as well as interpersonal interactions. Parents perceived that their children use new information in a variety of ways, including incorporating it into their free-time activities, sharing information with others, and making purchases. Parents perceived that their children share the information they have found through interpersonal interactions, as well as sharing information sources and information creations. While parents often reported assisting their children in finding new information, they reported assisting their children in using and sharing new information less frequently. Parents of children with intense interests did not describe their children’s information practices in substantially different ways than parents of children with more typical hobbies and interests.
Discussion

As is evident by the findings of this study, parents of children as young as the age of four years old observe their children engaging in a range of information practices, including information seeking, information use, and information sharing. The information actions that comprise these practices are embedded within the routines of the children's everyday lives and are influenced by several contextual factors, including the children's interest in the information at hand, as well as their ability to access and engage with this information.

Savolainen (2008) notes the significance of interest as a contextual factor influencing information practices. However, the information practices of children who met the intense interest criteria did not differ significantly from the information practices of children who displayed more typical hobbies and interests. Responses from parents of children with intense interests displayed comparable ways of information seeking, information use and information sharing practices to those children not meeting the intense interest criteria. Instances in which children with intense interests displayed differing types of information seeking or sharing from those of children with more typical hobbies or interests were instances in which such activities were described by only one or two parents within the entire sample.

The small sample size of this study makes it difficult to draw conclusions based on such small differences. Also, the survey questions may not have adequately captured the information necessary to determine the presence of intense interests in young children. This could explain why the proportion of children with intense interests in this sample (six of thirty-one children) was lower than the expected proportion in the general population (one third; DeLoache et al., 2007). Additionally, it is possible that children with intense interests engage in information practices that are similar in type to those of other children, but differ in other ways such as the frequency in which information is sought, used, and/or shared.

The most commonly cited way of seeking information involved interpersonal interactions, including conversations with others. This is consistent with the findings of previous research on a range of populations, in which a preference for interpersonal sources has been noted (e.g., Agosto and Hughes-Hassell, 2005; Harris and Dewdney, 1994; Meyers et al., 2009). The heavy reliance on interpersonal information seeking that was reported by the parents of young children in this study is not only unsurprising due to the findings of previous research but also when young children's comparatively lower literacy levels are taken into consideration. Information seeking using more traditional, text-based sources may prove difficult, if not impossible, for young children who have no or very limited ability to read and write. Parents' descriptions of providing their children with assistance in seeking information highlight these difficulties.

Parents described a number of ways in which their children find new information that
fall outside of traditional conceptions of information seeking. Trying new things, using one's imagination, and observing others are examples of ways of information seeking that were described by parents in this study that are not typically discussed in studies of the information practices of adult populations (observation as a way of seeking information has been discussed in previous research with children (Crow, 2011)). It may be that parents perceive their children employing these means of information seeking because of their limited abilities to engage with text-based resources; however, it may also be that the types of information that children seek in response to their hobbies and interests lend themselves to these alternative modes of information seeking.

Parents described interpersonal interactions playing an important role in information sharing in addition to information seeking, but not in their descriptions of their children's information use. Information sharing by definition involves giving information to another person, thus it is not surprising that interpersonal interactions were the most commonly cited way of sharing information. Parents' descriptions of information use indicate that in many instances, information use precedes information sharing in that their children created objects such as stories or crafts which were then shared with others.

Parents' descriptions of the ways in which their children use and share information were quite similar, in keeping with Savolainen’s (2008) assertion that information use and sharing are heavily connected practices. This may also indicate that parents may not perceive a distinction between these two types of information practices, with some parents explicitly stating that their children use information by sharing it. Parents also described activities that here are conceptualised as information creation, such as writing stories or making crafts. In this way, parents' descriptions of their children's engagement with information is similar to much of the information behaviour and information practices literature, in which information use, sharing, and creation are often not clearly differentiated (Kari, 2010; Savolainen, 2008).

The ways in which parents described assisting their children in information seeking, sharing and use are reflective of young children's developing literacy skills but also their reliance on parents to buy things for them, take them to various locations, and engage in other activities that young children may not yet be capable of doing on their own. Parents of four- and five-year-old children were more likely to report helping their children than were parents of older children. The age differences that were apparent in the descriptions of young children's information practices are also reflective of young children’s developing literacy skills, with four- and five–year-old children exhibiting differences from older children in information seeking, use, and sharing. This also highlights a set of contextual factors that Savolainen (2008) does not explicitly address in his discussion of his model, that of an individual or group’s ability or inability to engage with information sources due to limited mobility, and/or autonomy, in addition to their stock of knowledge.
As noted, some parents did not provide descriptions about the ways in which their children engage in information seeking, information use, or information sharing. This could be an indication that not all of the children’s hobbies and/or interests involved an obvious and observable engagement with information. This is particularly true when such hobbies or interests fall under the umbrella of casual leisure. When children engage in such activities as playing outdoors or watching television, parents may not perceive that their children are engaging in information practices. Engagement with information is more likely to be a component of activities that fall under the serious leisure umbrella (Hartel, 2010a; Stebbins, 2009), and Stebbins (2009) has even argued that many casual leisure activities do not include an informational component. This may be true of some types of children’s hobbies and interests as well, although more research is needed before such a claim could be made.

In general, children’s hobbies and interests appear to fit well with the categorisation of free-time activities as outlined by Stebbins (2007), and these activities could be considered to fall under the categories of serious and casual leisure. However, the distinction between activities that are pursued as casual leisure and activities pursued as part of serious leisure need to be more fully explicated. The responses gathered in this study did not provide sufficient detail for a more definitive evaluation of the applicability of the concepts of serious and casual leisure to children’s free-time activities.

**Conclusion**

The findings of this study have important implications for understanding the ways in which young children engage with information. This study demonstrates that children as young as four years of age engage in information practices in response to their hobbies and interests. These information practices are in many ways similar to those of adults. However, a number of the described information practices differ from those reported in research with adolescent and adult populations. Even within the descriptions collected in this study, differences between younger and older children were apparent. These findings highlight the need for researchers to pay special attention to the information practices of young children and the unique contextual factors that may influence or constrain them.

In general, children’s hobbies and interests appear to fit well with the categorisation of free-time activities as outlined by Stebbins (2007). However, the distinction between activities that are pursued as casual leisure and activities pursued as part of serious leisure needs to be more fully explicated in future research in order to better determine the suitability of the serious leisure perspective when studying the free-time activities of children.

**Limitations**

While this study sheds light on a number of gaps in the literature on children's
information seeking and use, it does have limitations. First, the sample of this study was relatively homogenous, as the majority of the respondents were white middle-class mothers. This may be due to the sampling method used in this study. The conclusions drawn from this study may not be generalisable to the greater population. Future research should attempt to achieve greater diversity in its samples.

Additionally, only six of the thirty-one participants provided information about their children that indicated that their child may have an intense interest. This is lower than the proportion of the general population that exhibit intense interests, as posited by DeLoache et al. (2007). It could be that the questions in the survey did not sufficiently address the intense interest criteria in order to elicit responses that would give an adequate indication of the extent of the intensity of the children’s interests. Future research should attempt to investigate the existence of intense interests in more detail. The lower than expected proportion of children with intense interests could also be due to the fact that parents of young boys made up less than one-third of the sample, and intense interests are more common in boys than in girls (DeLoache et al., 2007). In addition to helping better distinguish children with intense interests from children without such interests, such investigations may also help in evaluating the suitability of the serious leisure perspective for use with children.

Finally, while parental reports offer many benefits as a research method, this approach is not without its drawbacks. Parents may be biased and their observations unsystematic (Bornstein, 2014). Parental observations may also be influenced by the amount and quality of time a parent spends with their child, a factor that was not accounted for in this survey. Additionally, parental reports of children’s behaviour may be influenced by the retrospectivity of these accounts (Bornstein, 2014) and are limited to behaviour that is externally observable. As Scott (2008) notes, ‘there is often a very large gulf between parental observations about their child and the child’s own perceptions’ (p.88). Future research investigating the information practices of young children should involve the children directly, either in place of or in conjunction with parental reports, particularly when investigating phenomena such as information use that may not be easily observable.

**Future research**

This research study has demonstrated that children between four and eight years of age engage in observable everyday life information practices such as information seeking, information use, and information sharing in ways that are similar to yet different from those of adolescents and adults. As so little research has been conducted on the everyday life information practices of young children, there remain many unanswered questions that would benefit from future research, only a few of which are addressed here. Further investigations should seek to address the ways in which such information practices emerge in young children and the importance of parental involvement in developing related skills. Differences in the information practices of children of different ages should also be further explicated. The
prevalence of both active and passive information seeking should be investigated further, as well as the importance of socioeconomic characteristics of the families to which the children belong.

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**References**


How to cite this paper

**Appendix**

1. What is the total income for your household?
   a. Under $20,000
   b. $20,000 - $29,999
   c. $30,000 - $39,999
   d. $40,000 - $49,999
   e. $50,000 - $69,999
   f. $70,000 - $99,999
   g. $100,000 - $149,999
   h. $150,000 or more
   i. Prefer not to answer

2. What is your race/ethnicity?
   a. White
   b. Asian
   c. Latino
   d. African American
   e. Other (please specify)
   f. Prefer not to answer

3. What is your relationship to the child?
   a. Mother
   b. Father
   c. Step-mother
   d. Step-father
   e. Grandmother
   f. Grandfather
   g. Aunt
4. How old is your child?
   a. 4 years
   b. 5 years
   c. 6 years
   d. 7 years
   e. 8 years
   f. Prefer not to answer

5. What is your child’s gender?
   a. Male
   b. Female
   c. Prefer not to answer

6. Please describe your child’s hobby/hobbies and/or interest(s).

7. Of the hobby/hobbies and/or interest(s) described above, which hobby or interest is your child most preoccupied with? (Please select a hobby or interest with which your child is naturally pre-occupied, not a pre-occupation that has resulted from a medical condition)

8. At what age did your child first begin showing interest in this hobby or interest?

9. In what location(s) does your child engage in this hobby or interest? (check all that apply)
   a. Home
   b. School
   c. Daycare
   d. Friends’ homes
   e. Other (please specify)

10. Have others (for example, friends, extended family, teachers) indicated to you that they have noticed this hobby or interest? If so, please specify.

11. What type of activities does your child engage in related to his or her primary hobby or interest?

12. Of the activities described above, which activity would you consider to be the primary activity your child engages in related to his or her hobby or interest?

13. How often does your child engage in his or her primary hobby or interest?
   a. Daily
14. In what ways, if at all, does your child go about finding new information about his or her hobby/hobbies and/or interest(s)?

15. Please describe in what ways, if any, your child requires assistance in finding new information about his or her primary hobby or interest.

16. In what ways, if at all, does your child go about using new information about his or her hobby/hobbies and/or interest(s)?

17. Please describe in what ways, if any, your child requires assistance in using new information about his or her primary hobby or interest.

18. In what ways, if at all, does your child go about sharing information about his or her hobby/hobbies and/or interest(s)?

19. Please describe in what ways, if any, your child requires assistance in sharing new information about his or her primary hobby or interest.

20. With whom does your child share information about his or her hobby/hobbies and/or interest(s)? (check all that apply)
   a. Parents
   b. Siblings
   c. Friends
   d. Classmates
   e. Other (please specify)
   f. My child does not share information about his or her hobby or interest with others

21. Is there anything else you would like to share about your child’s hobbies and/or interests?