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EIGHT

Children's Information Seeking at School: Findings from a Qualitative Study

Melissa Gross

Until the recent development of the imposed-query model (Gross, 1995), there was limited recognition of the familiar practice of seeking information on behalf of someone else, such as an employer, teacher, friend, or family member, though it is a user behavior that information professionals have long observed. This chapter will review the findings from a qualitative study of children's questions in the school environment, and for what those findings add to understandings of the information-seeking behavior of youth, grades preschool through six, in the context of an elementary school setting.

CATEGORIZING QUESTIONS

One fundamental effect of the imposed-query model is that it dichotomizes thinking about the questions people carry and transact in their daily lives. It does this by breaking the concept of question into two types—self-generated and imposed.

A self-generated question is a question that results from the per-

sonal context and interests of a person's life and that is pursued by the person that produced it. For example, the questions that occur to a woman when she finds out she is pregnant or that develop out of the process of planning a vacation can be said to be internally derived or to result from the context of the individual's life.

In the imposed-query model, the decision to pursue a question is a key point. If an individual decides to resolve the question for him- or herself, the question is called a self-generated query. If, on the other hand, the question is turned over to someone else (their agent), then the question is called an imposed query. Imposed queries are externally generated in the sense that they do not spring from the subjective context of the person who is seeking their resolution. An imposed query is a question that is developed by one person (the imposer) and then transferred to another (the agent) who is charged with transacting the query for the imposer.

Close reading of the information-studies literature reveals some examples of imposed information seeking. Chu (1999) documents the presence of child cultural mediators who transact for their non-English-speaking parents. Metoyer-Duran (1993) describes the characteristics of ethno-linguistic gatekeepers who mediate the information needs of their communities. In the health field, it is observed that family, friends, nurses, and others often negotiate questions for the critically ill. Kuhlthau (1993) has researched and extensively described the agent's view in her studies of student experiences while working on research reports.

Research on adult reference desk use in public libraries has identified a wide variety of relationships, both formal and informal, that result in imposed information seeking (Gross and Saxton, 2001). Further, in this study, children were responsible for the largest proportion of adult-imposed reference desk use (35 percent).

METHODS

The findings reported here come from a study of imposed information seeking in elementary schools that used both quantitative

and qualitative research methods. A description of the full study is reported elsewhere (Gross, 2004). The focus here is on the qualitative findings of this study, which are based on in-depth interviews with students and teachers across the elementary grades and their school library media specialist.

The subjects for this qualitative study were all recruited from the same elementary school, which was a laboratory school on the campus of a major university. Participation was sought from nine key informants (individuals who could provide insight into the children's experience) and sixteen representative subjects (the children themselves). To realize this design, participation was sought from the school library media specialist and two teachers from each grade level at the school. Grade level was conceptualized in this environment as early childhood (the equivalent of preschool and kindergarten), primary (grades 1 and 2), middle (grades 3 and 4), and upper (grades 5 and 6). For the representative subjects, four children (two boys and two girls) from each grade level were randomly chosen as subjects from the participating teachers' classrooms.

All but one of the subjects sought were recruited, as only one teacher from the early childhood level chose to participate in the study. Assent to participation in the study was sought from all children who were randomly chosen as subjects in addition to standard consent by their parents. One child declined and was replaced with another child randomly chosen from that same classroom. Subjects were interviewed individually and audiotaped. Interviews varied from about twenty minutes in length with the youngest children to about forty-five minutes in length with the older children. Adult interviews ran between one and two hours.

The general purpose of these interviews was to understand when and to what extent information seeking involves the generation of imposed queries, to look at students' perceptions of ownership versus imposition when completing school work, to get a sense of who the players in the imposed query lifecycle might be

and how these roles are invoked, and to get a sense of how resource choice and use varies between self-generated and imposed queries.

The interviewer followed the general interview guide approach and kept extensive notes and an interview journal to record descriptive and reflective data to supplement the interviews in the data analysis phase. The interview guides were pretested for working with children across the age/grade range, but who did not attend the school being studied. However, the intention here was not to address specific interview questions, but rather to gain an understanding of the imposed-query process from the point of view of those involved in it. The interview process was used to determine common themes and behaviors across the age/grade levels and to gain insight and understanding of the information-seeking behavior of these students. The perspective of teachers and the school library media specialist were important for understanding their views of the imposed-query lifecycle in the school environment, as well as their observations of the information-seeking behavior of their students. The interview guides used in this study are presented in Appendix A.

Limitations

Throughout this discussion, it is important to remember that this study investigated only one school environment and while its findings provide much food for thought, they may not be generalized to other elementary schools. In terms of accuracy, all of the data collected is dependent on self-reports, some from children as young as four years of age. Another consideration in this type of research is the degree to which the presence of the researcher might bias or affect the data that is collected. In an effort to avoid this potential, this site was chosen in part because as a lab school both students and staff are fairly accustomed to taking part in research. It is also hoped that the relative familiarity of the re-

searcher, who spent the year before data collection as a resident fellow in the school, increased the likelihood of participation and the comfort levels of those who chose to participate.

IMPOSERS AND THE NATURE OF IMPOSITION

Early on in the conceptualization of the imposed-query model the school assignment was offered as an example of the process it describes. The three key players in the imposed-query lifecycle could be assigned as follows. The teacher was seen in the role of the imposer, the person who developed the question. The student took the role of the agent, the person responsible for transacting the query, and the school library media specialist had the role of information intermediary, a position that potentially might be assumed by any of a variety of information professionals or even an information system or resource. This scenario was easily understood and it clarified that the resolution of the query is not complete until the answer is delivered to and approved by the imposer (teacher). One of the findings of this study is an understanding that in the school environment this process is much more complex than it appears to be on the surface.

School: A Socially Constructed Environment

In general, the teachers who participated in the interviews did not like the idea that what they were doing was imposing questions on students. Although most teachers did accept the term *imposer* in a metaphorical sense and found the model useful in discussing their work, the label of imposer did not fit their self-perception of their role in the classroom. Teachers made comments like, "They're not finding it out for me."

Teachers preferred to think of themselves as "co-creators" with

the children and focused on the desire to motivate, inspire, or excite their students and made little reference to grade-level curriculums and expectations for students that teachers are expected to respond to.

As the interviews progressed it became clear that a number of players contribute to the creation and continuous reproduction of the social environment at the school as well as the definition of social objects such as the classification of individuals as teacher, student, etc. Embedded within these socially constructed roles, perceptions of the function of assignments in the learning process and the appropriateness of behaviors as concerns the imposed-query lifecycle are also defined for this environment. For instance, parents, the experience of friends, family and siblings, the expectations (both public and private) that the school feeds into, and the general standards and expectations for student learning held by the community at large all help to define what school is. Within the school in its day-to-day operation students, teachers, interns, the school library media specialists, administrative staff, etc., all contribute to making the school environment what it is. Over the course of the interviews the view of the school environment that emerged was one in which imposition is an implicit force that all of the players prefer not to invoke or make explicit if they do not have to.

Children have many ways of perceiving this environment. For instance, they may believe that school is about "performing" for the teacher, that school is something they do for themselves, that they go to school in order to meet the expectations of their families, or even to represent their families in the public world. Regardless, the school environment works to elicit the compliance of children such that they will submit to a process that is intended to, in time, fashion a fully contributing member of society. To the extent that things go well, there is no reason to make the imposition explicit, and positive relationships between teachers and students work to facilitate the process. However, children who resist the im-

position will find it made explicit for them in a variety of ways ranging from gentle persuasion, to notes to parents, to other types of sanctions designed to gain their participation in the process.

Teachers: Imposers or Agent Users?

The teacher is the main imposer in the school environment (Gross, 1999). However, teachers differ from other types of imposers in some important ways. For instance, although the development of questions may seem the teacher's stock and trade, on closer inspection it becomes clear that the questions they craft are didactic in nature. These questions cannot be defined as self-generated according to the models we have because they are not developed to fill a gap in the teacher's understanding. The questions that teachers fashion tend to be based on "known" knowledge and serve the dual purposes of providing a learning experience for students and a means of evaluating student progress. In practice, teachers do not always construct the questions they pose to students, but at times use the preformulated questions provided in textbooks and other materials developed by others for classroom use.

Teachers also need to be considered in terms of their place in the socially constructed environment of school. As this study progressed, it became clear that imposition at the school has many layers. Teachers are imposers for students, but teachers are also directed and imposed upon in terms of formalized curriculums, goals, and special emphasis they are expected to follow and incorporate into their teaching plans. In the case of the particular school studied here, imposition could potentially come from the research findings of the school of education that houses the lab school as well as the political hierarchy of the state as expressed in published subject frameworks adopted by the school's administration.

Imposition on teachers takes implicit, explicit, and voluntary forms. For instance, a requirement from the principal to develop

student projects that can be displayed for Earth Day is not unlike an open-ended assignment a teacher might give a class that expects students to contribute their own intellectual and creative input into the process.

However, teachers also have a fair amount of autonomy in their work and enjoy wide latitude in determining how to achieve the goals of the curricular framework. They are not given specific questions to hand out and do not provide answers as such to their imposers. Teachers are subject to evaluation, but generally, their professional status allows them to operate using their best judgment. The combination of imposed context and professional judgment, however, does leave room for teachers to respond to their perception of their students' information needs. As Walter (1994) points out, adults in various roles can and do identify children's information needs and help to fill them. Thus, in response to student questions on neighborhood or world events, the teacher may decide to add or expand on certain topics. This was demonstrated in an early childhood classroom where the children happened to observe the class tortoises mating and had questions that were not part of the teacher's prepared lesson plan, but which she decided to address anyway. In such instances though, teachers are working from a basis of "known" information. Their objective is not to fill a gap in their own understanding. However, depending on the circumstances, such situations could require some personal gap-closing for the teacher and so some allowance for a view of teacher's classroom questions to be seen as self-generated should be made.

The Design of Assignments

One of the ways that imposition is downplayed at school is in the strategies teachers use in designing assignments. At all grade levels teachers made a point of providing students with assignments that allow them to either make choices about what they do

or to personalize their work within a larger imposed structure. Teachers preferred assignments they felt students could "take wherever they need to." Typical assignments ran along the lines of: "We will study Native Americans—you may choose the tribe you want to learn about;" or "Our unit is on transportation—you will get to design your own vehicle;" or "We are going to be writing letters today—you may write to anyone you choose."

Teachers also revealed that sometimes there are goals imbedded in assignments that the children may not realize are there. For instance, for younger children school library media center visits are often presented as an opportunity to select materials for personal use, as a kind of fun. However, the teacher may have other unspoken goals such as encouraging reading in the home, generating a love of books, or teaching responsibility. So, as an example of implicit imposition, the borrowing and bringing back of books becomes a form of homework and not a voluntary activity. Because most children do experience going to the library and choosing books as fun, it can be a rare event for the imposition to become explicit. However, in these interviews two teachers discussed instances in which children who did not want to check out books had to be brought into compliance; they learned they had to participate by checking out and returning books whether or not the books were desired or read.

The hidden facets of assignments can make it complicated for a student to understand teacher expectations and to differentiate teacher demands from their own interests in terms of how student performance will be evaluated. Teachers report designing assignments that have a "base level" expectation, but which children can respond to in ways that are more complex. In such situations children may be evaluated on which questions they choose to answer, how many resources they use, how difficult the resources they use are, and whether they are able to stay with a topic or later opt to change to an easier one.

The Importance of Context to Questions

One of the main points made in the self-generation models of information-seeking behavior (Dervin and Dwedney, 1986; Taylor, 1962, 1968) is that questions spring from life situations and are best understood and resolved when the response to the question makes sense in terms of the context that produced it. One implication of this is that knowing only what the question is may not be sufficient for finding a useful answer. To overcome this problem, when the imposer passes the question to the agent it makes sense for the imposer to provide some context, to provide things the agent needs to know to understand the question, and perhaps even some ideas about resources where the answer might be found. Kirkelas (1983) addresses this issue by pointing out that when people go to other people for information they try to find someone who will not only understand their question, but who will understand their situation.

Teachers demonstrate that they understand that a question needs context to provide it with its sense of form. Context is used to give students a handle on the topic and as an aid to deriving questions of their "own." Time and again, teachers described this approach in the interviews. Assignments always begin with the presentation of some context, which might take the form of a presentation to the class, an experience like an experiment or field trip, or the reading of textual material. For example, children visit the local post office and then write thank-you letters, read a unit in the history textbook and then receive directions for a project, or are shown an object and then asked to identify what the object is.

Students: Issues of Question Ownership

The view of the school environment as one in which imposition tends to be an implicit structure and where an overt expression of cooperation and community are preferred to adult expressions of

authority was demonstrated in students' experience of imposition at school and in their sense of ownership surrounding class work.

Although younger children tend to think of library materials as being meant for them, not the teacher, the bottom line of imposition was not completely lost on them. The early childhood students were very interested in displaying their knowledge of class rules and expected behavior, but less articulate about the substance of the direction given to them. Though weekly library visits are perceived as fun, when asked about the purpose of the visit or what happens if you do not take a book out, children responded by saying, "you keep it for a week and then bring it back," and "I think it's okay if you don't get a book because sometimes I don't find a book and we have to leave. I just don't get one," and "We don't have to, we can trick them." These children were aware of the rules meant to govern their behavior in the library; they did not talk about reading the books or being read to at home as part of the expectations for library visits and materials.

Children in the older grades have less stringent requirements for checking out books and these children easily make distinctions between materials they gather for their own use and those selected to meet teacher demands.

HOW CHILDREN FIND INFORMATION

Establishing question type, as a precursor to understanding children's information-seeking behaviors, is an important step toward understanding the processes they engage in when trying to transact information needs. In the process of finding information children face many limitations and frustrations related to developmental skill, skill level, and their dependence on adults (for instance for money, transportation, access to computers) that must be managed, compensated for, or overcome if they are to successfully locate and assimilate the information they are seeking.

How Children Look for Information

Although teachers at this school encourage students to recognize the wide range of resources that are available and work hard to maintain a classroom environment that includes a variety of materials for students, teacher-developed information packets, which contain all the information needed to complete an assignment at home, are often provided to students in this environment.

If other resources are needed, it is most common for that resource to be other people, usually family. For example, students might interview parents or grandparents as part of an introduction to a unit on immigration. Older children are the most likely to be asked to use multiple resources and have more personalized reports, but even they often receive articles and book chapters copied for them ahead of time by the teacher.

Teachers say they prepare these packets because they do not feel that they can require outside library use at the school, which many students travel long distances to attend and where the teachers are unsure of what the students' neighborhood libraries are like. They also provide materials to students because they feel that appropriate resources are hard to find across the wide range of reading and writing skills the students in their classes need.

Although teachers emphasized the value of using a variety of materials, when students were asked what resources they thought teachers liked them to use, they routinely answered, "the dictionary" and sometimes a second response was "the encyclopedia." Children also felt that teachers prefer books to electronic resources.

For their self-generated needs, students showed a strong preference for known resources whether these were books, people, or Web sites, and for sources that they owned or could easily access. When asked how they chose "fun" reading, every child but one said they would choose one of the books they owned and had at home. The other student said, "I don't do fun reading."

When asked how they solved personal needs for information, two children said their first choice was the Internet. Both children talked about going to sites they were already familiar with and had bookmarked on their home computers. The children who talked about using books for personal information needs talked about using books they already owned or were familiar with. One middle school girl steadfastly said that if she needed more information on the ghosts of Martha's Vineyard, her favorite area of interest, she would reread a book she said she had already read eight times. "Because like," she said, "after you read it once, sometimes you don't get all the information. The first time I only got the, you know, main parts of the story and I never noticed the little parts of the story."

Only three students talked about using the library to find information, and only two were public library users. One primary-level child said she would ask someone else if she needed to know something and added, "I just like people telling me." The upper-level child who said she did not read for fun said, "My favorite resource is my friends because I can talk to them about other stuff, also."

The school library media specialist was aware of the frustrations students sometimes have with school assignments, but when their information needs were imposed, she was able to take a larger view of the situation. "I'm pretty sure that they're going to be back. They will be returning. They are going to have to find that information. They are going to have to face this." In contrast, the school library media specialist felt that there was less frustration for students in solving self-generated needs. She said, "I think they are much more apt to be flexible with their own materials. If what they thought they wanted is not easily available, or found, or apparent, rather than having to really spend that time looking for one thing, I think most change what they want."

The school library media specialist also observed that children had the most difficulty answering research questions when there

was nothing on a topic, or many things, but nothing specific to their needs and that, "When they have to make some decisions because their topic is subsumed in a broader topic and it's included in a book on a broader topic, what I find is there are a lot of children who want you [as librarian] to make that decision, to say, this is it. Take it. This is the right one. Take the time to evaluate it. They're not completely comfortable, they don't really like to do that."

Finding Information in the School Library Media Center

Due to extensive weeding and rearrangement of the shelves over spring break, the ability of children to find materials in the school library media center was a topic of current concern during the data collection period. Students have access to the university library catalog, which includes the holdings in their school library media center. The system does not have a special interface for these child users, but it does allow them to limit their search to their own collection, which is classified according to the Dewey system, not LC.

During their weekly visit, students were oriented to the new locations of different types of books, but in the interviews it became clear how dependent children at all grade levels were on having a stable configuration in order to find the books they wanted. The students reported they did not like to use the catalog and demonstrated little understanding of the Dewey system as a help for finding nonfiction. The students did know that nonfiction is grouped by subject, but relied most heavily on knowing the specific shelf locations for snakes, jokes, dinosaurs, etc., rather than knowing the call numbers or relating to the fact that they could use the numbers to find out where the books were now located.

In using the school library media center, children also showed a preference for known items. For the younger children, this often meant a specific book. They said, "It's easy. I find my favorite

book, the truck one. I just got it double" and "I had this book I checked out practically every single time I went to the library and I knew exactly where it was, between what two books." Young children also liked to browse the books that previous users left on the tables and that had not yet been gathered up for reshelving. The third place they went was to the picture book shelves. The rule at this school is that students can only take out and use the books they can reach. These young students took pride in knowing the rules and in finding their own books, they did not report asking for help or using the catalog.

Children at the primary level also relied heavily on knowing where the books they liked were housed. In nonfiction they knew where the books on subjects that interested them were, such as insects or dinosaurs. These students, however, did seek help to find materials. They asked friends, the teacher, and the school library media specialist. They commented that they thought the good books were on shelves they could not reach and the reshelving of the library made it very difficult to use.

Middle-level children reported increased difficulty in finding what they wanted and an increased need to ask for help. These students also showed a preference for browsing tables and shelves, and relied on their memory of how the library was arranged. Like the younger children, they were most likely to look for items they had checked out previously. One boy said he used the catalog, but he also said he had two favorite subjects, and that he routinely sought them out by browsing the shelves.

Among the oldest children, known items continued to be important, although the definition of known item expanded from a particular title to books by the same author and sometimes to books in a particular genre, such as science fiction. Only one student expressed satisfaction with the catalog, but this student also mainly preferred browsing tables and shelves. All the other upper-level students interviewed expressed a lot of dissatisfaction with the cat-

alog and said they preferred the advice of friends or the school library media specialist when they needed help.

Teachers were vague in the interviews when asked when and how students were taught to use the catalog. One teacher said she felt that the children used the catalog to play and to avoid their library responsibility, and that since the children were routinely told what shelves to go to they did not need the catalog during a class visit.

The school library media specialist was rarely involved in the development of, provision of research skills for, or the evaluation of class assignments. She did teach students to use the catalog as part of their library use one-on-one or in small groups on an as-needed basis.

Right Answers

Integral to the ability to transact a question is the capacity to recognize the right answer. The question, "How do you know when you have the right answer?" was extremely difficult for the youngest children and they could not answer it. In general, for all the children interviewed, this question made the most sense to them in terms of their study of mathematics. They said things like, "I usually add it up on the scrap paper or ask my mom for help and she might know the answer," and "Maybe I could look at my flash cards if the answer's on the top at the other side," or "Sometimes if I have a right answer I write it down and then check on my fingers." For many children this was as far as they could go with this idea.

Some children tried hard to express the process in dealing with textual material, but found it very difficult to go beyond a sense that a piece of information "sounded" or "felt" right. One primary-level child said, "You check it. You just do it over again and if it sounds funny you just do it again." When asked if there was something to check the answer against the response was, "Think! That's

what I usually do because I don't want to get a whole dictionary." Upper-level students also used this strategy. For instance, one student explained, "I read the question over and over and it will be in my head. It pops in." Another upper-level student responded that you can know an answer is right when, "It doesn't sound like someone just typed it out. They thought about it for a while. It just kind of fits together with other things."

Some children were able to respond to the question, though, and many of them indicated that they would ask someone who would know, like a parent or a teacher. Some children were able to give detailed descriptions of an information-seeking situation where they knew they had the right answer. One girl told a story about helping her younger sister find a description of the type of dog their family was about to get. She said, "I found the answer. I knew because my mom told it a lot [the breed name of the dog]. She's like, 'Let's get this dog, it's so beautiful, come on let's get this dog.' So I said, 'Okay what's the name?' and she said 'well . . . the name. So I'm like okay, I know that and then I checked and it said the same thing in the dictionary, in the encyclopedia. It said the same thing and I'm like, it's right!"

An upper-level girl said when she found a picture of Ursa Major she knew she had the answer to a teacher challenge "because it was a bear and then the picture was in the Milky Way, I mean not the Milky Way, I mean the Big Dipper and then the third one was that it said something about the bear that was what [the teacher] said would be in it."

An upper-level boy gave this advice, "After I get the question I'll think about where the place might be to find it and after I figure that out I'll go there. And to check it? If it's really important I'll go to another source and see if it has the same answer."

Another upper-level boy had to come up with thirteen causes for the American Revolution, "And I had like two here and three there, so I had gaps and then you find something that fits in between. So that leads to that."

It was only among the older children that issues about determining the relevance of documents to a particular question being transacted were expressed. The girl who identified Ursa Major did so in part because she was able to match information given in class by the teacher with what appeared in the book. Poor matches between vocabulary words and the need to use synonyms made the process very difficult. Students were frustrated by materials that did not have the exact information they needed for their assignment. They were also frustrated when they had to wade through a lot of text to find what they needed, when the terminology did not match the terms used in class, and when they had to use multiple resources because each resource provided only a little bit of the information they needed.

USING OTHERS IN THE QUEST TO KNOW

Imposed information-seeking at school is firmly grounded in teacher assignments. Parents were also shown to be imposers in this environment in that they make demands concerning what children should or shouldn't read in class and the kinds of selections they should make in the school library media center. The school library media specialists imposed sustained silent reading as part of the regular class visit time. Children are also imposers in their environment and, as will be discussed below, use friends, classmates, siblings, and caretakers in a variety of ways when seeking information.

Peer Informants in the Classroom

One of the first resources the youngest students at the school are exposed to and taught to use are other people. This strategy at the early childhood and primary levels may be related to these children's limited ability to read, but is also related to the desire to

help children understand that information is available in a variety of places. One teacher gave this example, "They come to me and say, 'Can you tie my shoelaces?' I will say, 'Go and find another child who will tie your shoelaces,' for them to go to that person. So that's like a small example, but they will come to me, but I will push them out." Other teachers used similar strategies, they said things to children like, "Ask your buddy over there, he'll help you," and "I'll even say sometimes, 'Raise your hand if you're someone who can help.'"

Group work is also more commonly assigned in the earlier grade levels than in the older grade levels at this school. In classrooms set up for the younger children, the tables were typically arranged in groups so that even when students worked independently, they did so in small groups. At the upper level this changes, and students are expected to take more individual responsibility not only when they work in groups, but are more likely to receive individual assignments. This increased need to evaluate individual performance is related to teacher concerns about how their students will perform on standardized tests and their ability to transition as easily as possible to middle school when they matriculate.

One teacher describes the process this way, "At the older grades the goal is to get you started working more independently. . . . I'm making them see that there's different kinds of learning. So that not everything is done in a cooperative group, that you need to learn to do independent activities." Another teacher said, "Yes there's information you directly need, but there's, you know, this whole me/we thing . . . you know, what you're finding out for you, and what you're printing out for you, and what you're doing for the community."

Agent Users

In the interviews teachers were asked if there was a certain type of child that the others tended to go to for help, not only because

they might know the answer, but because they might be able to retrieve it for them. All of the teachers said that they did observe such children in their classes and some classified them as identifiable personality types. There children were called variously "power brokers," "mother's helpers," and "nurturers." They were described as bright children who have a special skill-based expertise that their classmates recognize. Some teachers reward this behavior and in other classrooms, it has negative consequences. One teacher said, "They get in trouble for it, too. They keep others from working. Everybody knows that the teacher or the aide is there for that."

One of the primary-level teachers told this story. "They don't necessarily know, but they want to help. One day we were working on a sheet of paper and one little girl needed help writing someone's name and another child in the group, she didn't know how to write the name, but she said, 'Why don't we go over to the cubby and copy it down?'"

The students also talked about getting information from classmates they knew to have a certain skill and about learning from friends at school. Two children told stories in which another child taught them to read and another child described how a friend taught her to go down the pole on the jungle gym. They also talked about using friends for help, or helping their friends with homework. One child felt that classmates only helped their friends, that if someone else asked they would ignore the request or refuse to help.

The students had many examples of imposed information seeking. One middle-level boy said, "My brother always asks me to go and ask my mom when we're leaving for school and when's dinner." A middle-level girl was worried about keeping some exotic frogs in an aquarium with her other frogs, "So, my dad writes this letter in the computer for people to answer it and people, some people, said it wasn't a good idea, but most people said that you

could" and also, "Well at home my mom always asks me to find something out on the Internet."

An upper-level boy said, "I play baseball and I'm a pitcher and so I asked my dad to find out how to throw a curve ball. Well, I mean I kind of know how to do it, except my dad knows someone who's a sports writer and so he knows how to do it, so I asked him to call him up."

One upper-level boy said that he often sought information for others. He said, "I've done lots of different work for people to find information. Like one kid wanted to know the whole schedule of the Dallas games so I had to get that for him really fast." When asked how this young man knew to go to him for information this student replied, "Everybody knows that I am a computer freak. Well, not really a freak, but I know a lot about computers. So, he asked me since he also knows that I own a lot of cards. But he asked me and I said sure and I looked it up on the Internet. I just got this new program that makes business cards, memos, calendars, everything. So I'm going to start a business."

Double-Imposed Queries

The double-imposed query describes a situation where the agent passes the question on to someone else (a second agent) for processing. In the school environment the version of the double-imposed query that gets the most attention is the one where the teacher makes the assignment and the child agent passes the query on to a parent or other caregiver who then transacts the query for the child. The teachers interviewed at this school perceived the double-imposed query as an ongoing problem. Although teachers did want and even expected parents to be involved in homework, there were also many complaints across all the grade levels about parents doing children's work for them.

Teachers said things like, "You know who did the work when the child has to get up to talk about it and they have no idea what's

on the paper"; "A lot of kids, I have no idea whose work I'm grading"; "That's why I don't like to give homework, you don't know who did it"; and "I don't like grading parents' work. And you can tell you know, you're working with a kinder class and I know what he's able to do and the homework comes back perfect."

Teachers had several thoughts about why parents do their children's homework. Some felt that parents want their children to meet adult perceptions of good work and perfectionism, others see it as the parents' strong desire to see their children succeed, and still others felt the real issue was one of control in which the parents needed to direct the child's behavior even to the point of usurping the teacher's authority.

On the other hand, children talked about going to parents, babysitters, parents' work assistants and secretaries, friends, and siblings for help with their homework. Children were not asked, "Does anyone ever do your homework for you?"; rather they were asked how they went about doing homework, if they received help, when, and what kind of help. The kinds of help they described were things like checking math problems for right answers, looking up spelling words, checking grammar, and being read to. None of the children interviewed described having their work done "for them" and indicated that requests and offers for help seemed to go both ways. Some children asked for help only when they needed it, and parent or older siblings routinely asked some children if they needed help with school work.

Sharing Information

Over the course of the interviews, another variation on imposed information seeking came to light. This is the recognition that people will retrieve information for others even when they are not asked explicitly to do so. One teacher observed that when children are asked to find books for the classroom library, "They always choose books they know I like. I don't tell them to, but they do."

Another teacher said, "Some children have realized from very early on what books they can read for themselves and which books Mommy's going to want to read to them." Several teachers remarked that students "just bring in" materials related to what the class is studying without being asked to. One teacher provided this description, "A kid in the process of looking essentially for something for himself finds something and says, 'Oh that's something Marcella needs.'" These are all instances of information sharing that demonstrate how some connections between people and information are made.

This too is a familiar behavior when people are aware of each other's information interests or needs. Among these students, friends did not have to explicitly ask each other for information in order for it to be provided. Having knowledge of someone's context, tastes, and preferences can be enough for an individual to attempt to fill those needs if they come across a potential "answer" in the course of their activities. The information and/or materials are shared with the potential end-user who will determine the relevance of the information to their needs and/or the appeal of the material to their taste.

A middle-level girl gave this example. "My mom knew I liked ghost story books. So one day she came home and we were on summer vacation in our house in Martha's Vineyard, she was going, she went to the drugstore and she got me this book and I had no idea so she told me."

Twidale (1997) has also recognized this behavior between adults and calls it "serendipitous altruism." Erdelez and Rioux (2000) study similar behavior in their investigation of the use of Web site links labeled with some variation of, "E-mail this to a friend."

WHERE TO NEXT?

This investigation provides a first look at information seeking in the school environment from a perspective that differentiates be-

tween self-generated and imposed information seeking. The study is descriptive and exploratory in nature, focusing on understanding imposed queries from the point of view of those who generate, impose, carry, and/or transact them.

Some of the findings, such as children's stated preference for browsing, reinforce findings from previous study. But this work also calls attention to the need to understand the developmental process more fully, in terms of how children learn to ask and transact questions. The finding that there are children who actively seek the role of agent needs to be better understood. Who are these children? Do they have identifiable characteristics or experiences in common? How do they perform in school as compared to their classmates? How do they fare later in life in terms of attained education or choice of profession?

It is also important to explore the question of whether the desire to be an agent for others should be encouraged or discouraged in the classroom setting. Is such behavior problematic to the development of the agent's peers, or does this sharing of skills help other children to attain them? Investigation into the role that imposed queries play in the socialization of children should be of interest to educational theory.

Because the generation and transfer of questions is central to the information-seeking process, it is important to look at how question development is related to the attainment of reading, computer, and information-seeking literacies. The difficulties children have in locating information electronically and in text reflects their attainment of reading skills, but also their level of information-seeking instruction, as well as developmental factors. All of these variables may affect their ability to recognize a "right answer" when they see one.

The variations in the imposed-query model revealed in this study are also provocative. The view of the school environment as one in which various layers of imposition overlap and interact led to new views of how people use each other to find information.

Children's impositions on parents and caregivers in the double-imposed query scenario and evidence that children can choose to be agents without being asked give further insight into how information flows between people and warrant further investigation.

In other writing, the implications of the imposed query revealed in this and other studies (Gross 1998, 2000) for the performance of reference work with children and the evaluation of information programs and services have been explored. More work is needed, however, in a variety of settings such as other elementary, middle, and high schools environments, to fully understand children's information seeking in school and to what extent the findings of this study can inform teachers and school library media specialists in the performance of their professional duties.

APPENDIX A.

Interview Guidelines for Case Studies

STUDENT INTERVIEW GUIDELINES

1. Do you remember going to the library this week with your class? Did you work on a class assignment there or was it free time? Please tell me about what you worked on while you were there.

Follow-up questions: Did you check out any library materials? How did you choose the materials you used? Were materials difficult to find? Did you ask anyone for help? How did you feel about your visit/assignment?

2. Do you have any homework now, or do you ever get homework assignments that you need to go to the library, bookstore, or other places or people to complete?

Follow-up questions: Are you usually pretty sure about what the teacher wants? How do you decide where to go for the answer? Does your mom or dad, brother or sister, friend, or maybe even

someone else ever help you? How do they help you? Do you ask them or do they ask you?

3. What kinds of resources, people, or places have you used for schoolwork? Which do you like best? Why?

Follow-up questions: How often do you get to use your favorite resource? What kind of resources do you think your teacher likes best?

4. If you were going to give another student advice about doing a good job on homework, what would you say is the most important thing?

Follow-up questions: What makes that part tricky? How do you handle it? Are there other parts that need special attention?

5. When you need something to read for yourself or information for something (not schoolwork), how do you go about getting it? Can you remember a time you needed to find out something? How did you handle the situation?

Follow-up questions: If you were going to do this again, would you handle it the same way?

6. When someone asks you to find something out for him or her, how do you know where to go for the answer?

Follow-up questions: How can you tell if you got the right answer?

TEACHER INTERVIEW GUIDELINES

1. Can you tell me about an assignment your class is currently working on? Did you design the assignment yourself? How was it developed?

Follow-up questions: How was the assignment presented to your class (verbally, copied from board, part of a worksheet, other)? In this assignment, are the students meant to work alone, in pairs, or in small groups? Does this assignment require any resources outside those available in the classroom? What form is the answer to

this assignment meant to take (raise hand in class, oral presentation, written answer, etc.)?

2. When your class visited the library this week, was there a plan concerning how they were to spend their time?

Follow-up questions: When do the students receive their directions concerning their library visit? What happens if they don't finish what they need to do in the allotted time? Was this week a typical library visit? What made it typical or atypical?

3. When you make assignments, to what extent are you looking for a specific answer versus evidence of some process on the part of the students? Why do you look for one or the other? Does this change at different times or under various circumstances?

Follow-up questions: How do you evaluate their process? What types of strategies might you expect of them?

4. When you give an assignment, what types of resources might you expect them to use in their work? Do you specify the resource(s) as part of the assignment?

Follow-up questions: How do you gauge the existence/availability of these resources for your students? What types of resources do you like your students to use?

5. What factors (skills, understandings, etc.) would you say most influence your students' ability to successfully complete their projects? What do you feel their biggest stumbling block?

Follow-up questions: Are there certain children the others seem to go to for help? Why do you think these children are sought out? Do you have any sense of how the involvement of parents, siblings, classmates, or others helps or hinders your students' process?

6. To what extent is your evaluation of the students' performance based on predetermined target responses (specific answers) versus evidence of process or experience?

Follow-up questions: Has a student's response ever changed your understanding of the question or assignment? Does student work

ever result in changes to your evaluation of the group? Have the students' responses ever resulted in further research on your part?

SCHOOL LIBRARY MEDIA SPECIALIST INTERVIEW GUIDELINES

1. Please describe a typical class visit to the library at this school.
Follow-up questions: From the point of view of the students, would you say they come to the library knowing how they are meant to spend their time? From your own point of view, do you feel you know what the teacher's expectations are concerning class visits to the library? Does your involvement in the class visit vary with grade level, by teacher, or for other reasons?
2. What are some of the assignments you are aware of that classes are currently using school library resources for?
Follow-up questions: How do you plan for these visits? Are assignments stable enough that once you see them you can anticipate their return next school year? Do you ever go into the classroom to help prepare the students for an assignment?
3. Do you have any sense of the proportion of questions brought to your library that are imposed or self-generated? Does this affect how you run your library in any way (collection development, arrangement of furniture, lesson plans, circulation rules, etc.)?
Follow-up questions: What would you say is the service mission of this library? Do you have any working relationships with other information-providing institutions the students might also be using? What is this relationship (resource sharing, referral, etc.)?
4. How does what you do differ when you are helping children with school assignments versus self-generated information needs?
Follow-up questions: To what extent are you able to plan ahead for school assignment-related queries? To what extent are you involved in the development or evaluation of student assignments? Have you noticed any particular resource as being preferred by the students or that they tend to want to consult first? Do you ever

need to consult the teacher to clarify assignments or to evaluate the appropriateness of resources?

5. What are the main stumbling blocks you see students face as they transact schoolwork in the library?
Follow-up questions: Do they have the same problems when looking for information for their own use? Do you see the same issues across age/grade levels?
6. Aside from school assignments, what kinds of information have you noticed children seeking for someone else?
Follow-up questions: Do you know whom they were getting the information for? Do you have any sense of how often this happens in your library? Why do you think these children bring these questions here?

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