

# How to Study Children Searching For Fun: Some Experiences and Reflections

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## ABSTRACT

In this position paper we argue for the need to develop a scientific framework for investigations of children's searches for fun. We believe that an exploration of the potential of aesthetic relevance is worthy of further attention. We also report on insights gained on searching for fun during studies of children's information-seeking behaviour in schools. To provide context for our studies and to understand more about children's interests and motivations we carried out short investigations of the children's information preferences and searching activities in their leisure time. Our findings indicate significant differences in information needs and searching style from adults and highlight the challenges posed when considering a study of this behaviour.

## Categories and Subject Descriptors

H.3.3 [Information Search and Retrieval]: Search process;

## General Terms

Design, Human Factors, Theory.

## Keywords

Search, information retrieval, information needs, user experience, fun, children, aesthetic relevance.

## 1. INTRODUCTION

It is our belief that more attention should be paid to developing a scientific framework for exploring searching for fun with children than currently exists. At present there is a gap in the literature with regard to criteria for children's leisure searches, however we believe that aesthetic relevance may provide a promising direction for future work. Aesthetic relevance is a criterion that describes "the potential of a document to provide a suitable reading experience"[6]. It can be considered a sibling of the traditional relevance concept that in Information Retrieval indicates the potential of a document to provide information users need to retrieve. Aesthetic relevance deals with a different scenario of use i.e. looking for pleasurable reading, and fits very well with the richer information seeking process that studies the different roles and exchanges human beings play in the retrieval of information, besides interacting with an IR system. One of the most inspiring works in this area is by Reuter [6] who in a study of children

using the International Children's Digital Library (ICDL) identified a set of factors influencing children in their book selection and mapped these onto the basic concept of aesthetic relevance. Reuter argues for the use of the criterion to be expanded to other contexts and to explore the patterns of factors that emerge with other types of collections. We would welcome such further work, in particular, naturalistic studies of children's leisure searches: real tasks involving real fun.

## 2. BACKGROUND

In our own research with children in primary schools we have found out a great deal about children's preferences with regard to the information resources available to them in the classroom. We have gained some understanding of how children search for and select information dependent on the type of task being undertaken. Much of this work has been carried out during naturalistic studies of searching in the school environment[5] in schools in Scotland. When considering the behaviour of the children in the school environment it has also been important to us to understand what the children with whom we conduct research do while away from the strictures of the classroom (where sites such as Youtube and social media are banned or filtered out) and to consider to what degree out-of-school information experiences influence children's information behaviour while at school.

We have aimed to answer the following questions with regard to children's leisure time searching activities: What are children interested in? How do they find out about it? Which information sources are they using and which do they prefer? To date, in the absence of a fully developed scientific framework, much of our research in this area has relied upon the use of questionnaires about hobbies and interests that have focused on information seeking about these, in conjunction with follow-up group interviews. In the course of our studies we have also been able to accompany children on library visits and to observe their book selection strategies and preferences there and in the classroom. Additionally, in a study in Switzerland examining children's preferences for books we employed a video interview technique where we asked children to interview each other and to ask about how they select the books that they want to read[1].

## 3. SEARCH CATEGORIES

When we talk about adults Searching For Fun, we have come to think of this behaviour as falling into one of three categories: Serious leisure (lifelong interests/hobbies/commitments), Project leisure (booking a holiday etc.) and Casual leisure (playing, having fun relaxing) [8]. It is worth considering how well children's searches for fun correspond with these categories and, while we cannot ourselves claim to have thoroughly investigated this yet, our work to date allows us to make a few observations in

this regard. Our studies have found that typically for children in late primary school i.e. 11-12 years of age, most searches reported are of the Casual leisure type, with a majority of these being for games websites, closely followed by Youtube and other video sites. So we can see that during their leisure time, children are primarily visiting entertainment websites that would be completely out of bounds in school. The next most common type of search we have seen reported was for Serious leisure. Searches of this type tended to be of the lifelong interest or hobby sub-types with children looking for and accessing sites associated with, for example, football teams, and their favourite pets and animals. There were a couple of instances of intersection of the Casual and Serious categories with several children searching for games related to their hobbies. In their questionnaire responses, none of the children reported searches in the Project leisure category with regard to their own information needs but via group interviews we uncovered some evidence, particularly among children from ethnic minority and or lower socio-economic backgrounds, that children are performing these types of leisure searches (e.g. looking for products to purchase or searching for flight deals) on behalf of their parents, perhaps due in part to differences in language skills, technological ability and experience and perhaps also due to parents' lack of time to perform such tasks.

#### **4. WHERE CHILDREN SEARCH FOR FUN**

Our research showed that most searching for fun by under 12s is currently done at home. Increasingly this will change as more children take up smartphones and other mobile devices, however we had little such activity reported to us as occurring outside the home and only very few of the children had such devices. Despite coming from a wide range of socio-economic backgrounds, all of the children we worked with had access to a desktop or laptop computer at home and all but one had Internet access there. A majority reported doing most of their leisure searching in their own homes, at a relative's home or at a friend's house after school. Sometimes paired searching at a friend's house that started off being for a homework topic led to searches for fun. Many reported doing their searching for fun with a friend. Girls often mentioned doing searches with mums and sisters, boys with male relatives. Of interest to us was the number of times that children described each other as information sources without being specifically asked about this. The majority reported using friends as an information source for fun activities (much as they had done in regard to their school work). Most of the children also mentioned using family members as information sources. Again, girls tend to mention mums and sisters, while boys tend to mention male relatives. When asked how they knew about or found the websites they liked, children tended to mention people who had told them about the site more often than they mentioned the method by which they found it, though Google was mentioned by around half of them. No specific information about how their searches were conducted was volunteered, which is undoubtedly a limitation of the questionnaire+group interview method.

#### **5. FACTORS IN CHILDRENS SEARCH**

Our research has uncovered some key differences between the genders where searching for fun is concerned. Boys report a narrower range of hobbies and interests than girls, but tend to use a wider range of information sources to access these. Additionally, gender and age come together to be particularly important in late childhood. Boys are choosing books aimed at a rather lower reading age than girls of the same age, many of whom have moved on to books in the young adult category before

boys give any hint of doing this and, as we have seen already, there is a split along gender lines where searching with others and using others as information sources is concerned. One of the key factors in children's searching for fun is the influence of others. Reasons for many of their searches for and decisions to choose books and websites come from the recommendations of others in a way that we suspect is stronger than is the case for adults. We also found that in the one instance of fun searching that children were allowed to do while at school (during a library visit), children chose books for their leisure time very much in line with the leisure topics they chose to search for online while away from school.

#### **6. CONCLUSIONS AND FUTURE WORK**

We have made some attempts to uncover children's preferences and strategies, perhaps being more successful with the former than the latter. We cannot be sure of the accuracy of the self-reporting in the questionnaires though we believe using follow-up interviews strengthened the technique by allowing us to both verify some of the questionnaire responses and to probe further. We previously mentioned the naturalistic aspect of some of our studies. Other authors have argued for more studies of this type when investigating searching for fun [3] and we believe such studies would be of merit when investigating children's fun search. We would now like the potential of aesthetic relevance to be fully explored in a naturalistic context, investigating the real leisure tasks undertaken by children. We are aware that such research will pose significant challenges, given that most fun searching takes place at home, which is far less accessible to the researcher than is school and also takes place at unscheduled times, unlike at school. The tools most suitable for undertaking such an investigation would require careful selection and design. Key we believe to our success in investigating the searching and selection done for school topics in a naturalistic setting has been using reports or drawings produced by children to get them to talk about their searching experiences and information preferences[5]. However we believe this technique would be unsuccessful for most fun searching as there is rarely anything created as a result of the searching activities children that children report doing in their leisure time. Diary studies have already shown to be of use when studying adults searching for fun[2,7] and if carefully designed could be very effective with children [4] in a naturalistic study of fun searches. It is important that the keeping of the diary does not seem like homework and those designing studies that investigate fun should be particularly sensitive to this. Studies with younger children could also consider the use of a parent evaluator technique in the home[4]. This technique was originally designed for the evaluation of what are generally entertainment products in the home and therefore we feel it has some potential for investigating fun searching with younger children also. The video interview technique that we employed for book selection preferences[1] might also be successfully employed in the home as increasingly technology to do this becomes ubiquitous.

#### **7. ACKNOWLEDGMENTS**

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