

# A STUDY OF SERIALS USE AT KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY LIBRARY, KUMASI.

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## **Abstract**

*This study was undertaken to find out how intensively the serials collection of the Kwame Nkrumah University of Science and Technology (KNUST) Library was being used by students and Faculty and to establish how adequate the collection was to their subject needs. The principal users of the KNUST Library are the students, both undergraduate and post-graduate, lecturers and research fellows of the University. A sample population of 483 registered users of the Library, constituting one-tenth of total registered users were selected. The 483 spanned all the various categories of users and these were served with questionnaires. A high return rate of 82.6% was attained. It was clear from the results of the study that the serials collection was being fairly used. It could however, not be firmly established whether the collection was adequate to the subject needs of all the clientele. The undergraduate student users were identified as one group that significantly used journals and this was because lecturers were recommending the journals to them. The study, unearthed some loopholes and lapses in the collection and its management, which needed to be addressed in order to satisfy, adequately, patrons of the Library. Thus, recommendations made, included engaging in new and intensive methods of user education in the use of serials; and an intensive current awareness and the provision of SDI services.*

KEYWORDS: SERIALS USE, KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY LIBRARY, UNIVERSITY LIBRARIES, GHANA

## **Introduction**

Serials, periodicals or journals are terms used to describe those publications that are not books or monographs, but serve to provide original documentary source of information on academic work. There is emphasis on academic literature, because serials are not journalistic publications or newspapers, magazines etc. they are usually published in "successive parts and intended to be continued with no predetermined end" (Szilvassy, 1996).

Many articles published in one issue are not published in other editions. A serial stock is an important collection of documents that report current scientific and technological research as well as social, historical or economic research. It is therefore, an important collection in an academic library.

### **Scope and objectives of the study**

The study is limited to the serials section of the Kwame Nkrumah University of Science and Technology (KNUST) Main Library. The use of journals and other serial materials stocked at the section for academic work by lecturers, researchers and students is the emphasis of the study.

Serials form an important component of the library's collection, and are expensive to acquire and manage. Libraries spend huge portions of their budgets to update their serial holdings in anticipation of use. It will be a great waste of resources if the serials are not fully utilized, it is therefore imperative to establish whether users patronize the serials collection to the expectations of the library administration and also find out if the collection is adequate to the needs of its patrons.

Objectives:

It is therefore imperative to establish;

(a) whether users seriously patronize the serials collection.

(b) whether the collection satisfies the serial information needs of users.

The results may serve as a further pointer to the need for more detailed instructions on information searching skills to be adopted in order to promote better appreciation and utilization of the serial collection in the Library.

### **Methodology**

In this study, the survey research method was used to gather information and the specific research tool used was the questionnaire. The questionnaires were issued to registered users of the Library as they entered the Library during August and September, 1998. In most cases, they were collected back as they were leaving the Library. Others, especially, lecturers were later followed to their faculties to collect them. The exercise continued daily and lasted for two weeks in order to cover a variety of users. This method of administering the questionnaire may not be the best in terms of capturing a representative view of the various users but it has the advantage of a very high return rate. The observation technique was also employed. Several personal visits to the section were made to observe how requests for materials were made and the search patterns adopted by them.

### **Sample Population**

It would have been very difficult to administer questionnaires to all registered users of the KNUST Library. The cost in terms of personnel, time, and materials would have been prohibitive. It was therefore necessary to take a sample population that would be quite representative of the total registered users. The

total registered users in all categories, during the study, were 4831. One tenth of the 4831 was decided upon as quite representative, so 483 questionnaires were administered to mainly undergraduate students (first year undergraduates exempted) graduate students, lecturers and research fellows.

### **Sampling technique**

The 483 questionnaires were served from the Circulation Desk of the Library to users as they entered. This was randomly done. Much of this method was inherent with accessibility bias, but it provided the opportunity to deal with active users of the Library and not just any user. It also made it possible for the achievement of a high return rate of about 86.2%.

### **Organization of the KNUST Library**

The KNUST Library is organized on functional lines, otherwise known as the production system. This involves delimiting departments by functions or tasks. The production system which is the same as functional organization is formed by grouping work by functions performed, into departments, or divisions. By this functional arrangement the KNUST Library has the following departments: Lending, Reference and Research including the Ghana Collection and the Undergraduate Library: Acquisition/Orders; Cataloguing; Serials and Electronic Information Unit.

### **The Serials Section**

This Section, the focus of this study, is located on the third floor of the new wing of the Library. It is a unified collection that contains both current and bound journals. The current ones are displayed on racks and the bound ones are put on open shelves. The documents are housed and serviced separately from the rest of the larger library collection. For example, in this section, borrowers do not go through the normal borrowing process of the Library.

### **Processing**

The section is responsible for acquiring and processing the journals, its management and control of usage. The collection is classified using the same L.C. Classification Scheme, as the larger collection, it is not catalogued but has its own recording system.

The Serials Section collaborates with the Electronic Information Unit, on the ground floor, which provides about 7000 electronic journals online, through the sponsorship of the International Network for the Availability of Scientific Publications (INASP). The sponsorship ended in December 2004.

### **Stock development**

Journal titles will normally be selected by professional librarians in cooperation with teaching and research staff, and sometimes students. The titles have to be chosen to satisfy the demands of users, all other things being equal. In ideal

circumstances where funds are readily available, the Library must have journals appropriate to the academic levels of all courses being offered.

Where inter-lending facilities exist, the collection could take advantage of borrowing facilities with other libraries while concentrating on acquisition of core journals, fully aware that others could easily be borrowed for users. Out of date journals waste space and can be detrimental to the educational development of students as they may be reading out-dated information. Stock, therefore, has to be reviewed continually to ensure that it is relevant and up to date. Whereas learned journals may merit longer storage, others have a short current life and must not be stored for an indefinite period.

The Serials section of the KNUST Library is guided by the fact that it is a university library serving an academic community. But because of a history of inadequate funds, the section had relied heavily on donations in acquiring journals, thus contributing to falling levels of subscriptions. From 1970 to 1986, the Library subscribed to about 1,589 journal titles, which reduced to virtually nil by 1990.

In the year 1990 – 1997, the section was supplied with 750 core journals by the Ministry of Education through the Educational Sector Adjustment Programme. (EDSAC).

The responsibility of the Serials Librarian at the time was to collate recommended core journals from the faculties and add his own selection from publisher's catalogues. The list was then presented to the Ministry which ordered them on behalf of the Library. The norm, however, in purchasing journals is to place standing subscriptions, paid for a year or more and the journals are received regularly.

### **Gifts and Donations**

Another form of acquiring journals was through gifts and donations. International institutions like Book Aid International, Campus Book Link, Brother's Brother and American Association for the Advancement of Science (AAAS) have in the past arranged for back copies of a number of journals to be supplied to the Library to fill gaps in the collection.

In the case of Book Aid International (BAI), advance lists of serial titles were sent to the Library for selection of relevant titles. In another instance, BAI requested for lists of missing copies in the Library's collection and supplied them. Not all the selected titles were received but in most cases those received were found to be very useful.

Other donations are received from international organizations and banks which send their annual reports and quarterly bulletins. One noticeable problem with these is that the donations are not sustained. Items tend to consist of single copies.

## **Exchange**

A reliable way of acquiring scholarly journals is by membership of learned and professional associations; or by entering into exchange arrangements with them. The KNUST Library engages in few such arrangements. The Exchange, as the name implies, is based on reciprocity and since the Library does not have many publications to give out, it is limited in this aspect of acquisition.

The **Journal of Science and Technology**' (JUST) which is the main university journal and publications from the faculties are mainly used as exchange materials. The Library obviously cannot purchase or acquire through other means, all journals that are of value to its readers. So concentration is on core journals, which are described as, those, for which several interests overlap, to satisfy a large proportion of needs.

## **Reader and Current Awareness Services**

Reader Services involves direct service to the user to meet his/her need for information as efficiently and as quickly as possible. The methods used include, among others, library co-operation, access to serials through the catalogue, use of indexes and abstracts and current awareness services. All the staff take part in reader services or user contact. It is very often the case because the reader has no other reference or access point. As already noted, the main catalogue does not contain entries on serials. The non-professional staff normally takes up the directional inquiries while in depth searches are conducted by the professional staff.

Very often, in library terms, current awareness involves knowledge of the contents of recent publications like serials; such a service includes retrieving available documents, selecting those relevant to the needs of the individual or group and sending notification to them. It can take the forms of Selective Dissemination of Information (SDI), periodical routing and display of pages of current contents.

Specifically, the serials section of the KNUST Library undertakes current awareness in the form of SDI to lecturers when necessary. It is not a regular feature. Actual periodicals are not routed for fear that they may get lost while being circulated as the teaching community is quite large. Current contents pages are also not displayed anywhere in the Library but the journals themselves are displayed in the Section.

## **Inter-library loans**

Alemna (1997), states that "in many developing countries the little that takes place in the form of document delivery is informal and voluntary in nature. It is very often characterized by very few requests and therefore low and infrequent traffic at both the local and international levels". The observation is quite applicable to what exists in the Serial Section of the KNUST Library.

Inter-library co-operation and lending are not based on any union catalogue or other bibliographic records but on a mutual arrangement based on the chance that the requesting library hopes the other library may have the document in question. A happy development at the KNUST Library was that requests for non-available journal articles were made through the AJOL, Blackwells and Emerald online databases sponsored by INASP, in the Electronic Information Unit, and photocopies were obtained.

Serials literature form an important medium for the dissemination of learned, scholarly and accurate information. In the light of this importance the Serials Section of the KNUST Library should be perceived to be well utilized by its users to derive optimum benefits in terms of information services.

### **Presentation and Data Analysis**

The fact still remains that information in journals is more current, more specific and less verbose than that in monographs.

The Serials Section of the Main Library of the KNUST is the case study in this work. The principal sources of information were the Serials Librarian and the users. The survey method was adopted to find out whether the journal collection was beneficial to the users. In this regard, questionnaires were distributed to a sample of the registered users of the Library. The choice of the registered users was to ensure that the person had used the Library before and was likely to have used the serials collection.

New undergraduates or freshmen were excluded because they would not have used the Library long enough as library use is the main criterion for inclusion in the survey population.

A random selection of 483 registered users was made. This number comprised 312 undergraduates; 48 graduate students; 16 lecturers and 12 research fellows. Twelve

teaching assistants and demonstrators formed part of the sample. The table below gives a graphical representation of the different categories of users. After carefully sorting out the questionnaire, 400 were found properly answered for analysis thus giving a response rate of 86.2%.

**TABLE 1: STATUS OF USERS**

RESPONDENTS	FREQUENCY	PERCENTAGE
Undergraduate students	312	78
Graduate students	48	12
Lecturers	16	4
Research fellows	12	3
Others	12	3

Another question sought to know the faculty of study of students. It was observed that students of all the faculties use the main library, but it was not surprising that students from the Social Science Faculty were in the majority. Medical Science students were observed as being in the minority; this may be so because the College Library has a good collection on the medical sciences. It also came out that College of Art students also do not use the Library intensively.

In the questionnaire, respondents were given the chance to express their frequency of use of the Library. It was intended to establish whether frequent use of the Library implied frequent use of the Serials Section also. This objective could not be clearly achieved because only 293 (73.25%) responded. A total of 107 (26.75%) gave no response and 120, (30%) said they used the Library less frequently. Table 2 illustrates the point further.

**Table 2 – FREQUENCY OF USE**

VALUE LABEL	FREQUENCY	PERCENTAGE
Daily	40	10
Once a week	31	7.75
Once a forth night	18	4.5
Frequently	84	21.0
Less frequently	120	30.0
No response	107	26.75
<b>TOTAL</b>	<b>400</b>	<b>100</b>

It was necessary to find out the purposes for using the Library, therefore, respondents were given the opportunity to tick as many responses as applicable, to their purposes of using the Library. The use of the academic library by patrons, mainly students, was for looking up references, to borrow books, consult journals and read lecture notes. Looking up references topped with 135 responses;

followed by borrowing of books, 79; consulting journals 56, and reading lecture notes, 49. Multiple responses were allowed and so percentages could not be calculated. Assuming that looking up references included some reference to journals, it could still not establish very clearly, a high use of the serial collection.

In order to establish whether the Library has journals in the subject areas of respondents, they were asked to indicate this. A large number of 213 (53.75%) gave an affirmative answer; followed by 103 (25.75%) who said they sometimes found journals in their subject areas. Those who found no journals in their subject areas were 84 (21.75%).

Table Three shows these responses.

**TABLE 3 – USE OF JOURNALS**

YES	213	53.25%
NO	84	21.75
Sometimes	103	25.75
<b>TOTAL</b>	<b>400</b>	<b>100</b>

It could not be established that a greater portion of the "sometimes" is positive, so it is difficult to state categorically the level of use of journals. The figures do not give a clear, positive impression that users are getting the journals they require. Nevertheless, the 53.25% positive responses and an additional 12.5% (50% of 25.75%) computed from "sometimes" would come to a total of 65.75 %, which can be described as fair.

Specifically, the student respondents were asked if journal articles were often recommended by lecturers. The answers are tabulated in Table Four.

**TABLE 4 – REFERRAL TO JOURNALS**

<b>VALUE LABEL</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
Very often	69	17.25
Quite often	211	52.75
Occasionally	58	14.5
Never	62	15.5
<b>TOTAL</b>	<b>400</b>	<b>100</b>

The question sought to know whether referral to journal articles was a common feature in their studies. The small number of respondents, 69, (17.25%) that said that journals articles were very often recommended to them further confirms the responses in the question where consulting journals ranked third among four



reasons for using the Library. However, the 52.75% that said they got references quite often add to the positive responses.

Three other questions dwelt on the awareness by respondents, of the availability of journals. To be able to use the journals effectively, respondents must first be aware of their existence in the Library. When asked the means by which respondents located the Serials/Periodicals Section, the total response of three similar questions show that they located the Section through means other than the guiding system in the Library. A total of 36 (9%) of respondents said they asked to be directed; 68 (17%) said they were taken there during the Orientation programme, as many as 224, (56%) said they were directed by colleagues and 72 (18%) of them said they discovered it by chance. This result is rather surprising and disappointing because any student who participated in the Library's Orientation programme was introduced to the Serials Section. This result reveals the need for continuous user instruction for users and that the one time orientation is grossly inadequate for familiarizing users with the Library. The user education should be extended to include graduate students and faculty.

Respondents were again asked if they had ever seen a list of serial publications in the Library. A total of 308, (77%) indicated that they had never seen any such list. The 92, (23%) who replied in the affirmative, might have misunderstood the question or mistaken the KARDEX record, for a published list of journals.

A related question was meant to elicit responses to the adequacy of the information in the journals to the purposes of study of the respondents. A small number of 54 (13.4%) were positive they got the required information in the journals consulted. The same number said they never did. As many as 292 (73%) of the population indicated they did not always get the needed information from the journals consulted by them. This response is not positive enough to say conclusively that users found the journals adequate to their needs. Table five (5) shows the responses.

**TABLE 5 - ADEQUACY OF JOURNALS**

VALUE LABEL	FREQUENCY	PERCENTAGE
YES	54	13.5
NO	54	13.5
NOT ALWAYS	292	73.0
<b>TOTAL</b>	<b>400</b>	<b>100</b>

Responses were sought on the preferred method of searching for journals. Direct shelf approach seems to be popular with respondents as 222 (55.5%) said they preferred browsing on the racks to locate journals, to asking to be directed. The responses are illustrated in Table 6 below:

**TABLE 6 – SEARCH PATTERNS**

VALUE LABEL	FREQUENCY	PERCENTAGE
Browsing	222	55.5
Through staff	86	21.5
Ask a colleague	84	21.0
Others	8	2.0
<b>TOTAL</b>	<b>400</b>	<b>100</b>

Browsing on the racks and shelves may also be an indication that users are shy to ask the staff for assistance.

The last question was an open one for respondents to state their views and comments on the Serials Section. No structural responses were provided. Some of the comments have been categorized as follows:

1. comments on collection maintenance
2. poor guiding system, including shelf labelling
3. currency of journals

In the case of collection maintenance, some respondents felt that the periodical racks should be constantly checked to remove less current titles.

Another group of comments related to proper library guiding and shelf labelling. In the absence of a total or complete guiding system for the whole library, it is felt that the Serials Section should be clearly labelled or a signpost mounted for easy identification.

### **Summary**

Journals contain the most current information in any field of study and constitute an invaluable component of a university library's stock. Building a respectable collection of journals in a university library to satisfy the various disciplines and regularly update it is a formidable and expensive venture.

It is therefore necessary for the right structures to be laid and the correct approaches adopted to ensure the journals are used. The University Library of the KNUST, Kumasi, tries to satisfy the journal information needs of its clients. To ensure that the journal collection is justified in use is the result of this study.

The principal users of the KNUST Library are both undergraduate and graduate students, lecturers and research fellows. Questionnaires were distributed to these categories of users. A total of 483 questionnaires were administered, representing 10% of total registered users of the Library, and 400 were retrieved giving a return rate of 86.2%

The analysis of the responses received confirmed that all categories of the academic community use the resources of the Library, but the students were obviously identified as the single largest category, with a percentage of about 90. In ranking the use of the various materials in the Library, the use of journals came third and 53.25% of this indicated that they found journal titles in their fields of interest.

The study also revealed that undergraduate students mostly use journals on referral by their lecturers as 52.75% indicated that journals were often recommended to them as additional reading.

Browsing the shelves turned out to be one of the preferred methods of looking for journals, indicating that patrons did not consult staff at post for assistance which might yield positive results.

## **Conclusions**

### **Adequacy of Journals**

The study could not establish very firmly that the journal collection was adequate to the subject needs of its users. This is because the 53.25% which found journals to satisfy their requirements is not large enough and, therefore, cannot be a very strong determinant of the adequacy of the journals. In any case, it is a positive indication that if the lapses at the Section are corrected, more users would be attracted to the journals.

### **Rating of Journals**

Reading or consulting journals ranked third on the list of reasons for using the library. This position tallied with the statistics that showed the population of undergraduate respondents to be very high (78%). Undergraduate students are perceived as irregular users of journals. Such rating should also be an indicator of the need for serials management practices to give more instruction on information searching skills to promote better appreciation and utilization of the journal collection.

### **Success of the "Core" Journal Collection**

The core collection of 750 titles built from 1990, has served many overlapping interests. It was built at just the right time to strengthen the Section and rescue it from total collapse. Therefore, the Serials collection has achieved to some extent, the objective of the Library in supporting academic work of the University.

### **Guiding and Sign Posting**

Another conclusion derived from the study is that respondents located the Section through means other than the guiding system in the Library as 56% of the respondents were directed there by colleagues. Directional signs are important in guiding users to the service areas in the Library. The absence of a

periodicals catalogue cabinet or a standalone PC with the serials database, or an Online Public Access Catalogue, (OPAC) for readers' use is a serious lapse in guiding users. In addition, a published list would guide patrons to make their requests for titles more specific.

### **Need for adoption of conventional search patterns by users**

One other observation from the study was that, users approached the shelves directly to search for materials needed. This type of search behaviour may not always yield positive results in locating items. They must have the option to verify if the materials needed are, actually, in the collection.

### **Recommendations**

We can deduce from the study that users of the KNUST Library appreciate and use the journal collection of the Library. However, the collection can be made more attractive and useful if the lapses identified from the study can be addressed as recommended below.

The following recommendations are therefore made, based on the findings of the study, with the view that when implemented, journal use will rise at the KNUST Library.

#### **Guiding and Sign- posting**

It is recommended to the Library administration to mount a signpost at the point of entry to the Serials Section to guide all library users. A general guiding system for the whole Library is also recommended.

#### **Online Public Access Catalogue (OPAC) for Serials**

All records of journals should be integrated and brought together at one point for easy access. This exercise would enable the publication of a periodical title list, a catalogue cabinet or an OPAC, which are all essential tools for effective serials management.

#### **Continuation of the online databases in the PERI Project**

The KNUST Library was provided with online journals, such as Africa Journals Online (AJOL), Blackwells, EBSCO and Emerald in the PERI project. This project really enriched serials work in the Library, meanwhile sponsorship for the project ended in December 2004. It is therefore recommended that the University Librarian should take up the subscription or team up with the other public universities in Ghana and renew the subscription. The subscription, if renewed, should be located at the Serials Section to boost its resources and for effective management and not at the digital Library.

#### **Current Awareness Services**

In addition to the SDI service to selected lecturers and research fellows, it is also suggested that the Serials Librarian undertakes in-house current awareness

service too. This involves the photocopying of contents pages of new titles and posting them on display boards in the Library and other vantage points in the Faculties. They could also be circulated to the departments on subject basis. The service would definitely attract Faculty to the Library.

### **User Education**

1. It has become obvious from the study that continuous user education is required. The one time user education given by the Library during the orientation period to first year students appears not to be enough as a guide for users in the use of Library materials, especially journals. The Library should devise a system for continuous user education for users so that readers could access, effectively, the materials collection and also the subject indexes and abstracts.
2. The study revealed that the graduate population needs to be drawn into the Library by organizing a separate user education for them. This is strongly recommended. Also user education should be expanded in content and extended to cover all categories of users.
3. It is further recommended that new methods of user education should be devised to include documentary film shows to the students to precede the guided tour of the Library.
4. It is necessary to inculcate in students, the need for using materials in the Library in academic work. In that view, it is recommended that the Library Administration should make proposals to the Academic Board of the University, to integrate use of the Library into the first year Communication Skills Course, as is the practice in some Nigerian Universities, and the University for Development Studies Tamale, Ghana.
5. To reduce the incidence of browsing on the shelves, staff at the Serials Section should observe to assist 'lost' and 'bewildered' users to help and advise them to consult staff most times. This would increase success in search for items, which would in turn increase use of journals.

The use of periodical literature is vital in university education, and so every effort must be made to bring awareness to our users and to encourage them to take advantage of the collection in the KNUST Library.

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