

Exploring models for the management of indigenous knowledge in academic libraries of Ghana

Information Development
1–11

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DOI: 10.1177/02666669211052928

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Abstract

The need to manage indigenous knowledge (IK) as a key knowledge base of society has become vital in the era of information society. The lack of representation of IK is partly blamed on its exclusion from academia because IK is not primarily the core focus of academic library's collection. The study sought to explore existing models and develop a framework for the management of indigenous knowledge in academic libraries in Ghana. The qualitative methodology using content analysis was adopted for the purpose of the study. Data was analysed using themes developed from the documents and literature. It was evident that the library services and programmes did not reflect on the African content of knowledge management. For an integrated indigenous knowledge management system, stakeholder's partnership, policy guidelines and integration of IK into library's collection is instrumental. Transformation of knowledge systems was identified as the starting point of integration. Social inclusion of marginalised knowledge, equality, sustainable development was identified and recommended in the effort to integrate indigenous knowledge management systems into the library's collection. A proposed framework has been developed for the management of indigenous knowledge in academic libraries as a blueprint for any integration effort.

Keywords

indigenous knowledge, indigenous knowledge systems, indigenous knowledge management systems, indigenous knowledge management, preservation of indigenous knowledge, indigenous community leaders, stakeholders partnership, community participation, integration of indigenous knowledge, information professionals, academic libraries, Ghana

Submitted: 25 May, 2021; Accepted: 16 September, 2021.

Introduction and background

The emergence of the information and knowledge society places a premium on the need to manage all forms of information and knowledge. However, academic libraries in Ghana encounter difficulties in incorporating indigenous knowledge systems (IKS) because they do not fit into their mainstream information management practices. Models such as the Wenger's community of practice, the Earl's taxonomy, the world bank knowledge for development, and popularly the SECI (socialization, externalization, combination, and internalization) model have been

suggested as useful to manage indigenous knowledge (IK) in academic libraries. Although they are rooted in the western notion of knowledge and information, there is no integrated indigenous knowledge management system model that is transformative and socially inclusive of the rather marginalised IK. The lack of models to manage IK may be attributed to a lack of agreement on what constitutes IK, the training and

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theoretical foundations of librarians, and the impending demise of the knowledge due to a lot of factors including colonialism and urbanisation.

Several terms have been used to describe indigenous knowledge by different scholars looking at the context and field of discipline. Notwithstanding, they all give the same meaning. These terms include but are not limited to Indigenous Technical Knowledge (ITK), Local Knowledge (LK), Traditional Knowledge (TK), Ethnoecology, Rural People's Knowledge (RPK), Indigenous Skills, Ethnoscience, Cultural Knowledge (CK), Peoples' Science, Folk Knowledge (Lwoga et al., 2020; Mahwasane, 2017: 77; Ngulube, 2003: 2; Chisenga, 2002: 1). Whichever way one might choose to label indigenous knowledge, Onyancaha et al. (2018: 155, 165) assert that IK lacks a uniform label which may be influenced by several factors. These factors may include personal, historical, and regional preferences, sociolinguistic preferences of researchers and research subjects, disciplinary preferences, and publishers' preferences. Based on the various discipline-specific definitions that have been given, what is common and runs through all the definitions is that IK is the knowledge that people in a given community have developed over time and continue to develop based on experience, often tested over centuries of use, adapted to the local culture and environment, dynamic and changing (International Institute of Rural Reconstruction, 1996). Communities globally have got storehouses of IK and according to Nyumba (2006: 1), they have been handed down by word of mouth across generations consciously or unconsciously over the years. Thus, every community whether rural or urban have some indigenous knowledge. Indigenous knowledge as explained by the International Network for Advancing Science and Policy (2002) is created and exchanged when the motives of community members are triggered and when they have the opportunities as well as the necessary means and skills to do so.

As part of Africa's uprising, it has been realised by scholars, professionals, and development institutions like the World Bank, United Nations and UNESCO that tapping into this rich knowledge base of indigenous societies' is the way forward to address issues that can positively impact their growth and development. Indigenous knowledge is perceived by many as something rural. However, the International Institute of Rural Reconstruction (1996) debunks this by explicitly explaining that IK is not confined to tribal

groups or the original inhabitants of an area or rural people. In its totality, IK is holistic and dynamic, community-based and unique to societies, tacit in nature and shared through oral communication systems, based on experiential learning, runs through generations, and outside mainstream publishing and print traditions which are the core of library, archival and institutional collections (Cajete, 2000; Hurley et al., 2017: 124; IIRR 1996; Ina Hoi Riwa Foundation, 2000; Ngulube, 2003: 23; Ngulube and Onyancaha, 2020; Raseroka, 2002: 3; Sharief et al., 2021).

Modern library and information systems are oriented towards a western logic of information retrieval and access without consideration to the cultural context in which it was created (Burtis, 2009). The problem of representing indigenous realities in the library and archival collections according to Hurley et al. (2017) is stereotypical representations and classification schemes constructed from a western worldview. Organising information for easy access and retrieval is not only about cataloguing, abstracting, indexing and classification but the drive towards the management of IK is to develop a knowledge organization system (KOS) in a cultural context that can be usable and accessible to the owners of the knowledge system as well. Ghana has profound IKS that are embedded in the culture of the people. However, because of inadequate documentation and organization, this knowledge rest in the minds of custodians who die with it. Consequently, this knowledge is gradually becoming extinct. Thus, making it an exigent need to manage it before it is completely lost As stipulated by Afful-Arthur et al., 2021, in exercising their proactiveness as managers of all forms of information and knowledge, academic libraries have the basic resources to manage IK.

Manifestations of indigenous knowledge systems

Majority of Africans are predominantly dependent on IK for their livelihood. This is manifested through informal education, agriculture, traditional medicine, arts and craft, music and dance, natural resources management, weather and climate, chieftaincy, festival, conflict resolution among others. Sarkhel (2016: 430) outlines the manifestation of IK to include but not limited to information, practices and technology, beliefs, nutrition, health, veterinary care, human resources, education, communication, agriculture

and fisheries, food and technology, tools, handicrafts, performing arts, religion and astrology among others. These manifestations of IK are reflected in the daily life and activities of people within a community. Thus, they form the foundation and growth in their livelihoods. The skills in all of these activities and practices are tacit and manifested through oral forms of communication. However, these forms of manifestation of IK is threatened by modernization, urbanization and globalization (Chisenga, 2002: 2) which considers activities and practices which are not documented as invalid and unscientific. IK manifest in the everyday life of indigenous people. They are used by people at the local level as the basis for decisions pertaining to all the vital activities including health, education, natural resource management, food security and conflict management. This consequently constitutes the social capital and main asset of people in the community (Gorjestani, 2000; Lwoga et al., 2010).

Problem statement

Academic libraries are the repository for information and knowledge for research and learning. Thus, it is peremptory to keep and manage updated and authentic information (Kargbo, 2005: 206). In exercising the mandate of collecting, documenting, managing and preserving IKS, the information professional is confronted with the problem of access to indigenous knowledge and institutions and what aspect of IK to collect. Much of the problem emanating from the lack of a framework to incorporate IK in academic libraries to serve as a guide, especially in Ghana. Issues of validation (integrity and authenticity) and who is assigned the responsibility of what to do and where to start from need to be outlined. Several models have been discussed in the extant literature on the possibility of using them to manage IK effectively. However, in situations where resources are limited in academic libraries and their focus are clearly defined, having a systematic way of integrating IK into their collection and services cannot be ignored. This study investigated existing models used to manage IK in order to recommend a framework for its integration into academic libraries in Ghana. This study contributes to defining the roles and responsibilities of information professionals regardless of the type of library and the information resources they collect, manage and preserve. The study was guided by three key research questions.

1. What are the existing attempts at IK management in academic libraries in Ghana?
2. What are the tools/expertise needed for the effective management of indigenous knowledge?
3. What are the existing models that can be applied to manage IK in university libraries?

Methodology

A study of this nature required going through various documents and literature to assess what has been practically done, its successes and its limitations. The study was limited to ten public universities which are the oldest in Ghana. The universities were Kwame Nkrumah University of Science and Technology, University of Development Studies, University of Energy and Natural Resources, University of Cape Coast, University of Education, Winneba, University of Mines and Technology, University of Ghana, University of Professional Studies, Ghana Institute of Management and Professional Administration and the University of Health and Allied Sciences. The qualitative method using content analysis was adopted for the study. For this purpose, the researchers reviewed literature, documents on policies, reports, standards, procedural manuals among others to gather secondary information which may be relevant to the focus of the research. This technique of data collection is normally referred to as document assessment or document analysis or review, which Creswell (2009: 181) explains as assessing information in policies, procedures, standards, reports and other relevant documents. These documents may include but are not limited to reports, procedural documents, government papers, journals, diaries, newspapers etc. It was evident that not all information may be articulate and perspective with document assessment. Notwithstanding, document assessment are inconspicuous sources of information, saves researchers time and expense of transcribing recorded information (Creswell, 2014: 241–242). The researchers assessed the collection development policies of the universities to find out whether there was any aspect of the policies that dealt with the management of indigenous knowledge. A brief interview was conducted with the heads of the libraries to authenticate and get a clear understanding of their policies and reports. The researchers also used information from journals, reports, and other related documents to study the growing trends of indigenous knowledge management through the literature review.

The criteria for selecting the documents used were based on the five main themes that were identified in Table 1 based on the research questions. Selective codes were assigned to them for a concise analysis.

Theoretical perspectives

While it has been tested and established by Ngulube (2003) that the SECI (socialization, externalization, combination and internalization) model provides a holistic approach to the management of IK, the

Table 1. Coding responses under themes to generate data for analysis.

Themes	Selective codes
1 Policies and frameworks governing the management of IK	Collection Development Policy Availability of Collection Development Policy Operationalization of Collection Development Policy Focus of Collection Development Policy National policies on IKS
2 Library programmes and services	Outreach Programmes Content and focus of outreach programme Library and Community Partnership Service to indigenous community Library Social Responsibilities
3 Integration of IK into library services	Transformation Social inclusion Equality Integration Management of IK Sustainable development Stakeholders Partnership
4 Tools and expertise needed for the management of IK	ICT equipment Staff competency
5 Challenges to the management of IK	Skills and expertise Funding Lack of interest by information professionals IK not part of university curriculum Focus of library's collection Marginalisation of IK Management buy-ins

researcher realised that other theories like Wenger's Community of Practice (COP) model, Earl's Taxonomy Model, World Bank Knowledge for Development (K4D), Information Integration Theory and Cognitive Justice Theory provides aspects that can be integrated and used to effectively manage indigenous knowledge (IK). The aspects from these theories informed the conceptual framework of the study.

The SECI model and its applicability to the management of IK

The Organizational theory propounded by Nonaka and Takeuchi (1995) based on the social interaction between tacit and explicit knowledge through socialization (conversion of tacit knowledge to tacit knowledge), externalization (conversion of tacit knowledge to explicit knowledge), combination (conversion of explicit knowledge to explicit knowledge) and internalization (conversion of explicit knowledge to tacit knowledge) is seen as the four modes of knowledge transformation and conversion. Mbatha (2013) and Ngulube (2003) demonstrate these four modes of knowledge creation as extremely useful and can be effectively used to manage the different forms of tacit knowledge both in communities and organisations by capturing, storing, processing, retrieving, and disseminating IK across space and time and offers the best mode to capture, create, leverage and retain knowledge. By interacting with people, a person can acquire tacit knowledge without language. The mode of acquiring this form of knowledge is basically through direct interaction with people through shared experiences by practice, imitation, and observation (Mbatha, 2013; Ngulube, 2003; Nonaka and Takeuchi, 1995).

Earl's taxonomy model

The model is characterized by codification, connectivity, capability, commercialization, collaboration, and consciousness by factoring in the use of ICTs for effective impact and management (Earl, 2001; Njiraine and Le Roux, 2010). It has been established that tacit knowledge can be wholly and effectively managed using codified systems in the form of knowledge processes, knowledge bases (repositories) and knowledge directories. Earl's model focuses on the different stages of managing organisational knowledge systems as it encompasses all aspects that can accommodate an entire community's lifecycle.

Information integration theory (IIT)

The Information Integration Theory (IIT) is based on the assumption that attitudes are formed and change by combining new information with existing thoughts (Anderson 1971). Thus, people's attitudes are highly influenced by the important qualities in terms of weight and value they place on information and this creates new attitudes and perceptions in them. The usefulness of this theory to the effective management and use of IK in sustainable development agendas reflects a purpose. Thus, for IK to be seen as a type of knowledge system that is not marginalised, all stakeholders including policymakers must place higher weight and value on IK. This will consequently foster the integration of IK into appropriate sectors of the economy.

Cognitive justice theory (CJT)

The idea of universalism globally called for the need for democracy of knowledge systems which brought about the concept of cognitive justice. The underlining principle of cognitive justice is diversity, plurality,

inclusiveness and equality to guarantee other paths and solutions to problems within a culture to create a new self-reflexive idea of democracy around actual communities of practice (Leibowitz, 2017; Visvanathan, 2009). By implication, the same problem in different jurisdictions might require different solutions based on the culture and nurturing processes in each geographical region. Applying cognitive justice in the field of library and information sciences, Burgess (2015) explains the need for diversity of solutions using both indigenous and western knowledge for dynamism and flexibility. Thus Nkata (2003) contends that there must be ways to integrate IK within current library systems as a way to eroding past mistakes (marginalization of IK through colonialism).

World bank knowledge for development (K4d)

The economic and institutional regime, education and skills, information and communication infrastructure and innovation system are the main pillars of the knowledge economy which requires effective action through reform, investment and coordination (World Bank, 2012). Based on this, the World Bank K4D program works to create awareness among national policymakers of the powerful growth effects of knowledge to encourage economic actors to combine global and local knowledge to accentuate comparative advantage and to help leaders to build institutions that foster rather than discourage individual attempts to exploit the competitive opportunities available to knowledge-powered enterprises to design knowledge-based strategies that leverage a country's strength to attain its development goals.

Wegner's community of practice (COP) model and its application to the management of IK

The COP model is centred on the management of tacit knowledge through a systematic process of acquiring, organising, sustaining and renewing tacit knowledge of people in organisations in order to use such inherent knowledge for innovation and to achieve competitiveness. The focus on tacit knowledge which is both individualistic and collective in nature through experiential learning reflects the characteristics of IK and how it can be managed through COP based on its multi membership cycle incorporating inclusiveness, dynamism, experiential knowledge, expertise and most importantly sharing knowledge without

Table 2. Conceptual framework.

Conceptual Framework		
Models Used	Key Concepts Identified	Integration of Indigenous Knowledge
1 SECI Model	Transformation and Management of IK	Integration of Indigenous Knowledge
2 Communities of Practice	Social Inclusion	
3 Earl's Taxonomy	Transformation, Social Inclusion and Management of IK	
4 Knowledge Management for Development	Transformation, Social Inclusion, Integration and Sustainable Development	
5 Cognitive Justice Theory	Social Inclusion, Integration and Equality	
6 Information Integration Theory	Integration	

Key Concepts: Transformation, Integration, Social Inclusion, Equality, Management of Indigenous Knowledge, Sustainable Development.

Source: Synthesis from Literature (2021).

boundaries (Wegner et al., 2002). Thus, through the use of COP, IK can be effectively managed by collecting, documenting, storing, sharing (using different mediums) through the use of technology. The application of COP depicts that information professionals, custodians of IK, IT experts, interested persons and institutions, and all stakeholders can partner to ensure that IK is managed and preserved as a strategic resource for sustainable growth.

Table 2 below gives a brief picture of the concepts that have been identified from each of the models used.

Table 2 illustrates the various models from which the conceptual framework was developed. From each model key concepts were identified which in effect encompasses what constitutes the integration of indigenous (Anderson, 1971; Earl, 2001; Leibowitz, 2017; Mbatha, 2013; Mungai 2014; Nonaka and Takeuchi, 1995; Ngulube, 2003; Njiraine and Le Roux, 2010; Visvanathan, 2009; Wenger et al., 2002; World Bank, 2012).

The connexion between the theoretical perspectives

The important elements to the management and preservation of IK are transformation, integration, social inclusion, equality, management of indigenous knowledge, and sustainable development. These elements revolve around factors such as the library's outreach programmes, the content and focus of the outreach programmes, library and community partnership, library services to indigenous communities and the library social responsibilities within the communities they are located. For its successes, any integration effort requires agreement and partnership from all stakeholders who are involved. In this context, stakeholders will include indigenous community leaders who are the key custodians of the knowledge; experts in IK who will help identify, collect, and validate the knowledge gathered; and information professionals whose roles are clearly defined as managers of the knowledge. Thus, information professionals are instrumental in ensuring that the knowledge gathered is well managed, appropriately stored to ensure its preservation and disseminated to patrons who may use IK for varied purposes which may not necessarily be limited to research.

The need for policy guidelines is crucial to any integration effort. Policies are important as it gives information professionals focus and direction to manage and preserve IK. Collecting virtually everything

related to IK can be an overwhelming endeavour. A collection development policy will help minimise information overload and guide information professionals to avoid duplication of works in their various communities, especially in situations where the knowledge systems may be directly related or specifically the same. Integration of IK into the library's collection requires its inclusion into the university's curriculum, tools and expertise for its management and preservation.

Findings and discussions

Library programmes and services

Library services as defined by Mhlongo and Ngulube (2019) are activities that libraries undertake to serve their user communities. These services as explained include referencing, circulation, inter-library loans, information searches and current awareness services to outreach programmes. For its management and preservation, libraries as recognized by IFLA (2012) are to implement programmes to collect, preserve and disseminate indigenous knowledge resources. The programmes initiated by the libraries were outreach programmes specifically to help develop community and school libraries within the communities where the libraries were located. There were also reading clubs that were set up within the community schools and during such activities, the librarians supported and encouraged reading amongst the pupils. However, none of these programmes was geared towards the management of indigenous knowledge. Presumably, in terms of service provision, the libraries although opened to the public did not have any peculiar services for indigenous communities. There was no relationship or collaboration between the libraries and the communities, nor had any efforts been made towards that. The libraries programmes and services were basically for its primary users including library week celebrations which focused on publicizing the library resources to their users. The library's social responsibilities to the communities around were the donation of books to the community schools. The lack of any initiative by the libraries to provide service to indigenous communities towards the management of indigenous knowledge is cause for concern. The need for diversity in information provision and access is an added advantage to academic libraries as agents of transformation and social inclusion in service provision. Thus, for diversity,

inclusivity and transformation, agreeing with Nkata (2003) information professionals can create ways to integrate IK within current library systems. The focus on the integration of IK into library services and programmes requires the need for community partnership for its success. Building such relationships according to Thorpe and Bryne (2016: 18) ensures the inclusion of more and stronger indigenous voices to reflect on past and contemporary indigenous experiences. However, the nature of library programmes and services in academic libraries in Ghana reflects more on the university's curriculum than the inclusion of other knowledge systems that reflects on the African content of knowledge.

Integration of indigenous knowledge into library services

Integration of IK into library services was instrumental in developing a framework for the management of IK in academic libraries. By integration it was necessary to find out whether librarians besides managing documented information in their custody, go into communities to collect, document, manage and preserve their indigenous knowledge in its tacit nature for posterity. This was because indigenous knowledge is becoming extinct and needs to be preserved. The people to do it best are the information professionals whose mandate is managing and preserving information. The need for integration also calls for capacity, expertise and resources to do it since it is not their core mandate and they are not obliged by any policy to do so in Ghana. Whichever way one looks at it, information professionals should just collect IK in collaboration with experts and once users get to know that such information is available, they will request it and use it. Indigenous knowledge management could be seen as one of the most effective ways the library can be seen as being proactive. This concurs with the opinion of Mahwasane (2017: 77) that libraries should see the management of indigenous knowledge as an additional responsibility and service in the innovative application of indigenous knowledge

Staff training programmes on indigenous knowledge

The quest to integrate the management of IK into library services calls for staff who are competent and have the requisite skills and knowledge to manage indigenous knowledge. The training came in diverse

ways, but the focus was on whether there had been training programmes on indigenous knowledge. It was gleaned that there had not been any training on indigenous knowledge management or preservation. Such training organized by the library association of Ghana had been done but none of these training had indigenous knowledge management as a focus. The university library's training programmes for staff did not focus on IK. This is because the primary focus of these libraries is not on the management of IK. Again, training comes at a cost and with the limited budget the libraries are allocated, they rather focus it on training to enhance the services and nature of resources they provide to their user community.

Tools and expertise needed for the management of indigenous knowledge

Information professionals as part of their training would have acquired some skills in managing information from their creation, maintenance through to their preservation and the different media on which the information is stored in both print and electronic format. It becomes quite easier to train people with such background on how to manage other forms of information and therefore equip them with the skills for curating and managing informal knowledge. Do information professionals have the requisite skills and competency to manage indigenous knowledge in academic libraries, when all they are used to is managing documented information? It was evident that information professionals had fair competencies in transcribing, codification, translation, video/photo editing and media literacy. However, when it came to competencies in areas such as computer literacy, managing databases, digital literacy, digitisation, preservation management, indexing/abstracting, cataloguing and classification, they had very good competencies in such areas because these were the daily routine of staff at the various units and so it was not surprising to know they had great expertise in that. If the library intends to take on board managing indigenous knowledge, then it would require building the capacity of staff on how to manage and preserve informal knowledge such as IK and by extension, as suggested by Sarkhel (2016: 437), work on the legal implications that comes with managing and preserving indigenous knowledge. Since expertise is something that can be developed, there is the need for advocacy in accepting to manage indigenous

knowledge once there is the potential and the goodwill from information professionals.

Summary and recommendations

This study sought to develop a framework for the management of indigenous knowledge in academic libraries which can be integrated into the library's programmes and services for its effective management in Ghana. It was concluded that:

1. The libraries had no services or programmes for the management of indigenous knowledge. Their outreach programmes were targeted at the community schools towards the donation of books, establishing reading clubs and in some cases helping them to organise their library.
2. There were no training programmes for staff on indigenous knowledge management systems. It was established that as an intellectual asset, IK was critical to sustainable development if well harnessed.
3. It was established that although information professionals had expertise in managing information, they required additional training to collect and document indigenous knowledge.
4. The tools in terms of ICTs and its infrastructure was available at the library and so it could be used for the purposes of collecting, documenting, storing and disseminating indigenous knowledge for its management and preservation. With the use of ICTs for such purposes, there were staff with the requisite skills on the use of ICTs.

The following recommendations were made:

1. The way forward is to make IK part of the university curriculum. And it starts from making IK a part of the library and information science curriculum. Universities in each region should collaborate with community leaders to identify which IK is peculiar and relevant to be collected and documented.
2. Information professionals need to reskill so that they will be able to harness IK collectively to the advantage of custodians of IK and Ghana as a whole. Information professionals need to acquire additional training on managing and

preserving the oral and tacit nature of IK and examine the best way to do so.

3. The way forward is for information professionals to sit down and identify which kind of information they want to collect. For example, what they think will be unique in the communities the universities are situated that should be collected because of its intrinsic and intellectual value. The need for partnership is very critical. Just like journalists do, information professionals could seek stories and information. So, libraries could also take up those kinds of challenges, go out there to seek what is there to collect by way of indigenous knowledge and try to manage it.

The purpose of the framework is to serve as a blueprint for information professionals in their quest to effectively manage all forms of knowledge including indigenous knowledge which is deemed an intellectual asset. The need for integration is based on the findings that there are no procedures to guide information professionals to integrate IK into their library collection, services and programmes because it is not the focus of their collection. Three core principles are identified in the effort to manage IK and integrate it into the library's collection. These are stakeholder's partnership, policy guidelines and integration of IK into the library's collection to achieve transformation of knowledge systems, social inclusion of marginalised knowledge, equality, sustainable development for an integrated indigenous knowledge management system (Figure 1).

Stakeholder partnership calls for collaboration amongst experts in various fields, indigenous community leaders and information professionals. Indigenous community leaders are the custodians or owners of IK and so the knowledge resides with them. The experts include for example historians, researchers, scientists etc who will help identify relevant IK, validate it and collect it in collaboration with community leaders. The role of the information professional is to manage IK, store the collected IK in the appropriate format, provide access and disseminate IK resources. All these cannot be done in isolation but calls for a collaborative effort from all the stakeholders.

Policy guidelines are important because they serve as a legislative framework within which entities operate. Information professionals are guided by budgets and the format or kind of information they manage depending on their roles. Thus, the need for

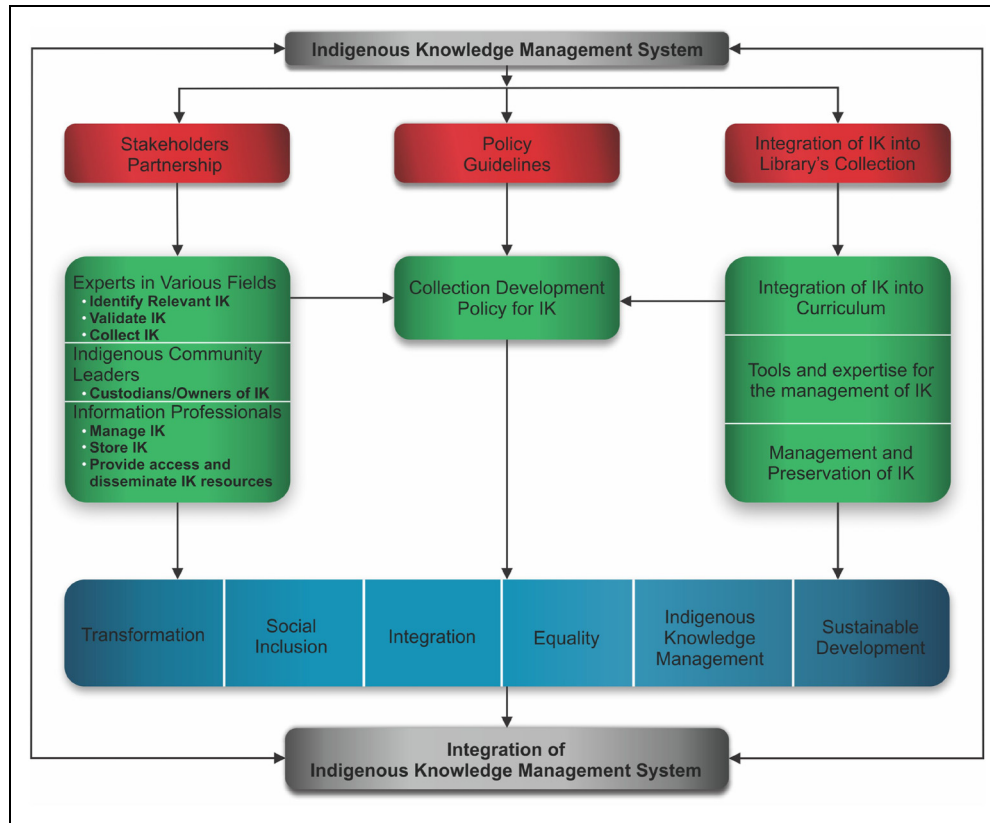


Figure 1. Proposed framework for the management of IK in public university libraries in Ghana.

a collection development policy that guides the collection management of academic libraries. Indigenous knowledge is broad and cuts across diverse aspects of society. It is thus important in the effort of integration and for its operationalisation for academic libraries to define what they deem important to collect and manage for research, teaching and learning purposes since their collections are guided by their curriculum.

The integration of IK into the library's collection requires integration of IK into the curriculum (which would have already been covered under stakeholder's partnership), tools and expertise for the management of IK, and the management and preservation of IK. For its total acceptance, it is important to identify areas where IK is useful in academia. Areas like history, arts, agriculture among others (this would have been covered under stakeholder's partnership). It is very important here to have the requisite tools in place and also train staff to manage and preserve such knowledge in the formats within which it is stored. Once the necessary protocols are in place, then it becomes easier for information professionals to manage and preserve IK in its form and nature for

access provision and dissemination. The resulting end of these protocols is to achieve transformation, social inclusion, equality, sustainable development and to effectively have an integrated library where users can access all forms of knowledge.

Conclusion

Academic libraries in Ghana did not have a comprehensive framework for managing indigenous knowledge in their collections. That implies that the management of indigenous knowledge in academic libraries was not systematic. Drawing on concepts from various knowledge management models including the knowledge creation theory, this study recommends an integrated framework that may inform collection development in academic libraries of Ghana. Furthermore, the model that is proposed here may inform curriculum development in order to equip library professionals with the requisite skills to manage indigenous knowledge in their libraries. Other academic libraries in the Global South may use the framework with contextual adaptations.


Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship and/or publication of this article.

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