

THE ROLE OF THE NATIONAL FISHERIES RESEARCH INSTITUTE (NaFIRRI) INFORMATION CENTRE IN DISSEMINATING INFORMATION TO RESEARCHERS AND EDUCATORS

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Abstract: Information plays a vital role in the day-to-day decision making of a country's organizations and policy makers. NaFIRRI Information Centre has played a major role in ensuring that scientists and researchers access relevant information to enable them produce quality research products. The paper discusses the role played by E-Board, a locally established network to increase access to information available within the information centre. NaFIRRI electronic board is a LAN based service that was devised to electronically facilitate information dissemination and communication within the institute. The paper looks at the different components of the E-board and the Aqualink program under the information section that was established to disseminate information on biodiversity conservation among school children and teachers. It discusses the success achieved by this program so far.

Keywords: information access, information dissemination, Electronic Board, Aqualink program, biodiversity conservation, aquatic sciences.

Introduction

Information plays a vital role in the day-to-day decision making process of a country's organization and policy makers. Research has shown that decision makers often adapt their decision strategies to the information environment (Payne, Bettman and Johnson, 1993). Information is needed at all levels and it is the foundation of effective planning and management as long as the information is used and disseminated. NaFIRRI Information Centre has played a major role in ensuring that scientists, technicians and other researchers from the region access relevant information to enable them produce quality research products for effective policy and decision making through its electronic information dissemination infrastructure.

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The National Fisheries Resources Research Institute (NaFIRRI), formerly the East African Freshwater Fisheries Research Organization, was established in 1947 by the colonial government to investigate all freshwater fisheries resources in British East Africa. The mandate of NaFIRRI is to conduct basic and applied research of national and strategic importance in aquaculture, capture fisheries, water environment, socioeconomics and marketing, information communication management, and emerging issues in the fisheries sector.

NaFIRRI Information Centre was then established in 1947 to provide information to research scientists in the East African Region. The Centre has evolved from a small Library to a modern Information and Data Centre. It is divided into 6 sections: processing unit, handling information processing; general reference; the journals section; general books section; Africana; and Archives. The Centre also has an Information Communication and Outreach component, which is responsible for reaching out to the stakeholders by providing information and is responsible for all the ICT infrastructure of the institute.

Information available in the Centre dates from 1947 when it was established. The centre covers the following subjects: fish biology, ecology, invertebrates, fisheries management, environment, socioeconomics, fishes, water quality, aquaculture, agriculture (crops, soils), research information on lakes like Victoria, Albert, Edward, George, Kyoga, Nabugabo, Tanganyika, Rukwa, Chad, Malawi, River Nile, River Zambezi and many other satellite lakes in

Uganda. It also contains project reports and consultancy reports carried out by the institute in the area of fisheries, water environment, aquaculture and fisheries.

The Electronic Board

The Electronic Board, a locally designed network, was established in 2009 to enable researchers, technicians and support staff to have access to information from the Information Centre from their desks. NaFIRRI Electronic Board is a LAN based service that was devised to electronically ease internal information dissemination and internal communication flow within the institute. To use the Board, you navigate through it as you would do with any website. The E-Board has the following elements: bibliographic databases available in the information centre; publications from the section comprising of digitized papers (reprints); reports; work plans; project technical reports. It also has an internal interaction window for notices; memos; news; development programs; activity schedules, future plans, budget estimates and reports/presentation and other documented materials.

The E-Board also houses the stores database, a shared application covering requests of items from stores of the institute. In future, the E-Board will accommodate all the institutional data and reporting forms for staff to complete online. A suggestion box will be placed there for users to give comments.

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Methodology Used/ Background of the Study

The study was carried out by NaFIRRI Information Centre staff with the main objective of assessing the impact and establishing the role of the Information Centre in disseminating information to scientists through library visits, use of the E-Board and the Aqualink outreach program, which targets school children and their teachers. This was done to enable the Information Centre to identify gaps in order to improve service delivery.

Design/Methodology/Approach

Data were collected for the study using questionnaires and interviews administered to researchers, technicians, support staff and teachers in the selected schools. User statistics for the years 2009-2011 were the main sources of information. Data tables with numbers indicating the visits of students and teachers to NaFIRRI were also analysed using the Excel program to establish the percentages. The study focused on 50 NaFIRRI staff members and 8 educators. Scientists were asked questions about the Information Centre, Electronic Board and the NaFIRRI website. The educators had questions about the Aqualink programs. Interviews were also conducted with key respondents who gave some useful information for the study.

Results

The findings from the study suggest the following: 95% of the scientists and technicians agreed to using the E-Board to access information and 76% said they were happy with the design of the E-Board because it has enabled them to access information research reports, bibliographies, reprint papers, and staff contacts internally while 24% said the design needed improvement. On the design of the E-Board all the respondents requested updating regularly with new information.

Asked whether the E-Board had satisfied their information needs, 75% said yes while 25% said not fully because they want more information loaded on to the Electronic Board, such as news events and information pinned on the notice boards. Their needs were satisfied because they are able to access reports, reprints, bibliographic data about publications available in the library, the museum database, full publications and could also requisition stores items from their desks. The E- Board acted as a backup for institute work plans, proposals and reports. On whether the E-Board could be effective in dissemination of information within the Institute, 85% of the respondents said yes. The main suggestion was that the Information Centre needed to add more information to the E-Board.

On what should be done to improve the E-Board, 155 of respondents suggested that it should be linked via Skype, Facebook or Twitter for more free exchange of information within NaFIRRI.

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All respondents reported that they accessed the Information Centre. Asked how many times they accessed it, 40% said daily, 26% said twice a week, 12% once a week and 22% once a month. On whether the Centre provides the required information, 87% said yes while 100% of the respondents said that it had contributed positively to their research outputs.

The information sought most by the scientists was fisheries information, aquaculture, and scientific reports (40%), followed by journal articles (54%) with information about lakes and rivers, water environment, fisheries, Invertebrates molluscs, socioeconomics of the fishery. Three percent sought dissertations 3%; 1% used it to access the Internet; and 2% accessed newspapers for current awareness. The Internet is less used within the Centre because the scientists have access to it from their desks.

One hundred percent of the researchers acknowledged the contribution of the Information Centre to their research outputs by providing information/literature on water environment, fisheries, socioeconomics, aquaculture, scientific reports, baseline information, historical data, lakes, rivers, Information on research done by other scientists outside Uganda, and current awareness information from newspapers. It also includes provision of reference materials to enhance and promote research interests and dissemination of research results to end users is highly commendable.

Several suggestions were given on how the information centre can improve service delivery:

- Procure more computers for accessing digital information.
- Place more documents on the Electronic Board.
- Provide regular seminars on retrieval of scientific information from Wiley and AGORA databases.
- Subscribe to more online journals.
- Purchase more books.
- Purchase more newspapers like the Weekly Observer
- Provide access to e-resources 24 hours a day, either at hand or in the field.

In comparison with the Information Centre, the studies show that scientists preferred to use the E-Board to access information resources rather than the Information Centre because the E-Board was easy for them to access from their desks. Less time was spent having to seek information from the Centre than from the E-Board. The information accessed most on the E-Board was journals (reprints), books (reports), workplans and historical information and data.

Questions	Percentage
Access to the E-Board	95% of respondents use the E-board to access information
Structure of E-Board and design	76% said they were happy with the design while 24% said the design needed improvement
Satisfaction of information needs	75% said yes while 25% said not fully, they need more information loaded onto the Electronic Board
Effectiveness of the E-Board in disseminating information	85% of the respondents said yes while 15% said no, it should be improved.
How E-Board setup can be improved	Sensitization of staff, update regularly, 15% suggested it should be linked to Skype, Facebook and/or Twitter for more free exchange of information

Table 1. Summary of Results - E-Board.

Questions	Percentages
Access to the Information Centre	100% said yes
How often they access the Information Centre	26% twice a week, 40% daily, 22% once a month, 12% once a week.
Does the Information Centre provide the required information	87% said yes while 13% said they needed more information from the Information Centre.
Contribution to research outputs	100% of the respondents said the Centre had contributed positively to their research outputs.
Information sought most by the scientists	Fisheries, aquaculture, scientific reports 40%, journal articles (54%) about lakes, rivers, water environment, fisheries, invertebrates, molluscs, socioeconomics, dissertations (3%), Internet (1%), newspapers and magazines (2%).

Table 2. Results - Information Centre.

Challenges Faced With the E-Board

Starting the program was difficult because users wanted to see a running program before they could believe in it. The second challenge was that of hardware and disk space. The Institute has lots of information both current and historical information which the current disk space cannot handle. In future we must acquire more disk space.

Aqualink Program

The Aqualink program was established to disseminate information on biodiversity conservation to school children and teachers. It aimed at educating students through an international education program to encourage them to participate in international stewardship of aquatic resources, and to enhance public awareness of natural history and

aquatic conservation issues. It also aimed to link educators and students in Canada and East Africa (Uganda) using the Internet and mail so as to allow participants to gain a cross-cultural understanding and foster attitudes as global citizens.

Launched in February 2010, it has exposed the NaFIRRI planned conservation outreach program to schools in and around Jinja through sensitisation visits to discuss the project with school administrations. It has also attracted schools from other parts of Uganda that frequently visit to access biodiversity conservation information in the Institute's Information Centre.



Figure 1. Students accessing biodiversity information in the Information Centre

The program started with 8 schools with a total number of 1,570 students. The educators from NaFIRRI reviewed and repackaged biodiversity information in the form of lessons for students. The package included information on ecosystems, fish species introductions,

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great lakes of East Africa, and experiments. They also prepared a joint work plan with the teachers of the selected schools. Ugandan students and educators are linked to their counterparts in Canada using Internet avenues like e-mail, Skype and Yahoo Messenger. Students are allowed to exchange experiences on their local aquatic ecosystems. The schools are sometimes hosted at NaFIRRI and students are given presentations on biodiversity information covering the status of Lake Victoria fisheries through time.

Achievements of the Program

By the end of September 2011, the number of students and pupils who came to receive biodiversity information had increased to 4,900 from the 1,570 in 2010. This shows that the program has been successful.

The students were guided through NaFIRRI facilities where they were able to gain information and knowledge about managing aquatic biodiversity (Aquarium Tanks). Consultative workshops were conducted with teachers to assess progress and discuss the sustainability of the project in their schools. A draft question and answer booklet has been developed to enable student and teachers read and understand more biodiversity information.

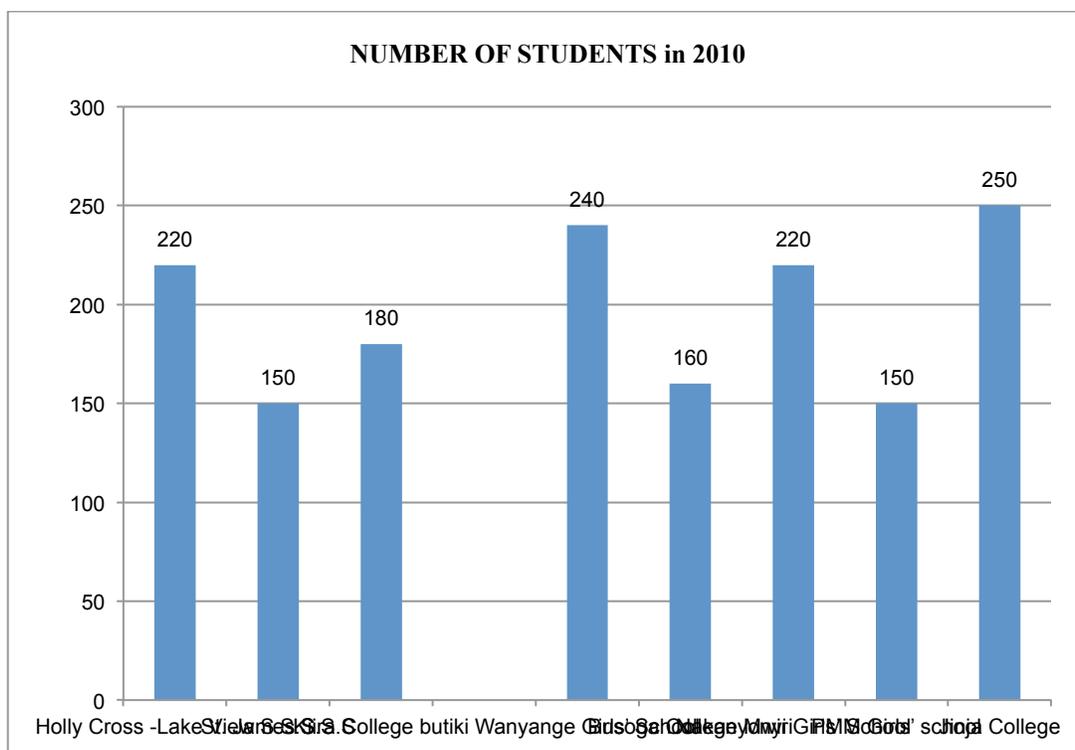


Table 3. Number of students in 2010.

SCHOOL	NUMBER OF STUDENTS	DATE VISITED
Holly Cross -Lake View S.S.S	220	03/07/2010
St. James S.S.S	150	05/07/2010
Kiira College butiki	180	14/07/2010
Wanyange Girls' School	240	15/07/2010
Busoga College Mwiri	160	17/07/2010
Nakanyonyi Girls' School	220	10/07/2010
PMM Girls' school	150	09/07/2010
Jinja College	250	09/07/2010
Total	1570	

Table 4. Chart showing the number of students from the 8 schools the program started with in 2010.

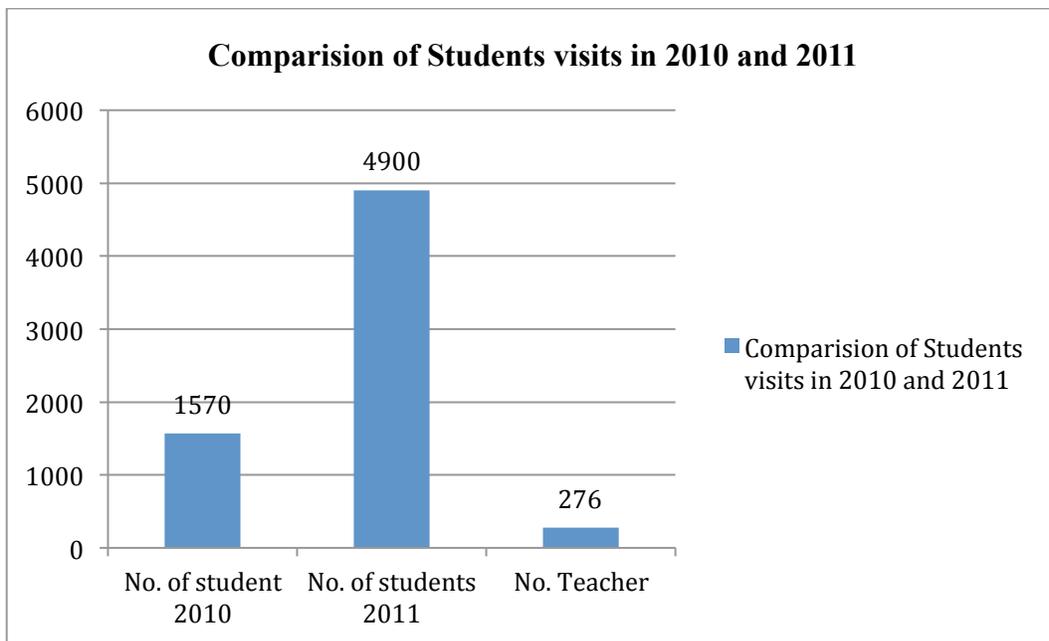


Table 5. Comparison of student visits in 2010 and 2011.



Figure 2. Interacting with students in one of the information dissemination sessions.

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Aqualink Program Challenges

The main challenge has been of funding, since the schools need to be visited weekly by the dissemination team. The second members of the dissemination team are few and are engaged in several activities with limited time available.

Conclusions

The E-Board is effective in information dissemination though it requires regular updating with different information resources in order to meet the daily information needs of the users. Its advantage is that it can be accessed from one's desk, but it is still constrained by failure to upload regular updates.

Recommendations

The respondents recommend regular updating of information by introducing an enhanced method of collecting information from the scientists and making sure whenever information is collected it is loaded without delay.

References

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