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Making A Change: An Exploration into How Children Search

Introduction

The standard classification systems of Dewey Decimal and Library of Congress Subject Headings have been used in libraries around the world and people must learn how these systems work in order to search and find the materials they are looking for. For those untrained or unfamiliar with these systems, it can be quite confusing as the organization system follows a very particular set of rules and guidelines. Not only this, but searching for materials in these systems also requires a specific set of language competency skills. Having the skills necessary to consult a database and search is a key element of being able to locate materials within libraries.

So, what happens when a child comes to a library and wants to search for a book on “baytovn” (Beethoven), but can’t find any results? What about a child coming into the library to find books involving princesses, but they are shelved in different areas? What types of efforts are being made in libraries to handle this different way of searching and what can libraries implement to make the search process easier for children? As librarians, this should be something we consider since children can be patrons of our institutions and it should be our goal “to show them the fun in browsing, the thrill in finding new subjects, and the pleasure in learning how to locate books on a newly-discovered subject” (Montgomery, 2014).

For the purpose of this inquiry, “child/children” is referring to people aged 4 to 12. The reason for this specification is because 0-3 year olds are in a specific developmental stage where the basic skills required for searching are not yet present. For those over the age

of 12, they are often referred to as young adults in literature and thus their searching abilities have often evolved to a point where the library systems are more understandable.

Background/History

While children's searching practices were not given importance when creating the LCSH subject headings, in the 1940's a change was made to the classification system. The Library of Congress added the subject subdivisions "Juvenile Fiction" and "Juvenile Literature" (for non-fiction) to help users find children's materials (Farmer, 2021). However, while this change made it easier for librarians and older patrons to identify children's materials, it did not do much for the children who were seeking these materials. Thus began more research into how searching practices and shelving arrangements vary greatly depending on age.

Children do different types of searching in their everyday lives, ranging from things like playing games and pursuing interests, to communicating with one another (Fountain, 2011). These activities require information literacy skills such as "constructing searches, using keywords, selecting synonyms, narrowing topics, navigating web pages, and determining which pages are relative and authoritative" (Fountain, 2011). However, this varies greatly based on age. A child who is 5 will be searching differently than a child who is 12. Because of this, libraries need to come up with ways to cater to the searching patterns of children in their various stages of development.

There are a few important things to keep in mind while looking into children's relationships with searching. The first is that children search very differently than adults. Secondly, for children who do not read yet, adults serve as intermediaries for them and therefore will likely interact with the children's space in a different way than the child (Farmer, 2021). This is important to note because if adults are used to classification systems

like DDC or LCSH, they may need help in understanding the way the children's section and catalogues are organized.

Literature Review

Children's searching can be narrowed down to two main areas in the literature: searching catalogues (either physical or digital) and searching the shelves.

Searching Catalogues

According to various literature, the main reason required for adjustments to be made to libraries involving children's search practices is because of the lack of cognitive and mechanical skills necessary to search effectively (Fountain, 2011). Children have difficulty with multi-step processes, have less semantic and technical knowledge, and often search differently from adults (Farmer, 2021). When looking at how children use catalogues to locate resources, it was found that children search differently from adults for several developmental reasons: "less reading and writing practice, spelling and vocabulary limitations, less subject knowledge, less emotional maturity, and less life experience" (Farmer, 2021). Children do not have the knowledge base or vocabulary to effectively construct searches. According to Fountain, the LCSH requires knowledge from words above a sixth-grade level, so these controlled vocabularies make it difficult for those under the age of 12 (Fountain, 2011). In addition, children search using natural language and much less with controlled vocabulary. This finding suggests that librarians and cataloguers should include added notes to catalogues to account for the language children use to search (Farmer, 2021). Literature often refers to this as reader interest classification, or RIC.

Following how children search in terms of language, children also have not yet developed recall memory, and as such they have trouble modifying a search. Boolean searching is "too complicated for children 10 and under" because children are just entering the development stage where they can classify objects and comprehend hierarchical structures (Fountain,

2011). The ability to determine broader and narrower terms, as well as related terms is often not attainable at this stage. Not only this, but choosing the right form of a word (i.e. dog or dogs) proves to be difficult as well.

These cognitive skills are also compounded by the various mechanical skills needed to access information. Children have difficulty “typing, spelling, alphabetizing, and even holding down a mouse button for an extended period of time” (Fountain, 2011). However, whether it be cognitive or mechanical, children often explore through trial and error until they feel they are successful, or can no longer tolerate failure. Sometimes this means abandoning the search all together, or switching to a more familiar or easier topic (Farmer, 2021).

A few recent studies have found certain feature changes made to library catalogues have been beneficial for child searching. Some of the features are faceted searching (i.e., filter by format) and interactive features such as “shells” which are similar to a Google search bar that enables users to input favourites or folksonomies and provides them with a full list of items (Farmer, 2021).

Shelving Arrangement

In addition to searching catalogues, the other main area where children search are the physical shelves. Valerie Nessel conducted a study in a school library with a class of third graders and found that many students were not in the habit of consulting catalogues before searching for materials, but rather went directly to the shelves to begin browsing (Nessel, 2013). She noted that because the school’s library section of non-fiction books was identified with simplified labels, students did not have to rely on the call numbers, but tended to use visual cues like book covers and shelf labels to locate their materials. One of the biggest things she noted was students rarely read the titles of the books and opted to look at pictures within the book to determine whether or not the book would be of interest to them (Nessel,

2013). Going along with this, because the students relied rather heavily on the visual cues, relevant books on shelves were often rejected if the student did not see a picture of what they were looking for right away. What this demonstrates is how vital visual cues are on helping children locate relevant information (Nesset, 2013).

Through this investigation, Nesset also learned that children believed the way they would group materials on the shelf was how the shelves were organized. For example, if a child found a book about bears, they assumed all books about bears would be in the same section, or at least grouped together. After learning this, the school library reshelfed the collection to reflect grouped subjects, which resulted in more efficient browsing and retrieval from the students (Nesset, 2013).

This regrouping highlights the idea of reader-interest classification which was mentioned previously. This is a type of genrefication where no set standard exists. Instead, librarians create their own system which reflects the needs and searching patterns of the patrons and community they are serving. There are several flaws with this type of classification. The first is the burden placed on the librarians to determine what category a material belongs to (Farmer, 2021). This will then in turn affect things like copy cataloguing and consistency. The second is that one library's way of organizing a genrefication system is unlikely to be used in other libraries. For children who are learning how to search and can already be overwhelmed, this might cause some frustration if they are visiting various libraries and branches (Farmer, 2021).

Another study was completed by Kimmel and Lancaster in 2019 which aimed to see how changes made to a children's picture book section of a public library had an impact on children's searching habits and behaviours. A similar study was done by Raqi and Zainab, who observed children's searching behaviours in a public library and concluded that shelf

browsing was the most popular search strategy employed by this age group (Raqi & Zainab, 2008). Before the reorganization, various literature was evaluated and an understanding that classification systems act as boundary objects for users and how the objects structure how users find connection in order to build new knowledge was learned (Kimmel & Lancaster, 2019). This reflects back to the idea of who the classification system is for. For systems like DDC and LCSH, they are very much for the librarians, library staff who are trained in them, and a certain degree of older patrons.

Making changes to shelving arrangements is not a new practice, as it is done to some degree in other sections of libraries. For example, in many libraires fiction materials are taken out of DDC arrangement and instead ordered alphabetically by the author's last name, as well as various signage is posted, displays are created with covers faced out, and genre stickers are placed on spines (Kimmel & Lancaster, 2019). This is also echoed in the work done by Harris and McKenzie who point out that libraries often separate sections for "beginning readers, large print books, or graphic novels" (Harris & McKenzie, 2004). These practices support the promotion of browsing and this can be extended to the children's section as well.

When it came to the reorganization of the section, a few decisions had to be made. The first was how many categories the section would have. It was decided there would be 26 categories, each section represented by a letter from the English alphabet. It was then up to the librarians to fit all the picture books into these 26 categories, echoing the issue of library discretion mentioned earlier. It also highlights the systems of power libraries can uphold. In addition to this, some of the books were not easily categorized. An example highlighted was regarding a book about bugs and how though the characters were bugs, the story itself was about friendship, so it was put in the friendship category (Kimmel & Lancaster, 2019).

Another issue with the 26 categories was the effect it had on the cataloguing. A sticker was placed on the spine with the letter of the category the book belonged to, as well as a single letter was placed in front of the traditional call number. This “served to coordinate with other libraries in the regional catalogue who continued to use traditional call numbers” (Kimmel & Lancaster, 2019). This also relates back to the issue mentioned previously about the confusion when a library’s genrefying is not cohesive amongst all branches.

There were also many benefits to this system. Staff were able to easily scan the shelves to see which books were not in their proper place using the colours and letters as cues (Kimmel & Lancaster, 2019). It also became clear which categories needed more materials. In this study, the library realized they were lacking a lot of materials related to princesses and dinosaurs, two categories children were constantly searching through (Kimmel & Lancaster, 2019). In addition, the new system allowed children to discover new connections (both materials and personal). A child who likes trains for example can also find books about cars, trucks and airplanes in the same section on the shelf. This can expand their area of interest and help them make connections to other kinds of vehicles (Kimmel & Lancaster, 2019). The other benefit this system brought on was children were choosing their own materials which is crucial for children learning to read (Kimmel & Lancaster, 2019). With this being said however “coordination by itself does not allow for rich learning within a community”, so librarians must still be proactive in providing opportunities for children to engage with their searching behaviours. (Wenger, 2000)

Recommendations

Based on the literature there are a number of recommendations that can be made to make searching for children in libraries more in line with their developmental needs. The first recommendation is enhanced cataloguing practices. Cataloguers must use language children can read/understand for things like subject headings, summary notes and keyword fields

(Fountain, 2011). Materials should be described “accurately and in ways that connect meaningfully to children” (Farmer, 2021). This can be done by including natural language, or organizing/grouping shelves into easily identifiable sections. For this recommendation, cataloguers must constantly ask themselves the question: “How might children search for this item?”.

The second recommendation is improved interface design. This applies to the databases children use to search and they should include elements like spell-checkers or “Did you mean ...?” (Fountain, 2011). The database should also promote faceted browsing which will help children to narrow their searches without needing Boolean operators (Fountain, 2011). In addition, bright colours, graphics, an “easy-to-read” font, and a clear layout will make the search process for children more developmentally appropriate. Alphabetical searching is also recommended to help children locate the materials they are looking for.

The third recommendation is focused literacy instructional programs. By teaching information literacy to children, it will help them to be more successful in their ability to retrieve information. This type of instruction should involve “concrete demonstrations, visual guide sheets with examples, simple screencasts and time for guided practice and exploration” (Farmer, 2021). When concentrated effort is made to teach these skills, there can be large payoffs such as smoother searching processes and creating life-long, independent library users (Montgomery, 2014).

The final recommendation (which can be applied to all the above mentioned) is to seek input from the children in local libraries as early as possible. This can happen through various steps in the search process and can include determining which MARC fields would be most helpful, to watching how the children in your library interact with the materials (Farmer, 2021). In consulting with children, libraries will be better suited to provide accurate

and meaningful tools and libraries can modify their systems to reflect the children in the communities they serve.

Reflection

I chose to look at children's classification systems because I have worked with kids in my previous career as an educator and was interested to see the limitations or obstacles they faced in libraries. Libraries where I am from put a lot of time and effort into creating places for children to interact with materials and explore the resources offered by the library. However, the cataloguing system for my home library is complicated to use, and if I as an adult sometimes struggle to use it, I wondered how kindergarten aged children were able to? This led to reading various articles about how library systems are designed for adults and only recently has there been a large push to make the classification systems and searching practices more "kid-friendly".

As for what kind of impact projects like this can have on librarianship, I believe it can act as a starting point for making libraries more accessible for children. By looking into how children interact with cataloguing and classification systems, libraries will get a better understanding into the types of areas of interest and types of materials children are interested in, as well as patterns in different types of information behaviour. This is important because children growing up now are going to be searching and potentially classifying in different ways than say 20 years ago. The emergence of technology has really had an impact on how children interact with resources and systems within libraries and I believe a lot more research needs to be done in this area.

In terms of why it is an important topic, not only is there is an extreme lack of research done into this topic, and specifically this age group, but children are usually a large demographic in libraries (mainly public libraries). I personally found there was not a lot of scholarly material to work with dealing with the age group of 4-12 year olds. Majority of the

research I found pertained to teens and dealt with their online searching behaviours. However, from the research I did find, there seemed to be a boom in the research in the early 2000s, which I think had to do with the introduction of the internet and other emerging technologies. There was another boom in research from around 2015, onward and I am curious to see if more research emerges in the next few years.

It is my hope that more scholars look into how children use libraires, both in searching and various methods of classification. Children go through a lot of developmental changes in a short time and librarians should be aware of ways to help make the process and experience locating materials and interacting with resources more meaningful.

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