



# The Role of Libraries in the Use of African-published Journals in African Universities

A. A. ALEMNA\*, V. CHIFWEPA<sup>†</sup>, D. ROSENBERG<sup>‡</sup>

## ABSTRACT

Although journal collections in African universities have deteriorated over the last 15 years, many libraries have more recently benefited from schemes donating journal titles or money to purchase journals from the West. Since 1994, a number of university libraries in Anglophone Africa have had access to titles published in the rest of Africa through the African Journals Distribution Programme (AJDP). This paper reports on the study carried out the use of the journals in two of the universities — University of Ghana, Legon and University of Zambia, Lusaka.

© 2001 Academic Press

## RATIONALE FOR THE RESEARCH

In recent years publishing outlets in Africa have dwindled. University presses have declined and many once renowned periodicals and journals have ceased publication or been reduced in size or frequency. University library acquisitions budgets have been cut. Research is suffering, because the means to publish research are lacking and the results on which to develop further research are not disseminated. Yet indigenous publication is essential to the emergence of African academic enterprise. It cannot be replaced by publication in the West. The marginalization and underrepresentation of African scholarship within both the field of African studies and the production of knowledge generally is one of the effects.

\*Department of Library and Archival Studies, University of Ghana, Legon.

<sup>†</sup>Department of Library and Information Studies, University of Zambia, Lusaka.

<sup>‡</sup>International African Institute, SOAS, Thornhaugh Street Russell Square, London WC1H OXG, UK.

A recognition of the importance of indigenous publications to African scholarship has led to a considerable number of initiatives to strengthen the African academic publishing sector. These have been chiefly in the area of publication and distribution. Examples are:

- Direct support for the publication of individual scholarly journals: many of Africa's journals now rely on donor subsidies. An example is the support provided by Sida: SAREC to the publication of 13 journals in Ethiopia. This support started in 1985.
- APEX: <sup>1</sup>an annual exhibition of African journals launched at the Zimbabwe International Book Fair in 1993. In 1997, 135 titles published in 22 African countries were included. The catalogue of the exhibit is widely distributed.
- African Journals Distribution Programme (AJDP): a scheme through which scholarly journals published in African countries are made available to scholars and academics in other African countries, by purchasing the titles on behalf of university libraries. In 1997, 34 titles from 20 countries were distributed to 20 African university libraries in 9 countries of Anglophone Africa. In 1998, 10 additional titles and 10 additional libraries were added to the programme. In 1999, an expansion into Francophone Africa is underway, with the inclusion of 15 titles and 15 university libraries from these countries.
- African Journals Support and Development Centre (AJSDC): since the end of 1997 the management of both APEX and AJDP has been transferred to Kenya. The new Centre aims to carry out a number of additional support programmes, including education and training.
- Handbook and Workshops: since the publication of the pilot edition of Hans Zell's *A Handbook of Good Practice in Journal Publishing* in 1996,<sup>2</sup> three workshops have been held in Africa. A second edition of the manual was published in 1998.
- African Journals Online:<sup>3</sup> this pilot project, undertaken in 1997/1998, aims to promote the use and awareness of African-published journals by offering access via the Internet to either tables of contents or the full text of journals in science, technology and medicine.

<sup>1</sup> *APEX Catalogue: A collective exhibit of african scholarly periodicals at the Zimbabwe International Book Fair 1993* (1997) Nairobi. AJSDC.

<sup>2</sup> Zell, H. (1998) *A handbook of good practice in journal publishing* 2nd edition. London. International African Institute. Oxford: African Books Collective.

<sup>3</sup> *African Journals Online* (1997) <http://www.oneworld.org/inasp/ajol>

As a result of these and other initiatives, chiefly taking place in the countries of Anglophone Africa, journals published in Africa are now available for consultation and use throughout the continent.

The main rationale for providing assistance to African-published journals is that such support will contribute to the improvement of the quantity and quality of research taking place in Africa, through the provision of reliable and regular intra-African channels of communication. It will reduce Africa's dependence on the West and encourage appropriate research leading to sustainable economic and social development.

There has, however, been no systematic survey that documents the use that is made of African-published journals and their impact on research. The evaluation of the pilot project of AJDP indicated that such journals were well read and had been used as recommended student reading and as sources for ongoing and future research. But the evidence was incomplete. On the other hand, academics interviewed during research undertaken for the review of *University Libraries in Africa*,<sup>4</sup> on the whole did not show any special interest in Africa-published materials and did not consider them vital for teaching and research. They preferred to read and be read in Western journals. A number of librarians thought that their journal collections were not well used.

It was to fill this knowledge gap and to provide data on the use that is being made of African-published journals and their impact on the culture of research in Africa, that a survey was undertaken. It is hoped that its results will guide both those concerned with the publication of journals in Africa (whether journals publishers or donors supporting such publication) and those concerned with providing access to them (whether through libraries, Internet or other modalities).

#### AIMS AND OBJECTIVES

The aims of the survey were to: discover what use is made of African-published journals; evaluate their impact on research; and compare the use made of African-published journals with those published elsewhere. More specifically, the research aimed to examine, in the context of African universities and their libraries, the following questions: how often African-published journals are read; how the reading of African-published journals compares with the reading of those published elsewhere; why African-published journals are read/not read; why journals in general are read/not read; which journals are used most in teaching

<sup>4</sup> Rosenberg, D. (1997) *University libraries in Africa: A review of their current status and future potential*. London. International African Institute.

and research; to what extent and for what reasons African-published journals are used in teaching and research; how the teaching and research use of African-published journals compares with that of those published elsewhere; what sources and means are used to identify and acquire articles from African-published journals and those published elsewhere; and what problems are faced in the use of journals and in particular African-published journals.

### METHODOLOGY

Since the introduction of performance measurement in the evaluation of library services, a number of investigations have been attempted to determine the best method of evaluation of journal use and impact. However it has proved difficult to devise one satisfactory method. Journals taken from the library shelves for reading can be counted prior to reshelving. This shows use but not the reasons for use. Information can be gathered from the citations given in student projects, postgraduate theses and the publications of academic staff. This will reveal journal articles that have been consulted, but often only quotations and not everything consulted are cited; in addition the value of a journal article to a piece of research may be inspirational rather than directly related. Finally questionnaires and interviews can be used to find out why journals are read, which are the most useful and how they might be more useful. Data gathered by one methodology complements and amplifies that gathered by other methods. Therefore it was decided to use a combination of all three methodologies in this survey.

The methodology chosen was therefore as follows. In two African universities [University of Ghana (UG) and University of Zambia (UNZA)] the procedures below were carried out and repeated at yearly intervals over a period of 3-years. An hourly count and identification (title, volume, number, date) of journals read in the university library over a 1-week mid-semester period was carried out, followed by structured interviews with all academic staff within two faculties in each university to discuss their use of journals, both African and non-African, in teaching and research. An annual analysis of journal citations given in the undergraduate projects, postgraduate theses and academic staff publications (conference papers, research reports, journals articles, books) from the four chosen faculties was also carried out, and interim reports at the end of each year were produced. A meeting of researchers was held to discuss the content of the final report, which contained findings over the 3-year period, conclusions and recommendations.

## COLLECTION OF DATA

Using the common instruments provided, data was collected during 1996, 1997 and 1998. In December of each year, researchers submitted the raw data to the co-ordinator, who analysed it and prepared an interim report on findings for that year. In April 1999, the co-ordinator and researchers met in London for a 2-day meeting to discuss findings and agree on the content of the final report.

*Background data*

To provide the necessary background data, researchers were asked to submit the number of current journals received by the university library, plus the number of titles and volumes of back files; a list of titles of current African-published journals received; and a list of titles of back files of Africa-published journals.

*Interviews/questionnaires*

The total population of each faculty or school was targeted. However, as the staff in the two UGL faculties numbered well over 50, it was decided to interview or send questionnaires to only 50, with these randomly selected but so as to represent all departments.

Response rates over the three years were as follows. Faculty of Arts: 40% (1996), 44% (1997), 44% (1998); Faculty of Social Studies: 66% (1996), 82% (1997), 70% (1998); School of Agricultural Sciences: 75% (1996), 47% (1997), 30% (1998); School of Medicine: 30% (1996), 50% (1997), 32% (1998).

Within faculties/schools, the majority of departments were represented each year. Although figures varied between faculties, of those completing questionnaires in 1998, on average 66% had also responded in 1997 and 44% in 1996. So the data collected each year provided a fair balance between new and previous respondents.

*Journal citations*

Undergraduate final year projects, postgraduate theses and academic staff publications that had been produced or published in the previous academic year were examined.

*Count of journal use*

A library count of journal use was made for one full week in mid-semester each year. Originally it was planned for early November and this happened in 1996. In the succeeding years, there were slight variations caused by changes in semester dates. Generally the counts were for

six working days, Monday to Saturday. In 1998, the libraries at UNZA were also open on Sundays.

### PROBLEMS AND LIMITATIONS

The main problem faced in both universities was lack of co-operation from academic staff. Many claimed that they had no time for interviews or for the completion of questionnaires. When researchers went to collect questionnaires left for completion, they found that staff had mislaid or lost them. At UNZA, the researcher found it difficult to find some staff in their offices, particularly those from the Faculty of Medicine who had clinical duties; others had disappeared on long leave or secondment. At UGL, staff complained at being asked to give information over a period of three years, saying that nothing had changed. This lack of co-operation explains the lowish response rates, even though in 1997 and 1998, a full six months was allowed for the process, so that adequate follow-up could be made. It is a pity, as end user reactions, collected during the research, provided much important data about the use of African-published journals that is not available elsewhere.

Local researchers had difficulty supplying accurate information on journal titles, both current and back files, held by the university libraries. Lack of accurate local record-keeping was the problem. It was also difficult to differentiate African-published journals from those with an African content but published elsewhere without actually inspecting the title, as this information was not included on the records. This led to apparent contradictions appearing in the research results, e.g. African-published journals being consulted in the library, but which were not on the original list of African-published titles held; or journals being counted as African-published when they were in fact African journals published in the Western world. However once this problem was recognized, researchers succeeded in providing much more accurate lists in 1997 and 1998. Current African-published titles were differentiated from back files and annotated with the country of publication. This involved the researchers in a lot of extra work, as library records alone proved an inadequate source.

### FINDINGS

The findings presented in the following tables are the mean average of the findings of each of the three years. In some cases, data was only collected for one or two of the years and, where appropriate, this is

indicated. Findings for UGL and UNZA are given separately, so that any differences in usage between arts/social sciences and applied sciences/medicine can be seen.

The percentages in the tables refer to the members of academic staff. Not all respondents answered all the questions. Except where indicated, there was no significant difference between replies of academic staff from Arts and Social Sciences at UGL and Agricultural Sciences and Medicine at UNZA.

### *Importance*

The reasons given for the importance of journal literature are shown in Table I. There were some differences between the replies from the two faculties at UGL. In 1998, for example, 46% in Social Studies as opposed to 27% in Arts rated journals more important than other types of literature and 18% of those in Arts compared to none in Social Studies rated journals as less important.

Table II shows the importance of African-published journals compared to journals published elsewhere. Some academics at both universities expressed difficulty in answering this question, because they felt that their access to African-published journals was too limited. Many of those who did comment did so in the context of the potential

TABLE I  
*The reasons given for journal literature being important*

	UGL	UNZA
Important to current academic work (e.g. overwhelming because journals provide the latest information and explore the frontiers of knowledge in area of specialization; provide a means of sharing experiences)	92%	95%
More important than other types of literature (e.g. more current and accessible; concise and easily readable; more relevant; better methodologies)	56%	62%
Equally important as other types of literature (e.g. books are more useful for teaching; books provide overall theoretical frameworks; journals and books complement each other; research reports and archival material equally important in some subjects)	40%	32%
Less important than other types of literature (e.g. relevant journals not available; more authoritative information is found in textbooks)	3%	6%

TABLE II  
*The importance of African-published journals, compared to  
 journals published elsewhere*

	UGL	UNZA
More important (e.g. provide necessary background information on Africa; relevant; articles are empirical)	19%	18%
Equally important (e.g. are complementary, in that they are specific to Africa, whilst Western journals discuss subjects theoretically and in general; easy to obtain if locally published)	49%	49%
Less important (e.g. not available; irregular; not very relevant; research is less focused and content less reliable; not raised by literature searches)	26%	30%

importance of African-published journals, should they be published and made available in relevant subject disciplines. The point was made also at both universities that the most important research that is carried out in Africa is published in foreign journals and therefore local ones are not needed.

A difference between the two universities that could affect perception of journals is that UGL does not give equal weight to articles appearing in African-published journals for purposes of promotion. At UNZA all journals are recognized as equal. At UGL, some academics gave this as their reason for stating that Africa-published journals are less important.

#### *Use made of journals: Titles*

Table III shows the most used journals in the two universities. Inclusion of African-published titles amongst those most used increased considerably over the years. Overall, the naming of all non-African journals fell from 84% in 1996 to 61% in 1998. Medical staff mostly favoured international journals. In 1998, only 9% included an African-published title in their list, compared to 67% in Agricultural Sciences. In some departments at UGL, the same African-published titles appeared in all lists of most-used journals, e.g. *African Journal of Library, Archives & Information Science* in the Department of Library and Archival Studies and *Ife Psychologia* in the Department of Psychology.

Table IV shows the use made of African-published journals. Some academics found it difficult to differentiate between journals published in Africa and those with an African content published elsewhere; some of their answers to the question on African-published titles therefore had

TABLE III  
*The journals most used*

	UGL	UNZA
All non-African	70%	77%
Included three African titles	2%	0%
Included one or two African titles	25%	22%

TABLE IV  
*Regular consultation of African-published journals*

	UGL	UNZA
Two or three titles	53%	64%
One title	29%	20%
No titles	18%	14%
Included one or more Ghanaian/Zambian titles	49%	53% (97/98)

to be discounted. Others continued to name African journals that had ceased publication, presumably because there was nothing to replace them.

The three Ghanaian journals most consulted were *Legon Journal of the Humanities*, *Research Review* of the Institute of African Studies, *Legon and Universitas*; because the University published these, they were easily available. Staff in Social Studies consulted more African journals published outside of Ghana than did their colleagues in Arts (43% in Social Studies as compared to 73% in Arts named at least one Ghanaian journal in their selection of regularly used African-published journals).

In Zambia, all staff in Medicine consulted African-published journals. The most popular were *East African Medical Journal* and *South African Medical Journal*. In Agricultural Sciences, the *Zambian Journal of Agricultural Science* produced in the school and free to members of the professional association was usually included. The titles named did encompass the major journals being produced in Eastern and Southern Africa.

#### *Purpose of journal use*

Academic staff were asked to state why they used journals, both in teaching and research, and these reasons are shown in Table V. Those

TABLE V  
*The reasons for using journal literature*

	In general		African	
	UGL	UNZA	UGL	UNZA
Ongoing and future research	89%	95%	73%	78%
Updating lecture notes	90%	88%	61%	72%
Recommended student reading	80%	43%	59%	41%
Basis of a lecture	54%	49%	41%	37%
	(97/98)	(97/98)	(97/98)	(97/98)
Updating knowledge; access to recent research trends	14%	11%	13%	4%

in Social Studies tended to use journals in general, as well as African-published journals, more intensively and for a greater variety of purposes than their colleagues in Arts. Those in Medicine rarely used journals in teaching.

In 1998, staff were asked to rate these reasons in order to their importance. At both UGL and UNZA, research was the most favoured (73% for journals in general, 63% for African-published), followed by updating of lecture notes (53% for journals in general, 43% for African-published). Far fewer staff gave recommended student reading as the primary reason (13% for journals in general, 17% for African-published).

#### *Identification of journal articles*

Table VI shows the way that most relevant journal articles are found. At UGL, staff in Social Studies favoured the use of indexing and abstracting tools much more than their colleagues in Arts, both for journals in general and African-published journals. In 1998, 31% rated these as their primary method for identifying journal articles in general as opposed to 9% in Arts. (However the fact that the Faculty of Social Studies contains the Department of Library and Archival Studies — from which nine staff returned questionnaires — is likely to cause a bias in this direction.) But, overall, references in other publications was rated the key identification tool (25%). At UNZA, it was medical staff who used indexing and abstracting tools, rather than staff in agricultural sciences. This accounts for the fact that this method was rated the most important means of identification (25% for journals in general, followed by references in other publications (20%) and browsing (20%).

TABLE VI  
*Sources of relevant journal articles*

	In general		African	
	UGL	UNZA	UGL	UNZA
Reference in other publications	76%	68%	48%	50%
Browsing the current issue	61%	44%	53%	36%
Current contents/indexing/abstracting services	40%	66%	21%	32%
Recommendation from colleague	32%	34% (97/98)	37%	51%
Newsletter	18% (97/98)		17% (97/98)	37% (98/98)
Display in bookshops, at conferences, etc.	4% (98)		0% (98)	
Subscription		0% (98)		10% (98)
No way at all	4%	7%	14%	10%

For African journals, receiving a recommendation from a colleague (33%) followed by browsing the current issue (22%) were rated as the primary means of identification at both universities. At UGL, 19% of staff felt that, more often than not, there was no way at all to identify articles in African-published journals.

#### *Acquisition of journal articles*

Table VII shows how most journal articles are acquired. It was acknowledged that the university library could no longer meet all needs that it was therefore necessary to use a variety of methods to obtain journal articles. Departmental libraries were preferred to the university library when available and subject networks were also used by staff in Social Studies and Agricultural Sciences, e.g. AERC, CABI, ICRAF. (The exception was staff in Medicine who continued to rely heavily on the university library, but a university library which was a branch specifically serving their needs and therefore similar to a departmental library.)

At UGL, the use of the university library remained fairly static over the 3 years, whereas the use of other means of acquisition for journals in general rose as follows: departmental libraries from 26% in 1996 to 63% in 1998; personal contacts from 55% in 1996 to 77% in 1998; and other libraries from 15% in 1996 to 46% in 1998.

TABLE VII  
*How journal articles are acquired*

	In general		African	
	UGL	UNZA	UGL	UNZA
University library	65%	63%	49%	47%
Personal contacts	62%	46%	55%	46%
Departmental library (if available)	42%	41%	35%	18%
Purchase of subscription	33%	36%	32%	14%
Other libraries, including subject networks	30%	50%	23%	37%
No way at all	3%	4%	12%	16%

At UGL, the method of acquisition rated as the most important in 1998 for both journals in general (37%) and African-published journals (32%) was personal contacts. Departmental libraries were equal with the university library for journals in general (19%) but preferred for African-published (26% cf. 18%). At UNZA, the primary method was the university library (35% for both types of journal), followed by personal contacts (30% for journals in general and 20% for African-published).

#### *Use of ICT*

Tables VIII and IX show the ways of identifying and obtaining journal articles. At UGL, the majority of staff in both faculties did not use electronic means, either to identify or obtain journal articles and, in particular, for journals published in Africa. Some staff indicated that their use of ICT was restricted to those times when they travelled out of Ghana and were able to visit other universities. Staff in Social Studies made greater use of the CD-ROM and e-mail facilities available in the main university library. (But, again, this result may be influenced by the closer contact with the library and professional knowledge of ICT enjoyed by staff from the Department of Library and Archival Studies.)

At UNZA, many more staff in Medicine than in the Agricultural Sciences used the Internet. Those who used electronic means pointed out that they were rarely able to identify or acquire articles from African-published journals by this method.

#### *Improvements*

Table X shows the ways that African-published journals can be made more useful. At UGL, staff in Arts favoured more regular publication

TABLE VIII

*Identification methods of journal articles through electronic means  
(1998 only)*

	In general		African	
	UGL	UNZA	UGL	UNZA
Internet	9%	55%	0%	20%
CD-ROM	25%	35%	7%	25%
E-mail	11%	35%	0%	15%
None	64%	25%	91%	60%

TABLE IX

*Acquisition methods of journal articles through electronic means  
(1998 only)*

	In general		African	
	UGL	UNZA	UGL	UNZA
Internet	7%	50%	2%	15%
CD-ROM	9%	35%	5%	10%
E-mail	11%	25%	5%	10%
None	77%	20%	91%	65%

and better researched articles; those in Social Studies rated improved marketing and the circulation of new issues and tables of contents as more important. It was interesting to note that only staff who used current contents/indexing/abstracting services to identify journal articles also rated the inclusion of articles from African-published journals in international databases as the most important improvement. Overall more regular publication (40%) was the improvement rated the highest, followed by the circulation of new issues or tables of contents (23%).

At UNZA, staff in both schools wanted to see more regular publication of African journals. Those in Agricultural Sciences favoured improved marketing, while those in Medicine rated better researched articles higher on their list of improvements. Overall better marketing and distribution (40%) was the improvement rated the highest, followed by a separate current contents or indexing service for African-published journals.

TABLE X

*Ways suggested to improve the usefulness of African-published journals*

	UGL	UNZA
Better marketing and distribution by journals	49% (97/97)	60% (97/98)
More regular publication	40%	52%
Circulation of new issues or tables of contents to members of the academic staff	40%	43%
Establish a separate current contents, indexing or abstracting service for African-published journals	38% (96/98)	50% (96/98)
Better researched articles	16% (98)	35% (97)
Index and abstract in international databases	25%	39%
Make available in university departmental library	28% (96/97)	28% (96/97)
Exercise better refereeing and editorial control	13% (97/98)	39% (97/98)

A few academics suggested that the answer would be to publish more journals in a greater variety of subject fields, but one respondent thought that the recent proliferation of journals, containing low quality articles, had affected general sustainability. Others suggested that Africans should be more encouraged to publish in African journals and that it would help if UGL authorities fully recognized these journals. A more general feeling was that journals should be subsidized to bring down prices and encourage personal subscriptions. Only one academic at each university proposed electronic publication.

*Changes from 1996 to 1998*

The situation of journal importance, use, identification and access, on the whole, did not change (Table XI). Use of journals in general increased, because the World Bank and other donor projects had provided subscriptions. But it was pointed out that access and availability remained the key problems. If they were solved then importance and use would increase. Many staff remained pessimistic and considered that identification and access had become harder over the last three years. For some, especially at UNZA, the introduction of electronic

TABLE XI  
*Changes in importance, use, identification and access*

	In general		African	
	UGL	UNZA	UGL	UNZA
<i>Importance</i>				
No change	68%	70%	56%	55%
More important in the future	14%	25%	26%	45%
More important	9%	0%	11%	0%
Less important	5%	5%	4%	0%
<i>Use</i>				
No change	32%	45%	54%	60%
More use	49%	25%	23%	25%
Less use	18%	25%	19%	10%
<i>Identification and access</i>				
No change	33%	55%	49%	55%
Easier	33%	15%	14%	5%
Harder	30%	25%	37%	35%

means during the past three years had gone some way to improving access. But staff in Medicine, in particular (45%), were finding it increasingly difficult to obtain copies of journal articles.

#### CITATION ANALYSIS

The analysis of citations was undertaken to give some indication of the extent to which journals and, in particular African-published journals, were used in research. The journal citations in undergraduate final year projects (Table XII), postgraduate theses (Table XIII) and academic staff publications (e.g. journal articles, books, research reports, and conference papers) (Table XIV) produced during each academic year were examined. Citations made analysed by journal title and number of times that an issue was cited. In 1997, dates of citations were also examined, so as to give an idea of the currency of journals being used in research. UGL provided this information in 1997 and both universities in 1998 (Tables XV and XVI). Unlike the UGL and UNZA main libraries, usage in the Medical Library in both 1997 and 1998 concentrated on a small number of titles and issues, used many times. In 1997, 72 issues of the *British Journal of Surgery* were used 196 times during the week and

TABLE XII  
*Undergraduate final year projects*

	UGL		UNZA	
	Arts	Social Studies	Agricultural Sciences	Medicine
Average number of journal citations per project	2.6	6.2	3.6	3.2
% of African-published journal citations	31%	26%	21%	24%
% of African-published journal citations which were Ghanaian/Zambian	58%	82%	7%	16%
% of journal citations 1990+	30%	35%	15%	n/a
% of African-published journal citations, 1990+	38%	39%	0%	n/a

TABLE XIII  
*Postgraduate theses*

	UGL		UNZA	
	Arts	Social Studies	Agricultural Sciences	Medicine
Average number of journal citations per project	6.3	13.1	17	15.5
% of African-published journal citations	37%	20%	5%	18%
% of African-published journal citations which were Ghanaian/Zambian	66%	76%	27%	24%
% of journal citations 1990+	30%	25%	18%	71%
% of African-published journal citations, 1990+	20%	29%	33%	44%

39 issues of the *East African Medical Journal* 18 times. In 1998, the most popular non-African journals were *British Medical Journal*, *Lancet* and *Australian and New Zealand Journal of Surgery*. The two African titles used were *East African Medical Journal* and the *Zambia Health Information Digest*. One issue of the latter was used 30 times.

TABLE XIV  
*Academic staff publications*

	UGL		UNZA	
	Arts	Social Studies	Agricultural Sciences	Medicine
Average number of journal citations per project	2.9	3.9	15.4	17.3
% of African-published journal citations	26%	29%	7%	7%
% of African-published journal citations which were Ghanaian/Zambian	61%	57%	1%	25%
% of journal citations 1990+	28%	33%	29%	68%
% of African-published journal citations, 1990+	37%	34%	100%	100%

TABLE XV  
*All journals*

	UGL	UNZA Main Library	UNZA Medical Library
Number of titles used during one week	88	55	23
Number of issues used during one week	119	86	80
Number of times a journal used during one week	130	121	279
Percentage of issues used which were current (1996+)	75%	10%	41%
Average number of times a journal used each day	22	19	45

## RECOMMENDATIONS

It is clear from this study that although international journals were more heavily used, most staff considered that those published in Africa were complementary to those published in the West and that each had a

TABLE XVI  
*African-published journals*

	UGL	UNZA Main Library	UNZA Medical Library
Number of titles used during one week	9	7	3
Number of issues used during one week	12	8	17
Number of times a journal used during one week	13	10	62
Percentage of issues used which were current (1996+)	39%	30%	57%
Average number of times a journal used each day	2	2	12

role to play. International journals were strong on theory and methodology, but only those from Africa could provide the coverage of subjects relevant to the continent and offer appropriate solutions to problems.

This study has therefore shown that, although useful and wanted, African-published journals will not attain their full impact on teaching and research in African universities, unless they become more easily accessible and more readily available. African academics have to know what is being published in their subject areas. What is being published needs to be more regular and of better quality. There needs to be reliable and systematic channels for obtaining the required journals and journal articles. It is with these conclusions in mind that the following recommendations are made, all in the context of maximizing journal use in African universities and, in particular, the use of journals published in Africa.

*To African university librarians*

The African university librarians should promote library holdings of African-published journals by taking out subscriptions and ensuring that there is a good balance between foreign and African titles and between those published locally and in other African countries; by holding exhibitions of African-published journals; circulating tables of contents of new issues and offer selective dissemination of journal articles to academic staff; and encouraging the use of journal collections, by providing publicly-available holdings lists of journals by title, subject and country of publication and by ensuring ease of access through the immediate

display of new issues and the regular and accurate shelving of previous issues.

The librarians should also promote knowledge of African-published journals by training academic staff and students in the tools that identify titles of journals and articles within the journals; to students, including such training in orientation programmes; and offer training on a one-to-one basis for academic staff,

They could also advise and assist in the creation of tools for the indexing and abstracting of African-published journals and assist in pressing for their inclusion in international indexing and abstracting databases; monitor usage of journals in the library, so as to know which are used and which might be discontinued or withdrawn and in what areas further marketing is required; and recognize that academic staff acquire journals and journal articles from many different sources, not just from the university library, and undertake co-ordination of these sources within the university so as to ensure maximum access and availability, e.g. by assisting in the organization of departmental libraries; by including the holdings of departmental libraries in journal holdings list.

*To African library and information science educators*

Information on African-published journals and their bibliographical searching tools in all professional training courses could be included, and the teaching of journal collection management in academic libraries improved, with a view of maximizing usage of journals by staff and students.

*To African academics and researchers*

Academics and researchers could use African-published journals for the dissemination of research findings, especially those relevant and valuable to African countries; recognize that many relevant journals are published in Africa, outside of the home country, and make an effort to find out, read and contribute to what is available; and make more use of African-published journals in teaching, in order to introduce a knowledge of them to students from undergraduate level onwards.

*To African journal publishers*

The publishers should improve journal management and ensure that issues are produced regularly and on schedule, so as to engender and retain confidence in the journal. They should also improve marketing and promotion by: targeting both institutional (libraries, faculties/schools, departments) and personal subscribers; pressing for inclusion in all relevant current contents, indexing and abstracting tools, local as well as international; following legal deposit regulations, so as to appear

in national bibliographies; and taking advantage of co-operative marketing ventures, e.g. APEX, book fairs, etc. The production quality (paper, print, design and binding) of journals could also be improved, as well as the content quality by: better editing and copy editing; using peer review; including only well-researched papers; commissioning articles; and having an international circulation. They should also recognize that journal publication worldwide is moving from print to on-line and that every journal should aim to have some presence on the Web, even if this through the on-line services of a third party, and recognize that journals that target a niche subject area, previously not covered, are the ones that are likely to succeed on an all-Africa basis.

*To ICT providers in Africa (including donor agencies as well as university administrations, libraries, computer centres, etc.)*

Internet access in all universities should be provided, as it is now an essential means of identifying and acquiring journal articles. ICT providers must also recognize that if ICT is to be used effectively by academic staff, access must be spread throughout the university, preferably at departmental and office level. Training should be provided for academic staff in the use of ICT on an ongoing and one-to-one basis, so as to overcome the prevailing lack of know-how. Initially ICT services should be provided free of charge at the user level, to encourage take-up, and they should ensure that there are sufficient funds available on an annual basis for the maintenance of hardware, networks, online subscriptions, CD-ROM renewals, etc. ICT is only useful if connectivity is always there.

*To African university administrators*

Administrators should recognize the worth of African-published journals and their special role in creating and maintaining the African academic enterprise, by giving consideration to the inclusion of publication in local journals among the criteria for staff promotion. They should also recognize that the publication in local journals of articles based on quality research depends on there being sufficient funding and adequate facilities within the university to enable academic staff to carry out the research.

#### ACKNOWLEDGEMENTS

The research was funded by the UK's Department for International Development (DFID). The full results have been published by DFID and the report is available on application to the Department.