

# Accessibility of Diversity in the Picture Books of the Alice Hagar Curriculum Center at the University of Wisconsin – La Crosse: Impacts on Undergraduate Education Students

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Faculty Sponsor: Teri Holford (Murphy Library)

## ABSTRACT

This article expands the preliminary research from the case study “How is diversity counted? What counts as diversity? An academic library picture book diversity analysis,” where 5,296 picture books in the Alice Hagar Curriculum Center (AHCC) at Murphy Library were coded for diversity representation (Holford & Hendrix, 2024). Taking inventory of the picture books and their diversity codings, a simple web-based search tool was designed for undergraduate students to create a customized search for diversity in picture books. The tool was tested with a particular focus on facilitating a way for students in Multicultural Education classes who are looking for multicultural picture books. Using various diversity search points, the goal was ultimately to improve accessibility in a more intuitive way and thus improve productivity and satisfaction. A follow-up survey was conducted with the same students to track their experience and determine what diversity in children's literature meant to them.

## INTRODUCTION

Children's books function as mirrors and windows for young children (Bishop, 1990). Picture books allow them to see their social identities reflected in what they read and peer into the lives of those with differing social identities. Books that have diverse characters can work to broaden worldviews and nurture positive ideas about students' physical characteristics or societal circumstances. Representation of historically underrepresented groups of main characters in these picture books is especially important because historically underrepresented groups of children from cultures, races, ethnicities, or other social identities can have feelings of inadequacy and abandonment if they cannot see themselves reflected in what they read (Martinez, 2022). However, a lack of diverse representation does not just affect historically underrepresented groups of children. It can also negatively affect children who belong to a majority culture by providing a limited or ignorant perception of other cultures, races, ethnicities, or social groups.

Despite over half of the United States's K-12 public school system being nonwhite (National Center for Education Statistics) and the recognized benefits of diverse literature (Martinez), there remains a striking lack of diversity in children's literature. Data from the Cooperative Children's Book Center (CCBC) at UW-Madison's School of Education illustrates this disparity. The CCBC receives many thousands of books annually, using them to track diversity statistics (CCBC, 2024). In 2019, out of the 3,717 books received, only 63% featured people. The other 37% featured animals or objects as main characters. Of these, 40% had white main characters, while only 12% featured black main characters. Approximately 10% were categorized as "unspecified brown," and Asian characters accounted for eight percent (Books, 2018). The trend of an abysmal amount of children's literature has continued throughout the years.

Inspired by the research done at the CCBC, Associate Professor and Education Liaison Librarian Teri Holford and history and archeology student Adeline Hendrix conducted a similar study at the Alice Hagar Curriculum Center at the University of Wisconsin -La Crosse titled “How is Diversity Counted? What Counts as Diversity? A Picture Book Diversity Analysis in an Academic Library.” Manuscript submitted for publication. (Holford & Hendrix, 2024). They collected data on various racial, ethnic, and social groups in the library by doing one of the first hand-done academic library diversity book audits. They ended up coding 5,296 picture books. Each book in the picture book library, as well as non-fiction children's books featuring people, were hand-coded based on various criteria. White main characters were featured in 33% of all books. Animals, objects, and other nonhuman main characters were featured in 26% of all books. All other groups (multicultural, other historically underrepresented groups, including LGBTQ) as main characters were between 11% and 1% (Holford & Hendrix, 2024). The data and statistics they created showed that the spread of bias for animal or white main characters could happen in academic children's library settings, even if there is a large effort to buy diverse books.

The raw data they created detailed how each book in the collection fit into 64 different diverse criteria (such as race, sexuality, gender, nationality, life circumstances, and age). Expanding on this preliminary research from the case study by Holdford & Hendrix, This data was then used to create a web-based search system that anyone at the university could use to search for books in the Alice Hagar Curriculum Center. This system was meant to help promote the use of diverse books, and books in general from the AHCC, with a particular emphasis on Education Majors as those students typically utilize the children's library the most. To target this group, a follow-up survey to a presentation showcasing the search system was conducted with students in Multicultural Education classes to track their experience and determine what diversity in children's literature meant to them.

## METHODS

Defining diversity and what it means in education is one of the first steps when examining the impacts of diverse children's literature and, in part, AHCC's ability to provide those books to education majors. Merriam-Webster defines diversity as having or being composed of differing elements, especially the inclusion of people of different races, cultures, etc., in a group or organization;" however, diversity in the education field is more niche than the dictionary definition. Thomas W. Brignall III and Thomas L. Van Valey define this concept excellently in *Approaches to diversity education: a critical assessment*, stating, "The idea that differences in race, gender, religion, sexuality, age, or other categories deemed unworthy of group inclusion shouldn't matter when it comes to people's access to all that a society has to offer, is central to the teaching of diversity." Their definition of diversity in education emphasizes that everyone deserves an equitable, robust education that meets each group's needs.

Murphy Library is part of the "One System, One Library" consortium of the University of Wisconsin, which allows students to search for items across the University of Wisconsin system (Libraries, 2014.) The official library search tool used for this process is called "Alma" by a company called Ex Libres (Library Systems, 2024.) While Alma is a powerful search system, it is not the most intuitive for undergraduates. While coding for the original case study, it was discovered that being able to search by certain criteria that were being coded for would be an efficient and simple way of searching. The target audience of users for this search system is undergraduate students and teaching faculty and instructors at the University of Wisconsin-La Crosse. A simpler search interface was designed with those in mind who may be unfamiliar with the AHCC to help encourage university members to utilize this part of the library.

The goal of accessibility in this project meant providing an easy-to-use platform for refining picture book searches based on predetermined searchable access points, meaning various cultural, community, or circumstantial variables such as African American, Native American, Latinx, Asian, Muslim, LGBTQ+, Disabilities, Socio-economic factors, displaced people, etc. Over 60 additional criteria were provided similar to the previously listed variables, allowing users to search for books on diversity-related topics quickly. During the process of defining these criteria, there would be instances where a singular book would be able to fit into multiple categories. This would cause certain books to pop up in searches more often; however, these books would still strongly reflect the criteria searched for, so these criteria-saturated books did not misreflect the desired searched response.

When building the search system, many steps were taken to make the experience of using the website as seamless as possible and increase ease of use. There was an emphasis placed on making layered searches possible. For example, searching for year, title, and criteria all at once or in any combination of those search features is possible. This would allow a simple interface while also allowing complete, specific searches to be made. The website was also set up to dynamically fit the screen of any device, allowing it to be more accessible to students who may be more inclined to use their phones for a quick search. Additionally, APIs were used to gather images online of book covers to allow more ease of finding books instead of just having to go off a call or info number and title.

## RESULTS

### Web-Searchable Database

Using the data compiled to create those statistics, Venue Communications developed a web-searchable database to give anyone in the UWL community a new way to search for books. Creating an easily accessible way to access this data will allow anyone to find books with specific characters or on particular topics. The website address is <https://adelinehendrix.com/> (Hendrix, 2023) and the main page can be seen below. This website can be viewed on any screen and will still be usable.

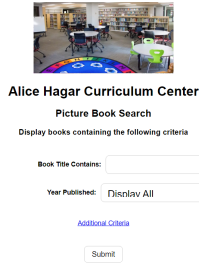


Image 1. Main Page of Search System

The blue link that says “Additional Criteria” opens to reveal a more specific search feature where users can select to search for/with one of the additional options selected. The expanded “Additional Criteria” web page is displayed below.

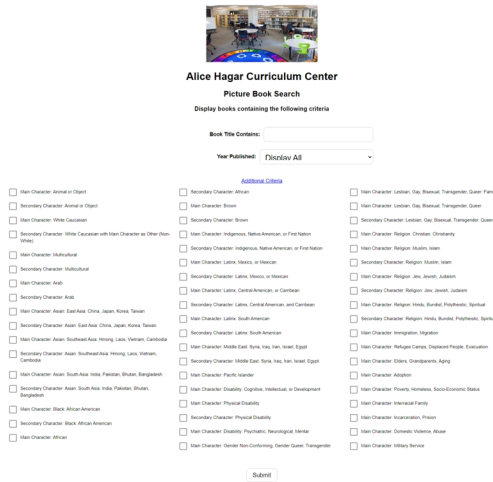


Image 2. Expanded Additional Criteria on the Main Page

Users can type in a term and hit the submit button when searching. Words that end in an “s” will also be displayed when the singular version of those words is searched. For example, searching for “dog” will automatically display the results for “dogs.” This is to make the user experience more efficient when searching for books. Additionally, capitalizing a word does not affect the search results.

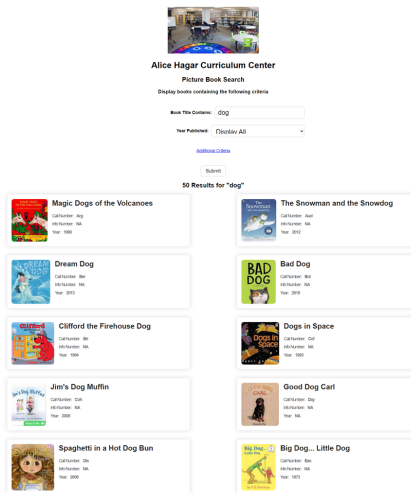


Image 3. Search Results of the word “dog.”

Users are additionally able to search with multiple features selected at the same time. For example, when searching for “dog” and selecting 2021, the results display books published in 2021 about dogs.

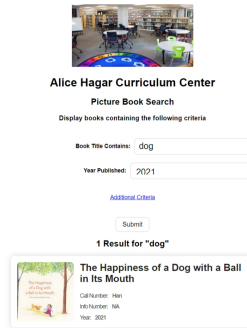


Image 4. Search for “dog” and year

The criteria that can be selected are unlimited. For example, one could search for a book about dogs published in 2022 with a white main character.

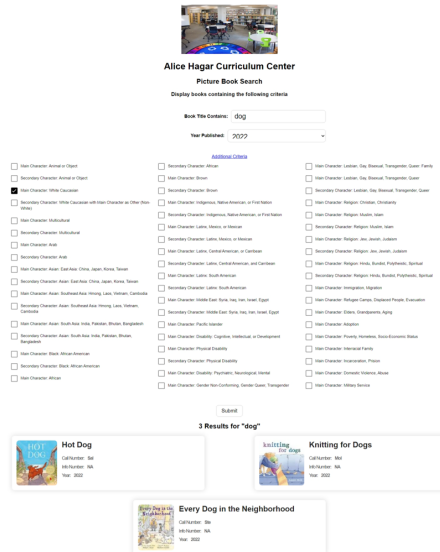


Image 5. All possible conditions selected

It is important to note that when searching with only an “additional criterion” or a year selected, it is possible to see all books that meet those conditions.

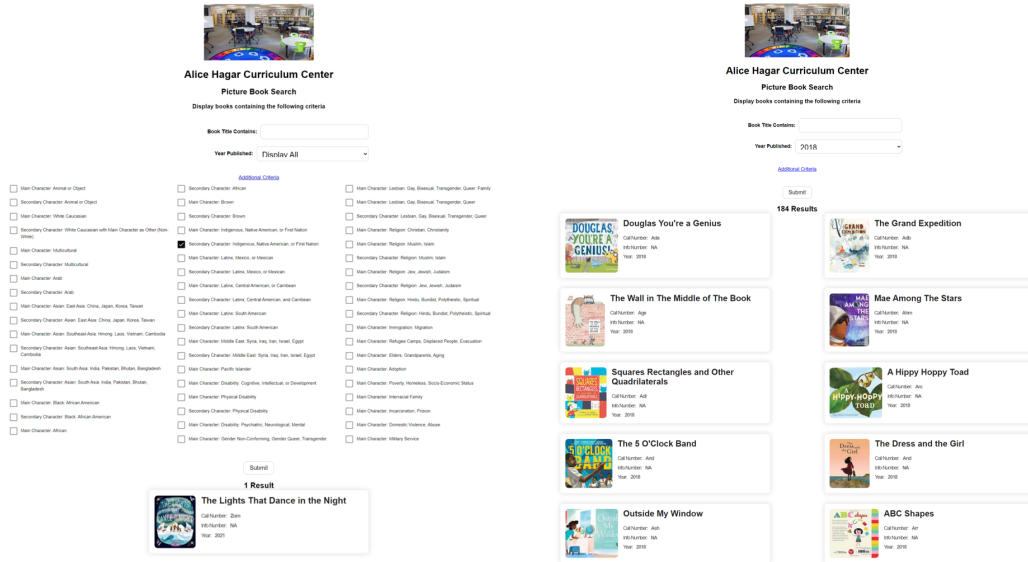


Image 6 & 7. Additional Criterion search and results

There is a secret back entrance for librarians for this website at the address; there, they will see a log-on screen where they will enter their login information. There will be a two-factor authentication, in which a code will be sent to their email.

Alice Hagar Curriculum Center Admin

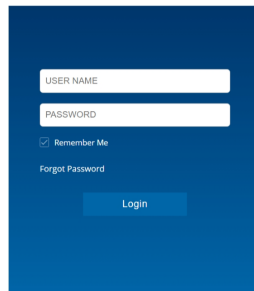


Image 8. Back Interface login

Two system authentications are used to help prevent website hacking.

Alice Hagar Curriculum Center Admin

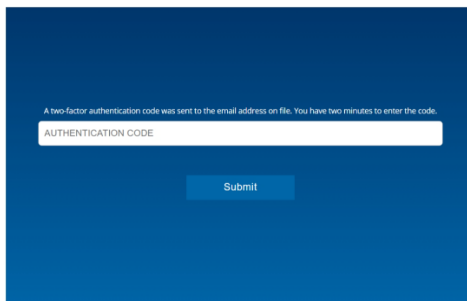


Image 9. Back Interface login – Authentication Code

After logging in, librarians can access the page below. They will see a list of all the books used in the study and can sort them alphabetically. The information, call number, and year are also displayed for each respective book. Additionally, the ability to edit the information of each book or delete it entirely from the search system is also available.

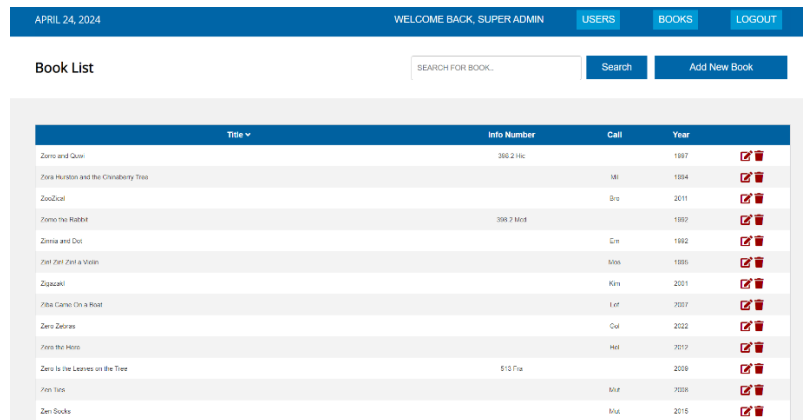


Image 10. Librarian view of book search system.

The following pop-up will occur if the “Add New Book” tab is clicked. There, librarians can enter various information, including the title, initials of who is entering information, Call or Info number, year, the time the book was entered in the search system, and an image of the book, and check if the book meets any of the additional criteria.

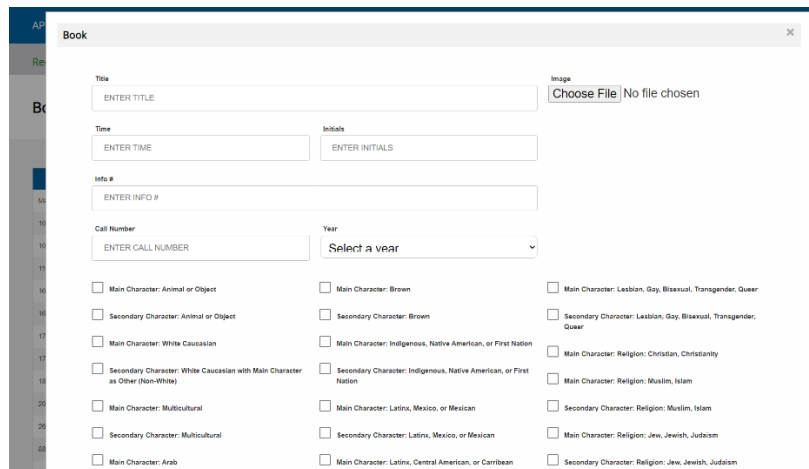


Image 11. Adding a new book to the search system

*Survey of Web-Searchable Database and Diversity in Education Majors in EDS:206*

A voluntary, anonymous survey was used to collect data after an informational presentation about search systems and book diversity to test if the web -searchable database is helpful for undergraduate education majors. This survey had no impact on students’ grades in the class. If students were in multiple classes where research is being presented, they would only complete the survey once. This survey was open from February 16th through March 31st. This was not an analysis of the aesthetics of the search system but only of the function, relevancy, and intuitive use of each search system for finding books on topics related to diversity and how helpful it is to the patrons of the Alice Hagar Curriculum Center.

Four undergraduate education classes received an in-person presentation, and six classes had a link to the survey and presentation available on Canvas. Students would answer the survey after navigating and searching for multiple books using the current Curriculum Center search system and the student. After the presentation, the students were surveyed and asked a series of questions, some of which they rated things on a scale of one to five and some that were short answers. There were 102 responses to the study, with 96.1% of the respondents being students enrolled in an EDS 206: Multicultural Education course. There were two responses from EDS 308: Foundations of Literacy, one from EDS 318: Literacy Methods I, and one from EDS 418: Literacy Methods II. Of the students that

filled out the survey, 72.5% were first-year students, 23.5% were sophomores, 2.9% were juniors, and one response was from a non-student. The breakdown of which professor the students were taking the survey for is as follows: 53.9% for Julie Welch, 42.2% for James Carlson, 2.9 for Yuko Iwai, and 1 for Denise Reuter. Students were asked questions about the course's diversity initiatives and the value the new search system would bring.

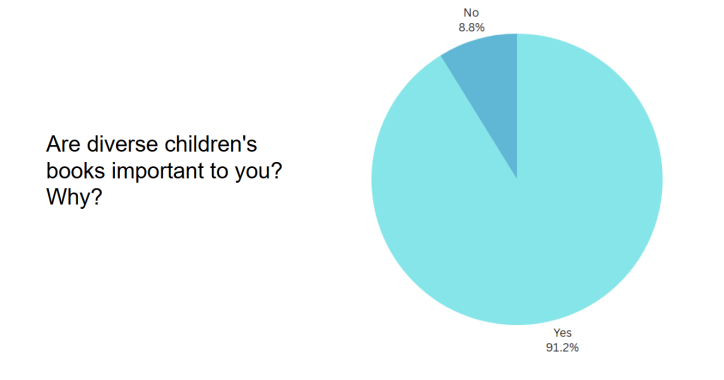


Figure 1. "Are Diverse Children's Books Important to You?" Pie Chart

When asked, "Are diverse children's books important to you?" 91.2% said yes and 8.8% said no. This information was not broken down by major as it was a personal question and did not relate to one's major. This short answer question allowed students to elaborate on their answers. One of the most thoughtful "yes" responses was by an education major who said, "Yes. As a future educator, incorporating diverse children's books into the classroom is an excellent way to open up my students to diverse cultures, ethnicities, etc." One of the most thoughtful "no" responses was by a non-education major who said, "No, they aren't that important to me. A good children's book will captivate the audience just by the story alone. I believe that the purpose of a children's book is to teach valuable but basic life lessons." While the more elaborate "no" response was from a noneducation major, it is essential to point out that five of the nine people who said diverse children's books are not necessary to them were education majors.

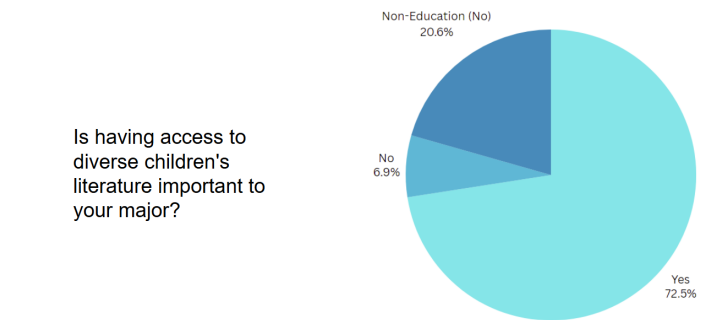


Figure 2. "Is having access to diverse children's literature important to your major?" Pie Chart

Then, students were asked, "Is accessing diverse children's literature important to your major?" Non-Education majors, all of which said no, accounted for 20.6% of responses. 72.5% of respondents were education majors that answered yes, and 6.9% were education majors that answered no. Of the education majors who answered no, some said no to the previous question about diverse books being important to them. Of the education majors that answered "yes," here are two quotes that show the student's reasoning taken from the short answer section of the question. "Yes, it's important to my major because I want to include books that discuss diversity in my classroom as a resource that all of my students can use. I want them to feel that they are valued and celebrated." Another student said, "(Diverse children's books are) Extremely important as we don't have one type of student." These students use the language and ideas taught throughout multicultural education.

Of the education majors that said no, two explained the following: "To my major, not entirely, music ed trying to find ways to work on diverse topics on multicultural education is not the easiest. The most I can do is select a piece that has that significance and try to talk to my students about it." And another similarly said, "Not necessarily, unless I end up teaching elementary general music, but that is unlikely." Their responses show they see

the value of diverse literature but aren't sure how to apply it to their area of education. Five other education majors said no. Four of those education majors did not elaborate on their responses, only stating "No," "I don't think so," "Not Really," and "No." The fifth one only said, "Not really, because I want to teach people."

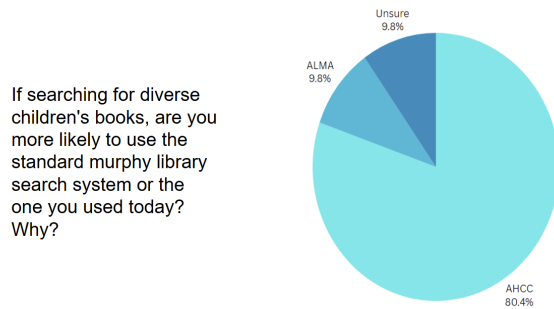


Figure 3. "If searching for diverse children's books, are you more likely to use the standard Murphy library search system or the one you use today? Why?" Pie Chart

Students were then asked questions to determine if the search system would be helpful in practice to education majors. They were asked three questions on a scale of one to five and one short answer response. The short answer response question was, "If searching for diverse children's books, are you more likely to use the standard Murphy library search system or the one you use today? Why?" 80.4% said they were more likely to use the AHCC system, 9.8% said they would use the standard library search system, and 9.8% were unsure.

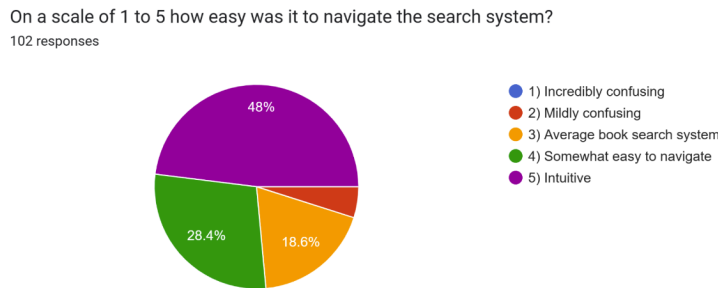


Figure 4. "On a scale of 1 to 5, how easy was it to navigate the search system?" Pie Chart

The first, on a scale of one to five questions, was to determine how easy the search system was to navigate. 48% of students found the search system intuitive and rated it a five. 28.4% found the search system somewhat easy to navigate and rated it a four. 18.6% rated the search system at three for the average book search system, and only 4.9% found it mildly confusing, rating it at 2. No students gave the search system a one out of five, which stood for incredibly confusing.

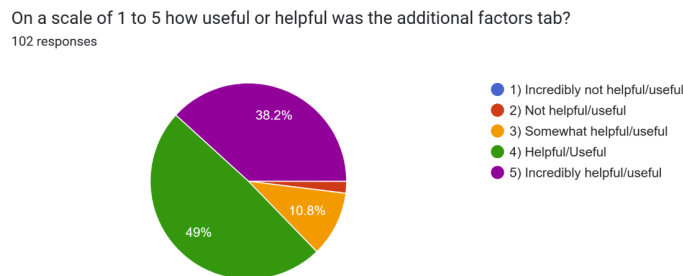


Figure 5. "On a scale of 1 to 5, how useful was the additional factors tab?" Pie Chart



Students were also surveyed on a scale of one to five on how useful or helpful the additional factors tab was. 38.2% found that the additional factors tab was beneficial/helpful and rated it a five. 49% found it helpful/useful, rating it as four out of five. 10.8% found it somewhat helpful, rating it a three out of five. Once again, only 4.9% found the search system mildly confusing, rating it a two.

On a scale of 1 to 5 if given the opportunity too, how likely would you be to use the new search system you used today again either for academics or personal use?  
102 responses

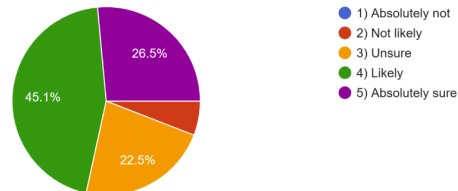


Figure 6. “On a scale of 1 to 5, If given the opportunity to, how likely would you be to use the new search system you used today again, either for academics or personal use?” Pie Chart

Third, on a scale of one to five, the students were asked, “If allowed to, how likely would you be to use the new search system you used today again for either academics or personal use?” The Majority, 45.1%, said they were likely to use the search system again, giving a 4. 26.5% of students said they absolutely would by answering five. Next was number three, meaning unsure, at 22.5%. Then there were two, which were unlikely, at 5.1%. Zero students answer one or not.

## DISCUSSION

A response from an undergraduate education student to the question, “Is diverse children’s literature important to your major?” was, “Not really, because I want to teach people.” Which seems to be the antonym to what a course like EDS:206, Multicultural Education, is attempting to teach. The multicultural education course at the University of Wisconsin-La Crosse “provides future teachers and all citizens with the analytical and pedagogical tools to ensure multiculturalism is valued, cultivated, and promoted in classrooms across the U.S. The question remains as to how a student who was over halfway finished with the course at the time of the survey came to that conclusion. Even with education on why diversity and inclusion initiatives are vital to student success, certain students still reject and deny these initiatives. If this is the case, even if a small percentage of undergraduates do not value diversity in literature, this can still impact hundreds of their future students.

A shifting of the perspective taught could make the material more effective in EDS:206. To first do that, we need to examine, on average, who these education majors are. Most undergraduate education majors across the University of Wisconsin system are white, with a disproportionate number of other ethnicities and races becoming education majors. We should tailor the education taught to show why it is important for white individuals to connect with diverse students. Training in diversity and inclusion for future teachers should focus on the why and how aspects of multicultural education, showing how to communicate with students and make students feel safe and accepted in the classroom.

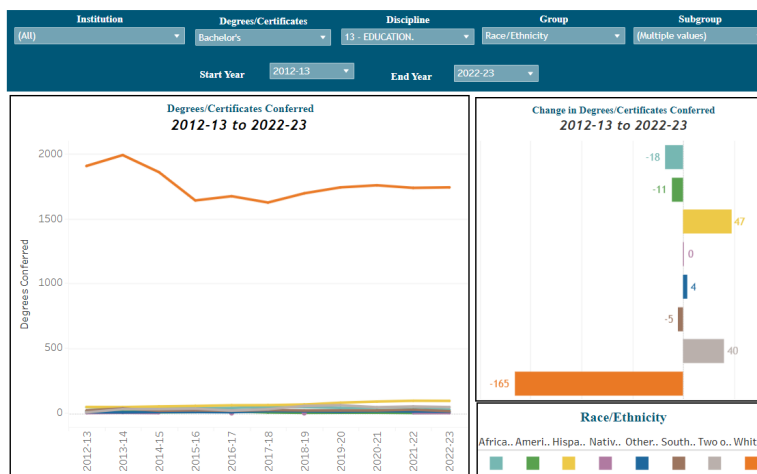


Figure 7 [Degrees and Certificates | Education Reports & Statistics \(wisconsin.edu\)](https://www.wisconsin.edu/education-reports-and-statistics/)

## LIMITATIONS

It would be inappropriate to draw a claim about the diversity of general children's literature or picture book literature in general based on this study's results, as this study's sample size is not large enough to make this claim. Also, the books in the Alice Hagar Curriculum Center are chosen to be used by students, staff, and community members in the UW-LAX area and are ordered to fit the needs of this community. Therefore, applying the findings of this study to communities or libraries outside of academics would be non-applicable.

On a separate note, the limited sample size of education majors, particularly pulling from EDS:206, a lower-level general education course, would not allow for any broad observations about the opinions of education majors at the University of Wisconsin-La Crosse. However, observations could be made on the effectiveness of courses such as EDS:206 in achieving its goal of "ensuring that multiculturalism is valued, cultivated, and promoted in classrooms across the U.S."

## ACKNOWLEDGEMENTS

Thank you so much to Scott Hendrix, the owner of Venue Communications, for your support in bringing this database to reality; it would not have been possible without you. Thank you to all the staff at the Special Collections Area Research Center at Murphy Library for supporting me through the start and finish of this project. And to Teri Holford for allowing me to work on this project and inspiring me with a love of literature that will never die; thank you.

## REFERENCES

- Bishop, R. Sims. (Summer 1990). "Mirrors, windows, and sliding glass doors." *Perspectives: Choosing and Using Books for the Classroom* 6, no. 3 <https://scenicregional.org/wp-content/uploads/2017/08/Mirrors-Windows-and-Sliding-Glass-Doors.pdf>.
- "Books by and about Black, Indigenous, and People of Color 2018." Cooperative Children's Book Center, <https://ccbc.education.wisc.edu/literature-resources/ccbc-diversity-statistics/books-by-and-or-about-poc-2018/>.
- "Diversity Definition & Meaning." (n.d.). *Merriam-Webster*, Merriam-Webster, [www.merriam-webster.com/dictionary/diversity](http://www.merriam-webster.com/dictionary/diversity).
- Hendrix, A. (2024). Alice Hagar Curriculum Center Picture Book Search. (2024). [Picture Book Search \(adelinehendrix.com\)](https://www.adelinehendrix.com/)
- Holford, T.L., & Hendrix, A. (2024). How is diversity counted? What counts as diversity? An academic library picture book diversity analysis. Manuscript submitted for publication.

*Educational studies (EDS) - courses*. UW La Crosse. (n.d.).  
<https://catalog.uwlax.edu/undergraduate/coursedescriptions/eds/>

*Libraries*. (2014, July 7). Libraries. <https://www.wisconsin.edu/libraries/>

*Library Systems Management: ALMA. Ex Libres*. (2024, April 9.) <https://exlibrisgroup.com/products/alma-library-services-platform/>

Martinez, A. (2022). Combating Internalized Racism: The Effects of the Lack of Latane Diversity in Children's Books. *Pub Res Q* 38, 721–734

National Center for Education Statistics. (2022). Racial/Ethnic Enrollment in Public Schools. Condition of Education. U.S. Department of Education, Institute of Education Sciences. Retrieved [date], from <https://nces.ed.gov/programs/coe/indicator/cge>.