



A Library Response to the Massification of Higher Education: The Case of the University of Zambia Library

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This paper looks at the challenges that libraries in Africa face in responding to massification of higher education by discussing the University of Zambia library's response in library and information resources provision. As a result of massification of higher education, libraries have been forced not only to employ new and different strategies to meet the increased demand for information resources but also to balance the increased demand for services with dwindling human and financial resources. In doing so, the library's response to massification needs to take cognizance of the different levels of information literacy skills in order to afford every student an equitable opportunity to effectively use the information resources available.

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Introduction

The argument for the massification of higher education worldwide has been to reduce societal inequalities and making education accessible to all social groups within society. In this case 'massification' refers to the 'absolute growth in student enrolments as well as a more egalitarian distribution of students in higher education' (Jansen, 2003, 292). Implicit in this is higher education institutions' taking cognizance of socio-economic inequities at all stages and in all processes of education to ensure that all students are given not only equitable access to education, but also encouragement to remain and stay engaged in the educational process. The library as an integral player in higher education can contribute to the achievement of this equity by making sure that all students are equipped with the necessary information navigational skills that will support an enquiry-based learning.

However, there is a lack of debate on the effects of massification on library and information services provision in higher education in Africa. It is in



recognition of this lack of debate that this paper tries to fill that gap by looking at the responsive measures instituted by the University of Zambia library to meet the increased demand on library services.

The National Context of Higher Education

Zambia's public higher education system followed the 'massification model' from the onset at independence in 1964. This was brought about by a combination of factors. Some of the reasons advanced for increasing access to education were the shortage of qualified human resources to push the development needs of the country (Manchishi, 2004). At the time of independence, education was highly under developed with only 107 graduates, of whom four were females (Kelly, 1991). The other reason for the rapid expansion of education is the belief that education is beneficial not only on an individual level but to society as a whole (Mwikisa, 1999). In many societies, this is an aspiration that people strive for; as explained by Sall *et al.* (2003, 143) where in the Western African nation of Gabon, education is seen as the 'main vehicle for inter-city and rural-urban migration, indicating how attractive student status can be beyond the social value and career prospects actually offered by the institutions. For some it remains the only decent avenue of escaping poverty'.

Higher education in Zambia has undergone tremendous changes, from the opening of the first publicly funded university in 1966, the University of Zambia (UNZA). This was later followed by Copperbelt University, which was initially a satellite campus of the University of Zambia, and lastly Mulungushi University which opened in 2008. There are also other higher institutions of learning such as Colleges of Nursing, Teacher Training Colleges, and Agricultural Colleges, with programmes of 2- to 3-year duration. Some of these institutions are affiliated with the University of Zambia, and therefore offer university-accredited qualifications. The mission of public university education was then as it is now linked to that of the country: affording everyone an opportunity to learn and ultimately contributing to the development needs of the country.

The lack of trained human resources in the country exerted a lot pressure on the University of Zambia to increase the pool of qualified people from which the nation could draw on. Lulat (2003, 628) argues that at the opening of the university in 1966 with a mere 312 students, a committee had recommended to the young university that 'within five years this number should be doubled. Instead, the figure had already reached more than 1,000 students by 1970. Four years later, this number had more than doubled to 2,500 students. In 1980, it stood at a little under 4,000'. Student admissions to the first year rose from 800 to 2,000 in the 1999/2001 academic year (UNZA,



2005, 12). Currently the University of Zambia has a total student population of 10,008 students, of whom 6,135 (61%) are males and 3,873 (39%) are females.

Institutional Context

The 1990s liberalization of education put more emphasis on student enrolment numbers without a corresponding increase in student support systems. Since then, enrolment figures have been going up. In 1999/2000 there were a total of 4,516 students as compared to the current figure of 10,008. Within a time span of 6 years the numbers of students had doubled. The drastic increase in the number of students was done in several ways; firstly by increasing the number of students in particular programmes; secondly, the introduction of completely new programmes; and thirdly the introduction of evening programmes. For instance, the School of Law introduced an evening programme of the LLB (Bachelor of Laws) programme that was targeted mostly at working people. The Distance Education and Extension Programme also expanded the number of admissions per year.

However, the introduction of these new programmes did not correspond with planning for the supporting infrastructure that would be needed to nurture enquiry-based learning among the students. The library infrastructure was completely ignored as there were no plans for either expansion of library space or recruitment of new library staff to support the high number of students as evidenced by the lack of these resources as of 2007 (UNZA Library, 2007). The situation is the same with lecture rooms, laboratory and teaching facilities all across the university.

The University Library System

The University of Zambia library system is made up of three libraries namely: the Main library, the Medical library and the Veterinary library. These are administered as a single unitary centralized library system. The library system also provides services to extension and distance students. The main library has a designated seating capacity of 1,600 readers and accommodates 300,000 volumes of library information resources (UNZA, 2005, 445). The Medical and Veterinary libraries both have seating capacities of 88 and 40, respectively. In 2007, the library system had a total staff population of 75 out of a total staff quota of 147. This translates into a staff shortage of 72 people (UNZA Library, 2007, 6). It therefore makes a student/staff ratio of 1 staff member to 133.5 students.



Problems Affecting the Provision of Library and Information Services at the University of Zambia Library

According to the UNZA Library Annual Report (2005b, i), ‘the challenges for the library continue to intensify, not least in terms of space, with each reading space now full to capacity. The general dilapidation of physical infrastructure, unhealthy sanitary conditions, lack of shelving facilities, lack of reading tables and chairs, unreliable Internet connectivity, failing ICT infrastructure, insufficient funding, unreliable transport, and dwindling staffing levels, are perpetual burdens’.

Inadequate staff

The delivery of a quality library and information service is dependent on several components. Some of these constitute staff, finance and sufficient infrastructural facilities. If any of these components are missing, the delivery of an effective and efficient library service suffers. In its recommendations, the Bobby Bwalya Commission (1998, 59), appointed by the then Republican President to investigate the operations of public funded universities, noted that the ‘factors that contribute to academic performance are many and among them are the competence and professionalism of the academic staff, the quality and adequacy of education facilities, the quality of the library, the opportunities for research and publishing and the staff-student ratios’. The quality of the library service is determined by the number of competent staff available, adequate financing and users who are willing to take advantage of the resources available. Table 1 shows the trends in staffing at the University of Zambia library over a 10-year period.

Funding

Funding to the library has not been corresponding with the increased demand for the services that are offered. In their study of University libraries in Zambia, Simui and Kanyengo (2004, 35) found that over a 10-year period (1980–1990) funding had been declining (Figure 1). And yet, this was the period when the university was slowly increasing in the number of enrolments. Clearly there was no correlation between the student numbers and the resources allocated to the library. As of 2007, the library funding situation had not changed as evidenced by the lack of funds allocated for the purchase of books and journals (2007, 7).

The University of Zambia Librarian’s submission to the Bobby Bwalya Commission (1998) also found that money budgeted for UNZA libraries were actually never released. (see Table 2). The Commission concluded that the

Table 1 Student/library staff ratios 1997–2006

	<i>Students</i>	<i>Library staff</i>	<i>Ratio</i>
2006	10,008	64	1:175
2005	9252	75	1:123.3
2004	6672 ^a	79	1:81.4
2003	7317	57	1:128.3
2002	—	—	—
2001	5993	65	1:92.2
2000	—	67	—
1999	5511	83	1:66.3
1998	4306 ^b	—	—
1997	3767 ^c	93	1:40.5

Total Quota is 132.

^aUNZA Annual Report.

^bRosenberg (1999).

^cBobby Bwalya Commission Report (1998).

— Data not available.

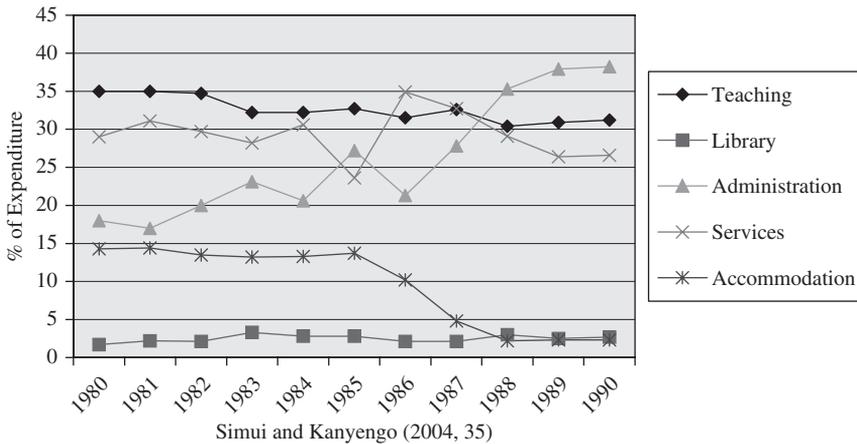


Figure 1. Allocations of expenditure by percentage (%) for the years 1980–1990 (Simui and Kanyengo, 2004, 35).

‘marginalisation of the library at the University of Zambia had been the deliberate work of management and not that of the government’ (*ibid.*, 67). This observation by the Commission arose out of evidence that in years when the University declared a profit (1993–1995), management never released funds towards the purchase of library and information resources (Simui and



Table 2 Allocation of budget expenditure to the library as a proportion of the university of Zambia total budget from 1993 to 1996 (Zambia Kwacha million)

<i>Year</i>	<i>University budget</i>	<i>Library allocation</i>	<i>Percentage of the university budget</i>
1993	4,499.5	99.1*	2
1994	8,421.3	125.5*	1
1995	14,671.6	213.4*	1
1996	11,376.6	184.6*	1

*Funds not released by central administration.

Source: The registrar's office, UNZA Bobby Bwalya Commission Report (1998).

Kanyengo, 2004). This reality is a confirmation that there was a disconnection between university management in understanding and interpreting the mission of the University of Zambia: Service and Excellence through Teaching, Learning and Research. Why else would a University deliberately not fund library services (when they can declare a profit in their finances), if they want to achieve such a mission?

However low levels of funding to university libraries is not unique to Zambia alone. Several studies indicate that universities in Africa are facing a similar situation: inability to meet the cost of buying books and journals, and inability to sustain efficient and effective library services. In Ghana and Uganda respectively, Martey (2002) and Were (2002) found that the cost of journal subscriptions was too much to sustain for their university libraries. In another study of sub-Saharan university libraries, Chisenga (2000) found that the only activity that the university libraries were involved in and which concerned the provision of library and information services was salaries. Mutula's (2001) survey of several university libraries in the Eastern and Southern African region echoed the same findings, that the only funding available for libraries was funding earmarked for personal emoluments. Aina (1999, 12) in his study of several Nigerian universities found that 'structural facilities, which are supposed to aid academic programmes, are no longer effective. Visits to the various university libraries also showed that most of the library shelves are empty; the available books are relatively outdated, while supportive facilities like photocopiers and computers are virtually in non-existence. Generally, in all the universities, students do not have direct access to computer technology, while the very few lecturers who have personal computers, acquired them mainly through externally funded research'.

Inadequate reading space

With the increasing number of students, the reading space has remained the same as it was when the university was first opened in 1966. At that time the

seating capacity was 1,600 students for the main library. The 2003 Library annual report asserts that 'during library opening times, a large group of students gather at the library entrance waiting to get into the library early in order to secure a sitting place. As the library opens its doors, students rush for seats for which, in many instances, are reserved for later use in the day' (UNZA Library, 2003, 7).

With the current student population of 10,008 there is a need for expanding the current reading space. This can be done by expanding the current library as the actual design was already made for expansion, if and when student numbers increased. However, in terms of future growth and expansion of library and information services within the University, it would be prudent to establish School/Faculty-based libraries such as those that exist for the School of Medicine and School of Veterinary Medicine. Already, the School of Law is moving in this direction by putting in their current strategic plan: a complete new Law Library building. This approach has several advantages: faculty and students feel greater affinity to the library resource within their faculty libraries as they do not share it with other faculties. When it comes to allocating financial resources, it will be easier to argue from within faculty budgets rather than making the library part of the administration in terms of funding purposes, especially when experience has shown that university administrations have failed to fulfill its role in providing for library services.

The problem of adequate seating is not just a problem in Zambia, but is also experienced in other countries in Africa. In Cameroon, the combined academic library seating capacity ratio was 1:25 in the Universities of Yaounde I, Yaounde II, Doula, Dschang, Buea and Ngdere (Awason, 2004, 412). Kenyan universities 'have been overstretched beyond their limits, and are witnessing unprecedented congestion. Currently the University of Nairobi library, has a seating capacity of 6,000 but is serving a student population of 22,000' (Ngome, 2006, 859). Ngome also confirms that this phenomenon is similar in other publicly funded universities in Kenya.

Lack of computer/internet facilities

Existing computer facilities are completely inadequate both in terms of numbers and functionality. The library has a total of 20 computers to cater for the student population of the more than 9,500 students at the Main Campus. The Medical Library has a total of 15 computers available for students' use at the Medical School. The Veterinary Library has two computers reserved for students. Internet access is not only hampered by the lack of adequate computers but also the limited bandwidth which makes accessing electronic documents a tedious effort.



Table 3 Status of internet connectivity in university libraries in sub-Saharan Africa

	<i>Total</i> % (no.)	<i>Excellent</i> % (no.)	<i>Good</i> % (no.)	<i>Adequate</i> % (no.)	<i>Poor</i> % (no.)	<i>Very poor</i> % (no.)
Vsat	35% (22)	3% (2)	9% (6)	11% (7)	9% (6)	2% (1)
Leased line	29% (18)	0% (0)	2% (1)	13% (8)	11% (7)	3% (2)
Wireless/Radio	11% (7)	0% (0)	2% (1)	3% (2)	3% (2)	3% (2)
Dial-up	9% (6)	0% (0)	0% (0)	3% (2)	6% (4)	0% (0)
None	14% (9)	—	—	—	—	—
No Data	2% (1)	—	—	—	—	—
Totals		3% (2)	12% (8)	30% (19)	30% (19)	8% (5)

% (no.) libraries with computers

<i>Computers</i>	<i>In working order</i>	<i>Internet — connected</i>
100%	40% (25)	19% (12)
75% to 99%	34% (21)	16% (10)
50% to 74%	8% (5)	15% (9)
1% to 49%	5% (3)	23% (14)
0%	0% (0)	15% (9)
No data provided	13% (8)	13% (8)

Source: Rosenberg (2005).

In a survey of 62 libraries in sub-Saharan Africa, Diana Rosenberg (2005) found not only a heavy dependence on outside assistance towards the support of the library and information services provided by the libraries, but also the state of internet connectivity very minimal (see Table 3). Most university libraries were not adequately equipped with computers and if they had any, they were not in working order. In the same survey only 3% of the institutions had excellent connection to the internet, while 40% had computers in working order. In order for universities to derive maximum benefit from the use of Information and Communication Technology (ICT), many of the infrastructural problems need to be solved: ‘phone lines, the power supply, the capacity to maintain and upgrade systems and machines, and narrow bandwidth’ (Teferra, 2006, 566).

Mitigating measures adopted by the University of Zambia Library

In the face of massive enrolment numbers of students, the corresponding fall in financial support to the library, declining supporting infrastructure and a failure to recruit more staff, the library tried to adopt measures that were to meet the increasing need for information resources by both faculty and students. These measures were meant to be short term, and that long-term

planning and implementation of sustainable information support programmes would be instituted later. The measures constituted mainly: employment of students in the library; expanding the reserve collection; limited access to the serials collection; increased library opening hours, textbook programmes; and use of electronic resources.

Employment of students in the library

The library in collaboration with the Office of the Dean of Students began a programme of employing students in the library through a Campus Work Study programme. At the inception of the programme, the University library argued that in order to offer an effective library service it would be necessary to employ library students that would supplement the library staff (UNZA Library, 2005a). The aim of the Campus Work Study programme was two-fold: help needy students with the opportunity to earn money that would go towards the payment of their tuition fees, while at the same time give some work experience in libraries to students. The second aim was to alleviate the shortage of human resource in the library and other sectors of the University. The necessity of implementing such a programme in the library was due to the increased workload that arose out of the increased numbers of students. As a result of the high number of students, the volume of library and information resource usage increased, creating a corresponding increase in the workload for library staff, such as shelving of library materials. This should be seen in light of the decline in the numbers of library staff against the official staffing level of 14,775 of whom were in position, leaving 72 positions vacant. It is important to observe that this figure 'has not been revised for a long time and therefore does not match the increasing student population' (2007, 6).

Reserve collection

Owing to the increased student population, the library was forced to remove some of the popular reading materials from the open shelf to a reserve collection and devise a system that would allow every student equal access to the information resources. The reserve collection only allows reading materials to be borrowed for use within the library for periods of two and half hours. If the reading materials had to be taken out of the library, then the students could only borrow them overnight or for a maximum number of three days. Otherwise, the trend was for books to circulate among groups of students who were either friends or were in the same study groups. This scenario would have denied access to those students that did not fall into any of these categories.



Closed access serials collection

Access to the serials collection was closed to undergraduate students; however it remained an open access area to postgraduate students. This measure was implemented due to the increased incidences of mutilation of journal articles. Mutilation of journals results in an irreparable loss of scholarship resources that the library has already spent vast amounts of financial resources on. Typically, undergraduate access to the serials collection requires that they identify the particular journal they are interested in and then borrow it for a period of two and half hours. This measure also widened access to the journal collection to a wider cross-section of the student population, especially for those very highly used journals.

Increased library opening hours

The increased student population made it necessary for the University Library to change its library opening hours. The library opening hours were extended and now open at 8:30 am and close at midnight, Monday to Friday, and on weekends the library opens at 9:00 am and closes at 5:00 pm. The extension of opening hours was to allow flexibility in the times that the student had to spend in the library as lectures were now going beyond 5:00 pm.

Textbook programme

Through government funding, required core textbooks are now procured for students to purchase using their book allowance. This programme is run in conjunction with the University bookshop. The bookshop purchases the textbooks and then sells them to students. Students were not and are still not given the actual money, but an account with the amount of book allowance due to each student was set up for them at the bookshop. The students would then have to redeem their book allowance with books from the bookshop. This also ran parallel with another textbook programme that was administered by the library. The library programme involved the lending of textbooks for a year to each student. This was more prevalent in the faculty of medicine, as the medical library was able to purchase certain core texts using funds donated by different funding agencies such as the Department for International Development (DFID) of the United Kingdom. Other funds for the textbook programme came under the Education Sector Support Programme through the Ministry of Education, which was funded mainly by the Finnish International Development Agency (FINNIDA) (2007). This programme was a countrywide support programme towards education in Zambia; inclusive in that support was funding for information resources for all higher education institutions.



Electronic information resources

While in theory, the use of electronic information resources could potentially alleviate the problems of access to current literature, in reality the scenario is quite problematic. Access to electronic literature is currently hampered by inadequate infrastructure; lack of computers for the numbers of students and faculty; serious difficulties in internet connectivity and low levels of information literacy skills among students and faculty (UNZA Library, 2006, 14–15). Although the library has not been able on its own to fund subscriptions to electronic resources, it nevertheless benefits from various donor-funded programmes. The Access to Global Online Research in Agriculture (AGORA) and the Essential Agriculture Library (TEAL) funds access to Agriculture-related subjects; the Health InterNetwork Access to Research Initiative (HINARI) is for Health; and the Programme for the Enhancement of Research Information (PERI) with access to over 11,000 full text journals in a wide variety of subjects such as humanities, science, and arts. All these are programmes that could have enabled University of Zambia library users to access full text electronic journals (Kanyengo, 2007, 36–37). The HINARI programme for instance currently provides access to over 3,000 full-text electronic journals in the Health and Medicine-related fields (World Health Organisation, 2007).

Discussion of the Library Responses to Massification

Provision of library and information service provision in an era of massification of higher education is challenging and complex. The complexity lies at several levels. On one level, ensuring that the library offers every student equitable access to university library resources taking cognizance of the fact that students come from very different social economic circumstances is of paramount importance. This is compounded by the fact that in today's context, computer competency (read information literacy) is very crucial if the student has to remain engaged and successfully complete their studies. And even then access to a computer at the university is so limited that it is pointless spending hours in the queue to use the Internet, which is so slow it would take 20–30 min to download one PDF document. However, as of 2008, internet access at the University of Zambia has slightly improved in terms of speed but there are still limited numbers of computers to serve the overall numbers of students.

Information literacy skills vary among the students; you have students who have been using the computer since they were in primary school, giving them a head start in navigating the internet. Such a mix in the student population calls for dynamism among libraries to design information literacy programmes



that will target each student's level of information literacy skills. Obviously the need to expose the students to basic computer skills is not only important but critical. However, libraries and teaching faculty need to go further than just imparting basic computer literacy skills. They are challenged to work together so that they can design information literacy skills courses that are embedded within the curriculum in order for the training to be relevant to the students. Ideally such an information literacy course should earn students credits.

On another level, the context-specific environment in which libraries find themselves is very precarious. There is virtually no funding for new information resources; there is high dependence on donor-funded programmes, meaning that nowadays donors are more willing to support information access projects that are electronic based. However there is no guarantee of these programmes' continuity once the funding period ends as the local institution more often cannot sustain it. In addition, there is scarcity of library materials, be they journals or books, and generally inadequate staff in terms of numbers and capacity; and library staff that still need training in new information delivery mechanisms. There is also the problem of brain drain even if the library staff is trained in electronic delivery methods. The library therefore has to continue training staff because of the brain drain. Line (1997, 40) argues that 'libraries are inevitably, and centrally, caught up in the turmoil'. In all this, libraries have to find ways of effectively supporting critical scholarship among students and faculty, even in an environment that is not supportive of the library. Zeleza (2005, 9) argues that it 'cannot be overemphasized that libraries are knowledge banks from which intellectual investments are derived and in which knowledge products are deposited'.

The work-study programme, a programme set up to meet the staffing needs of the library, has been fraught with problems. Although all the students on the work-study programme were integrated into the library work schedule and obtained basic library training, not all students were available for duty during the times allocated for them. Furthermore, some students withdrew their labour during the course of the semester due to academic pressure as well as low remuneration, forcing the library to recruit new students to the programme (UNZA Library, 2005b, 11). This meant that the library was constantly training new students when they had initially planned that training of students on the work-study programme will take place at the beginning of every semester. It also resulted in library staff members being called at short notice to fill the gap left by the students, thereby creating a lot of unease and anxieties among the staff (personal communication). According to the UNZA Library Annual report, (2005b, 11), 'the withdrawal of student participation in the Library work had an adverse effect on certain



areas of operations. The Library, therefore, continued to depend on the existing staff’.

The expansion of the reserves collection was well received by both faculty and students in making the library resources accessible to a wider student population. However, there were complaints raised that related to the loan period as it was considered too short. The library staff insisted on the loan period arguing for the value of enabling every student access to the few library resources. As evidenced by UNZA Library Annual Report as to the necessity of the reserve collection, 201 copies out of 229 new book additions to the collection were donated on loan to the reserve collection by faculty staff (2007). Making the serials collection a limited access space was also not welcomed by the students as they felt it was much easier for them to browse the collection and identify what they required. The library staff argued for limited serials collection access as it was meant to safeguard the serials collection against mutilation. It also reduced the time spent shelving by the staff. A review of the effectiveness of the measures as a response to serials mutilation has not yet been done. It will be interesting to see whether indeed it was effective in safeguarding the serials collection against mutilation.

The increased library opening hours has had a big impact on an already understaffed library. The staff was now working longer hours with a corresponding increase in the workload due to increased student demand of information resources (UNZA Library, 2005b). For instance, the shelving workload increased and therefore the staff was constantly shelving. This had the corresponding effect of lowering the staff morale and several complaints were laid to management (personal communication with staff members and union representatives).

The textbook programme worked efficiently and students took advantage of the programme to borrow the textbooks they needed for a period of 1 year. In retrospect, the funds for the textbook programme that were used to buy books could have been better spent on buying more resources for the library therefore benefiting not only the particular students but future generations to come. Although the programme was of benefit to the individual students, it was not sustainable over a long period. The textbook programme that was effective is the one where the textbooks were purchased for the library as in the case of the medical school where the books are still a shared resource today. In a country where resources are few and limited, it is prudent that information resources that could be shared are purchased for the current students with a view of benefiting future generations of students of the university.

The introduction of electronic journals could potentially play a big role in alleviating the problems of current access to information that the institution is



facing. However, until such a time when the university invests in the infrastructure capacity that would enable both faculty and student utilize electronic information resources effectively, it will still remain a dream for the majority of the library users. Improvements in infrastructural capacity will require both an increase in the number of computers and more bandwidth access to the internet. This will ensure that students have access to a more distributed computer network in terms of the actual numbers as well as not being frustrated by the slowness of the internet. Having access to a distributed computer network will also allow for more strenuous information literacy programmes that are library based and embedded in the various course disciplines offered by the institution. In its 2007 annual report, UNZA library also asserts that for information literacy programmes to be effective they need to be fused into the 'course contents for each student so that the student will be obliged to attend as these sessions will be done in conjunction with their lecturers' (UNZA Library, 2007, 14).

Conclusion

In an era of massification of higher education, it is important that libraries institute responsive measures that allow library users continued access to library and information resources. At the University of Zambia, these measures have included: Employment of Students in the library; Reserve collection; Closed Access Serials collection; increased Library opening hours; and the TextBook programme. These measures need to be augmented by having a well-educated staff and the university making a strategic investment in internet access that would allow library's effective access to vast information resources that are available. Only then will the library be playing its role of being an integral player in the learning process.

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