NIGERIA — INTERNATIONAL LINKS AND THE ROLE OF SANDWICH PLACEMENT 1971-1983

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One of the many problems facing Third World countries is the lack of financial control of their own construction industry. Too often such control is exercised furth of their borders. In the UK the development of financial control of the construction industry has been through the Quantity Surveyor.

In Third World countries during the construction of large and nationally prestigious projects such as motorways, dams, irrigation schemes and power stations costs very often spiral to such an extent that the final cost is many times the original estimate. When this happens on a number of large projects within the normal "five year development plan period", an approach favoured by many developing countries, it leads to chaos. The result: projects are abandoned by contractors before completion. This was the situation in Nigeria in the 1960's when a degree course in Quantity Surveying was established to meet the needs of Nigeria.

The major difficulty in establishing a profession within a Third World country is that there are no indigenously educated men and women within the profession. The local people who are qualified have been educated overseas in courses normally relevant to the country in which the course is located but not necessarily relevant to the needs of their own country. These individuals are also in such short supply that the attractions of private practice outweigh those of teaching and therefore the task of recruiting academic staff becomes impossible.

One method of overcoming this problem is to send large numbers of young people to study overseas but this is extremely expensive in terms of foreign exchange. There are also the social and cultural problems inherent in being separated from the homeland and families for long periods.

An alternative method is to link an academic institution in a developed country with a similar type institution in a Third World country. The purpose of such a link is to establish a framework in which courses can be

set up and run while at the same time developing the indigenous staff to take over at the conclusion of the link.

Glasgow/Ahmadu Bello Link 1971-1976

In the late 1960's, an attempt was made to set up a Quantity Surveying course at the University of Lagos, Nigeria. This plan had to be abandoned because it proved impossible to attract suitably qualified staff. In October 1971, another attempt was made as Ahmadu Bello University (ABU), Zaria, Nigeria, initiated a Bachelor of Science (BSc) honours degree course in Quantity Surveying. It had been planned the previous year and, in many ways, was an act of faith by the University, given the previous experience in Lagos.

Within a few weeks of starting, it looked as if the ABU course would collapse, as the senior member of staff appointed to lead the course failed to take up his appointment. To rescue the situation ABU made contact with the Surveying Department of the then Glasgow College of Building (GCB) in Scotland to ask for assistance. Through the good offices of the Inter-Universities Council a link was formed between ABU and GCB. Under the link, Glasgow agreed to send the second senior members of academic staff to ABU for periods of up to 13 weeks. Over the next four and a half years, a steady stream of quantity surveyors, building technologists and lawyers from Glasgow volunteered to lecture at ABU.

The BSc honours degree course in Quantity Surveying was developed on the basis of a three year full-time program offering. Where possible non-mandatory "summer" (July-September) vocation periods of sandwich placement were encouraged. However, the problem with the first cohort of students was that the number of placements available within Nigeria at that time was practically nil. There were various reasons for the lack of placement sites.

In 1973 in Nigeria there were only a small number of private practice firms in a position to offer placements to students. Also because of the difficulty and cost of obtaining construction cost data, construction firms were unwilling to share data with the students. Their fear was that on graduation the students would set themselves up in direct competition. Their fears were well-founded as this did happen in a number of instances.

Government departments were willing to take students on placement but there were no qualified personnel to supervise them. The same was true of contractors although some of the expatriate firms took students on the basis of a long term "business" investment.

In one instance a three month placement was arranged for one of the students with a Scottish multi-discipline firm of Architects, Engineers, and Quantity Surveyors which had a number of World Bank commissions in

Nigeria. This was highly successful as it opened up to students the whole concept of sandwich placement. Other groups were consequently encouraged to seek placements. Later when these students themselves were established in practice they subsequently provided meaningful placements for other upcoming students.

There is no doubt that if more students could have obtained placements overseas the development of the Quantity Surveying profession in Nigeria would have been more rapid. Since the majority of the students came from relatively poor backgrounds, obtaining the necessary funding for them to go overseas was impossible.

At the beginning of the sandwich program students who managed to obtain a placement were often used by the firms as highly intelligent and highly motivated but inexpensive labour. There was also a tendency for firms to take students from the area nearest to their office in the hope that, upon graduation, these students would join the firm.

Against a background of a mushrooming construction industry in Nigeria and a government insisting on some measure of cost control, firms suddenly had much more work than they could handle. Of course then there was no shortage of placements. An additional problem was then created since graduates were not willing to embark upon an academic career in teaching.

In June 1974, the first cohort of fourteen students completed their course. The degree of BSc (Honours) in Quantity Surveying was conferred on the graduates at a convocation on 6 December 1974 by Vice Chancellor Dr. I. S. Audu, later to become Nigerian Minister for Foreign Affairs. In his address Dr. Audu pointed out that ABU was the first university in Nigeria to produce graduate quantity surveyors. Thus the foundation had been laid for an indigenously educated Nigerian Quantity Surveying profession and by 1982 the founding group was well established. Of the fourteen graduates, eleven entered private practice, while two were engaged as Chief Quantity Surveyors for the Nigerian government.

By the completion of the Glasgow/ABU link in 1976 a number of lessons had been learned. Among these were:

1. In the initial stages of the development of vocational-type courses in Third World countries sandwich placement is essential. Where possible such placements should be overseas and any link should make provision for this.
2. A staff development component should be included to allow for the transfer of the course to the indigenous staff upon completion of the link.

Glasgow/Auchi Link 1977-1983

In 1977 Dr. Pius Igharo, Principal of Auchi Polytechnic, Nigeria, approached the Surveying Department of Glasgow College of Building and Printing (GCBP) to obtain assistance in setting up a Quantity Surveying course at Auchi. Dr. Igharo had been a Reader in Civil Engineering at ABU during the University's link with Glasgow.

In May 1977 the Glasgow/Auchi Link was formally established under the umbrella of the British Council as part of the technical co-operation agreement between the Governments of the UK and Nigeria.

The aims of the link were to:

1. Assist in establishing a two year full-time National Diploma (ND) in Quantity Surveying with a minimum entry requirement of five Credits at Ordinary level in the West African School Certificate (WASC) examinations.
2. Assist in establishing a two year full-time Higher National Diploma (HND) in Quantity Surveying. Both the ND and HND courses had to satisfy the academic requirements of the Nigerian Board for Technical Education (NBTE) and the Nigerian Institute of Quantity Surveyors (NIQS).
3. Provide senior staff to develop the courses and sustain them during their formative years. The staff was to be provided on the basis of six week secondment from Glasgow.
4. Develop lecture/tutorial material appropriate to the Nigerian construction industry to sustain the courses at completion of the link.
5. Liase with the NIQS to obtain sandwich placements in Nigeria for students completing the ND course.
6. Assist in the selection of suitable students from Auchi for sponsorship to read for a BSc in Quantity Surveying at Glasgow.
7. Obtain six month sandwich placements in Scotland for the sponsored students.
8. Act as a point of contact between the Polytechnic and its students in Scotland.

UNESCO also undertook to provide an expert in quantity surveying to be based at Auchi. The UNESCO expert was responsible for overseeing and participating in the development of the courses for a period of three years.

One of the deficiencies of the Glasgow/ABU Link was that there had been no provision in the link for the development of Nigerian staff so that they would be able to take over the running of the course when the link

was terminated. The whole concept of the Glasgow/Auchi Link was, however, one of partnership based on the premise that the Nigerian staff would progressively assume the responsibility for the running of the course as the assistance from Glasgow was phased out.

At the beginning of the 1977/78 session, as the first member of the Glasgow team left for Auchi, two young Nigerians left their families, homes and country for the first time in their lives. They were coming to Scotland to commence a four-year course of study.

The negotiation of the link had been relatively straightforward but, because it involved so many human variables, fulfilling its requirements seemed a monumental task. Among questions which time alone would answer were: would the young Nigerians be able to cope with being away from their families, and with the cold, wet Glasgow winters? Also would it be possible to recruit sufficient qualified volunteers to go to Auchi and sustain the link for a minimum of six years? What would the response of firms in Scotland be to a request to provide paid sandwich placements for Nigerian students? Happily, all of these problems (and many others not envisaged in 1977) were successfully resolved without violating any of the laws of either country (e.g., overcoming the difficulty of remitting foreign exchange from Nigeria during the period of severe financial restrictions in the early 80s.)

The problem of sandwich placements in Nigeria was tackled in two ways. First, the Polytechnic's own Industrial Training/Placement Unit contacted as many firms as possible. Secondly, the UNESCO expert contacted a number of firms whose partners were ex-students of ABU. These students understood that the success of the course at Auchi, depended in part on their providing suitable placements.

Establishing and keeping contact with the placement firms was difficult because of the vast distances involved and the problems of internal communications. Auchi was not connected to the Nigerian telephone communication network at the time of these student placements.

Several developments in the late 1970s gave considerable impetus to the sandwich program. First, the Nigerian Government paid an allowance to students on placement but assigned responsibility for disbursement of the monies to the Polytechnic. This required staff to visit the students regularly, often entailing long journeys by car and carrying relatively large amounts of cash with all the inherent dangers. Second, during the link a mailing list was compiled with a major input from the UNESCO expert of organizations within Nigeria prepared to offer placements. An excellent working partnership has developed over the years with these firms. The success of the Polytechnic program can be judged from the placement record as outlined in Table I.

Table I

Sandwich Placement of Students in Nigeria

	Session				
	78/79	79/80	80/81	81/82	82/83
Type of placement					
Private Practice	34 (19)	31 (20)	32 (23)	32 (21)	44 (27)
Public Service	10 (4)	9 (2)	6 (5)	10 (5)	20 (14)
Totals	**44 (23)**	**40 (22)**	**38 (28)**	**42 (26)**	**64 (41)**

The placement of the Nigerian sponsored students in paid employment in Scotland proved less difficult than had been envisaged. By keeping firms informed of the link by papers in professional journals, articles in newspapers, "letters to the editor" of newspapers and personal approaches, interest was generated and sustained in the project. This approach not only identified placements but also encourged volunteers from practice to go to Auchi and assist in the program.

In August 1981 the first two sponsored students graduated and returned to Auchi and by the formal completion of the link in August 1983 all the sponsored students had graduated. As part of their course in Glasgow all of them completed two periods of sandwich placement. During their stay in Glasgow they won a number of prizes and made their own special contribution to the corporate life of GCBP.

As the sponsored students completed their degree courses in Glasgow, they returned to Auchi to take up lecturing posts in the Polytechnic and gradually assumed responsibility for the teaching and management of the Quantity Surveying courses. The number of Auchi students sponsored to study overseas is detailed in Table II.

Because of the special needs of the Nigerian construction industry, it was essential that an applied component be incorporated into the course. The inclusion of the applied component was achieved by enlisting the support of volunteers from the Architectural and Surveying professions in UK to go to Auchi to lecture on their own specialities. This was of benefit to the students as many of them on graduation joined organizations in which they were the only qualified quantity surveyor. Those from practice came from private firms, building contractors and local government. The practitioners from the private sector had an opportunity to gain first hand experience of working in a Third World country, assessing the business prospects and making contacts with local firms. They also provided the

Table II

Auchi Students Sponsored for Overseas Study

	Session											
	77/8	78/9	79/0	80/1	81/2	82/3	83/4	84/5	85/6	86/7	87/8	88/9
J. Imonigie	*	*	*	*	0	0	0	0	M			
B. Oyewande	x	x	x	+	0	0	0	0	M			
G. Arah		*	*	*	*	0	0	0	0	S		
A. Osiki		*	*	*	*	0	0	0	0			
A. Kusimo			*	*	*	*	P	P	0	0	0	0

Legend
* — BSc (Quantity Surveying), Glasgow
X — Higher National Diploma (Building), Glasgow
\+ — Diploma in Construction Management, Glasgow
0 — Period of bond to Auchi Polytechnic
P — Post graduate professional practice, Glasgow
M — MSc, Loughborough, sponsored by UNESCO
S — MSC London, sponsored by UNESCO

Nigerians with an insight into the benefits of using the expertise of the quantity surveyor. The total number of visits under the link was forty-one involving twenty-nine people as detailed in Table III.

Table III

UK Staff Seconded to Auchi Polytechnic Under the Link

	Session						
	77/78	78/79	79/80	80/81	81/82	82/83	Tls
Academic							
Quantity Surveyors	3	3	1	2	2	4	15
Architects & Others	0	1	3	2	2	1	9
Practising							
Quantity Surveyors	1	2	0	4	5	4	16
Architects & Others	0	0	0	0	1	0	1
Totals	4	6	4	8	10	9	41

The link with Auchi which was established in May 1977 was in the first instance for session 1977/78, then extended for sessions 1978/80. It was then reviewed and extended for sessions 1980/82. It was again reviewed and extended for session 1982/83 on the understanding that, given the progress envisaged, 1982/83 would be the last session of the formal link. This was concluded by mutual agreement in July 1983.

From a Glasgow point of view the link has been a major success as it achieved all of its aims. It is certain from the contacts made and the personal reputations the visitors have earned for their professional expertise, some business contacts at present in embryonic form will develop.

In Nigeria the success of the link was acknowledged on the 23 April 1982 when the NIQS announced that it would recognize the Auchi graduates by granting them exemption from the Institute's examinations. They now have the same professional recognition in Nigeria as their ABU counterparts.

In September 1981 Auchi Polytechnic established a multi-discipline Department of Quantity Surveying and by the conclusion of the link in July 1983 the Department had a staff of twelve, including seven Nigerian quantity surveyors. The Department now produces between thirty and forty HND graduates annually and is confident that the Federal Government will allocate funds to enable the Department to undertake research into construction costs in Nigeria. The numbers of students in each course are detailed in Table IV.

Table IV

Student Numbers in Quantity Surveying Courses at Auchi Polytechnic

	Session						
	77/8	78/9	79/0	80/1	81/2	82/3	83/4
ND1	47	60	59	54	63	66	66
ND2	0	44	54	44	38	62	53
HND1	0	0	40	43	52	32	23
HND2	0	0	0	40	42	53	33
Totals	47	104	153	181	195	213	175

Conclusion

The form of link arrangement pioneered at ABU and developed at Auchi Polytechnic provides a cost effective framework for establishing courses in Third World countries. The inclusion of sandwich placements not only as a component of the course but also as part of an integrated staff development program shortens the time taken to achieve a meaningful "transfer of technology."

There can also be major benefits for the country providing the assistance in terms of experience, business contacts, orders for equipment and long term influence.

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