Leveraging Human Intelligence and Social Media Monitoring for Competitive Intelligence in Academic Libraries: An Exploratory Framework for User-Centric Service Design

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***Abstract*—The need to make use of innovative approaches to obtain and use information has become a necessity due to the growing need for user-centered services in the library. This paper critically looks at how human intelligence (HUMINT) and social media monitoring can be used to improve competitive intelligence (CI) procedures in academic libraries. The study adopts an exploratory methodology by summarizing previous research that has been done between 2019-2025 and it suggests a conceptual framework that merges or combines both the human and social media intelligence sources. The study argues that integrating HUMINT and social media monitoring can help academic libraries anticipate user needs and improve service delivery and maintain their competitiveness in a quick-changing information environment by inputting interpersonal skills with real-time digital insights. The study contributes to the library and information profession by providing a structured and systematic framework for combining both HUMINT and social media monitoring sources into strategic services design.**

***Index Terms*— Human Intelligence, Social Media Monitoring, Competitive Intelligence, User-Centric Design, Academic Libraries**

I. INTRODUCTION

Organizations must progressively create services that are flexible, adaptable, and in line with users' needs in today's knowledge-driven and digital economy. This is not specific to libraries alone but a variety of industries, such as healthcare, education, businesses, etc. The transition has become necessary according to Norman (2013) and Rahman & Jyotti (2022). User-centric service design has become critical for raising quality services, boosting user pleasure, and guaranteeing organizational relevance in a cutthroat market. The advent of information and communication technology (ICT) has drastically changed the creation and utilization of information in society. People now have access to a large volume of information at the tip of their finger from both traditional and digital sources. The human intelligence (HUMINT) is referred to as traditional, while the social media are referred to as the digital sources. These two sources are becoming complementary methods for understanding users in order to guide decision-making. Understanding these sources is very important in order to gain a much wider knowledge of them.

Human intelligence (HUMINT) can be defined as direct interaction and communication with individuals through interviews, observations, and surveys of users. Understanding of user behavior, preferences, and experiences is provided by human intelligence (Rodriguez, 2013). In a nutshell, human intelligence refers to information gathered through interpersonal interactions, professional experience, and direct engagement with users. This type of intelligence is basically useful for capturing information that may be difficult to quantify, such as feelings, emotions, motivations, and tacit knowledge. With technology, organizations do not base their information gathering on only direct interaction alone, and this brought about social media monitoring.

Social media monitoring can be referred to as a method of tracking and analyzing user-generated content on digital platforms, e.g., Facebook, Instagram, LinkedIn, etc. These platforms have developed into rich sources of real-time data on users' opinions, trends,

and interactions due to their widespread use by people. With social media monitoring, a vast range of information can be collected within a short period of time, with detailed explanations of users' needs and competitive environments for the purpose of making strategic decisions (Choi et al., 2020).

Understanding of competitive intelligence is very important; different people have defined it in different ways. According to Adenekan et al. (2024), competitive intelligence can be seen as the procedure that generates and shares useful intelligence for decision-making. It can also be referred to as the systematic collection, evaluation, and dissemination of information from competitors, clients, and market trends for the purpose of making a systematic and improved decision. There are different definitions of CI, but generally, CI is seen as a systematic and moral collection of information in order to understand the abilities, strengths, and limitations of the competitors in order to be of competitive advantage. However, these systematic gatherings of information from users are in line with the combination of these sources (HUMINT and social media monitoring). While social media surveillance delivers breadth and real-time information, HUMINT offers depth and contextually rich information. With the combination of both, they help to understand users appropriately, which is essential for developing user-focused services (Calof et al., 2016).

Globally, organizations are leveraging both HUMINT and digital intelligence sources to enhance service delivery. When we look at developed economies' businesses and public institutions, they never take users' feedback, behavioral information, and social media analytics for granted due to the fact that this information can be used to design personalized and responsive services. Similarly, developing economies such as Nigeria are adopting the use of digital technologies and social media platforms to better understand customers/users and provide services that would be tailored to the needs of their users.

However, despite the advancement in technology, some organizations, particularly library and information sectors, still rely on and uphold the traditional methods of designing services, which may or may not capture the dynamic and evolving needs of users in full. This gap necessitated the need for a more integrated approach that combines human and social media monitoring to support and provide user-centric service design. Therefore, this study critically seeks to explore how HUMINT and social media monitoring are integrated to enhance competitive intelligence and to enhance the development of effective and efficient user-centered services in the library. The study aims to provide insights that will help to improve decision-making, service innovation, and user satisfaction in modern service environments.

Statement of The Problem

Basically, organizations such as libraries and information service providers are under the pressure of providing services that would meet the needs of users of the library in today's knowledge-driven and competitive world. This problem persists due to a lack of understanding of users' actual needs, tastes, and behaviors, which may lead to services that are either underutilized or do not meet the information needs of their users. Libraries historically depend on traditional ways of collecting information from users, such as surveys, feedback forms, reports, observations, etc. Although these methods are good, they have a narrow reach and might not be able to capture all the needs of the users in real time, which makes decisions that are based on this kind of information potentially shallow and responsive.

Technology brought about social media monitoring, and social media in combination with HUMINT offers new ways of improving services that would boost competitive intelligence. Social media monitoring provides extensive, real-time data on users' opinions, habits, and trends, while HUMINT provides rich contextual and experience-based or firsthand-based experience through direct communication with users of the library. Although there are minor integrations of these intelligence sources into services' design processes, particularly in library and information contexts, despite their potential advantages.

In addition, only a few research talks are about the combination of the impact of human intelligence and social media analytics and user-centered design on user-centric service design; most studies focus mainly on these areas separately. This could probably be due to the fact that organizations lack a thorough framework for utilizing both human and digital intelligence sources to enhance service results; this leaves a vacuum in the literature and practices. Therefore, this study seeks to address inadequate integration of human intelligence and social media

monitoring in designing user-centric services, which limits the ability of organizations to fully understand users' needs and respond effectively. This study aims to bridge this gap by examining how these intelligence sources can be combined to enhance competitive intelligence and provide more responsive user-centered services.

II. OBJECTIVE OF THE STUDY

The general objective of the study is to examine how HUMINT and social media monitoring enhance competitive intelligence for user-centric service design, while the specific objectives are

i. To examine HUMINT contributions
ii. To assess social media monitoring
iii. To propose an integrated framework

III. LITERATURE REVIEW

Competitive Intelligence in Libraries

Libraries are utilizing competitive intelligence (CI) as a tool in library administration. They can now monitor competition, forecast users' needs, and provide services delivery tailored to the needs of users. CI processes in libraries involve data gathering, analysis, and distribution to support decision-making. According to Yap and Rashid (2011), competitive intelligence is a strategy that helps businesses to deal with competitive environments skillfully. Globally, the development of information and communication technology has made the corporate climate more unstable and competitive. Libraries, despite being service-oriented, are not exempted. For this purpose, Dominic, Gog, Wong, and Chen (2010) are of the view that providing high-quality services is very crucial for survival and success in the current competitive landscape. Therefore, the focus of any library is to provide for all the needs of its users. As no budget is limited, there is a need to prioritize services.

Competitive intelligence has developed strategically into a more dynamic and technology-driven field through constant data collection, analysis, and strategic application of data that has been collected from users of the libraries. Even recent literature backed it up that CI depends solely and more on analytics, organizational agility, and digital transformation (Mashau et al., 2025). CI is now very important for businesses or organizations that are looking forward to improving decision-making. This helps organizations to study their environment, predict trends, and enhance the provision of services (Do Couto, 2026). It is not new that competitive intelligence that used to be manual or traditional has moved to digital-driven, data-intensive, and user-centered solutions that have been recorded recently (2020-2025). Therefore, both HUMNT and social media monitoring have become important sources of competitive intelligence in knowledge-based and driven organizations like libraries.

HUMINT in Information Management

Human intelligence is data that are obtained from interaction with users other than technology or electronic sources. It is a systematic way or method of collecting data from people through direct interaction, observations, and interrogations of informants (Rodriguez, 2013). HUMINT is referred to as a traditional method of collecting data, which is regarded as primary data and fundamental intelligence sources. Human intelligence, according to academics, is a multifaceted term that includes not only cognitive skill (problem-solving and reasoning) but also emotional and social intelligence, which enable one not only to understand or comprehend but also to impact others (Britannica, 2024).

HUMINT can be traced back to the golden era, where spies and informants are used for political and military purposes. According to Rodriguez (2013), the society made strategic decisions with the employment of humans. Research had shown that HUMINT was formalized within national intelligence systems during the 20th century, during the Second World War. However, due to the capacity of context and insight into human intentions, HUMINT is still regarded as crucial after technology intelligence fields like signals intelligence (SIGINT) were discovered (Footitt & Kelly, 2012). HUMINT is so important that its operations have been confirmed in modern contexts due to the increase in global security and threats (Osazume & Ugwukwu, 2025). HUMINT plays an important role in understanding users' needs in the following ways:

1. Reference interview
2. Feedback mechanism from users
3. Observations from staff, etc.

Dishman and Calof (2008) are of the view that human intelligence allows context-rich and qualitative insights that are not captured through automated systems. However, recent literature emphasizes that

i. Human intelligence complements digital data by making it more meaningful, interpretation, and strategic relevance.

ii. It also provides qualitative depth and contextual understanding that automated systems cannot offer.

Social Media Analytics in Libraries

Social media monitoring can be defined as the systematic ways of gathering, evaluating, and interpreting data from social media platforms in order to aid strategic decision-making. When we look at competitive intelligence, it involves using user-generated content and online interactions to track competitors, users, and market trends (Choi et al., 2020). HUMINT has paved the way to digital and data-driven strategies in competitive intelligence. Before, CI relied mostly on organized market research and internal reports from the organization, but the development of social media has made CI a more dynamic and ongoing process (Safarnia et al., 2011). According to research, the COVID-19 pandemic propelled the use of digital tools, such as social media monitoring, as organizations are out for quick and fast information (Mashau et al., 2025).

Social media monitoring has now become a crucial part of CI systems that allows organizations to react swiftly to shifts in the market and competitors' tactics (Ju, 2024). As a result of the incorporation of social media monitoring, concepts like social media intelligence and social media competitive intelligence have now emerged (Ju, 2024). Social media platforms are now seen as useful tools for tracking market dynamics and users' behavior because they offer real-time, extensive user-generated data (Bashar et al., 2024).

Recent studies have shown that social media are now viewed as vital and quick-growing sources of competitive intelligence. In the sense that a large volume of user-generated content is produced by social media platforms, which can be examined to learn about users' preferences, actions, and viewpoints. According to Ju (2024), social media gives businesses the opportunity to monitor user sentiments and competitors' activity in real time. It also improves intelligence processes by encouraging interactive communication, content creation, and massive data collection from the competitors.

Walton & Wilson (2025) are of the opinion that social media is among the most widely used sources by CI due to its feasibility and speed. It also serves as a valuable source of real-time user-generated data. This enables libraries to analyze user comments, preferences, and trends to improve services (Kim, Sin & Yoo-Lee, 2014). Social media monitoring allows the following:

i. Sentiment analysis

ii. Trend identification

iii. User engagement tracking

User-Centered Service Design

It can be defined as taking critical consideration of users' requirements, preferences, behavior, and experiences before designing services in order to meet their information needs. User-centric service design (UCSD) comes from the general idea of user-centered design (UCD), which implies that users are totally put into consideration at every stage of designing and development of services (Juárez-Ramírez et al., 2025). UCSD covers full services experience in service contexts by going beyond interface usability. It is a comprehensive approach that integrates systems, processes, and touch points. It put into consideration various service components' interactions to provide value to users.

User-centric service design is evident in its increasing application in digital systems, healthcare, libraries, and public services due to its interdisciplinary nature (Rahman & Jyoti, 2022). Libraries that adopt this approach are likely to improve user satisfaction and user engagement. Libraries and information services support the development of user-oriented services and tools (Luca & Ulyannikova, 2020). However, recent literature increasingly links CI to user-centric service design, particularly in library and information science.

Key insights include the following:

1. Libraries are now adopting CI in order to understand users' needs and their expectations.
2. Social media monitoring provides real-time data insights into user satisfaction and service gaps.
3. CI encourages the development of customized, adaptive, and innovative services.

Studies on library environments show that:
i. social media enhances user engagement and service visibility.
ii. Data-driven insights improve service responsiveness and quality (Agboke & Undie, 2025).

IV. INTEGRATION OF HUMINT AND DIGITAL INTELLIGENCE

Understanding of users is possible through the integration of digital and human intelligence sources. These two sources have a great impact on the understanding of users' needs in order to design services tailored to their needs. While social media delivers immediacy and breadth, HUMINT offers depth. However, if these two sources are well combined, competitive intelligence would be more successful (Fleisher & Bensoussan, 2015).

According to Stegen (2025), integrating digital and human intelligence sources is becoming increasingly important. The following findings include the

I Merging or interconnection of social media monitoring with HUMINT is necessary and important for effective and efficient CI.
II HUMINT presents more background and detailed information, whereas social media presents great momentum and varieties of information.
III The interconnection improves intelligence outputs' accurate and functional information.

The idea of social media monitoring intelligence emphasizes that strategic utilization of social media data in intelligence activities has become a formalized field (Stegen, 2025).

V. REVIEW OF EMPIRICAL LITERATURE

The growing complexity and range of the information environment have forced academic libraries to embrace innovative ways for upholding relevance and improving service delivery. One of these ways is the implementation of competitive intelligence (CI), human intelligence, and social media monitoring to perceive users' needs and improve user-centered services. Recent empirical studies dated from 2019 to 2025 point out that academic libraries progressively rely on intelligence-driven systems, analytics, and librarians' expertise to ensure systematic advantage and enhance patron satisfaction.

Competitive intelligence has significantly become a modern strategy for academic libraries. According to Iwu-James, Haliso, and Ifijeh (2019), competitive intelligence facilitates academic libraries to understand users' needs, monitor rivals, and develop effective and efficient service marketing strategies. In their study, it was discovered that academic libraries that engage in environmental scanning and strategic intelligence gathering are more likely and capable of attracting and retaining users. The authors further point out that competitive intelligence enhances innovation and improved service visibility in academic libraries.

Also, Adetayo, Asiru, and Omolabi (2021), in their studies, examined the role of competitive intelligence in building ambidexterity in libraries. It was revealed in their study that competitive intelligence aids both operational efficiency and innovation in academic libraries. The study further reviewed that librarians' analytical abilities, strategic thinking, and environmental awareness are important human intelligence resources that strengthen organizational adaptability and service delivery.

In another study, Iroaganachi (2022) explored the influence of competitive intelligence on library patronage in twenty-first-century academic libraries. The study demonstrated that libraries that are implementing intelligence-based strategies such as user behavior monitoring, environmental analysis, and information trend tracking experienced improved user patronage and engagement compared to those that don't. The finding is of the opinion that understanding users' evolving information needs and behavior is important for maintaining competitiveness in academic libraries.

However, HUMINT remains a crucial component of intelligence-driven library services. Although artificial intelligence and analytics are gradually embraced in libraries, librarians' professional expertise and interpretive abilities remain indispensable. Monyela and Tella (2024) argued that for artificial intelligence systems to function effectively and efficiently, they need to be complemented by human intelligence. Their study on sustainable knowledge organization in academic libraries revealed that librarians play important and

critical roles in interpreting users' information needs, managing ethical concerns, and providing personalized services. The researchers concluded that the integration of AI technologies with human expertise improves user satisfaction and knowledge organization processes.

Adewojo and Dunmade (2024) examined how big data analytics and intelligent technologies enhance user experiences in academic libraries. Their findings revealed that intelligent systems support personalized recommendations, automate repetitive library operations, and facilitate strategic decision-making. However, the researchers are of the opinion that librarians' cognitive abilities and professional judgment remain essential for interpreting data and designing user-centered services. This implies that human intelligence plays a critical role in transforming libraries into intelligent service environments.

Social media monitoring is a relevant source of competitive intelligence in academic libraries. Platforms such as Facebook, Instagram, LinkedIn, etc. provide valuable real-time information about users' opinions, preferences, and service expectations. According to the Journal of Global Information Management (2021), in studies on social media analytics and competitive intelligence, organizations that monitor social media interactions gain insights into customer behavior, market trends, and service improvement opportunities. The results of the findings suggest that academic libraries can leverage social media monitoring to better understand users' information needs and improve service responsiveness.

However, recent literature on social media use among library professionals and patrons also demonstrates that platforms on social media facilitate immediate communication, awareness, and feedback collection (Adegbola & Adio, 2025). The study establishes the fact that libraries leveraging social media monitoring are more capable of identifying users' expectations and responding immediately to service demands. The study supports the argument that social media monitoring is an essential component of a user-centric competitive intelligence system in academic libraries.

VI. CRITICAL EVALUATION AND GAPS IN LITERATURE

Despite the progressively scholarly attention, several gaps remain in the literature. Most studies focused on competitive intelligence or social media monitoring independently without integrating both concepts into a unified framework for academic libraries. In addition, there are limited empirical studies specifically examining how libraries' human intelligence and social media analytics can jointly support competitive intelligence and user-centric service delivery, especially within African academic library contexts. Also, existing literature pays little attention to ethical concerns, privacy management, and governance in social media-based intelligence systems

Based on these gaps in literature, there is a need for an exploratory framework that integrates human intelligence, social media monitoring, competitive intelligence practices, and user analytics to improve user-centric service delivery in academic libraries. These frameworks may assist libraries in predicting users' needs, improving personalized services, enhancing decision-making, strengthening competitiveness, and increasing user satisfaction.

VII. THEORETICAL FRAMEWORK

The study is anchored on two theories, which are user-centered design theory and knowledge management theory.

User-centered design theory (UCD)

According to Norman (2013), user-centered design focuses on understanding users, designing services with usability in mind, and improving user experience through continuous feedback. Instead of creating services based on organizational decisions, the users are involved through feedback, observation, interviews, testing, and interaction. The components of this theory are users, needs assessment, interaction, feedback, and evaluation. User-centered design theory serves as the theoretical foundation for this study framework because it supports the idea that libraries should understand users deeply, gather intelligence from HUMINT and social media to shape services and users, and also influence service innovation. User-centered design theory emphasizes designing services based on users' needs, experiences, and feedback. The theory supports the integration of HUMINT and social media monitoring as intelligence sources for

understanding users' needs and improving competitive intelligence in academic libraries.

Knowledge Management Theory (Km)

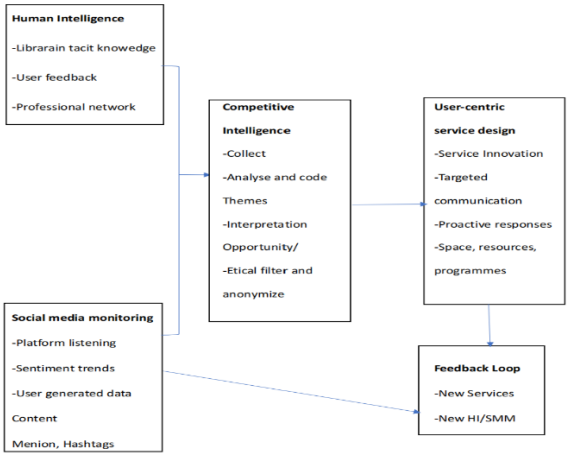
Nonaka & Takeuchi's (1995) knowledge management theory explains how organizations create, collect, organize, share, use, and preserve knowledge in order to improve performance, innovation, and decision-making. The theory emphasizes that knowledge is one of the most valuable assets of an organization and should be properly managed for effectiveness and competitiveness. This study also anchored on knowledge management theory, which emphasizes the creation, sharing, integration, and application of knowledge for organizational effectiveness. The theory supports the integration of human intelligence and social media monitoring as strategic knowledge sources for enhancing competitive intelligence and user-centric service delivery in academic libraries. The theory connects to this study because it covers the study components: HUMINT (tacit knowledge), social media monitoring (explicit/digital knowledge), competitive intelligence (knowledge analysis and interpretation), and user-centric service design (application of knowledge).

VIII. METHODOLOGY

The study adopts an exploratory research design; this was used in order to explore ideas, gain insights, and understand the problem better. Exploratory designs do not seek to test rigid pre-specified hypotheses; instead, they focus on establishing foundational understandings, discovering underlying patterns, and generating comprehensive conceptual frameworks from a complex body of evidence. Also, this approach is suitable for developing a conceptual framework and also identifying the relationship between variables (HUMINT, social media monitoring, competitive intelligence, and user-centric service design). Data were sourced and collected from academic journals, books, and conference papers relating to competitive intelligence, library science, and social analytics. Also, Scopus, Google Scholar, JSTOR, etc. were consulted. The studies published on HUMINT, social media, competitive intelligence, and user-centric service design between 2019 and 2025 were reviewed.

IX. CONCEPTUAL FRAMEWORK

The study proposes a framework where:



Exploratory Framework: Leveraging HI + SMM for CI in Academic Libraries

X. FRAMEWORK RELATIONSHIP

HUMINT + Social Media Monitoring → Competitive Intelligence → User-Centric Service Design

The proposed exploratory framework integrates human intelligence (HI) and social media monitoring (SMM) as dual inputs for competitive intelligence (CI) practice in academic libraries, with the ultimate goal of driving user-centric service design. The framework is conceptualized in three interrelated stages

Stage One: These two intelligence inputs acknowledge both formal and informal routes can produce valuable CI signals. Ojo and Olaniyi (2017) are of the opinion that human intelligence (HUMINT) includes insights shared through professional networks, direct user input, front-line staff observation, reference interviews, and implicit knowledge held by librarians. While social media such as Facebook, Instagram, TikTok, and local forums record user-generated information, platform discussions, mentions of the library and its peers, and emerging trends. SMM offers scale and real-time awareness, while HUMINT deals with context, subtlety, and ethical interpretation that automated technology cannot provide.

Stage Two: The framework's analytical core is represented by the competitive intelligence processing hub, which prioritizes a human-in-the-loop methodology. There are four processes that are

applicable in the process of data gathered from HUMINT and social media monitoring, which are collection of data, theme analysis, strategic interpretation, and ethical filtering. Thematic analysis discovered competitors' activity, service gaps, and recurrent users' requirements. The outcomes are then grouped according to library strategy as opportunities, threats, or neutral trends (Review of literature on human behavior and artificial intelligence, 2024). The utilization of social media in library settings is usually concerned with frequent restrictions of explicit ethical filters, which guarantees optimization and adherence to privacy standards (Turkish Review of Communication Studies, 2025). At this stage, librarians are seen and viewed as active sense-makers rather than passive data users.

Stage Three: These intelligence sources are converted into useful outputs through user-centric service design. Restructuring the study area, modifying the library hours, or examining new resources are examples of how service innovations are informed by insights. Apart from this, they also make provision for proactive solutions to users' complaints prior to their escalation and direct focused communication (Akinyemi, 2023; Oladokun et al., 2024).

The framework is cyclical (revolve round), which is important. A continuous feedback loop is created when new services are introduced in stage 3, producing new responses that are recovered as HUMINT and social media monitoring. With this, library services are aligned, and CI is guaranteed to become an ingrained, iterative process rather than a one-time audit (West, 2001).

XI. DISCUSSION

The integration or the interconnection of HUMINT and social media monitoring enhances the quality of competitive intelligence in the following ways:

1. Comprehensive Understanding of Users: The integration of HUMINT and social media monitoring enables a comprehensive understanding of users with regard to their demands, preferences, habits, motives, expectations, and contextual surroundings in addition to basic demographic data. The findings align with the study of Iwu-James, Haliso, and Ifijeh (2019), who are of the opinion that competitive intelligence facilitates academic libraries to understand users' needs, monitor rivals, and develop effective and efficient service marketing strategies. While social media delivers large amounts of data, HUMINT offers in-depth insights to the data.

2. Improved Decision-Making: The integration of the two sources improves decision-making. This has to do with using trustworthy information, pertinent insights, and a methodical analytical approach to make decisions that are more precise, efficient, effective, and well-informed. By combining the two sources, uncertainty is decreased and evidence-based planning is supported. This study is in line with Iroaganachi (2022), who in this study concludes that understanding users' evolving information needs and behavior is important for maintaining competitiveness in academic libraries and making improved decisions.

3. Real-Time Responsiveness: This involves a system organization's or services' capacity to recognize, process, and react to events, data, or user interactions instantly or with the least amount of delay. Libraries can react quickly to changing users' needs thanks to social media. The study is in line with the Journal of Global Information Management (2021). who are of the opinion that academic libraries can leverage social media monitoring to better understand users' information needs and improve service responsiveness.

4. Service innovation: The integration of these two sources enables the creation and application of new or much enhanced service concepts, delivery strategies, or business models that add better value for users and organizations. CI insights make it easier to create customized and creative offerings. The study aligns with the study of Monyela and Tella (2024) that argued that for artificial intelligence systems to function effectively and efficiently, they need to be complemented by human intelligence. Their study on sustainable knowledge organization in academic libraries revealed that librarians play important and critical roles in interpreting users' information needs, managing ethical concerns, and providing personalized services. The researchers concluded that the integration of AI technologies with human expertise improves user satisfaction and knowledge organization processes.

XII. LIMITATIONS

Despite the advantages, the following limitations are observed:

1. Data overload: with HUMINT and social media monitoring, managing and analyzing a large volume of information is critically challenging, especially social media monitoring.

2. Problems with data quality: the data collected from HUMINT and social media platforms may include bias, noise, and misinformation, and this may affect the creation of user-centric service design.

3. Privacy and ethical issues: monitoring of content created or information posted by the rival presents ethical issues.

4. Absence of standard frameworks: There is little agreement on approaches and best practices.

Based on research, the unorganized nature of social media information makes it challenging to convert it into usable intelligence sources.

XIII. RECOMMENDATIONS

Libraries should:

1.Teach and train staff members on how to gather and analyze intelligence

2. Use social media analytics technologies or machines;

3. Integrate intelligence procedures into systematic and strategic planning; and

4. Ensure that data collection from users is used and adheres to ethical norms.

XIV. CONTRIBUTION OF THE STUDY

The study addresses these gaps by proposing an exploratory framework that integrates or interconnects HUMINT and social media monitoring as complementary sources of competitive intelligence for user-centric service design in academic libraries. The following contributions are made:

1. Theoretical: The integration of HUMINT and social media monitoring as dual and interdependent inputs, the study expands CI theory outside commercial contexts and reframes CI as a proactive, user-focused innovation process rather than a competitor-focused audit tool. It also incorporates ethics as a non-negotiable processing stage due to its response to demand for ethical data use in new media monitoring.

2. Practical: The framework gives the libraries an opportunity for low-resource, actionable approaches that capture CI signals. By highlighting the human-in-the-loop role of librarians (Akinyemi, 2023; Oladokun et al., 2024), it provides comprehensive guidelines that can meet the needs of libraries with limited funding or technical infrastructure, which are prevalent in many African institutions.

3. Contextual: Addressing the regional bias in current CI and SMM literature, providing a model that would take into account local digital behaviors, communication channels like WhatsApp, and front-line services realities, the study offers empirical information from the Nigerian academic library setting.

In a nutshell, these contributions present CI as a reconfiguration approach that enables libraries to anticipate users' requirements, adapt to competitive challenges, and create services that stay relevant in ever-changing information ecosystems rather than as a corporate import.

XV. CONCLUSION

The study emphasizes the significance of utilizing both HUMINT and SMM in order to improve competitive intelligence in academic libraries. However, these components can be used to provide user-centric service design, as the suggested framework illustrates. By implementing this strategy, libraries can raise user satisfaction, improve on service quality, and stay relevant in the information market. With the integration of HUMINT and social media monitoring for competitive intelligence, it helps to improve understanding of users, improve decision-making, improve real-time responsiveness, and improve service innovation. The study contributes theoretically, practically, and contextually. The study suggests future research on empirical study of integration of HUMINT and social media monitoring for competitive intelligence.

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