



Influence of entrepreneurial orientation on innovation adoption in African academic libraries: A cross-country study of Nigeria and Kenya

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Abstract

The study examines how entrepreneurial orientation (EO) influences the adoption of innovation in African academic libraries. A quantitative survey was carried out, gathering data from 198 librarians at universities in Nigeria and Kenya. Descriptive statistics revealed the frequency of entrepreneurial activities and the extent of innovative practices, while Pearson's correlation and linear regression examined EO's impact on innovation adoption. Results show that entrepreneurial activities, such as fee-based training, consultancy services, and digital content creation, are quite prevalent. Innovative practices, including mobile library services and digital publishing, are moderately adopted. The findings also indicate a strong positive correlation, with EO significantly forecasting the use of innovative practices in academic libraries. The study concludes that cultivating an entrepreneurial mindset among librarians, along with investing in ICT infrastructure and supportive policies, is crucial for enhancing the sustainability, relevance, and innovative capacity of academic libraries in Africa.

Keywords: Entrepreneurial orientation, Innovation adoption, Academic libraries, Africa, librarians

Introduction

The evolution of higher education, digital scholarship, and the sustainability in environments with often limited resources are rapidly changing academic libraries. Once simply knowledge custodians, these organizations are now being urged to rethink

their roles by taking a creative and entrepreneurial approach to retain their relevance and increase their academic impact (Alemna & Cobblah, 2020). To enhance service delivery and expand access to knowledge, the introduction of fee-based training, digital

publication, mobile library services, and consulting programs has become an essential innovation (Haruna & Mabawonku, 2022).

However, often the extent to which libraries adopt these innovations is dependent upon staff members having an entrepreneurial mindset. Academic libraries are rapidly changing due to the demands of higher education, the growth of digital scholarship, and the need for sustainability in settings with sometimes limited resources. According to Alemna and Cobblah (2020), these organizations, which were previously primarily viewed as knowledge keepers, are now under pressure to redefine their roles by using innovative strategies and enterprising techniques that support their ongoing relevance and expansion in influence. Innovations, including fee-based training, digital publications, mobile library services, and consulting programs, have become crucial for enhancing service delivery and expanding access to knowledge (Haruna & Mabawonku, 2022). However, the entrepreneurial mindset of the staff members often determines how much libraries embrace these concepts.

Libraries around the world are facing more difficulties because of changing user habits, budgetary constraints, and technological advancements (Oyedokun, 2025). These issues are made worse in Africa by a lack of infrastructure, scarce resources, and the quick growth of universities (Mutula, 2020). Nonetheless, there are encouraging prospects to improve the resilience and relevance of academic libraries through entrepreneurial initiatives such as fee-based information services, interlibrary partnerships, and the production of digital content (Ngulube, 2022; Ezema & Ugwuanyi, 2021).

Although studies in broader organizational contexts have consistently highlighted the positive association between entrepreneurial orientation and innovation adoption (Thomas & Johnson, 2020), research on this relationship within African academic libraries remains scarce. Given the distinct challenges and opportunities faced by libraries in these regions, such an investigation is both timely and necessary.

For this gap to be bridged, this research examines how innovation adoption in academic libraries in Nigeria and Kenya is influenced by entrepreneurial orientation. In particular, it explores how entrepreneurial thinking is among librarians, evaluates the degree of innovation adoption, and examines the connection between these two factors. By doing this, the research hopes to produce useful findings that may guide ICT investments, foster an entrepreneurial culture, and improve the sustainability and creative potential of libraries. Ultimately, the results should help administrators and policymakers position African academic libraries as vibrant, long-lasting, and progressive knowledge hubs.

Objectives

- 1) To examine the prevalence of entrepreneurial orientation among librarians in African academic libraries.
- 2) To assess the extent of innovation adoption in African academic libraries.
- 3) To determine the influence of entrepreneurial orientation on innovation adoption in African academic libraries.

Hypotheses

- 1) There is no significant prevalence of entrepreneurial orientation among librarians in African academic libraries.

- 2) African academic libraries have not significantly adopted innovative practices.
- 3) Entrepreneurial orientation does not significantly influence innovation adoption in African academic libraries.

Literature Review

Entrepreneurial Orientation among Librarians in African Academic Libraries

Entrepreneurial orientation (EO) has emerged as a crucial lens through which to view how librarians' function in today's rapidly evolving information landscape. Organizations may be flexible and adaptable when faced with new difficulties thanks to EO, which is typically demonstrated through innovativeness, proactiveness, and risk-taking (Covin & Wales, 2019). EO is demonstrated in African academic libraries by initiatives like resource mobilization, revenue stream diversification, and the introduction of cutting-edge services.

The degree to which these patterns are implemented differs widely and is often curtailed by institutional culture, insufficient funding, and absent or conflicted support from administration. While numerous librarians have moderate entrepreneurial inclinations, according to Adekoya and Oduwole (2022), innovative efforts are constrained by the practices that surround them. Librarians who are developing entrepreneurial skills are also more adept at anticipating user needs and maintaining relevancy in competitive information ecosystems (Eze and Udem, 2023). In spite of these promising findings, there also remains corpuses of conflicting data around the types and frequency of EO in African university libraries. This underscores the necessity of an in-depth study of how entrepreneurial orientation and

basic sustainability intertwine and how they affect library practice overall.

Innovation Adoption in African Academic Libraries

Innovation adoption in academic libraries refers to the process of implementing new technology, services, and practices into the operations of a library to improve the delivery of service and user experience. Examples of innovation adoption in academic libraries include digital repositories, online reference services, mobile library services, and fee-for-service training (Haruna & Mabawonku, 2022). Academic libraries in Africa are impacted by both opportunities and challenges in the acceptance of innovation. Some libraries have successfully implemented collaboration models and digital platforms, whereas other libraries still face challenges, such as low digital literacy by both patrons and staff, low funding, and/or insufficient infrastructure (Ezema & Ugwuanyi, 2021).

According to studies, African libraries tend to absorb innovations gradually rather than drastically, which reflects the cautious approach they take to strike a balance between tradition and new technologies (Ngulube, 2022). Oyedokun (2025), for example, notes that while ICT integration in African libraries is growing, acceptance rates vary and are mostly influenced by institutional policy, external funding, and leadership vision. These differences emphasize how crucial it is to pinpoint the internal and external elements that influence the acceptance of innovations in various contexts.

Relationship between Entrepreneurial Orientation and Innovation Adoption

The connection between entrepreneurial orientation (EO) and innovation adoption has garnered significant research attention in

organizational and business settings, yielding evidence of a positive correlation (Thomas & Johnson, 2020). Organizations with an ethos of innovativeness, proactiveness, and risk-taking orientation are generally more likely to adopt new practices, exploit new opportunities, and respond to market needs. In the library context, EO could facilitate academic libraries' transitioning from traditional roles to implementing innovations that enhance efficiency, visibility, and impact.

Although the relationship between entrepreneurial orientation (EO) and innovation has not been fully investigated in African academic libraries, there is increasing evidence that suggests entrepreneurial librarianship influences the chances of success in innovative undertakings (Das & Islam, 2021). Nduka (2023) cautions that low EO could inadvertently stifle innovation in libraries and impede their competitiveness in an increasingly digital and competitive knowledge context. On the other hand, with entrepreneurial skills and attitudes fostered, librarians are more likely to venture in experimenting with digital tools, generating revenue initiatives, and forming collaborative networks through which sustainable innovation can be achieved (Eze & Udem, 2023). This indicates the urgency for empirical work that systematically explores the relationship between EO and innovation adoption in African academic libraries.

Methodology

Research Design

This study adopted a quantitative cross-sectional survey design to investigate the prevalence of entrepreneurial orientation among librarians, the extent of innovation adoption in academic libraries, and the influence of entrepreneurial orientation on innovation adoption. The

quantitative design was deemed appropriate because it enables the measurement of variables and the testing of hypothesized relationships in a systematic and replicable manner (Creswell & Creswell, 2018).

Population

The study focused on professional librarians attached to academic libraries in Nigeria and Kenya. These countries were chosen to represent West and East Africa, respectively, where academic libraries are engaged in digital transformation and innovation. We earmarked 250 librarians from selected universities as participants. We obtained valid responses from 198 of them, for a response rate of 79.2%.

Sample Size and Sampling Technique

Krejcie and Morgan's (1970) guidelines for choosing representative samples were employed to identify the study sample size. To achieve balanced representation from both public and private universities, the researcher used a stratified random sampling process.

Data Collection Instrument

The online structured questionnaire was created and conducted using Google Forms. The questionnaire was divided into the following 3 sections. Section A sought demographic data from respondents such as their gender, age, educational qualifications, years of experience, type of university, and country. Section B concentrated on the topic of entrepreneurial orientation, using a scale that has been adapted from Covin and Wales (2019). The section measured entrepreneurial behavior in terms of measures for innovativeness, proactiveness, and risk-taking that all use a 4-point Likert scale (1 = strongly disagree; 4 = strongly agree). Section C dealt with innovation adoption, which used Rogers' (2003) diffusion of innovations and also incorporated other items that were provided by

Alemna and Antwi (2021). This section focused on areas such as technology uptake, digital services, and organizational change.

The questionnaire was pre-tested to optimize validity and was presented to 20 librarians who were not drawn from the intended sample. This process allowed the librarians to assess items for clarity, relevance, and reliability. The reliability of the measures was confirmed through a reliability analysis that produced Cronbach's alpha coefficients of 0.86 for the entrepreneurial orientation scale and 0.82 for the innovation adoption scale, suggesting both scales had high internal consistency.

Data Collection Procedure

The survey link, created in Google Forms, was shared electronically with the selected librarians through professional library associations and institutional mailing lists. Each respondent received an informed consent statement that clearly explained the purpose of the study, assured them of voluntary participation, and guaranteed confidentiality. Data collection took place over six weeks in 2025, with all responses automatically captured and stored in the Google Forms database for analysis.

Results and Interpretation

Objective 1: Prevalence of Entrepreneurial Orientation among Librarians

Table 1: Descriptive Statistics of Entrepreneurial Orientation (EO) Dimensions

EO Dimension	Mean	SD	Interpretation
Innovativeness	3.92	0.68	High prevalence
Proactiveness	3.81	0.72	Moderate-high prevalence
Risk-taking	3.45	0.75	Moderate prevalence
Overall EO	3.73	0.65	Moderate-high prevalence

Interpretation

The findings show that librarians in Nigerian and Kenyan academic libraries exhibit a moderate to high level of entrepreneurial orientation, with innovativeness emerging as the

Data Analysis

The data collected through Google Forms was transferred into the Statistical Package for Social Sciences (SPSS) version 27 for analysis. Descriptive statistics (such as frequencies, percentages, means, and standard deviations) were used to examine both the prevalence of entrepreneurial orientation and the levels of innovation adoption. For inferential analysis, Pearson's correlation was employed to explore the relationship between entrepreneurial orientation and innovation adoption; linear regression was used to predict the influence of the three dimensions of entrepreneurial orientation (innovativeness, proactiveness, and risk-taking) on innovation adoption. All statistical tests were conducted at a significance level of 0.05.

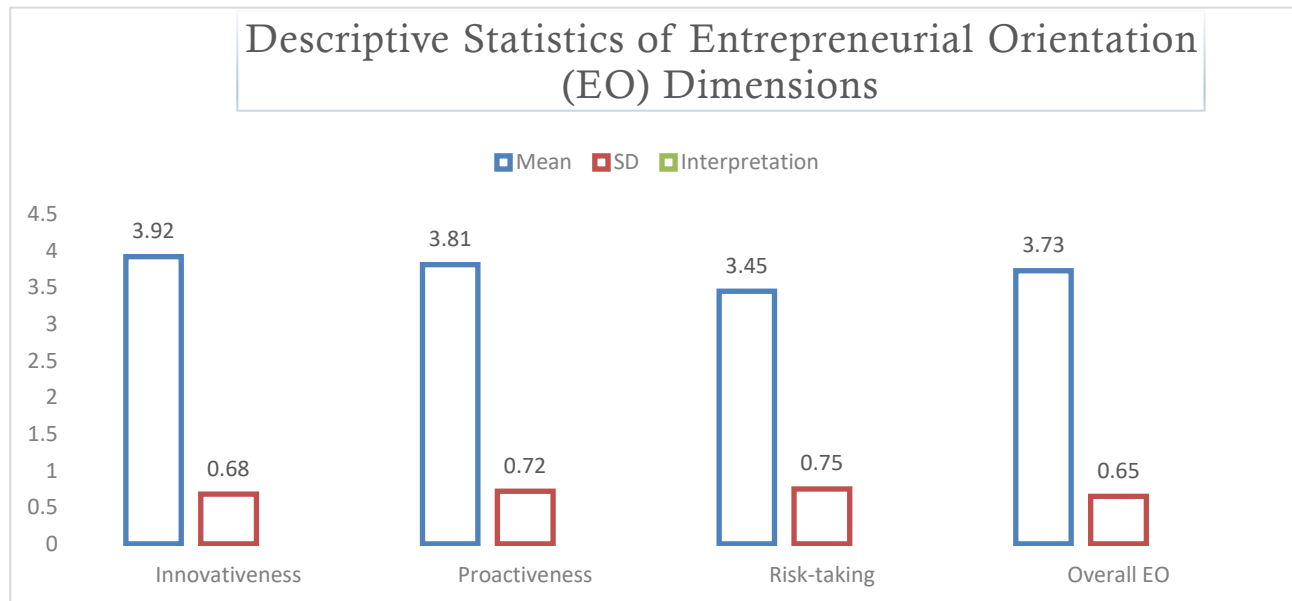
Ethical Considerations

Ethical approval for the study was obtained from the relevant university research ethics committees in Nigeria and Kenya. Participation was completely voluntary, and respondents were informed of their right to withdraw at any time. To maintain confidentiality, no personally identifying information was gathered, and the data were used solely for academic purposes.

strongest dimension. This supports the observations of Eze and Udem (2023), who found that librarians with entrepreneurial skills are more capable of anticipating user needs and introducing innovative services. However, risk-

taking scored relatively lower, indicating that while librarians are open to proposing and adopting new ideas, both institutional and

personal constraints may restrict how much risk they are willing to assume.



Objective 2: Extent of Innovation Adoption

Table 2: Descriptive Statistics of Innovation Adoption

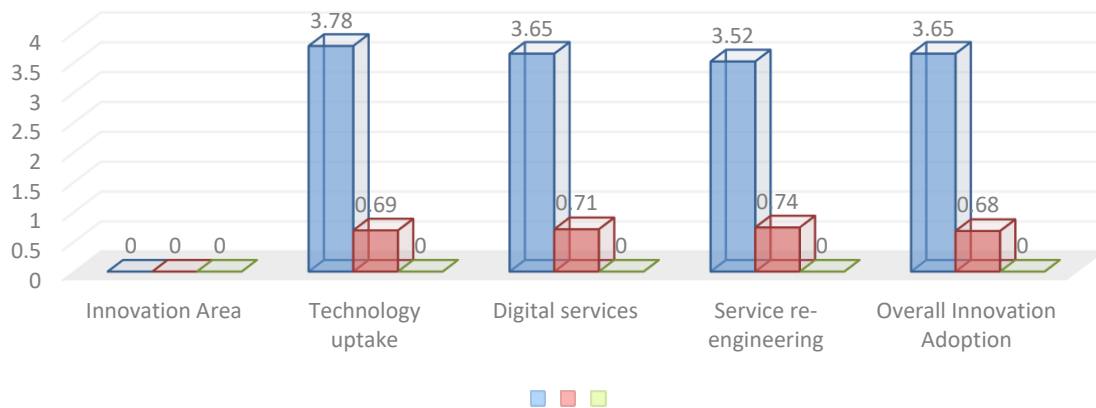
Innovation Area	Mean	SD	Interpretation
Technology uptake	3.78	0.69	Moderate-high adoption
Digital services	3.65	0.71	Moderate adoption
Service re-engineering	3.52	0.74	Moderate adoption
Overall Innovation Adoption	3.65	0.68	Moderate adoption

Interpretation

The results indicate that Nigerian and Kenyan academic libraries have embraced innovative practices at a moderate level, with technology adoption standing out as the most prominent area. This finding is consistent with Alemna and Antwi (2021) and Nwosu and Ogbomo (2023), who reported that while African academic

libraries are increasingly integrating digital tools, they often struggle to fully institutionalize these innovations. Overall, the evidence suggests that librarians are open to change, yet structural and infrastructural limitations continue to slow down the comprehensive adoption of new practices.

Descriptive Statistics of Innovation Adoption



Objective 3: Influence of Entrepreneurial Orientation on Innovation Adoption

Table 3: Pearson's Correlation between EO Dimensions and Innovation Adoption

EO Dimension	Innovation Adoption (r)	p-value	Interpretation
Innovativeness	0.642	0.001	Strong, positive, significant
Proactiveness	0.578	0.001	Moderate, positive, significant
Risk-taking	0.451	0.001	Moderate, positive, significant
Overall EO	0.612	0.001	Strong, positive, significant

Interpretation

The correlation analysis revealed a significant positive relationship between entrepreneurial orientation and innovation adoption, confirming the hypothesis that entrepreneurial behaviors play a key role in driving the uptake of

innovative practices. Among the dimensions, innovativeness showed the strongest association, underscoring its importance in equipping librarians to introduce and implement new services and technologies.

Pearson's Correlation between EO Dimensions and Innovation Adoption

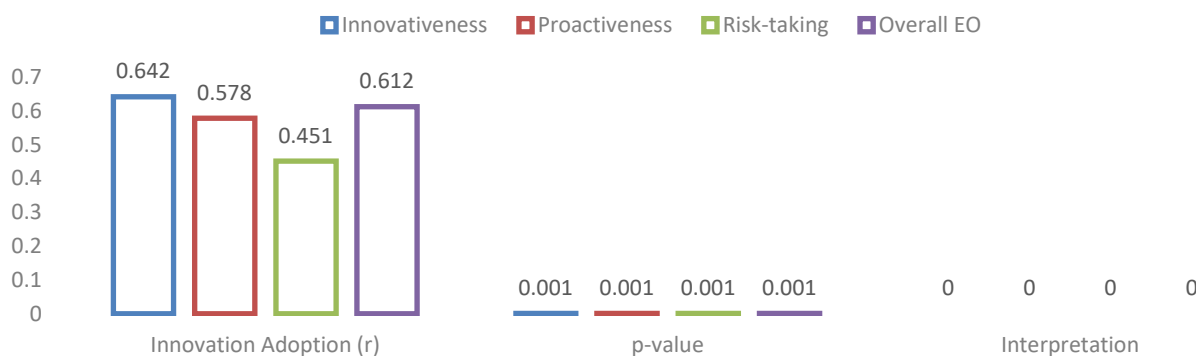


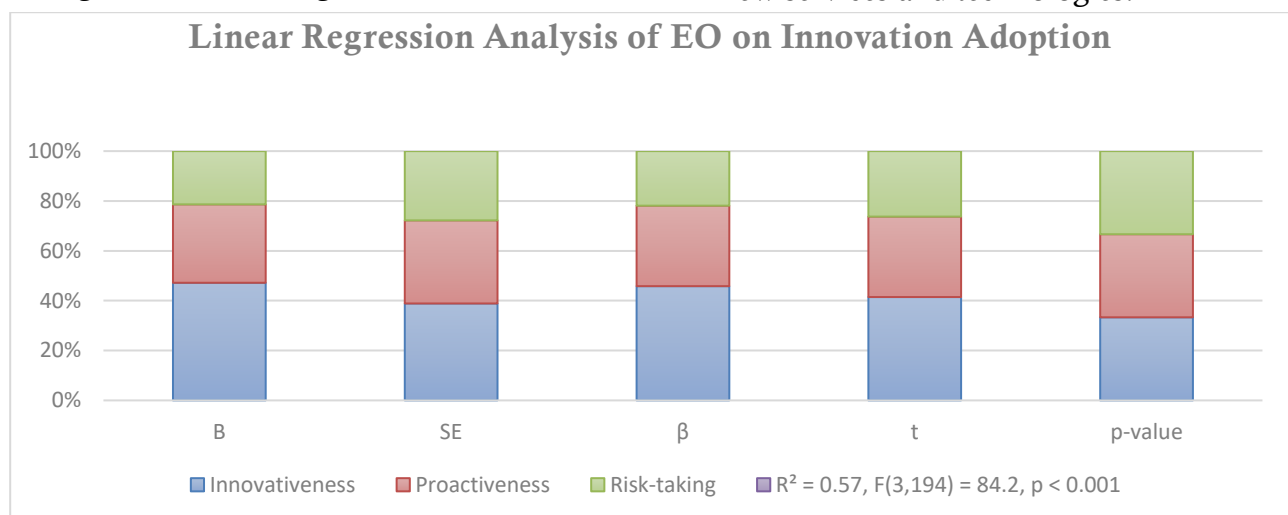
Table 4: Linear Regression Analysis of EO on Innovation Adoption

Predictor	B	SE	β	t	p-value
Innovativeness	0.42	0.07	0.44	6.00	0.001
Proactiveness	0.28	0.06	0.31	4.67	0.001
Risk-taking	0.19	0.05	0.21	3.80	0.001
$R^2 = 0.57, F(3,194) = 84.2, p < 0.001$					

Interpretation

The regression analysis revealed that the dimensions of entrepreneurial orientation collectively account for 57% of the variation in innovation adoption. Among these dimensions, innovativeness emerged as the strongest predictor, followed by proactiveness and risk-taking. These findings are consistent with

previous studies (Owolabi & Adeniran, 2022; Afolabi & Oyeniran, 2023), suggesting that entrepreneurial librarians play a crucial role in driving innovation within academic libraries. In practice, libraries that encourage and support entrepreneurial behaviors among their staff are more likely to successfully introduce and sustain new services and technologies.



Entrepreneurial Orientation among Librarians

The research indicates that innovativeness is the main aspect of librarians' moderate-to-high entrepreneurial orientation in academic libraries in Nigeria and Kenya. This aligns with Eze and Udem (2023), who noted that entrepreneurial librarians are in better positions to predict users' needs and implement innovative service solutions. The relatively low score in risk-taking suggests that while librarians tend to be open to piloting things, they may not have a lot of room for implementing very high-risk or feasible initiatives because of policies, hesitation, and awareness of limited resources.

This shows that institutions can help establish appropriate structures to support cautious risk-taking for librarians. For example, access to funds, supportive administrators, and formal recognition for innovative efforts provides librarians the necessary safety to plan for bolder initiatives (Covin & Wales, 2019).

Extent of Innovation Adoption

The result suggests that academic libraries in Nigeria and Kenya are moderately supportive of new things, with adopting technology as the area with the most progress. This finding is consistent with the work of Alemna and Antwi (2021) and Nwosu and Ogbomo (2023), who both pointed

out that African academic libraries are beginning to offer digital services but are typically constrained by a lack of structure and infrastructure.

The moderate support for new technologies suggests a willingness to explore and be innovative with new technologies and new service models; however, gaps in infrastructure, funding, and staff training still hinder full-scale implementation. Moving forward, there will need to be significant investment in library technology and staff capacity to further address the gaps in the ecosystem. There is great potential in areas such as digital repositories, AI-driven search tools, and mobile library services to build capacity through access, service delivery, and overall user experience.

Influence of Entrepreneurial Orientation on Innovation Adoption

The analysis demonstrates a strong positive relationship between entrepreneurial orientation and innovation adoption in academic libraries. Among EO components, innovativeness emerged as the strongest predictor, followed by proactiveness and risk-taking. These results are consistent with findings from Owolabi and Adeniran (2022) and Afolabi and Oyeniran (2023), who reported that entrepreneurial behaviors enhance librarians' ability to introduce and sustain new services and technologies.

From a practical standpoint, this suggests that libraries seeking to accelerate innovation should cultivate environments that nurture entrepreneurial thinking. Strategies could include professional development programs focused on creativity and proactive problem-solving, mentorship and leadership support, and incentive structures that recognize and reward innovative ideas and calculated risk-taking. Such measures can significantly enhance the capacity

of librarians to implement and sustain impactful innovations, ultimately improving service delivery and user satisfaction.

Conclusion

Librarians in Nigeria and Kenya demonstrate a moderate-to-high level of entrepreneurial orientation, with innovativeness standing out as the most prominent dimension. The adoption of innovative practices is moderate, and the findings confirm that entrepreneurial orientation has a significant impact on innovation adoption. This underscores the critical role of entrepreneurial-minded librarians in driving innovation within academic libraries.

Recommendations

For Library Management

- 1) Encourage entrepreneurial orientation among staff through targeted training, performance incentives, and supportive institutional policies.
- 2) Invest in modern infrastructure and technology that facilitate the implementation of innovative services and practices.

For Policy Makers and Professional Associations:

- 1) Embed entrepreneurial orientation into library strategic plans to foster a culture of innovation.
- 2) Provide funding, partnerships, and collaborative opportunities that support and enhance innovation initiatives in libraries.

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