

I. Cover Page

Comparing Definitions, Opinions, and Applications of AI Between Community College and University Academic Librarians	
Artificial intelligence (AI) is becoming more prevalent in our society and shifting the way people seek and receive information. As AI changes the digital landscape, information professionals are learning to navigate rapid developments with this new technology. The impact of AI technologies is felt by academic librarians that assist the student body in four-year universities as well as community colleges. Through a mixed method approach, this study will assess if definitions and perceptions of AI in these two types of institutions differ radically from each other. This research will also unveil any variation in how these librarians implement these technologies in these two higher education systems.	
Project Start Date: 9/16/24	Project Completion Date: 7/7/25
Amount Requested: \$7777.08	Proposal Submission Date: 8/2/24
Principal Investigators: Nicolas Aponte, Chloe Carver, Victoria Cavaliere, Teresa Cusidor, Kaitlyn High, Jeffrey Shuster	

II: Statement of Need and Significance of Study

I. Needs Assessment

Artificial intelligence, a rapidly advancing technology increasingly present in daily life, has grown tremendously in its capabilities over the past decade. Academic libraries, as hubs of

scholarship and learning, are well-suited to integrate AI into their operations, positioning librarians as guides for this emerging technology. However, their definitions, opinions, and uses of AI can vary widely due to the diversity of the institutions they work for. This study aims to explore how academic librarians' views differ regarding artificial intelligence and to understand how AI is being utilized across different academic settings.

II. Significance of Study

This study examines how academic librarians across diverse institutions define, perceive, and apply artificial intelligence (AI) within their roles, highlighting the pivotal role librarians play in integrating AI to support education, digital literacy, and library services. Despite AI's growing prevalence, institutional differences shaping these applications and perceptions remain underexplored. This research aims to provide actionable insights for tailoring AI resources, policies, and support mechanisms to various academic environments.

The study addresses challenges and ethical concerns, such as privacy, data security, and information integrity, that librarians face when adopting AI. It seeks to establish a framework for ethical AI integration aligned with librarians' values and principles. Additionally, it explores how institutional factors like size, resources, and mission influence the availability and quality of AI training and professional development, identifying gaps to ensure equitable and effective opportunities. By analyzing these dynamics, this study's findings will guide library administrators, educators, and policymakers in creating AI training initiatives that address the diverse needs of academic librarians and support responsible technology adoption.

III. Research Questions

For this proposed research project, this research will focus on the following questions:

- I. How do academic librarians define artificial intelligence across different types of academic institutions?
- II. How do academic librarians perceive the role of artificial intelligence in their work across different types of academic institutions?
- III. How do academic librarians apply artificial intelligence in their professional practices across different types of academic institutions?

IV. Literature Review

Many studies have been conducted to explore academic librarians' definitions, opinions, and use of AI but have overlooked a comparative analysis of their respective institutions, leading to inefficiencies in the findings. Hervieux and Wheatley (2021) studied academic librarians' definitions, opinions, and uses of AI, revealing that while many recognize its potential benefits, considerable concerns about privacy and ethics persist

The study surveyed academic libraries across the United States and Canada, categorizing institutions based on the number of full-time undergraduate students. The largest sample of respondents came from schools with 10,001 to 30,000 students, followed by those with fewer than 10,000. Although the researchers categorized based on size of university, they failed to compare by type of institution. This presents an issue, because the varied results could have been explained better when accounting for what type of academic library they work for.

In another study, Mutia et al. (2021) conducted a comparative study of the perceptions of librarians from Indonesia and Malaysia. While their findings identified similarities, including an

agreement that AI was beneficial for lifelong learning, the study faced limitations, including a small sample size of only 59 participants and sampling from more than just academic libraries.

Additionally, the questions were positively biased and generalized. An increased sample size and differentiation of academic librarians and their institution type, along with more specific and comprehensive questions, could lead to a better understanding on the range of perspectives.

Conversely, Lo (2024) conducted a larger study to compare participants from research universities, traditional four-year universities, and community colleges in terms of their perceived understanding of AI. However, the study's results were skewed due to not exclusively surveying academic librarians, which may be linked to the overall lack of understanding of AI found in the results. This indicates the need for a comparable study sampling academic librarians only, as they typically have more training and knowledge regarding AI.

Lund et al. (2020) conducted a study focused exclusively on academic librarians, categorizing them according to Roger's Diffusion of Innovations Model. While this allowed some comparative analysis among different types of adopters, early adopters and the early majority constituted 86% of the sample, suggesting a need for further exploration to capture the full spectrum of opinions within the academic librarian community. Finally, de Leon et al. (2024) attempted to study academic librarians' perceptions and utilization of AI but listed conflicting results of positive attitudes alongside challenges in adapting to the technology and feelings of being threatened. These conflicting findings underscore the need to explore how institutional differences may influence librarians' perceptions of AI.

While existing research has addressed librarians' views on AI, it often overlooks how institutional contexts influence these perspectives. This study focuses on academic librarians in Florida, distinguishing between institution types to address this gap. By narrowing its scope, the research aims to move beyond generalized findings, offering actionable insights into how different academic environments shape librarians' perceptions and uses of AI.

III: Research Design

Using a mixed methods approach to research design, the aim of this study is to discover any significant differences in definitions, views, and use of AI between academic librarians employed at a four-year university and librarians working at community colleges. By sending out questionnaires, the qualitative and quantitative data should reveal how these two types of institutions are adapting to the presence of this technology.

I. Survey Design

The data collection method will be a digital survey sent to the sample groups. This will allow the survey to reach participants who live and work farther away. In-person interviews were considered, but they would limit the radius of participants and thus limit the amount of data that could be collected. Before distribution, the survey will be tested by seven information professionals to ensure that the questions are clear and to work out any other flaws before collecting real data. The survey questions will be both quantitative and qualitative. Quantitative questions will gather demographic data (e.g., age, years of experience) and assess familiarity with specific AI tools used in library settings, such as chatbots, AI-driven cataloging, and recommendation systems. Respondents will share their definitions of AI, their perceptions of its

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role and impact in libraries, and how they apply AI in their daily work. This will provide a comprehensive understanding of how academic librarians conceptualize, view, and utilize AI in their professional environments.

Everyone involved in this research is held to the highest ethical standards as set by the University of South Florida's Responsible Conduct of Research. Participants in this study will be protected by anonymity and informed of the research study's exact goal and how it will be used. Full credit will be given to project researchers, participants, and consultants. No minors will be involved in this study. Participants will be treated as associates with full disclosure of findings.

II. Population Sample

This survey will be directed toward academic librarians in both community and public colleges. The sample for this will be information professionals from 12 four-year universities from the State University System of Florida (Florida Agricultural Mechanical University, Florida Atlantic University, Florida Gulf Coast University, Florida International University, Florida Polytechnic University, Florida State University, New College of Florida, University of Central Florida, University of Florida, University of North Florida, University of South Florida, and University of West Florida) and 28 community colleges from the Florida College System (Broward College, Chipola College, College of Central Florida, Daytona State College, Eastern Florida State College, Florida Gateway College, College of the Florida Keys, Florida Southwestern State College, Florida State College at Jacksonville, Gulf Coast State College, Hillsborough Community College, Indian River State College, Lake-Sumter State College,

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Miami Dade College, North Florida College, Northwest Florida State College, Palm Beach State College, Pasco-Hernando State College, Pensacola State College, Polk State College, Santa Fe College, Seminole State College of Florida, South Florida State College, St. Johns River State College, St. Petersburg College, State College of Florida Manatee-Sarasota, Tallahassee Community College, and Valencia College).

The study is limited to the state of Florida due to its diverse demographics. There will be demographic questions in the survey specifically targeting both the age and years of experience of the information professional. The sample will be limited to librarians as opposed to support staff to target those with years of professional experience in the field of academic libraries. While the goal is to receive many responses, we might only get half, which would reduce the sample size. By contacting the library manager at each institution, we can encourage a more enthusiastic response and gather more data.

The managers of each school library department will be contacted by e-mail explaining our project and requesting that their staff participate in our study. If the managers agree, staff names and e-mail addresses of potential staff participants should be provided. Compensation in the form of 25-dollar prepaid debit card will be given for agreeing to complete the questionnaire and another 25-dollar prepaid debit card will be given upon our receiving of the completed questionnaire.

III. Evaluation Methods and Expected Outcomes

Statistical testing will be utilized to evaluate the quantitative findings of the survey. A chi-squared test will be utilized due to the categorical nature of demographic data. In addition,

Analysis of Variance will be deployed as the research is concerned with comparing the data between two distinct groups of academic librarians.

The following methods will be used to evaluate the validity of the qualitative portion of the research findings:

- **Member checking:** An additional round table made up of participants of the original survey will be conducted. This additional interview will provide the opportunity to confirm that findings are accurate to participants' experience. Participants will be selected based on their response to the original survey indicating that they were interested in a follow-up interview. There is the possibility that this will lead to bias in the results, but it is ethically paramount that consent is given for these interviews. In addition, the survey data will also be factored into the study's overarching results mitigating any resulting bias.
- **Clarification of researcher bias:** Due to the researchers' affiliation with a state university, this could impact the researchers' interpretation of the responses from these institutions. Disclosing this information will assist with validation of the results.
- **Peer debriefing and external auditor:** The researchers will obtain support from graduate assistants for a peer evaluation. The graduate assistants will be allowed to review the research and ask clarifying questions that will ensure the findings are clear to individuals outside of the research group. The researchers will also use an external auditor to gain an objective perspective from one not involved in the research or affiliated with the researchers.

At present, a comparative analysis of views on AI and usage between academic librarians in four-year universities and community and state colleges has yet to be accomplished. An outcome of this study may be a discovery that community and state colleges are at a disadvantage when it comes to AI due to a lack of training or resources. They make up for this deficit in other ways. This study will also give us the views of various age brackets. Younger information professionals may understand that they have a more positive view of AI integration in library services than their older colleagues.

IV: Project Resources

I. Personnel

The research team will consist of six principal investigators, who are also considered primary investigators of their focus areas. Jeffrey Shuster, a graduate candidate working on a degree in applied research, identifies the needs assessment, research questions, literature review, and finalizes the research proposal. XXXXXXXXXX holds an MLIS with expertise in survey design and works with XXXXXXXXXX, who also holds an MLIS with a focus on research methods. They work together to create the survey's design and distribution. XXXXXXXXXX holds a master's degree in statistics and will lead the qualitative data analysis to identify emerging themes, ethical considerations, and training needs from the survey responses. XXXXXXXXXX, with a similar degree, will analyze the quantitative data conducts tests such as the chi-squared and ANOVA to interpret results.

XXXXXXX, with an MLIS and expertise in both AI and policy writing, explores ethical challenges from survey responses and proposes strategies to address them. She will also oversee

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the process of enlisting two graduate assistants to provide peer debriefing and one auditor to offer independent validation of the conclusions. The graduate assistants are selected for their background in research methodology and will review the research, ask clarifying questions, and offer feedback to ensure the findings are clear, understandable, and aligned with research objectives. The auditor is selected for their experience in academic research and will review the study's methodology, data analysis, and findings.

II. Budget

Salaries	Expenses	Comments
Graduate assistants (2)	\$720	\$12/hr, 10hr/week, 3 weeks total
External auditor	\$500	Stipend
Benefits		
Graduate assistants (2)	\$55.08	FICA
Equipment and Software		
Survey design platform	\$0.00	Google Forms
Microsoft Teams Essential	\$352	\$4/user per month, 11 months Includes 10 GB cloud storage/user
Office supplies	\$150	
Participation Incentives		
Gift cards	\$6000	
Total	\$7777.08	

III. Timeline

Research Phase	Action Item	Est. Start Date	Est. End Date
Needs Assessment	Determine the need for research	9/16/24	9/23/24

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Research Design	Develop research questions	9/23/24	10/7/24
	Prepare literature review	10/7/24	10/21/24
	Draft research proposal	10/21/24	11/21/24
	Design survey	11/21/24	12/5/24
	Finalize research design	12/5/24	12/20/24
Data Collection	Determine sampling method	12/20/24	1/1/25
	Distribute survey	1/1/25	1/31/25
Evaluation and analysis	Review survey data and draft initial findings	1/31/25	2/24/25
	Organize and facilitate follow-up with a sample of survey participants	2/24/25	3/24/25
	Develop second draft of research findings	3/24/25	4/21/25
	Peer debrief	4/28/25	5/19/25
	External audit	5/5/25	5/26/25
Final Draft and Submission	Develop final draft	5/26/25	6/23/25
	Final draft review	6/23/25	7/7/25
	Submit research study		7/7/25

IV. Others

The project will require an online survey platform for survey distribution, and data analysis software for both qualitative and quantitative analysis. Team members will need computers, reliable internet, and access to virtual meeting platforms for discussions and interviews. Secure cloud storage will store survey data and project documents. Basic office supplies and presentation tools will also be necessary for organizing tasks and reporting findings.

Member Contributions

XXXXXXXXXXXX: Revision of Draft 2

XXXXXXXXXXXX: Revision of Draft 2

XXXXXX, XXXXXX, XXXXXX, XXXXXX, XXXX, Shuster

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XXXXXXXXXXXX: Draft 3: Section IV- Timeline and Budget

XXXXXXXXXXXX: Revision of Survey Questions

XXXXXXX: Draft 3: Section IV- **Personnel and Others, Finalized Cover Page, Member**

Contributions

Jeffrey Shuster: **Revision of Survey Questions, Abstract**

References

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<https://doi.org/10.5860/crl.81.5.865>

Appendix: Survey Questions

Section 1: Demographics

1. Age (Quantitative)

What is your age range?

Options: 18-24, 25-34, 35-44, 45-54, 55-64, 65+

2. Years of Professional Experience (Quantitative)

How many years of experience do you have as an academic librarian?

Options: 0-5 years, 6-10 years, 11-15 years, 16-20 years, 21+ years

3. Institution Type (Quantitative)

What type of institution do you work at?

Options: Public College, Community College, Four Year University

4. Institution Size (Quantitative)

Approximately how many students are enrolled at your institution?

Options: Fewer than 5,000, 5,000-10,000, 10,000-20,000, More than 20,000

5. Institution's Primary Mission (Qualitative)

How would you describe the primary mission or focus of your institution?

Section 2: Definitions of AI in libraries (Familiarity and Use of AI in Libraries)

6. Definitions of AI in Libraries (Qualitative)

How do you define artificial intelligence?

7. Familiarity with AI Tools (Quantitative)

How familiar are you with the following AI tools or applications used in libraries?

Items: Chatbots, AI-driven cataloging, Recommendation systems, Other (Please specify)

Scale: Very Familiar, Somewhat Familiar, Not Very Familiar, Not at All Familiar

7A. Comment box: Please give a real-life example of your use of the tools and/or applications mentioned above.

8. Familiarity with AI Tools (Quantitative)

Are there any other AI tools or applications used in libraries that you are familiar with?

9. Frequency of AI Use (Quantitative)

How often do you use AI tools or applications in your daily work?

Options: Daily, Weekly, Monthly, Rarely, Never

Section 3: Perceptions of AI in Libraries (includes Challenges and Ethical Concerns)

10. Perceptions of AI in Libraries (Qualitative)

How do you perceive artificial intelligence as it applies to your work in the library?

11. Perceived Impact of AI (Quantitative)

Please rate your agreement with the following statements:

"AI tools improve the efficiency of library operations."

"AI tools enhance user service and satisfaction."

"AI introduces ethical concerns regarding privacy and data security."

Scale: Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

11A. Comment box: Do you have any additional thoughts or more to add to any of the above statements?

12. Peer Agreement on AI (Quantitative)

How likely is it that other academic librarians agree with your ideas on artificial intelligence?

Options: Most Likely, Likely, Neutral, Unlikely, Extremely Unlikely

13. Primary Benefits of AI in Libraries (Qualitative)

What do you consider to be the primary benefits of AI tools in your library setting?

14. Challenges and Concerns (Qualitative)

What challenges or concerns have you encountered, or anticipate encountering, with the adoption of AI in your institution?

15. Ethical Considerations (Qualitative)

Are there any ethical considerations you believe need to be addressed when implementing AI in libraries?

Section 4: Application and Resources for AI in Academic Libraries (includes Institutional Support)

16. Institution Type Impact (Qualitative)

Do you think your institution type impacts how AI is implemented in your library?

17. Additional Support Needs (Qualitative)

What additional support or resources would you find helpful in adopting and using AI tools in your library work?

18. Final Thoughts on AI (Qualitative)

Is there anything else you would like to share about the use of AI in academic libraries?