

Analysis of Students Industrial Work Experience Scheme (SIWES) in NIFFR and the Challenge of Skilled Fishery Extension Manpower Development in Nigeria

Ifejika, P.I., F.C. Odunze, J. O. Ayanda, and V. A. K. Sado
National Institute for Freshwater Fisheries Research
P.M.B.6006, New-Bussa 913003, Niger State
E-mail philipifejika@yahoo.com. pifejika@gmail.com.

Abstract

The study examined Student's Industrial Work Experience Scheme carried out in NIFFR visa-a-vise the challenge of skilled manpower development for fishery extension. Secondary data collected from NIFFR library and report of 2007 SIWES period was analysed descriptively. Out of 617 students from 36 schools that visited NIFFR, 282 (46%) were for IT from 16 tertiary institutions in the six geo-political zones. Over 80% of the IT students were University students in the department of fisheries dominated by institutions in the South West and North Central zones. SIWES students spend 2-32 weeks to acquire skills and practical knowledge in different aspects of fisheries like artisanal, aquaculture & biotechnology, fish technology, environmental studies, and socio-economic/ extension. High influx of students in the department of fisheries is an indication that NIFFR adds value to graduates of fisheries. However, it is appalling to note that students of agricultural extension never utilize opportunities existing at NIFFR for industrial training like their counterparts in fisheries department. This is a pointer to a large extent that the challenge of training skilled and competent professionals for fishery agricultural extension is still a mirage rather than a reality. To reverse the ugly trend, students of agricultural extension in various tertiary institutions should be compelled to spend at least two weeks of their IT period at NIFFR for practical experience. This development will be seen as a step in the right direction towards skill development and changing student's perception to seek livelihood in fishery particularly in aquaculture to create jobs and reduce unemployment as well as building competency and confidence.

Keywords: *students, niffr, fishery, extension, Nigeria.*

INTRODUCTION

One of the critical issues in the seven point agenda of present administration is food security. Realization of food security agenda can be accessed on the performance of agricultural sub sector of the economy to provide food at the right quality and quantity to citizenry with meaningful impact on nutrition, wealth creation, and poverty reduction to improve well being. Extension services delivery in agriculture has a key role to play to make this happen. In this regard, Eremie (2006) enumerated the role of effective extension service as facilitating the development of technology, support its adaptation

and adoption by farmers, foster linkages with relevant service providers and institutions and provide feedback for further improvement of the system.

Presently, agriculture extension service delivery is championed by Extension Agents (EAs) of the State Agricultural Development Programme (ADPs) with little contribution from Research Institutions as public providers and Non Governmental Organizations as emerging private providers. Efficiency and effectiveness of ADPs in extension service delivery to farmers reached its peak in the 70s and mid 90s during the period of World Bank assistance. This investment in ADP service delivery and capacity cost World Bank US\$2billion (Eremie, 2006).

Despite earlier impact of the State extension agents in agriculture, it is now characterized by decline in supporting adoption of technologies (Adebayo, 2005 and Oladele, 2005), shortage of agricultural manpower (Olunlade, 1996), low capacity (Moshia, 2006), unskilled graduates (Akpoko, 1998), low ratio of extension agents to farmers (NAERLS and PCU, 2002) and crop and livestock biasness against fishery/aquaculture (Okomoda *et al*, 1996). Also, further evidence by Okomoda (1996) in Nigeria, Gemo (2005) in Mozambique and report of Limpopo Province Department of Agriculture (LPDA) (2005) in South Africa established dominance of agricultural extension profession by Diploma holders (OND and HND) with few university graduates, a situation common in developing countries of Africa. This scenario poses a challenge on the capacity and capability of extension personnel to meet the needs of end users. Hence, there is urgent need to exposure prospective change agents in agriculture to practical training to improve their competency in chosen carrier. This circumstance made Dimelu and Saingbe (2006) to ask; when is it appropriate to acquire the knowledge, skills and re-orient agents/professionals for attitude change in extension work?

However, the issue of agricultural manpower development in terms of shortage, competence and skill is more critical in fishery due to its late introduction in ADPs activities. Consequences of fisheries neglect is manifested in ugly scenario where fish importation dwarf local production from capture and aquaculture as shown in Ifejika *et al* (2008). Also, it is obvious that fish supply from importation and capture cannot guarantee fish food security due to high cost, low per capita fish consumption as well as stagnation and decline in yield. Therefore, filling the gap existing in domestic fish supply shortage put at over 1.6million metric tonnes requires triple intensification of aquaculture practices to meet demand. This is a pointer that we need capable and skilled extension agents in fishery who can deliver the message to end users to produce result. Therefore, effort to increase domestic fish production should start with grooming of skillful manpower in fishery extension as change agents with practical orientation and spirit of entrepreneurship. Oladele and Agbebaku, (2006) asserted that student's farm practical training programmes are fashioned within the principles of entrepreneurial skill development.

In this regard, fisheries research institutions in the country have a vital role to play in practical grooming of agricultural extension students. One of them is the National Institute for Freshwater Fisheries Research (NIFFR), New Bussa, with mandate on freshwater fisheries is probably in a better position to perform this role. NIFFR is a federal government agency obliged by law to accept students on SIWES otherwise known as Industrial Training (IT) in this study. Rising number of students' to NIFFR for excursion and IT from 533 in 2005 to 656 in 2006 and 617 in 2007 is an evidence of active involvement in development of skilled manpower for fishery sub-

sector of agriculture. It is expected that extension students in the Department of Agricultural Extension should avail themselves the opportunity at NIFFR to be practically exposed in capture fisheries and aquaculture.

According to National Universities Commission (NUC) document, realization of skill weakness in Nigerian awarding institutions inspired the need to expose students to practical experience to acquire on the job skill training needed to face real work situation. In view of this, SIWES or IT has become one of the minimum academic standards for students to undergo for two to six months. The broad objective of SIWES is to bridge the gap existing between theory and practice in all professions including agriculture as in NUC document. The NUC document further stated that IT in fisheries is designed to make the graduates to enter into fisheries enterprise on their own, accept assignments in private and public sectors. In accordance with fisheries schedule guideline, IT students at NIFFR are exposed to five technical divisions;

1. Aquaculture and Biotechnology to learn breeding technique, hatchery management, sex reversal and fish feed formulation water recirculation system management.
2. In Artisanal Fisheries, IT students are exposed to different fish gears, identification of common fish disease, technique for catch assessment and obnoxious practices.
3. Environmental Studies groom students on raising of natural fish food (zooplankton and phytoplankton) for fingerlings, water quality management in ponds and control of aquatic weed in water bodies.
4. In Fish Technology, IT students are exposed to fish processing with smoking kiln and solar tent, fish feed formulation, preservation and quality control.
5. While Socio-Economics and Extension Services relates to aquaculture practices, packaging of technologies, dissemination of technologies, field trip to fishing communities, feasibility studies, information gathering methods and rural sociology of fisher folks.

It is in against this background that the study seeks to analyze 2007 SEWIS at NIFFR to determine;

- proportion of IT student's among Student visitors to NIFFR;
- categorize IT students based on course of study vis-à-vis zonal distribution; and
- Categorize SEWIS students based on tertiary institutions.

Study Area and Methodology

The forty years fisheries research institute was established in 1968 as a result of Kainji dam construction. It has undergone series of change in nomenclature to be known now as National Institute for freshwater Fisheries Research (NIFFR). It is located in New-Bussa, Niger State, in north central zone of Nigeria. The mandate of NIFFR is on freshwater fisheries which cover socio-economic and extension services, aquaculture and biotechnology, environmental issues, artisanal fisheries and fish technology. In carrying out these responsibilities, NIFFR collaborates with other organizations involved in fisheries development, thus making IT part of institute activities. Data for the study is secondary which was compiled from library and NIFFR

records for 2007 SIWES period only. The data were descriptively analyzed as presented in table and figures.

RESULTS AND DISCUSSIONS

Table one deals with identification of IT students to NIFFR in 2007. Within the period under study, there are two categories of student's visitors to the institute which is either for excursion/field trip or SIWES. Out of 617 students from 36 schools, 282 (46%) are for IT whereas 335 (54%) are for excursion. Report of Ibeun (1996) on decade of NIFFR library use between 1987 and 1996 established students to be institute most valued non-staff visitors. Trooping of students to NIFFR for either purpose is a sign of building students' interest and confidence in fisheries. This development is a step in the right direction towards changing youth perception to seek livelihood and entrepreneurship in fishery particularly aquaculture to create jobs and reduce unemployment.

An entry in table two is on zonal distribution of SIWES students, which reveals wide spread across the six geo-political zones in the country. Out of 16 tertiary institutions that came for IT, South West dominated with 37.4% and followed by North Central (25%). Further revelations confirm that three geo-political zones in the south account for 56.2% of the institutions on IT compared to 43.8% from the Northern zones. It implies that northern states are under utilizing NIFFR resources in their area for fishery aquaculture development. Also, high influx of institutions from South West and North Central suggests proximity and popularity of the institute in these areas. The trend in SIWES participation is a reflection on level of aquaculture development in the zones which is found to be poor in North West and North East. Above statement is supported in finding on inventory survey of fish farms in Nigeria conducted by FAO (2004).

Data on distribution of IT students based on course of study reveals that a total of 253 (89.8%) students from 14 different institutions in fishery department spent 2 to 32 weeks at the institute. Highest number of students came from Delta State University, Asaba Campus (48), University of Agriculture, Abeokuta (42) and Michael Opara University of Agriculture, Umudike (22). Report of Ibeun (1996) collaborated the finding on dominance of fisheries students from various schools including Abeokuta and Umudike. Other closely related courses taking advantage of the fishery research institute are Biological science and Agricultural education. Sending of student's en masse to NIFFR is a pointer on the quality and level of confidence the schools have on the practical training student's receive over the years. Similar study by Oladele and Agbebaku, (2006) found out that IT has influenced student's choice of livestock/fishery over crop as a means of livelihood. It is surprising that non agricultural extension student from any of the schools benefited in the practical exposure like their counterparts in fishery departments. Overcoming professional deficiency in skill and technical knowledge among extension personnel as observed in fishery can only be solve if agricultural extension students are practically groomed on the basic rudiments of fishery and aquaculture as experienced in NIFFR industrial training or any organized private fish farms with facilities. None utilization of opportunity at NIFFR by agricultural extension students will elude the desire to train competent professionals with skills and right attitude. Emerging facts in the study suggests that Agricultural Extension students are likely to lose fisheries extension works to their counterparts in department of fisheries. Hence, the desire for effective and efficient information

dissemination in fisheries will be jeopardized by incompetency and unskilled labour force among extension professionals.

Table four relates to categorization of tertiary institutions in the SIWES in the year 2007. As shown, University account for 84.2% of the institutions with 254 attaches followed by College of Fishery with 22 attaches and two students from College of Education. Dominance of Universities can be trace to their offering of agricultural courses in addition to College of Fishery as a specialist school. High utilization of NIFFR by universities hinges on the fact that research institutions are partners in progress in grooming of students; hence NIFFR is maximized to add value to graduates of fisheries. It is appalling that Student's of Agricultural Extension is yet to explore opportunities existing at NIFFR to gain skill like their counter parts in fishery department. This is a pointer that the challenge of training skilled and competent professionals for fishery agricultural extension is still a mirage rather than a reality to actualize.

CONCLUSION

In the country, NIFFR is being utilized by universities to add value to quality of graduates in fisheries and aquaculture in terms of knowledge, skill and practical orientation. However, the situation differs with that of agricultural extension due to none utilization of opportunities at NIFFR, New-Bussa. This has serious consequences on the quest to groom competent and skilled professional for fishery sub sector characterized by manpower shortage. In view of this, students of agricultural extension are advised to spend at least two weeks of their SIWES at NIFFR to gain knowledge, skill and practical experience to boost their competency in fishery and aquaculture.

References

- Adebayo, K. (2005). Three Decades of Adoption and Diffusion in Research in Nigeria: Lessons *Journal of Agricultural Extension*, Vol.8. Pp 65-73.
- Akpoko, J.G. (1998). Delivery of Effective Extension Training. CTA/DAC-ABU National Workshop. Workshop Manual DAC-ABU, Zaria, June 22nd -26th , 1998. Pp 145-155.
- Dimelu, M.U and Saingbe, (2006). Professional Teaching and Communication Competencies Needed by Extension Workers in Central. *Journal of Agricultural Extension*, Vol.9. Pp 14-22.
- Eremie, S. (2006). Capacity Building in Agricultural Extension: The World Bank Experience in Nigeria. *Journal of Agricultural Extension*, Vol..9. Pp 1-8.
- FAO (2004). Inventory of Fish Farms in Nigeria. Aquaculture and Inland Fisheries Project of the National Special Programme for Food Security with State Agricultural Development Programmes. Pp 1-10.
- Gemo, H.R.(2005). An Analysis of Human Resources Development Programme in Mozambique's Public Extension. *Proceedings of 30th Conference of Agricultural Extension*. Free State, 10-12 May.
- Ibeun, M.O. (1996). Library, Information, and Documentation. NIFFR Annual Report. Pp 222—223.

- Ifejika, P.I., Akinbile, L.A., Ifejika, L.I., and Oladeji, J.O. (2008). The Socio-Economic Effects of Aquaculture Technologies Adoption among Fish Farmers in Anambra State. *Journal of Agricultural Extension*, Vol.11, 2008. Pp 74-86.
- Limpopo Province Department of Agriculture, (LPDA) (2005). Human Resources Data of Extension Officers. Limpopo Province, Polokwane, South Africa.
- Moshia, M.E (2006). Capacity Building for Agricultural Extension Officers to Disseminate Research Results: A key to Sustainable Farming in South Africa. *Global Approaches to Extension*, Vol. 2, No. 2. Pp 35-40.
- NAERLS and PCU (2002). Field Situation Assessment of the Wet Season Agricultural Production in Nigeria.
- National Universities Commission (NUC). Student Industrial Work Experience Scheme (SIWES): Job Specification for Fisheries for All Nigerian Universities, Abuja. Pp 1-8.
- Okomoda, J. K., Ayanda, J. O., and Olawoye, J. E.(1996). Assessment of Aquaculture Extension within the Unified Agricultural Extension System of South Western Ecological Zone of Nigeria: A Preliminary Report. NIFFR Annual Report, 2006. Pp 194-201.
- Oladele, A. A and Agbebaku, O.M. (2006). Analysis of Entrepreneurial Skills Development through Farm Practical Training Programmes of University of Ibadan and University of Agriculture, Abeokuta. *Journal of Agricultural Extension*, Vol.9. Pp 14-22.
- Olunlade, R. (1996). Occupational Information Sources for the Nigerian Graduates. *Technical Education Today*, Vol.6, NO.1&2. Pp 40-43.Pp 222-224.

TABLE 1: Categorization of student visitors at NIFFR in 2007

Categories	No.	%
SIWES	282	46
Excursion	335	54
Total	617	100

TABLE 2: Geo-political zonal distribution of SIWES students

Zones	%
North East	12.5
North West	6.3
North Central	25.0
South East	6.3
South West	37.4
South-South	12.5

TABLE3: Distribution of SIWES students based on course of study

Course of Study	Frequency	%
Fishery/Aquaculture	253	89.8
Biological Science	4	1.4
Forestry/Wildlife	21	7.4
Agric. Science	4	1.4

TABLE 4: Categorization of SIWES based on tertiary institutions

Institutions	%
University	87.6
College of Fisheries Technology	6.2
College of Education	6.2

Sources: Niffr library & records, 2007.