

AN ANALYSIS OF THE STATUS OF HUMAN AND MATERIAL RESOURCES FOR GEOGRAPHY TEACHING IN SECONDARY SCHOOLS IN BENIN CITY.

-- P. O. YALOKWU AND I. O. AMADASUN

ABSTRACT

The paper identifies and analyses the status of human and material resources for Geography teaching in Secondary Schools in Benin City. It also discusses the resources' situation for proper Geography teaching and learning in schools.

The data used for the paper were collected from 7 Secondary Schools sampled from Benin City in April 1990. Using a structured questionnaire, relevant data were collected from Geography head-teachers who had knowledge about teaching resources in the schools. In order to ease comparability in the human resources for both Geography and Economics (both of which are social Science subjects taught in the surveyed schools) a provision was made in the questionnaire for the staff strengths of Geography and Economics departments.

Analysis of data involved the use of percentage and students 't' test. Findings show that staff strength and teaching aids available in Geography departments were poor. Less than half of the Geography teachers in the schools were professionally qualified. There were, however, an indication significant difference does not exist between the staff strength of Geography departments and that of Economics.

The implication for the findings is that effort should be made by Government and other appropriate education authorities to train more Geography teachers (and even Economics teachers) and provide relevant teaching equipments in order to make teaching and learning more result-oriented.

INTRODUCTION

One of the most comprehensive and functional subjects which the National Policy on Education provided to be offered at the Senior Secondary School level is Geography. The new Geography curriculum unlike the old one, is rich in courses contents, methods and evaluative procedures which reflect contemporary national needs in practical and functional education (Abegunde, 1988): This curriculum offers adequate guidance on the provision of adequately qualified teachers capable of training Geography students through the selection of practical themes as map work, graphical representation of statistical data, elementary surveying, field work and related projects. More than ever before, the scientific method of enquiry has been brought to bear on the broad spectrum of Geography methodology in that, great emphasis is laid on observational, investigational and analytical works of students both within and outside the classroom. Practical exercises in data gathering, processing and interpretation are to be carried out on a regular basis throughout the three-year course period by students with necessary guidance from teachers. Teachers are expected to be qualified and committed enough to be able to organise

and monitor the student's learning processes of observation, identification of phenomena, data collection, analysis, synthesis and generalisation.

Laudable as the contents, methodology and evaluative procedures are, it is important to note that the full objectives of the new Geography cannot be achieved without the right quantity and quality of human and material resources needed for sound Geography teaching. According to Oriafio (1984) "Resources" refer to "wealth and supplies of riches which could be human or material". As far as Geography is concerned, human resources consist of Geogaphy teachers, demonstrators, laboratory attendants, techonologists and their assistants while material resources are objects and other devices which the Geography teacher uses to carry out his teaching tasks (Yalokwu, 1989). They include visual materials (e.g. models, maps, specimens, etc), audio-aids (eg. radio, tape recorder, projectors etc) and audio-visual aids (eg. video, television, etc). Other instructional or material facilities include Geographical laboratory, library, survey instruments, materials for field work (eg. tape measure, camera, compasses, etc) photographs, weather recording equipment (eg. wind vane, stenvensons screen, etc) and some other community resources.

The importance of having the appropriate human and material resources for Geography teaching had been highlighted by a number of researchers. In his study of problems of Geography Teaching in Ondo State, Adetunberu (1984) found that a prominent problem facing Geography teaching is inadequate supply of qualified teachers. Okoro (1977) also emphasised the significance of numerical strength of graduate teacher as a determinant of the size of Geography class at the high school level in Nigeria. Okpalama et al (1975) in the research they conducted in Imo and Anambra States of Nigeria, found that of all the secondary schools surveyed, 50% had no single university graduate teacher while the remaining 50% had wither a graduate teacher or a Nigerian Certificate in Education (NCE) holders. Mc Bain (1967) in his own survey noted that a lot of problems facing many schools stemmed from the fact that there was shortage of qualified teachers to teach Geography. Berlina (1966) also noted that students performance in different curriculum areas (Geography inclusive) is differently affected by the qualification of the teachers.

Writing on the importance of teaching aids, Adejuyigbe (1970) emphasised that the success of the use of any new teaching method depends on availability of teaching aids and textbooks. In their separate studies, Majasan (1966) and Adeyemo (1987) posited that there is hardly any subject that requires instructional aids in the right proportion as much as Geography. From the foregoing review, it is clear that human and instructional resources are crucial components of a viable Geography curriculum and there is need for every secondary school to have an appropriate mix of the quantity and quality of these resources.

2. **Purpose** - The purpose of this study is to:
- i. identify and analyse the status of human and material resources in secondary schools located in Benin City; and
 - ii. discuss the implications of the existing resources situation for proper Geography teaching and learning in schools.

3. **Research Questions** - The following research questions and hypotheses will direct the thrust of this investigation.

- i What is the status of Geography teaching facilities in the surveyed schools
- ii What is the staff strength of Geography departments in the surveyed schools?
- iii/ What is the proportion of teaching staff (professional and non-professional) and non-teaching staff in Geography departments surveyed?
- iv. Is there any similarity in the existing staffing position of Geography and a related subject such as economics?
- v. Hypothesis one - There is no significant difference between Geogarphy and a related subject (Economics) department with regard to the staff strengths of their qualified teachers.
- vi. Hypothesis Two - there is no significant difference between professionally qualified and professionally unqualified teachers with regard to their staff strengths in the Geography departments surveyed.

4. Methodology

The population for this study consisted of all the 42 public secondary schools operating in Benin City, Bendel State during the 1990 academic session. As a result of limitation imposed by financial and time constraints, the survey, was restricted to a convenient sample of seven secondary schools comprising two boys', two girls and three mixed secondary schools. These secondary schools were all established over 9 years ago and each has above 1000 in student population. They have all been offering Goegraphy, Economics and some other subjects at the West African School Certificate level.

An instrument titled, "Secondary School Human and Material Resources Questionnaire" (SSHMRO) was jointly designed by the researchers for the purpose of collecting data from the said schools. Although, the main focus of this study is on Geography department, the SSHMRO was used to collect not only geographical data but also comparative data on similar variables in Economics department. The choice of Economics as a related subject is appropriate because Economics is the only social science, other than Geography, that is taught in the surveyed schools. Government, another social science offered at the Senior Secondary School level, is not taught, in all the schools studied.

The questionnaire was divided into two main parts. The first section was focussed on the number and categories of teaching and non-teaching staff, while the second part centred on available instructional materials. Head teachers in Geography and Economics departments were used as respondents to provide information on staff categories in their department. As for teaching facilities, available, only Geography head teachers were capable of providing necessary information since economics and other related subjects do not use all the teaching facilities meant for Geography teaching. Comparability is therefore hard between teaching aids used in Geography and any other high school subiect.

The questionnaire was administered to the head-teachers who helped to complete the instrument in such a way that it was useful for analysis. The responses provided by the teachers were analysed and summarised in Tables 1,2,3, and 4. It

should be noted that the seven schools surveyed have been coded serially - A, B, C.... G (See Table !) to ease further analysis. Analysis of data involved the use of percentages for descriptive analysis and the student 't' test for the proof of the stated hypotheses.

Results

The results of the computed data on Geography and Economics personnel resources in the surveyed institutions have been presented in Table 1 to 3 below.

TABLE I: COMPARATIVE STAFF STRENGTHS OF GEOGRAPHY AND ECONOMICS DEPARTMENTS IN SCHOOLS IN BENIN CITY

S/NO.	SECONDARY SCHOOLS		GEOGRAPHY				ECONOMICS			
			CATEGORY OF STAFF			TOTAL	CATEGORY OF STAFF			TOTAL
			B.Ed/B.Sc. Ed	A.Ed M.Sc.	NCE Below		B.Ed/BA/B.Sc. ED/ MSc	NCE & Below		
NAME	CODE									
1.	IDIA	A	3 (20)	1 (20)	1 (20)	5 (100)	1 (20)	2 (40)	2 (40)	5 (100)
2.	UDSS	B	2 (66.6)	1 (33.4)	—	3 (100)	2 (100)	—	—	2 (100)
3.	ASORO	C	—	—	2 (100)	2 (100)	1 (25)	2 (50)	1 (25)	4 (100)
4.	EDO	D	3 (50)	1 (16.7)	2 (33.3)	6 (100)	1 (16.7)	5 (85.3)	—	6 (100)
5.	EGHOSA	E	2 (50)	—	2 (50)	4 (100)	1 (25)	2 (50)	1 (25)	4 (100)
6.	ST MARIA GORRETI	F	2 (25)	—	6 (75)	8 (100)	1 (16.7)	2 (33.7)	3 (50)	6 (100)
7.	BAPTIST H.SCH.	G	1 (20)	1 (20)	3 (60)	5 (100)	—	—	3 (100)	3 (100)
	TOTAL		13 (39.4)	4 (12.1)	16 (48.5)	33 (100)	7 (23.3)	13 (43.3)	10 (33.4)	30 (100)

*Percentage values are shown in brackets.

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Source: Field survey April, 1990.

The result presented in table I reveals that the general picture of geography staffing in virtually all the schools is poor. Academic staff ranged from 2 in Adoro to 8 in St. Maria Gorreti Grammar School. All the seven schools combined had 13 professionally qualified graduate teachers, 4 non-professional graduate teachers and 16 professionally unqualified teachers. In other words, 39.4% were professionally qualified

geography teachers (e.g B.Ed., B.A. Edu, B.Sc + PGDE, etc) while 70.6% were professionally unqualified teachers (B.A., B.Sc., MA.,M.Sc., NCE, etc). None of the seven schools had any non-academic staff for Geography and Economics departments.

A look at Economics column of Table 1 shows that professional graduate teachers ranged from Zero in Baptist High School to 2 in University Demonstration Secondary School UDSS). Only 7 (23.3%) of the total number of teachers in Economics were professional graduate teachers; 13(43.3%) were non-professional graduate teachers while 10(33.4%) were professionally unqualified non-graduate teachers . It appears that the data presented on staff strengths of Geography and Economics departments are closely related both in the total number of teachers and relative strength of the professional teachers.

Hypotheses Testing

Table 2: Test of significant difference between professional teachers in Geography and Economics department.

	N	\bar{X}	SD	Calculated t value	Table Value of t.
Geography Teachers	7	2.43	1.29	-0.50	2.18
Economics Teachers	7	2.86	1.64		

*Not-Significant at 0.05 level.

Table 3: Test of significant difference between professionally qualified teachers and professionally unqualified teachers with respect to Geography Departments surveyed.

	N	\bar{X}	SD	Calculated value	Table t value
Prof Qualified Teachers	7	1.86	0.99	-1.32*	2.18
Prof - Unqualified Teachers	7	2.86			

Not-significant at 0.05 level.

The data in Table 2 above shows 't' test of significance. The test revealed that there is no significant difference in the existing staff strengths of Geography department and Economics department in the schools surveyed since the computed 't' value (-0.50) was below the table value (2.18) at 0.05 level. The hypothesis that there is no significant difference between Geography department and Economics department with regard to their staff strengths was accepted.

The test of significance presented in Table 3 shows a calculated 't' value of 1.32 was below the critical value of 2.18 thus indicating non-significance. Hence the

hypothesis that there is no significant difference between professionally qualified geography teachers and professionally unqualified geography teachers with regard to their staff strength in schools is accepted.

TABLE: 4 – INSTRUCTIONAL MATERIALS IN SEVEN SECONDARY SCHOOLS IN BENIN CITY

S/NO.	INSTRUCTIONAL MATERIALS	SCHOOLS							SCHOOLS WITH MATERIALS	% OF TOTAL SCHOOLS
		A	B	C	D	E	F	G		
1.	Wall maps	1	1	1	1	1	1	1	7	100
2.	Topo maps	1	—	1	1	—	1	1	5	71
3.	Globe	1	1	1	—	1	1	1	6	86
4.	Radio	—	—	1	—	1	—	1	3	43
5.	Television	1	1	—	—	—	—	—	3	43
6.	Projectors	—	—	—	—	—	—	—	—	0
7.	Aerial photo	—	1	—	1	—	—	—	2	29
8.	Models	1	1	—	1	—	—	—	3	43
9.	Lab. Equipment	—	—	—	1	—	—	—	1	14
10.	Geog. Store	1	1	—	1	—	—	—	3	43
11.	Survey Equipment	1	1	—	1	—	—	1	4	57
12.	Thermometer	1	—	—	1	—	1	—	3	43
13.	Stevenson Screen	1	—	—	1	—	1	—	3	43
14.	Rain gauge	—	1	—	—	—	—	1	2	29
15.	Wind Vane	1	—	—	1	1	—	—	3	43
16.	Anemometer	—	—	—	—	—	—	—	—	0
17.	Barometer	—	1	—	—	—	1	—	2	29
18.	Field Equipment	—	—	—	—	—	—	—	—	0
19.	Wall Charts	1	1	—	1	1	1	1	6	86
20.	Specimens	—	1	—	1	—	—	—	2	29

Source: Field work, April 1990.

A look at Table 4 shows that not all the schools have the full range of teaching aids needed to enhance geography learning. For instance, of the 20 teaching resources listed above, only one of them (wall map) was found in all the schools. whereas topographical maps and world globe are owned and used in 71% of the schools, wind vane, stevensons screen, Television and Thermometer were available in 3(43%) of the schools. None of the schools has projectors, anemometer and field equipments.

Discussion - Having presented the results of the data analysis in the foregoing section of this paper, we shall discuss the implication of the existing human and material resources for effective geography teaching and learning in secondary schools. The data have amply revealed that virtually all the schools had shortage of the right

quantity and quality of staff as well as the instructional materials required for the smooth execution of geography lessons. Except something drastic is done to redeem the currently poor image of staffing and instructional facilities in the schools, the laudable curriculum envisaged by the experts could only a force.

In specific terms we shall discuss the implication of the above on the future provision and promotion of adequate staff, teaching facilities, field work, geographical society and workshops and seminars.

- (a) **Staffing** - As indicated earlier in this paper, the academic and non-academic staff position of the Geography departments surveyed is to say the least appalling. It is sad to note that more of the seven schools surveyed had more than 3 professionally qualified Geography teachers. Professionally qualified teacher is one whose minimum teaching qualification is B.Ed/B.Sc Ed/B.A. Ed/PGDE. The strength of professionally qualified teachers ranges from zero in Asoro grammar School to 3 in idia College and Edo College. With 16 teachers having NCE and 4 having single honours; degree in Geography, the total number of non-professionals (20) exceeded those of professional (13). There was no single Geography laboratory attendant or technologist in any of th schools. A look at Economics department as shown in Table 1 reveals the fact that professionally unqualified teachers (23). From the picture given by Economics department (a sister social science subject) it appears that poor staffing is not peculiar to Geography department. This notwithstanding, the importance of having a well-staffed Geography Department cannot be over-emphasised. Unlike Economics and some other Social Sciences and Arts subjects which students can always read up from books in the event of inadequate staffing, Geographical concepts, values and skills by their very nature, need to be imparted through the guiding hands of trained Geography teachers. The implications of the shortage of Ceography teachers and other supportive staff are many. The existing crop of teachers may not be able to adequately cope with the highly comprehensive volume of work prescribed in the new curriculum. In view of the fact that researches conducted by Adesina (1984) in Oyo State, Adetunberu (1984) in Ondo State and Okafor (1985) in Bendel State amply corroborate the findings of this paper, there is need for the Ministries of Education and other education authorities to step up the training of more geography teachers and supportive personnel.
- (b) **Instructional Facilities:** The data shown on Table 4 have revealed that majority of the schools lack the necessary assemblage of teaching facilities. The new Geography curriculum makes ample provision for the teaching of elementary surveying, measurement and recording of weather elements in school Geographical gardens, and carrying out of periodic field exercises. All these involve practical work with necessary equipment. The bulk of the schools surveyed lack the equipments necessary for teaching the above skills. For instance, none of the schools had field equipments, projectors and anemometer while only 4 schools had survey equipment. Field work which includes field trip, field teaching, field demonstration and field research has been accepted as an essential part of Geography and is integral to the establishment of the subject and the understanding and true appreciation of it (Archer and Dalton, 1970).

According to Ogunnowo (1988) it is an integral part of the scientific mode of inquiry and it enables the learners to marry concept with realities. In order to foster the efficiency of Geography departments and boost the professional content of the subject, the Nigerian Geography Teachers Association, (NGTA) the Nigerian Geographical Association (NGA) in collaboration with the West African Examination Council should take practical steps to make the possession of surveying equipment, weather recording equipment and other teaching facilities a pre-requisite for schools to enrol their candidates for the Senior School Certificate examination. Efforts should also be made by Geography teachers to improvise teaching aids which can readily be procured from the local environment.

- (c) **The Geographical Society:** The Geographical society (an organisation for Geography student) should be formed in all secondary schools and its activities should be seen as an integral part of Geography department. Geography staff should take part in the organisation of its activities as moderators, patrons and advisors. It should be formally organised with elected student officers to run its activities. In a situation where secondary schools lack adequate qualified staff and the essential gadgets for acquisition of geographical skills, the Geographical society should constitute a complementary forum for engaging in local studies, field trips, debates, film shows, lectures and symposia on topics of geographical importance. Through such activities students are able to interact with their colleagues in a relatively informal and fraternal fashion, thereby filling the gap left by the conventional classroom work. Such a society can in fact enlist the assistance of local experts engaged in the fields of agriculture, water resources, manufacturing industries, town planning and surveying. Funds attracted from the above sources should no doubt be utilised on projects and tasks that will make Geography more relevant, objective and interesting to students.
- (d) **Workshops and Seminars:** It has been noted from Table I that majority (60.6%) of the geography teachers were inadequately qualified to handle Geography at the Senior Secondary school level. A situation in which 12.1% of the Geography teachers had purely non-teaching Geography qualifications (as B.A. and B.Sc. in Geography) and 48.5% had NCE, calls for a radical improvement in the training and retraining arrangement for professional Geography teachers. Since the percentage of professionally qualified teachers appear to be less than that of unqualified teachers, government should intensify inservice training arrangements in universities to enable the NCE and B.Sc/B.A (Geog) holders to proceed and acquire their B.Ed (Geography) and postgraduate Diploma in Education (PGDE) qualifications respectively. The NGA and NGTA in alliance with schools and Ministries of Education should organise Geography workshops and Seminars as retraining for all categories of teachers.

Conclusion

It is clear from the findings of this study that majority of the Secondary Schools lack the essential personnel and instructional facilities needed for the effective implementation of the new geography syllabus. The problems posed by the

above deficiencies have been highlighted. Though, they are many and varied, yet they are not insurmountable. What is called for at this time of Nigeria's Structural Adjustment Programme (SAP) is to look inwards and harness all the available environmental resources in a bid to make geography teaching more relevant to the needs of our students, teachers and the society. This means that secondary schools should exploit all opportunities in our local environments to improvise teaching aids, especially those which are becoming very scarce and expensive to procure. Since Geography has been recognised as an environmental science, it is only equitable and proper for it to enjoy all the current facilities extended to other sciences such as Biology, Chemistry, Mathematics and Physics) which include the provision of necessary teaching equipment and adequate funding of training and retraining programmes for teachers and supportive staff. It is expected that the provision of these human and material resources in their proper measure should not only make practical work in Geography more efficient and effective in schools but will inevitably foster the study of Geography thereby making it more attractive, acceptable and relevant to the needs of individuals and institutions in the larger society.

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