

## **Teacher-Utilization in Teacher Training Colleges in the Volta Region of Ghana**

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### **Abstract**

The study investigated teacher-utilization in teacher training colleges in the Volta Region of Ghana. Two hundred and four respondents completed the questionnaire and the interview guide on the mode of teacher utilization.

It was found that the teaching load of majority of teachers in teacher training colleges in the Volta Region was below the minimum norm of 16.7 hours per week set by Ghana Education Service. Also, all the teachers spent more time on their teaching-related activities. Again, it was found that teachers with administrative responsibilities and those without administrative responsibilities differed in their rates of utilization though not significantly. However, considering teaching-related activities, majority of the teachers worked for more than the maximum of 40 hours per week.

It is recommended that the present minimum load of 16.7 hours per teacher per week be reviewed because estimates given by respondents for teaching-related activities ranged between 45-90 hours per week.

### **Introduction**

The history of the development of education in Ghana from pre-independence to post-independence period is full of recommendations by various committees set up to review the existing education system and draw guidelines on improving education by way of formulating educational policies. Various governments have had educational review Committees that have proposed reforms of the education system with the Kwapong Education Review Committee of 1967 and the Dzobo Education Committee of 1972 being prominent ones (Ministry of Education, 1974). The Kwapong Committee recommended, among others, that all first degree graduates of the University of Ghana and the University of Science and Technology (now Kwarne Nkrumah University of Science and Technology) should not be selected for further studies in medicine or other essential services of technical nature but should do two years teaching as a form of

national service. The committee insisted that graduates of the University College of Cape Coast (now University of Cape Coast) should spend five years in teaching before being permitted to take up other appointments. The Dzobo Committee (MOE, 1974) recommended, among others, that from the 1972/73 academic year, all primary one to three classes should be staffed with trained and certificated teachers. Again the committee suggested that by 1975, all primary schools in Ghana should be staffed with trained teachers. There was, thus, the need for a viable teacher education programme that would feed the education system with qualified trained teachers who would lay a solid foundation, especially at the primary school level, on which further education would be built.

Generally, targets that are set by educational reforms would not be achieved without the availability and efficient use of teachers. Ginzberg and Smith (1967) have pointed out that the common error in both developed and developing countries is to focus exclusively on manpower supply while giving brief consideration to manpower utilization. Ginzberg and Smith (1967) emphasized that in manpower analysis, attention must be paid to utilization. They have argued that improvement on utilization of manpower offers one of the best prospects of securing a better balance between a limited supply and an unfulfilled demand for skill. Ginzberg and Smith (1967) accused developed and developing countries for their failure to match manpower supply with utilization and suggested that for prospective supply to meet demand, there must be considerable measure of how the effectiveness of people with varying skills are utilized. In a joint module prepared by the Ministry of Education and Culture, Ghana and the International Institute for Educational Planning in 1988, cited by Atta Boison (1992), teachers could be utilized in terms of the students in their class and the number of lessons they teach. According to this module, therefore, pupil-teacher ratios and teaching load could be used as indicators of teacher utilization.

Harbison (1973) expressed the opinion that under utilization of human resources has been the most serious problem facing less developed countries. He emphasized that though the concepts of employment and unemployment in developing countries have partly been different from those applicable to the advanced countries, it is clear that manpower in developing countries has been grossly under utilized. To him, the strategy of human resource development is concerned with the two-fold objective of

building skills and providing productive employment for unutilized or under utilized manpower.

Harris and Liba cited by Atta-Boison (1992) have contended that one important means of measuring the level of teaching staff utilization in schools is through teaching load. The teaching load in his view should generally be understood to include all the time and energy a teacher will expend in fulfilling duties and responsibilities relating directly or indirectly to the task of teaching.

The Organization for Economic Co-operation and Development [OECD] (1971) has stated that it is not enough to provide the school system with a reserve of qualified staff. A more rational development of teaching staff is essential. The OECD noted that the legal number of teaching hours required meant little. The teacher's other duties should be taken into consideration. These other duties include lesson preparation and marking of students' assignments, exercises and projects. It was revealed by OECD that in England and Wales, there are no fixed number of working hours for a full-time teacher. The teacher was engaged to carry out all activities that take place at school.

Edem (1987) argued that a teacher's morale is likely to be affected by the teaching load. The teacher will be demoralized if he/she finds a class too large or had too many lessons to teach daily, which require a great deal of preparation. Edem noted that if a teacher's responsibilities are of intolerable complexity and magnitude so that the teaching load exceeds the average of 25 to 30 periods a week, his/her morale is likely to be affected. The teaching load is partly determined by the staff establishment.

In general, staff establishments are determined according to the size of the service or establishment concerned and the work expected to be done. This applies to workers such as teachers, doctors, extension workers and others in related services. In the educational sector, teacher-pupil ratio, the minimum number of periods of lessons a teacher should teach in a week and the maximum number of students a class can hold are used to determine staff establishment.

One of the early proponents of effective utilization of human resources as cited by Arrigazzi, and de Simone (1972) was Taylor. Taylor, according to Arrigazzi and de Simon, argued in his scientific management theory that each employee of an organization should have a clearly defined

daily task. This task, according to Taylor, should require a full day's effort to complete.

In Ghana, there have been established norms that guide teacher-utilisation. According to the Ghana Education Service (GES, 1997), the student teacher- ratio in a teacher training college should be 15:1, and the maximum class size was put at 40 students. The minimum teaching load of 25 periods per week with each period lasting 40 minutes were also established. This, however, did not take account of the teacher's non-teaching load which comprises other teaching-related duties such as lesson preparation, marking of tests, projects and long essays, as well as supervision of students' teaching practice.

Teachers in the training colleges, therefore, complained about their workload because of the combination of both curricula and co-curricula activities. Officials of the Ministry of Education and the GES, however, argued that most teachers in the teacher training colleges were not effectively utilized and that their teaching load, most often fell below the norm of 16.9 hours a week, derived from the 25 periods to be done by each teacher per week. The question then is: To what extent does staff establishment set by the GES reflect teacher-utilisation in the teacher training colleges?

The purpose of the study was to investigate teacher-utilization in the seven public teacher training colleges in the Volta Region of Ghana. The study was conducted to determine the amount of time teachers spent on teaching, lesson preparation, setting and marking of assignments. It was also to find out how much time was spent on co-curricular activities such as supervision and administration in order to make informed judgement about teacher utilization in the teacher training colleges.

**The following research questions guided the study:**

- (1) To what extent does teachers' teaching load in the teacher training colleges meet the norm set by the Ghana Education Service for effective teacher utilization?

- (2) Do teachers with administrative responsibilities and those without administrative responsibilities differ with regard to their total work load?
- (3). Which of the following factors: teaching load, teaching-related duties, administrative duties, most affect teacher utilization in teacher training colleges in terms of the number of working hours?
- (4) In what way does staff establishment affect teacher utilization in the teacher training colleges?

## **Method**

### **Participants**

The population for the study was made up of all the 245 principals and teachers in the seven public teacher training colleges in the 2000/2001 academic year in the Volta Region of Ghana. However, at the end of the data collection exercise, 204 respondents comprising 197 teachers and 7 principals constituted the final sample.

### **Research Design**

The study was a cross-sectional survey to investigate teacher utilization in teacher training colleges in the Volta Region of Ghana. According to Kerlinger (1986, P. 377), surveys enable an examination of "large and small populations (or universe) by selecting and studying samples chosen from the populations to discover the relative incidence, distribution and interrelations of sociological and psychological variables"

### **Instrument**

A questionnaire was the main data-gathering instrument used. The questionnaire had sixteen items mainly the checklist type and open-ended questions. The first part of the questionnaire elicited demographic information on the respondents per college including their highest academic qualification and professional qualification. The second part had items pertaining to respondent's workload. The teachers were asked to estimate the amount of time used in performing duties such as lesson preparation, marking long essays, setting test items, conducting and marking assignments among others, as well as all the activities that each of them

performed in the questionnaire. The questionnaire was developed and pre-tested in three teacher training colleges in the Central Region of Ghana.

An interview guide was also used to obtain information from the principals of the colleges about teacher-utilization in their colleges. Examples of items in the interview guide included the following: Do you have the full compliment of teaching staff requested for each of the subject/courses offered in the college? Does the Ghana Education Service allow for extra teaching staff considering the teacher-student ratio establishment set by the Ghana Education Service have on teacher recruitment for your college?

### **Procedure**

To ensure effective collection of the needed data, personal visits were made to the training colleges to discuss the questionnaire with the vice-principals who served as research assistants for the study. The questionnaire were numbered before they were given to each of the 245 teachers in order to facilitate easy follow-up, collation and analysis of the data. The data collection process began on 4<sup>th</sup> June 2000 and ended on the 26<sup>th</sup> of the same month. The questionnaires were personally delivered to the vice-principals who in turn administered them to the teachers and have the completed questionnaires collected.

Computation of respondents' total load was based on the number of periods of teaching plus the estimated hours spent on co-curricula and administrative activities. In the teacher training colleges in Ghana, each teaching period is forty (40) minutes. Thus, the number of teaching periods of respondents were converted into hours. For example, a teacher teaching for 12 periods, a week's total number of hours for teaching is 8 hours (i.e.,  $[40 \times 12]/60$ ). In this study the total load of a teacher was considered to be teaching and teaching-related activities. The data gathered for the study were scored and analysed statistically to determine frequencies and percentages to show the distribution of teaching load in the colleges. The mean hours of teaching per week for teachers in the colleges for those with administrative and non-administrative responsibilities were calculated. Table 1 shows the number of hours of teaching by the respondents. The independent t-test was used to determine whether there was a statistical difference between the mean hours of total load per week of teachers with

administrative responsibilities and those without administrative responsibilities. This is shown in table 2.

### Results

The result of the study showed that 118 (57.8%) of the teachers had teaching load that was below the norm of 16.7 hours per week set by the GES, while 12 (5.9%) teachers had teaching load above the norm. Seventy-four of the teachers (36.3%) had teaching load around the norm.

Table 1

*No Hours of Teaching done by the Teacher Respondents*

Teaching Hours	Frequency	Percent
Below 16.7	118	57.8
16.7-17.0	74	36.3
Above 17.0	12	5.9
Total	204	100

The data in Table 1 show that majority of teachers in the colleges had teaching load that was lower than the stipulated 16.7 hours of teaching per week approved by the GES. Based on the available data, the answer to research question one is that, to a large extent, most teachers do meet the norm set by the Ghana Education Service for effective teacher utilization.

To determine whether there was a significant statistical difference in hours of utilization between the teachers in the colleges who held administrative positions (such as vice-principals, housemasters, housemistresses, senior housemasters or senior housemistresses) and their colleagues who had no officially assigned administrative duties the t-test of independence was employed. That was to establish whether there was any difference in their total work load due to the additional administrative and other responsibilities. Table 2 presents the results of the analysis of teachers with administrative responsibilities and teachers without administrative responsibilities.

**Table 2**

*Descriptive statistics and results of the t-test analysis for administrators and non-administrators in terms of hours of teaching.*

Category of teacher	N	X	SD	t	p
Administrators	146	3.2740	1.06687		
				-861	.390
Non-Administrators	56	3.3793	.64421		

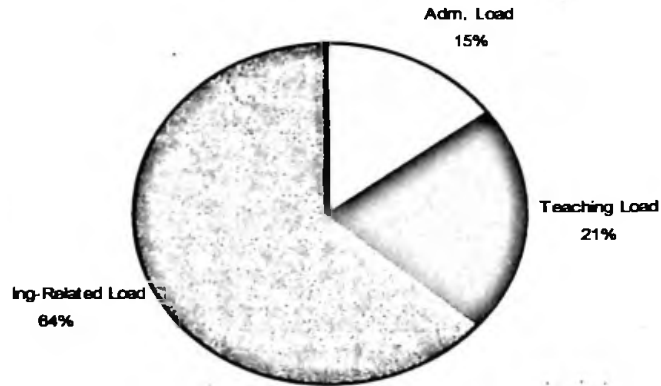
$P > 0.05$

With hours as the unit of measurement, Table 2 shows that the mean workload of teachers with administrative duties and teachers without administrative duties are almost the same ( $3.27 \approx 3.38$ ). Administrators' data show ( $M=3.27; SD=1.07$ ) while the non-administrators data are ( $M=3.38; SD=.64$ ). The t-test result is  $t(203) = -861, p = .390$  (two tailed). This shows that there is no statistically significant difference between the administrators and non administrators in terms of their teaching and teaching-related activities.

To determine which of the factors: teaching, teaching-related and administrative responsibility that most influenced teacher utilization in the colleges, data from the estimates of time allotted to the activities were considered as 100% and distributed among the three factors (i.e Teaching load, Administrative load and Teaching-related load) being considered. The analysis took the form of calculating the total load in percentages for all the teachers for each of the factors being considered.

Figure 1 shows the contribution of each of the factors to the total utilization of the teachers in the colleges.





**Fig. I:** Distribution of time in percentages among the factors.

It is observed that administrative responsibilities (load) accounted for 15%, while teaching load accounted for 21%. The teaching-related load accounted for 64%. It could, therefore, be said that the factor that most influenced teacher utilization in the colleges was teaching-related load which include lesson preparation, test item writing, and marking of assignments, among others.

From the interview with the principals of the colleges it became clear that the student-teacher ratio of 15:1 as established by the GES was not favourable to the teachers because they did more work considering the teaching and teaching-related duties that they performed. It came to light from the interviews that, in almost all the colleges, there were teachers who taught more than one subject because though the colleges had the full compliment of the teaching staff, the number of periods called for additional teachers. For example, in almost all the colleges, agricultural science teachers had the additional responsibility of teaching lessons in biology. Some Ghanaian language teachers also taught lessons in religious and moral education while some education studies teachers particularly those who did methodology in

mathematics as part of their diploma or degree programmes taught lessons in mathematics methodology.

It was found out that the teachers in the colleges were not happy with their workload as indicated in Table 3.

Table 3

*Teachers' satisfaction with workload*

Satisfaction	Frequency	Percent
Yes	23	11.3
No	181	88.7
Total	204	100

The data in Table 3, show that only 23 (11.3%) teachers said they were satisfied with their total workload while 181(88.7%) teachers expressed their dissatisfaction with their total workload. Data from the estimates for individual teachers' teaching-related duties ranged between 45-90 hours per week, and this supports the views of the principals of the colleges concerning the recruitment and utilization of teachers in the colleges.

### Discussion

The result of the study shows that on the average, the teaching load of teachers was lower than the minimum number of hours expected by the Ghana Education Service. The data on individual teachers' load ranged from 10.7-17.7 hours with the mean for the colleges being 14.3 hours per week. The result supports findings of Atta-Boison (1992) and Harbison (1973) who concluded in their studies that the teaching load of teachers is lower than the norm, but compensated for by the load in terms of teaching-related duties such as lesson preparation and marking of assignments. The result also supports findings by Caron cited by Herzberg (1989) that teachers' workload does not always correspond to official norm.

According to the Ghana Labour Redeployment Programme (1990), the labour laws of Ghana require a worker to work for 40 hours a week, with an average of 8 hours a day. Since the GES norm demands that teachers in colleges teach 16.7 hours a week, it is assumed that teaching-related duties will be completed by teachers in 23.3 hours a week which is the difference between the norm of 16.7 hours and 40 hours stipulated by the labour laws of the country. Due to unavailability of a time table indicating definite periods for the performance of teaching-related duties, teachers were asked to estimate the time used in performing duties such as lesson preparation.

marking of tests, assignments, supervision of teaching practice by students and long essays written by students. The results presented indicate that teachers in the colleges spent 64% of the total working hours (Fig.1) meant for teaching, administrative duties and teaching-related activities on only teaching-related duties, and this makes it the factor that most influenced teacher-utilisation. This confirms a survey by the Chilean Technical Secretariat for Technical Education cited by Arrigazi and de Simone (1972) that about 13.7% of the total teaching hours was, in fact, devoted to tasks other than teaching such as setting test items, marking long essays, and supervising students on practice teaching. The study also supports the assertion by the organization for Economic Co-operation and Development (OECD) (1971) that the legal number of teaching hours required meant little because the teacher's other duties should be taken into consideration.

On teachers satisfaction with their workload, as many as 181 (88.7%) teachers indicated that they were not satisfied with their workload, with 23 (11.3%) teachers indicating their satisfaction. The result confirms findings by Edem (1987) who argued that a teacher's morale was likely to be affected by his or her teaching load. Such a teacher would be demoralized if he or she found the class too large or had too many lessons to teach daily, which required a great deal of preparation. According to Edem (1987), if a teacher's responsibilities comprising teaching and teaching-related activities exceeded the average of 25 to 30 periods a week, his or her morale was likely to be affected.

### **Conclusion**

The study established that the teaching load of the majority of the teachers studied was below the minimum norm of 16.7 hours per week. The picture that emerged from this finding is that the teaching load of the majority of the teachers in the teacher training colleges in the Volta Region is less than 16.7 hours a week. However, many of the teachers, according to them, spent more than 40 hours per week on teaching-related and administrative duties than was expected by the labour laws of Ghana.

### **Implications of the study for education**

From the findings of the study it has been observed that whereas the teacher-student ratio of 15:1 may be appropriate, the actual workload of the teacher is far more than envisaged. Again the norm of 16.7 hours per week

per teacher set by the Ghana Education Service is not realistic since teachers' actual workload is not on only teaching. The Ghana Education Service should therefore compute the number of hours actually spent on all that teachers do as part of their load at the teacher training colleges.

There is the need for the Ghana Education Service to study closely what actually goes into the teacher's workload to enable the relevant authorities see the current appropriateness or otherwise of the student-teacher ratio of 15:1.

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