THE ATTITUDES AND PRACTICES OF TEACHERS AND PUPILS TO ENVIRONMENTAL HEALTH FACILITIES IN IBADAN SCHOOLS

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TO MY LOVING PARENTS, BROTHERS AND

SISTERS WHOSE ENCOURAGEMENT NEVER CEASED

ALSO TO MY WIFE, GEORGINA IUCHELO (MRS.) FOR

HER FAITH, ENCOURAGEMENT AND FOR ALLOWING

ME TO DO THE M.P.H. (H. Ed) DEGREE

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CERTIFICATION

We certify that this work was carried out by Mr. B.H. Michelo in the Department of Preventive and Social Medicine, University of Ibadan.

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ABSTRACT

The provision of satisfactory environmental health facilities in schools is very essential for the promotion of health of both teachers and pupils. In this dissertation, teachers' attitudes and practices to the use and maintenance of environmental health facilities in selected schools in Ibadan have been covered. The study has revealed that environmental health facilities in the Primary Schools are not only inadequate, but they are poorly maintained. It is an important duty for teachers to see to the maintenance of these environmental health facilities. In this study, pupils' practices to the use and maintenance of environmental health facilities were also included. It was not easy to study pupils' attitudes by mere observation because attitudes are the inner forces of man, which pull and push him to respond positively or negatively, and are therefore not observable. Because of this difficulty, pupils' attitudes have not been covered in this dissertation. Pupils' practices were studied by way of participant observation because it was easy to observe what pupils

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were doing. From each observations, it was easy to deduce from their practices that the existing facilities in schools were grossly inadequate to cope with large enrolments in those schools.

The research methods which the author used in the study included: the observation, interviews and discussions and the questionnaire which was administered to all teachers in the schools. The methods were used to collect as much useful information as possible on the attitudes and practices of teachers and pupils to the provision, use and maintenance of four selected environmental health facilities. The selected environmental health facilities which have been covered in this dissertation include:- Water Supply, Waste Disposal, Mid-day school meal and School Buildings.

The study discovered that although teachers possess knowledge, they do not put what they know about health into practice. Many of them neglect the use and the maintenance of existing environmental health facilities without realizing the health hazards that might arise. In this case, teachers fail to set the desired example of healthful living to pupils in schools.

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Water supply in those schools is often interrupted and in some cases water taps are locked and pupils cannot use them. In all schools storage facilities for water and wash-hand basins are lacking. Waste disposal methods are either inadequate or absent. The teachers' attitudes and practices to the existing waste disposal methods in schools are bad. From the research methods employed it was discovered that teachers are not drilling their pupils to use these facilities well. The Mid-day School meal in all schools is not well organized and not much health education is attached to it. Most of the school buildings are quite old and many of them are defective. The health implications of inadequate and unsatisfactory conditions of these environmental health facilities are numerous. In all, teachers did not show keen interest to inspect the existing environmental health facilities and see to it that deviations from standards get corrected.

To conclude, the study recommends that both the Government and the communities around the schools should be involved in the improvement of environmental health

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facilities. There is a need to train teachers in health education and to make them aware of their role as change agents. In addition to this, there is a need to conduct refresher courses for teachers to make them aware of the dangers caused by negative attitude and practices to the proper use, and proper maintenance of environmental health facilities. There is need to make school health programmes relevant to community needs to allow the pupils to benefit both at home and in school. Teachers should be encouraged to carry out their own periodic inspections of environmental health facilities in schools and do all necessary corrections where possible.

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CHAPTER ONE

INTRODUCTION

Attitudes affect the practices and the knowledge of both the teachers and the pupils in schools. This study examines the attitudes and practices of teachers and pupils to the provision, use and maintenance of environmental health facilities in schools. Environmental health facilities in each school are many, but in this dissertation only four of them are covered. The environmental health facilities which this study covers include:- Water supply, Waste disposal, Mid-day School meal and School buildings.

Water Supply in schools is essential for personal hygiene and for other cleaning purposes in the school. It is essential that this kind of water be adequate, safe and accessible to both pupils and teachers. Waste disposal methods in each school should be adequate

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and acceptable to the teachers and pupils. There is need for the mid-day school meal to be nutritionally balanced to prevent nutritional disorders among school children. This is also essential in order to promote the desired education in good eating habits of pupils in schools. However, where this mid-day school meal programmes have been started, teachers must operate it well and prevent all possible contamination of food at various stages through which food passes before consumption in the schools. Classroom blocks are also part of the educational process and not merely a shelter for learning. It is also a duty for teachers to keep them hygienically clean and correct any deviations from standards or make a report to the appropriate authority for action.

This study is carried out to discover whether teachers' attitudes and practices play a dominant part in hindering or promoting the successful operation of environmental health facilities in schools. It is also essential to find out whether pupils' bad practices to the use and maintenance of those facilities in schools emanate from the teacher's negative attitudes and practices. The

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research will find out whether those environmental health facilities are adequate to meet the needs of the school population and whether they are properly used and maintained to benefit the pupils in schools. An attempt will also be made to discover whether there are some health implications which can arise when such facilities are improperly used and maintained.

In some countries environmental health facilities are provided by the government. However, where the government cannot provide them, it is the teachers' responsibility to organize the community and see to it that environmental health facilities are provided in schools. Once these have been provided it is the duty of the teachers and pupils to maintain them well.

Teachers' attitudes and practices to the use and maintenance of these facilities in schools are governed by the knowledge which the teachers possess. Questions asked from the teachers on how pit latrines should be maintained in schools are likely to bring out positive as well as negative responses based on the teachers' feelings, thoughts, actions or behaviour towards the pit latrine.

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Teachers' preparation in health education prior to their appointment as teachers is essential to make them aware of their role as health teachers. These teachers have equal responsibility to maintain environmental health facilities in schools. In a group working situation such as a school, if the dominant group members have unfavourable attitudes or behaviour to environmental health facilities it will not be easy for the teachers individually to have favourable attitudes and practices to promote healthful living in the school.

Attitudes and practices are governed by the norms of the group to which one is a member. Those attitudes which get developed after a long time get deeply rooted and cemented and are therefore very difficult to change in the individuals i.e. teachers. For this reason, many governments have laid much emphasis to teach health education to pupils in schools because pupils can acquire correct attitudes more easily than adults. The ultimate aim of health education in schools is health practice or action. Health education occurs only when the health action or health practice has taken place.

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Before we can say that teachers' attitudes and practices are favourable or unfavourable, it is important to research and find out the status of environmental health facilities in schools. Some of the important questions to answer are:- Are these facilities a threat to their culture, beliefs, and customs? Is it practicable to acquire these facilities and maintain them in schools? Are these environmental health facilities acceptable to the local people in the study area? Is outside help available to help in providing these facilities in schools? Lack of adequate provision of these facilities may lead pupils to adopt incorrect practices i.e. pupils may throw school refuse anywhere if there is no available method of refuse disposal in school. In the final analysis, it is not easy to understand why teachers are not doing what they are supposed to do in school unless one studies their attitudes, knowledge and practices to the use and maintenance of existing environmental health facilities.

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CHAPTER TWO

2.1 LITERATURE REVIEW

The study on attitudes and practices of teachers and pupils to environmental health facilities should probe into the provision, use and maintenance of these facilities. The provision, use and maintenance of these facilities are in the interest of the pupils' own health; they also contribute to the development of sound health habits and attitudes.[1] Many research workers have written on the insanitary conditions in the majority of communities in Nigeria. Since schools are part of communities, the author has decided to investigate into the role of the school teachers as regards to the promotion of health for pupils. As stated by one research

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1. Kazaure, A.M.: School Sanitation. J.S.H.N. vol. XII, No. 1, (April 1978).

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Worker, the role of the school is not only an academic institution but it is a health education unit.[2] The school therefore should serve as a place of demonstration of good sanitation to the community and that children should be encouraged to participate in practical activities.[3]

In response to the above, each school can carry out this activity by providing good water supply and sanitary facilities for the disposal of waste inside the school compound. It should also provide good class rooms and operate a mid-day school meal programme.[4]

It is the duty of the teachers to drill the pupils so that they develop good practices on the proper use and maintenance of existing facilities in schools. There is much emphasis on pupils to do practical activities to make health education meaningful. The best way to brighten a country's future is to invest in its children.[5]

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2. Odunton, S.O.: Health Implications of the Proposed U.P.E. in Nigeria. J.S.H.E., vol. xi, No. 1 (January 1976).
3. Dronkhelm, Vivien: "School Health Education in South East Asia." Int. J. of Hlth Ed., 1:3 (1958), 133.
4. Odunton, S.O.: Op. cit.
5. Agondi: Women in Africa p.8 (February, 1978).

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Studies which were conducted in selected schools in Ibadan have revealed that environmental health facilities are grossly poor.[6]

Also Odunton in her earlier studies found the conditions in most Nigerian Schools to be "deplorable".

(i) 70% of all schools were without pipe-borne water;

(ii) 60% were overcrowded (a condition which most UPE classes are experiencing);

(iii) 23% had no refuse disposal facilities;

(iv) 23% had bucket latrines, collection of which is very irregular.[7]

Equally in the communities the environment is fetid, filthy and highly susceptible to any epidemic as a result of environmental neglect.[8]

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6. Adeniyongun, Y.A.: An investigation of status and problems of Environmental Sanitation in Selected Schools in Ibadan, Nigeria. Journal of Pharmaceutical and Medical Science, vol. 1, No. 2. (1977), pp 59-75.

7. Odunton, E.O.: "The effect of Environmental factors on the intellectual behaviour of Nigerian School Children. J. Trop. & Env. Child Hlth. vol. 17 (1971), pp 67-70

8. Onibokun, A.G.: "Environmental Sanitation in Nigeria" Directions for future research. J.S.H.J., Vol. 2, No. 1 (January 1976), pp 107-110.

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In order to improve the environmental health status in schools to benefit the future generation, many research workers have advocated for a systematic planned action. There is no proper way of doing this without involving the teachers in schools. Teachers in schools supervise and control the way pupils live, and are in a good position to prepare them as future healthy citizens.

It is accepted that beliefs and misconceptions which people acquire when they are young tend to stick to them for a long period later in life.[9] It is therefore essential that pupils' bad practices and attitudes to the use and maintenance of existing environmental health facilities be corrected when pupils are still in schools. The schools have an advantage in this because children in schools form ready audience which is easy to get, teach and influence. However, pupils' bad practices on the use and maintenance of existing facilities cannot be corrected unless teachers put what they know about health into practice.

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9. Oluwande, P.A.: Provision of Environmental health facilities for healthful school living in Nigeria. W.J.H.E., Vol. 1, No. 1 (July 1978), pp 19-23.

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2.2. THE EFFORTS OF THE SCHOOL IN PROMOTING THE HEALTH OF PUPILS

The importance of Primary Schools in Nigeria and Africa in general in connection to the promotion of health of school children cannot be ignored. Most government have introduced Universal Primary Education to enable the future generation to be enlightened. This scheme aims at equiping the pupils with health education especially practical health education by methods whereby the children will not only learn theoretically but undertake practical activities to effect a comprehensive physical, mental, social, moral and spiritual health.[10] This kind of education enables the pupils to develop good attitudes and practices.

The teaching of health education in Primary Schools has always been a major pre-occupation of many people and several conferences had been held about this. The one of 1948 which was organized by the International Bureau of Education, recommended to all Ministries of Education that practical instructions in hygiene and health education be made compulsory in all Primary Schools.[11]

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10. Sofoluwe, G.O.: The Health of the School Child. J.S.H.N., vol. xii, No. 1. (April 1978), pp 5-7.

11. Kilander, F.H.: Strong Recommendations of Health Education in Primary Schools adopted at the International Conference in Public Health Education (1948). Int. J. Hlth. Ed., vol. x (1967), p. 184.

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In response to this international call there is a Primary School Syllabus in Oyo State in Nigeria on Health Education. It is titled "family health".

In order to be meaningful, health education should be approached as a practical discipline and examples are important. It has to be related to the social and health needs of the school and community. This is essential because the child is part of a large community and what affects the community will affect him. Health Education should be related to the problems of life and their solutions.[12] A programme of constructing pit latrines in the school or community should therefore originate from the lives and problems of the people for it to be realistic. The school which only teaches the importance of good water supply, advocates a proper system of refuse and human excreta disposal and stresses on the need for the hygienic preparation and serving of food and yet declines to provide these essentials has failed in its task in health education.[13] For this reason, the school must aim at providing a high standard

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12. Hall, C.S.: Lecture notes on "School Health Education" Chalimbana In-Service Teacher Training College (Zambia) (1977).

13. Owon, J.S.: The role of Health Education in schools in promoting Environmental Sanitation. Journal of the Society of Health. vol. II, No. 2 (July 1967).

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for its environmental health facilities. Health Education in a school setting exists to prepare the citizen for the necessary changes in his habits through awareness, information and evaluation.[14]

THE FOUR SELECTED ENVIRONMENTAL HEALTH FACILITIES STUDIED

2.3 Water Supply:

The provision of safe drinking water in schools is very essential and is the first practical step towards healthful school living. The other requirements of a school water supply are its adequacy, convenience and continuity.[15]

Safe and adequate water supply does not only eliminate the use of polluted sources but it also makes possible water borne sewage disposal. It also provides sufficient water for laundries, cooking and personal cleanliness. If possible a school tap should be placed where pupils can obtain water for drinking without need for storage.

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14. Lagos Health Congress (Editorial). J.S.H.N. vol. II, No. 2 (July 1967).

15. Lucas, A.O. and Gilles, H.M.: "Environmental Health". A short textbook of Preventive Medicine in the Tropics, Chpt. II (1976).

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However, in cases where water has to be stored in class-rooms, it must be stored in proper sanitary devices to keep it wholesome. It is important and hygienic to give each pupil an individual drinking cup or single service paper cups. This helps to guard against the spread of diseases.[16, 17]

Research workers have suggested that in providing water supply to schools, the first important consideration is the source of the supply e.g. whether piped treated water, or whether from a deep or shallow well and whether from a stream, spring or pond. All suspicious sources must be protected from pollution. Schools which use wells as their sources of supply must be health educated against the dangers associated with underground water. The sanitary measures which such schools can adopt are as follows:- The well should not be less than 30 metres (100 feet) from any nearby source of pollution and should be situated at a higher level to that source of pollution to prevent polluted water flowing into the well. The well should have a watertight lining from the bottom to

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16. Lucas, A.O. and Gillies, H.M. On cit.

17. Turner, C.E. et al.: School Health and Health Education (1970).

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the top. The well should be provided with a parapet of about ½ metres above ground level to guard against the entry of surface run-off. This parapet should be surrounded by a concrete apron to drain the waste water away. There must be a water-tight cover. Water should be drawn preferably by a pump, or at least through a permanent bucket which is anchored to the well.[18] Individual buckets which may lead to pollution should be avoided.

Hand washing basins are very essential in schools for use by the teachers and pupils to clean up their hands after visiting the latrine and after manual work. This is very important and must be regarded as practical health education.

Studies which were carried out in selected schools in Ibadan and Ile Ife revealed that there is no water supply in some Primary Schools. Consequently children have to wander far and wide in search of water or bring water to school from homes. Therefore there is no water to clean up the latrines and for personal hygiene.[19]

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18. Lucas, A.O. and Gilles, H.M.: Op cit.

19. Sangowawa, O.O. and Obiyemi, M.A.: The analysis of the status and problems of Environmental Sanitation in Nigerian Educational Institutions J.S.H.N., (April 1978), pp 12-18.

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2.4 Disposal of Wastes:

(a) Toilet facilities:

Toilets should be adequate and conveniently located to classrooms with separate units for boys and girls. Units for male and female teachers should be separate too. Latrines should be well lighted, screened, ventilated and should be kept clean. The floor of a pit latrine should always be made of reinforced concrete so that it does not collapse. There is need for the proper maintenance of latrines to minimize the danger to health. Such dangers can be avoided if standards of construction and maintenance are followed.[20]

It is essential that hazards to pupils' health and any insanitary conditions in the school compound that endangers the health of the pupils and teachers be corrected without delay. In correcting some of those dangers to health, pupils must be involved because this is practical health education exercise. Teachers and the pupils must be alerted that large numbers of diseases are spread directly through man's contact with human

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20. Oluwande, P.A.: "The Pit Latrine System". Chapter 2, Cheap Sewage Disposal in Developing Countries. Ibadan University Press (1978).

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excrement, and indirectly via water, food and soil or via carriers and disease vectors like flies and cockroachers. Faeces are attractive to flies and support the development of larval stages. All indiscriminate disposal of faeces can constitute a grave nuisance as a result of unsightliness and smell.[21]

The above insanitary conditions can be minimized if adequate provisions for the disposal of faeces in schools are made and if both pupils and teachers are taught to appreciate and use such facilities and to maintain them properly.

Researchers have also discovered that the construction of a latrine is only a first step, but other activities such as the proper use (upkeep and disposal of contents) are equally important. Teachers should have some knowledge about the relationships between locally prevalent faecal borne diseases and excreta.

Pupils need to be drilled vigorously on practical health education, like ensuring that orifice covers are replaced

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21. Winblad, U. et al: Sanitation without Water (1978).

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in position after use of latrine to prevent the ingress of flies, and also scrubbing the floors of latrines from time to time. School children need to be motivated on the use of a latrine. Teachers in schools should lay more emphasis on the relationship between insanitary practices and disease.[22]

Teachers in schools should aspire for well constructed and properly maintained pit latrines. In such a latrine, there should be no handling of fresh faeces, no contamination of surface soil or any underground water that may enter into a well. Excreta should not be accessible to flies or animals and there should be no unpleasant odour or unsightly conditions. The construction method should be simple and inexpensive. The method must be acceptable in terms of culture and beliefs of the pupils and teachers.[23]

The pit latrine should be deep in order to discourage fly breeding and to prevent it from filling prematurely. The recommended number of pupils per pit latrine is 16 pupils.[24]

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22. Turner, C.H.: Planning Health Education in Schools. (1966).

23. A.O. Lucas and Gillos, H.M.: Op cit

24. Osiberu, E.A.: School Sanitation in Nigeria J.S.H.H. vol. XII, No. 1 (April 1978).

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(b) Refuse Disposal:

The proper disposal of solid wastes such as garbage and rubbish (waste food, cans etc.) is very essential in schools. According to the studies carried out by some research workers in Nigeria and other developed countries, provisions should be made in schools for adequate refuse disposal. It is essential that each classroom maintains its own waste paper box or dust bin. These are to be emptied regularly at a central refuse dump before final disposal. The central refuse dump should be within easy reach of pupils. Refuse should not be allowed to accumulate in school premises because it can lead to the generation of odours, harbouring of insects and rodents thereby encouraging their breeding.[25]

However, even if pupils in Primary schools are taught to pick litter within and outside their classrooms at regular intervals, it has been discovered that facilities like incinerators, refuse pits or other refuse disposal methods are not available. In some schools where the facilities are available, they are not effectively utilized in which case pupils and teachers alike dump refuse in nearby bush or in an open space.[26]

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25. Kazaure, A.M.: Op cit

26. Songomaga, O.O. and Obiyemi, M.A.: Op cit

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For practical health education purposes, pupils must be organized to empty school dust bins. In organized schools, Sanitation Committees have been formed to help bring about the cooperation needed in the maintenance and proper use of existing facilities. Where school incinerators are provided, the refuse must be thoroughly burnt often and ashes removed to maintain its burning efficiency. Composting wherever it is practiced should also be done properly to avoid fly breeding and any nesting of rodents.

2.5 School Mid-Day Meal Programme:

Research has revealed that most schools operate a mid-day meal system. In this system, many school children regularly receive some form of supplementary food. The mid-day school meal can play an important part in the vital programme of health promotion and nutritional education. School meals can serve several functions. First, it can be used to provide food for the growing children so as to ensure good health and proper development and growth. Secondly, school meals can be used to teach children about balanced diets and

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the right types of food to eat. Also cleanliness, food hygiene and sanitation can be taught using school meal as a basis. Thirdly, it can be used to combat malnutrition among school children.[27]

The value, from a health point of view derived from an organized mid-day meal is so important that every child should be made to eat in school.

Research work of the mid-day school meal has stressed on the importance of food sanitation. Food hygiene has to be applied to prevent the contamination of food-stuffs at all stages up to when it is eaten by pupils. The following measures have been suggested by some research workers in order to maintain a high standard of purity of the school mid-day meals.

1. Food vendors should maintain a high standard of sanitation.
2. Food premises i.e. abattoirs, markets, homes of food vendors and eating rooms in schools should all be subjected to periodical inspection by qualified officers such as Health Inspectors.

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27. Atimo, T. and Omololu, A.: School Meal J.S.H.N. vol. xii No. 1, (April 1978)

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27. Atimo, T. and Omololu, A.: School Meal J.S.H.N. vol. xii No. 1, (April 1978)

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3. Regular supervision of food handlers is necessary to ensure the hygienic handling of food.

4. Food vendors who prepare school meals should be scrupulously clean, the utensils, dishes cooking pots should all be washed thoroughly with hot water and soap.

5. Vendors should be subjected to regular medical examination at least twice a year at a health office or chest clinic. The aim is to screen out any carriers of infection.

6. Instruction on food sanitation should be given to all food handlers to ensure that wastes in their house are properly disposed of. The environment . where food is eaten should be hygienic and meals should be balanced and varied from day to day.[28, 29, 30].

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28. Lasoyo, J.A.: Principles and Practice of Health Education (1978).

29. Nwagwu, N.A.: Universal Primary Education in Nigeria. Issues Prospects and Problems (1976). Ethiope Publishing Corporation, Ring Road, Benin City, Nigeria.

30. Lucas, A.O. and Gilles, H.M.: Op cit.

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Despite the hygienic emphasis of the school mid-day meal, research workers who have studied some selected schools in Ibadan and other parts of Nigeria have revealed that some food vendors' premises are very unhygienic and in most cases they are not inspected. Thus, there is no sanitary protection of food. Food sellers are not screened, in most cases there are no eating shelters for pupils while in some cases pupils cannot afford to buy this meal in school.[31]

In some cases, studies have revealed that where this school mid-day meal is well conducted it offers a lot of advantages to school children. It ensures one wholesome meal to pupils a day especially to children who come from poor homes. The meal is a balanced one for pupils and is intended to prevent nutritional deficiency. Where pupils have eating rooms the meal helps to inculcate good table manners, (acceptable social behaviour) to pupils. In the final analysis the school meal serves as a laboratory where children are exposed to practical facts about food, nutrition and acceptable social behaviour.[32]

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31. Nwogwu, N.A.: Op cit.

32. Lnoye, J.A.: Op cit.

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2.8 School Buildings

These should be of sound construction, rain proof, with adequate natural light and well ventilated. Studies on classroom blocks have emphasized on the need to have adequate school buildings which should be built on well drained land. The walls and floors of classrooms should be rendered water-tight, dry and safe. School buildings should be so sited that each classroom will receive adequate light and ventilation. The roof should be of durable and non-inflammable material and should have ceiling.[33] In Nigeria, because of the tropical climate, schools require ceilings in order to provide a healthy comfortable atmosphere for both pupils and teachers.

However, some studies in Nigeria have revealed that some schools are sited on low lying swampy grounds while those schools which are built through self help by parents fail to meet the required health standards. The health of the pupils is not considered because some of those classrooms have drop dilapidated walls. In some of them there is overcrowding (over 40 pupils per class).[34]

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33. Osiberu, E.A.: Op cit.

34. Songonuga, O.O. and Obiyemi, M.A.: Op cit.

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The standard size of a classroom is 7.20m x 7.50m.[35]

Windows must be adequate and large (1/8 or 12.5% of the floor area is the minimum) and must be opened fully to allow free flow of fresh air. Repairs and maintenance of school buildings ensure that buildings are always in a good state of repair. It is the duty of the teachers to organize the communities to carry out the necessary repairs in schools when the government is unable to carry out the repairs.

Other studies in Ibadan have also revealed that lack of fence to some schools have led to serious problems. The privacy of each school is seriously challenged by dwellers at the vicinity who constantly intrude within the school premises. These neighbours constitute a threat to the smooth running of each school and pose a threat to the health of the pupils. These neighbours have filthy habits, they lack basic amenities. They have no knowledge of hygiene. Most of their domestic animals frequent the dumping sites within the school compound.[36]

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35. Chief Education Officer, Ministry of Education, Secretariat, Ibadan.

36. P.S.M. Staff Members: "School Inspection in Selected Schools in Ibadan (1976).

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Repairs and maintenance of school buildings ensure that buildings are always in a good state of repair. Simple repairs in school can be carried out at once but major works should be done during school vacation. Teachers should drill the pupils to keep the school premises tidy. The best method of teaching children is by a repeated practice, and the same action done over and over again, under the eye and direction of the teacher till they have the habit of doing it well.[37]

In order to keep sanitary status at a high level there should be periodic inspections of the buildings and grounds at least twice a year by appropriate health authorities. The school authority should be alerted of all deviations from standards. As a learning experience, it is essential for the teachers and their pupils to carry out their own unofficial sanitary inspections.

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37. Grout, R.E.: Health Teaching in Schools (1965).

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CHAPTER THREE

3.1 THE STUDY

During the author's community diagnosis activities, it was observed that the standard of environmental health was very low in the inner-core of Ibadan where the five Primary Schools are located. The environmental health facilities in the studied primary schools are either inadequate or absent. Most of the schools have interrupted water supply, inadequate and unsatisfactory waste disposal methods. The school mid-day meal programme in each school is not well organized and the meals are not hygienically handled. The classrooms are not only overcrowded but most of them are having a lot of defects. Since it is the duty of the teachers to prepare the pupils as future healthy citizens, the author has decided to study the attitudes and practices of teachers and pupils to the provision, use and maintenance of environmental health facilities.

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Teachers' reactions to the conditions prevailing in schools were revealed by observations and discussions. Also questions based on the knowledge of teachers were asked.. It was easy to deduce from the teachers' responses their attitudes to environmental health facilities. The factors which lead pupils to practice bad habits, such as urinating outside the latrine, throwing refuse anywhere and washing their feet, hands and cutleries at the school taps were revealed by participant observations.

3.2 Definition of terms and Concepts

(a) Attitudes:

Are status of readiness and predisposition to action. They are viewed as the chief determinants of action which make a person to use logical decisions to accept or reject what he is given. They are favourable or unfavourable behaviour tendencies to objects, persons, situations and ideas. Attitudes are either personal or social depending on how they are held. In this dissertation attitudes refer to teachers' feelings, thoughts or behaviour tendencies on the provision, use, and maintenance of environmental health facilities in schools.

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(b) Study Area:

As used in this dissertation, the area being referred to is in the inner-core of Ibadan. It is the area around the schools which are being served by the schools. However, some pupils come from outside the study area, i.e. from Oke Ado area.

(c) Health:

As defined by W.H.O. is a state of complete mental physical and social well being and not merely the absence of disease or infirmity.

(d) Sanitation Committee:

May include a group of people, that is, teachers, pupils, parents and government officers who volunteer themselves to take a leading role in promoting, establishing and maintaining the health conditions of the school.

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MAP OF SW 4 & SW 5 SHOWING THE FIVE PRIMARY SCHOOLS STUDIED

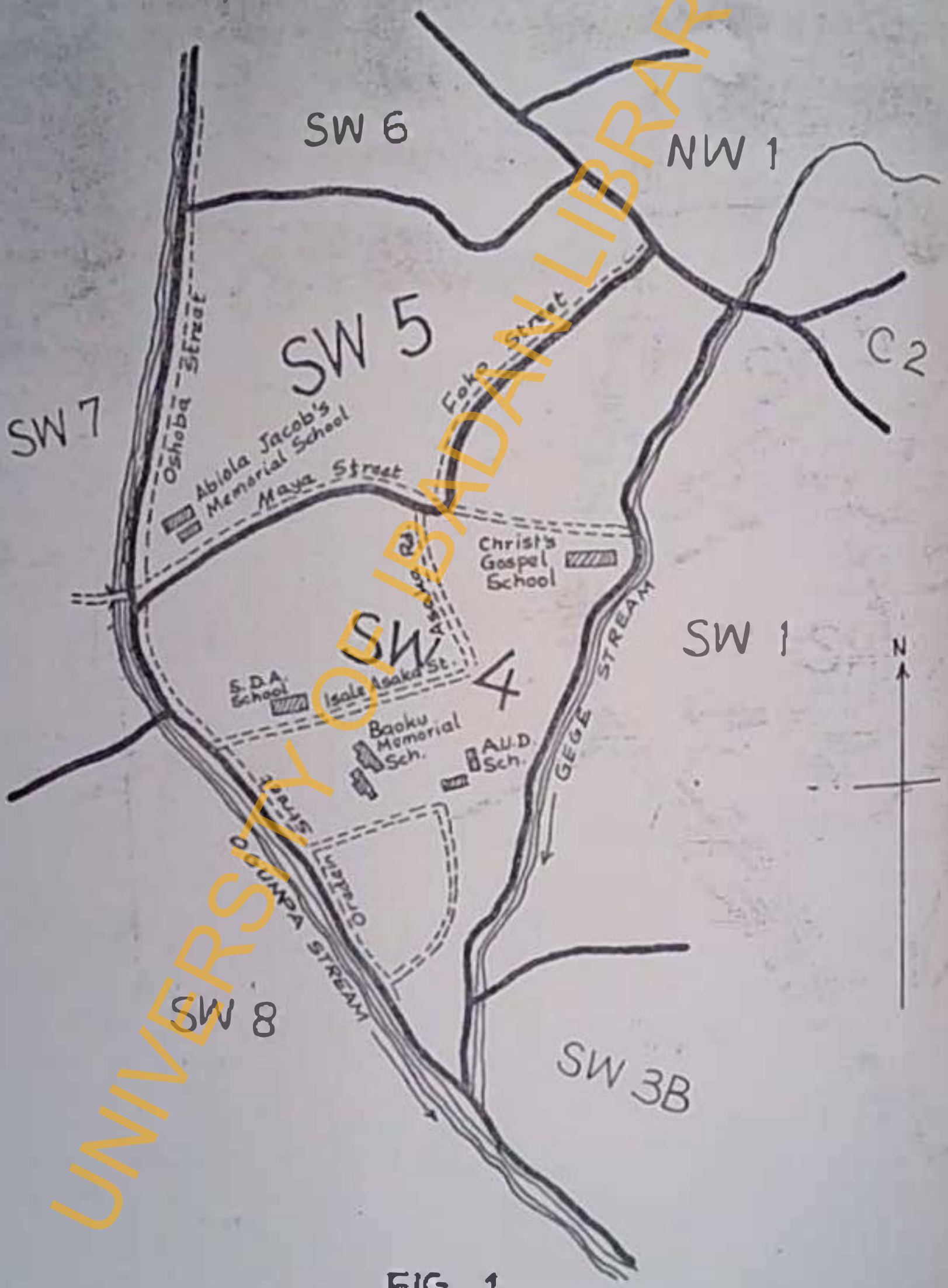

FIG. 1

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3.3 The Location and Scope of the Study

The study covers five Primary Schools in the inner-core of Ibadan city, in Nigeria. The inner-core of S.W.4 and S.W.5. is bounded on the South by a tarred road, on the north by Mulo stream, on the West by Ogunpa stream and on the east by Gege stream (See the map). The inner-core has 104 compounds in S.W.4 and 47 in S.W.5 all with 12,000 and 7,000 inhabitants respectively.[1]

This study is an exploratory in nature and aims to show the present status of environmental health facilities in schools and to find out the attitudes and practices of teachers in relation to the facilities. In this study, it was only possible to study the pupils' practices.

The environmental health facilities covered in the study include water supply, waste disposal, mid-day meal and school buildings. These four were viewed as the most important health education problems in primary schools during the author's community diagnosis. The author sees the teachers as having a vital role to enlighten the pupils and the community around on the essentials of environmental health facilities. Improvement

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1. Figures from Registers maintained by Councillors in S.W.4 and S.W.5 (1963 Census).

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of such facilities in schools will improve the quality of teaching and therefore raise the standard of healthful living of the community. The programme of school sanitation is important because it can serve as an example to the whole community around the school.

3.4 Objectives of the Study

1. To identify the teachers' attitudes and practices to the provision, uses and maintenance of environmental health facilities in schools.
2. To identify the teachers' problems on environmental health facilities in schools.
3. To identify the pupils' problems to cope with the selected environmental health facilities in schools.
4. To identify the teachers' needs to overcome the problems of environmental health facilities in schools.
5. To make recommendations for improving the attitudes and practices of the teachers and pupils on environmental health facilities in schools.

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3.5 Material and Methodology

In order to obtain a clear picture of the status of environmental health facilities, all five primary schools in the inner-core were included in the study. This in turn ensured a broad coverage in terms of knowing the teachers' attitudes and practices to the use and upkeep of environmental health facilities.

It should be noted that there are two sessions at each school. The morning session is referred to as school one while afternoon session as school two. It must be emphasized that both school one and two at the same school premises share the same inadequate environmental health facilities.(see appendix B for the latrine ratio)

The methods of data collection employed were:-

(a) Participant Observation

All five schools were visited to assess the conditions of environmental health facilities and how they are being used by both teachers and pupils. During the visits the methods of practical health education given to pupils in connection with the four studied environmental health facilities were explored. Several visits were paid to the five schools between the last quarter of 1978 and January 1979.

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The pupils' practices that were observed included: indiscriminate disposal of waste papers and waste food, urinating outside the latrines, eating their mid-day meal anywhere in the school premises, washing their feet, hands and cutleries at the school taps and trecking to distant areas to fetch water or to carry water from their homes to schools. Also failure of these pupils to wash their hands after visiting the latrines, failure to fill the few existing wash hand basins with water and failure to use the provided orifice covers for pit inlets.

The community around the schools was noted for its insanitary behaviour and its non-adherence to basic hygiene rules.

During the author's observation of the schools the following check list was used to assess the environmental health facilities.

1. Water Supply	One tap constantly running:	Adequate
	Tap interrupted at times:	fair
	No tap:	bad

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2.(i)Refuse disposal	No litter in school premises:	clean
	Few papers here and there:	dirty
	Heap of refuse	very dirty
(ii)Latrines	Latrines safe* and adequate** and no faeces on the floor:	clean
	Inadequate/adequate with faeces here and there:	dirty
	Inadequate, a lot of faeces on the floor:	very dirty
3. Mid-day Meal	From clean homes well inspected:	safe
	Clean homes not inspected:	suspicious
	Poor home sanitation, not inspected, Hygiene rules not followed, Vendors not examined medically:	dangerous[2]

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* Safe toilet is one with firm construction, pit holes not too wide to allow a child to fall in and no faeces on the floor.

** Adequate according to Western Nigeria Education Law 1955

2. Kornegwa, S.J.: "The health knowledge, attitudes and practices of primary school children in Ibadan and implication for Health Education" (1977)

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4.	School Buildings	Adequate, clean and safe:	good
		pot holes on floors, broken: windows eutters, etc.	bad
		Overcrowding, cracked walls, roofs nearly collapsing:	dangerous[2]

(b) Oral Interviews and Discussions

Interviews were held with school teachers, the Waste Disposal Board Office at Agodi, the Health Inspector in charge of S.W.4 and S.W.5 based at Mapo Health Office, Health Officers at Ibadan, Ministry of Education Headquarters at Secretariat and the Health Committee of S.W.4 and S.W.5. Interviews were often in form of discussion. In schools more discussion with teachers took place during break time and the author was able to extract valuable information from such talks. The discussions attempted to find out what plans, if any, the teachers have on the inadequate environmental health facilities, on the insanitary disposal of faeces and the unsatisfactory mid-day meal that come from unsuspected sources unknown to them. An attempt was also made to find out how much

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theoretical and practical School Health Education or health teaching there is in schools. Enquiries were made as to whether health personnel made frequent checks, to advise teachers on the methods of alleviating the current environmental health problems in schools. Any information which the author found to be misleading from any discussion was double-checked by school inspection. The author carried out three thorough inspections of each school other than mere routine visits.

(c) Questionnaire:

After reviewing the literature on Questionnaires that other earlier researchers used, the author decided to make use of questionnaire that would bring out most of the teachers' attitudes and practices. The questions on the four studied subjects were asked to measure the teachers' attitudes from their knowledge. Attitudes are reactions to something. It is easy to deduce from the teachers' responses whether they have favourable or unfavourable attitudes towards the washing of hands after using the latrine. It must be noted that attitudes of the people can be deduced from the knowledge they possess towards something especially when this is coupled with discussions.

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Thus in selecting the best responses out of the knowledge the teachers possess, teachers revealed their feelings, thoughts or behaviour towards the existing facilities being studied. e.g. Food vendors should go for medical examination once in six months. Using his existing knowledge, the teacher may have different feelings or behaviour about medical examination of food vendors. In cases where a teacher does not attach much importance to it, he is not likely to encourage the vendors to go for it. In this case, wrong knowledge means wrong attitudes and practices.

Questions on practices of teachers have also been included in the questionnaire. Practices were also got from discussions and from observations. Practices may equally depend on knowledge possessed by teachers and pupils. The author was able to judge the teachers' and pupils' practices by observing what was going on in schools as regards the provision, use and maintenance of environmental health facilities. The conditions of the latrines and how the mid-day meal was organized in schools helped to reveal the attitudes and practices of both teachers and pupils.

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Attitudes favourable or unfavourable can promote or hinder the success of a health education activity. The behaviour tendencies which teachers have as regards the use and maintenance of environmental health facilities need some alteration if the pupils are to benefit. Attitudes when held by individual are referred to as individual attitudes but when they are held by a group they are referred to as social attitudes.

The questionnaires were pretested at Progressive Day School. This school has the same kind of environmental health problems as the five that were explored in the Ibadan-core. In the studied Primary School questionnaires were given to all teachers at each school. The necessary information needed and the purpose of the survey were all clearly explained to the teachers. Teachers were asked to depend on individual judgement when answering the questionnaire. The essentials of the survey aimed at gathering different feelings, thoughts, and behaviourn since attitudes are favourable or unfavourable behaviour tendencies of a person to objects, situations and ideas. The teachers asked for one week during which to complete the questionnaire. The author accepted the idea considering the fact that teachers were still settling

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down after their month long nation wide strike (see appendix for the questionnaire opoeimen).

It is accepted that 'Health Education' is viewed as having three components viz:- Knowledge, Attitudes and Practices. However, for the purpose of this study the author has decided to look at the Attitudes and Practices of teachers and pupils' practices to the use of environmental health facilities in schools. It has been found from the questionnaire that one hundred and seventy-nine teachers responded. (152 teachers took Health Education course during their Teacher Training while 27 are untrained teachers.

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3.6 Methodological Problems

(a) Limitations of the methods

1. Teachers who had already completed some questionnaires in schools where they had formerly served were reluctant to complete the questionnaires on the grounds that they saw no improvement of any kind even after they have completed questionnaire.

2. Questionnaires could not be administered in time as expected because of the nation wide strike by teachers. It only became possible to do this in January 1979 when teachers called off their strike.

3. It was not possible, due to time allocated to this research to draw a separate questionnaires for pupils. For this reason the author interacted with pupils by way of participant observation. Such an activity limits the researcher to know the practices of pupils only.

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(b) Limitations of the Study

1. Communication Problems:

(a) Transport: In Ibadan it is common to be taken where the taxi is going and not necessarily where one wants to go. It was often difficult to know which taxi was going to the Inner-core. Even after getting into the taxi one is not guaranteed if it will continue on the same road as this depends on the heaviness of the traffic at that point in time. The use of branch roads by taxi drivers often complicated the problems of knowing where to be dropped. At times the author was carried beyond his research area but only to be told to return again. (This is because the author does not speak Yoruba, the local language).

(b) Language: It is really more difficult to travel in Ibadan when one doesn't speak the local dialects. The author could neither communicate well with most taxi drivers nor with many Inner-core residents from where he sought directions to schools. In schools the language barrier ceased to some extent. Most of the teachers use English which is a common language. However, it must be

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pointed out that there is a tendency among teachers, health officers and health committee members to use their local language most during discussions. When this happened, it simply put the author out of the topic being discussed.

2. The Nation-wide strike by Teachers

This completely put the author out of research in schools. All the prepared questionnaires remained undistributed. From the look of things this is why the author relied on participant observation in studying the pupils practices. Also the Nation wide strike delayed the interpretation of data on the findings about the teachers' attitudes and practices to environmental health facilities in schools.

3. Time Factor

The time allocated to data collection, analysing and compiling of the information into finished form was very insufficient. However, the author's concurrent field work enabled more information to be revealed and areas of future research suggested.

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4. Finance

The problem of finance cannot be ignored. A research project demands a lot of money both for transport, paper work typing and to some extent employing helpers e.g. interpreters who may know the local language where the research is being carried out

In spite of all these methodological problems it is hoped that this study will offer some contributions towards the understanding of the teachers' attitudes and practices to the use and maintenance of environmental health facilities in Primary Schools. The pupils' practices are covered in this respect too.

3.7 Assumptions:

1. There is not much difference between teachers who took health education during their Teacher Training and those who did not as regards attitudes and practices to environmental health facilities.

2. That without proper use of selected environmental health facilities in schools pupils do not grow up to value the use of proper sanitation.

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3. The theoretical knowledge about health imparted to pupils according to the syllabus "Family Health" cannot be meaningful when environmental health facilities are absent in schools and in the homes of pupils.

The emphasis on the assumptions cannot be ignored. It is from assumptions that tentative conclusions will be sorted out. One research worker wrote that many teachers have a hazy notion about the epidemiology of gastrointestinal infection and are therefore unaware of the dangers of indiscriminate defaecation and lack of hand washing facilities, or if they are aware they lack the imagination and initiative to improve the situation.[2] It is from such expressions that objectives of the study arise, and also from the same expressions that the assumptions are formulated.

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2. Owan, J.S.: The role of Health Education in School in Promoting Environmental Sanitation. Journal of the Society of Health, vol. II, No. 2, (July 1967).

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CHAPTER FOUR

4.1 FINDINGS AND ANALYSIS

The discussions and questionnaire revealed that many teachers live outside the studied area. Many of them live in the better, planned area of the city, an area lying between the crowded unplanned traditional part of the city and the reserved government area. There are quite a number of reasons put forward by teachers why they have chosen to stay outside the Inner-core area. Environmental sanitation in the Inner-core is very bad. The comfort stations which were intended to serve the residents of S.W.4 and S.W.5 have not been opened yet by the responsible authorities. The slums of the Inner-core are considered unfit for teachers. The streams and gutters in the area are full of night soil. There is absence of community organisation and very rarely do inhabitants make efforts to clean up the blocked gutters and the entire compound. From observation, people in the

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Inner-core are used to 'dirt' and they resist any 'health action' oriented towards the improvement of their compounds. At present the membership of the newly formed health committee has already started to dwindle. There is a tendency for the Inner-core community not to cooperate with the teachers. Instead of taking care of the schools they intrude and mess up all the school premises.

4.2 Water Supply:

From observations the following information was obtained: One of the Primary Schools, Christ Gospel Day has no private water connection and no storage facility is provided by the school. The remaining four Primary Schools have private tap points but inadequate water-pots to store water. Water in these four Primary Schools is not constant because tap points are often without water during most hours of each day. Pupils were observed trecking long distances to areas where water was still running in public water points. In two schools where tap points exist, pupils were seen struggling to wash their hands, faces, feet, plates and outlories.

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There is very little attempt made by teachers to discourage pupils from misusing the tap points. At Christ Gospel teachers are not keen enough to involve the P.T.A. to provide a school tap. There are also no efforts being made by teachers to remind and encourage pupils to fill the existing wash hand basins and other water pots with water when school taps are still running. In most cases such receptacles are empty, and no water for pupils to drink and for their personal hygiene. The lack of proper maintenance of tap points was also noted. The delays in repairs to damaged taps pose a big problem to schools. Taps in two schools were often locked by the school authorities and were not accessible to pupils during the time of need.

Theoretical discussions with teachers centered mainly on inadequate water supply. The situation became serious if a school tap broke down.

To find more about the teachers' attitudes and practices the author found it necessary to seek the teachers' feelings and behaviour on what could be done when a school tap broke down. Table 4:1 reveals the different thoughts from teachers.

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TABLE 4:1 (Question 11)

DISTRIBUTION OF RESPONDENTS TO WHAT CAN BE DONE WHEN A WATER-TAP BREAKS DOWN IN A SCHOOL

Method or Action to take	Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No.	%	No.	%
Call the Water Board	49	32.24	9	33.33	58	32.40
Ministry of Education to get a Contractor	14	9.21	1	3.71	15	8.38
P.T.A. to solve the problem	88	57.89	17	62.96	105	58.66
Leave to the Health Inspector	1	.66	-	-	1	.56
Other (specify)	-	-	-	-	-	-
Total	152	100	27	100	179	100

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TABLE 4:2

Variables	Took correct action	Took wrong action	Total
Trained Teachers with Health Education	88	64	152
Untrained Teachers	17	10	27
Total	105	74	179

Degree of freedom = (2-1) (2-1) = 1

$x^2 = 0.242$ P >0.05

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From table 4:1 it can be observed that 58.66% of the teachers had a feeling that it is the duty of the P.T.A. to solve the problem when a water tap breaks down in a school. This information was confirmed by the Ministry of Education. 41.34% of the teachers had different responses which were not favourable in bringing about the solution of the problem. The responses indicated that some teachers had an idea of how to solve the problem while others had mixed ideas. From the above information attitudes are influenced by the knowledge which the teachers possess.

The x^2 test reveals that there is no difference between the two types of teachers - trained and untrained to the correct action when a school tap breaks down. Both are able to take up a correct action irrespect of their background. The decision to take or not to take a positive action is determined by the teachers' knowledge which influences the attitudes to that particular problem.

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TABLE 4:3 (Question 14)

DISTRIBUTION OF RESPONDENTS ON THE NEED FOR WATER STORAGE FACILITIES IN CLASSROOMS

Reasons	Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No.	%	No.	%
To ensure the presence of water for use in classrooms.	94	61.84	17	62.96	111	62.01
No money and no need, there are taps already.	58	38.16	10	37.04	68	37.99
Other	-	-	-	-	-	-
Total	152		27		179	

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TABLE 4:4

Variables	Know the need for storing water	Do not see any need at all	Total
	No.	No.	No.
Trained Teachers with Health Education	94	58	152
Untrained Teachers	17	10	27
T o t a l	111	68	179

D.f. = (2 - 1) (2 - 1) = 1

x^2 = .01215 P >0.05

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TABLE 4:4

Variables	Know the need for storing water	Do not see any need at all	Total
	No.	No.	No.
Trained Teachers with Health Education	94	58	152
Untrained Teachers	17	10	27
Total	111	68	179

D.f. = (2 - 1) (2 - 1) = 1

x^2 = .01215 P >0.05

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From the table 4:3 it can be observed that 62.01% of teachers out of 179 saw that there was a need to ensure the presence of water for use by both pupils and teachers in classrooms. However, 37.99% of teachers out of 179 feel that there is no money and no need for water storage facilities. The responses of the 37.99% of the teachers indicate a negative attitude to the provision of water storage facilities. This is a bad attitude in that when the water taps dry pupils and teachers have no water to use in school.

The x^2 (table 4:4) analysis indicates that there is no significant association in being able to see the need for water storage facilities in classrooms between the two types of teachers being compared. Both trained and untrained are able to react equally, favourably and unfavourably towards the problem.

Discussions with the teachers on the stated need revealed that teachers are not receiving the desired help from the community to provide water storage facilities to schools. As of now, there are very few classrooms with hand basins.

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TABLE 4:5 (Question 15)

DISTRIBUTION OF RESPONDENTS TO PROBLEMS CONCERNING WATER SUPPLY IN SCHOOLS

Reasons	Trained Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No.	%	No.	%
Taps are inadequate and they often run dry	111	73.03	16	59.26	127	70.95
The school has no water tap of its own	-	-	10	37.03	10	5.59
The tap is not running	25	16.45	1	3.71	26	14.52
Other (specify)	16	10.52	0	-	16	8.94
Total	152	100	27	100	179	100

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TABLE 4:6

Variables	Able to detect water problems	Took it easy about the problem	Total
	No.	No.	No.
Trained Teachers with Health Education	111	41	152
Untrained Teachers	16	11	27
Total	127	52	179

D.F. = (2 - 1) (2 - 1) = 1

x^2 = 2.947 P>0.05

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The seriousness of water problems can be expressed well by teachers who spend long hours in schools. From the table 4:5 it can be observed that 70.95% of 179 teachers have a feeling that taps are inadequate in schools and they often run dry of water. In Christ Gospel Day School the school has no tap of its own. (5.99% of the teachers have indicated this). However, in all responses the teachers express a serious shortage of water in schools. Despite their knowledge of the essentials of water to schools there were no meetings concerning water improvement which the author witnessed during his study in schools.

From the x^2 table 4:6 it can be observed that there is no association between the two variables being compared. Problems which were observed include:- pupils had no water to wash their hands after visiting the latrines, they had no water to wash their hands before meals and no water to clean the floors of latrines. In some cases head teachers locked the water taps and pupils had no access to water for drinking.

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In this case trained teachers cannot detect water problems and are not able to know that water to a school is essential for social development. As indicated in table 4:5 70.95% of 179 teachers see that taps are inadequate but make no efforts to solve the problem. Observations and interviews revealed that teachers bring water for drinking from their homes. They rarely drink water available in their schools because they think water in the Inner-core is not pure due to leaking pipes which can lead to the pollution of pipe water.

WASTE DISPOSAL

4.5 Latrines:

The author observed that all the studied Primary schools use pit latrines. Two school latrines at Ansar-Ud-Deen and Abiola Jacobs primary schools remain about half ($\frac{1}{2}$) metre each to fill up. They have become breeding places for houseflies. Fly larvae could be seen crawling on the floors of these latrines. In latrines where few orifice covers exist for example at Seventh Day Adventist, Baoku Memorial and Abiola Jacobs

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primary schools they are not being used properly. This encourages the ingress of flies into latrine holes. It was also observed that four latrine compartments at Seventh Day Adventist and Baeku Memorial Schools were sealed completely. There were no wash hand basins for both teachers and pupils to wash their hands after visiting the latrines. In all the five primary schools latrines were inadequate and poorly maintained. These latrines are of poor construction and of bad design in that there are two pit holes in one latrine compartment. The observations revealed that there was not a single school which had a safe and clean latrine. During each visit to schools, faeces and waste papers were found all over the latrine floors. Pupils were seen defaecating on papers which later got thrown into the latrine or were either left on the latrine floors. From discussions with the teachers, they act like this because they do not use latrines in their homes.

Urinals too are either inadequate or absent. In three schools where urinals exist they are of bad design. Such urinals are just open shelters of corrugated iron

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sheets. These urinals are stinking. Usually a quarter (¼) of the class was seen urinating outside the urinals, outside in trines, on refuse heaps, outside the school premises and into gutters. From observations it would appear that such bad practices by pupils at school are also being practised at their homes.

The interviews/discussion with the teachers at Abiola Jacobs and Ansar-Ud-Doon schools revealed that the teachers were not making any efforts to prepare any new latrines to replace the two ones which are just about to fill up. Some latrines are about to collapse and so have been sealed up. Discussions with teachers also revealed that the schools had no wash-hand basins placed near latrines. Teachers face a lot of difficulties to motivate the pupils to use latrines especially those in primary one. The author's community diagnosis found this to be true.

There are little efforts which are being made to organize the P.T.A. to put up additional latrines. Teachers complained of the insanitary behaviour of the residents who live around schools that after schools hours they invade the premises of schools.

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TABLE 4:7 (Question 20)

DISTRIBUTION OF RESPONDENTS TO THE MEASURES TO BE TAKEN WHEN A LATRINE IN USE IS ABOUT TO FILL UP

Measure to take	Trained Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No.	%	No.	%
Call the Health Inspector	60	39.47	11	40.74	71	39.65
Inform the Ministry of Education	17	11.18	2	7.41	119	10.62
Stop using the latrine when it is about ¾ metres to fill up. Open a new latrine for use.	73	48.03	13	48.15	86	48.04
Other (specify)	2	1.32	1	3.70	3	1.68
Total	152	100	27	100	179	100

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TABLE 4:8

Variables	Took a Correct Action	Took a wrong Action/ Actions	Total
	No.	No.	No.
Trained Teachers with Health Education	73	79	152
Untrained Teachers	13	14	27
Total	86	93	179

D.f. = (2 - 1) (2 - 1) = 1

x^2 = .000136 P > 0.05

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TABLE 4:9 (Question 24)

DISTRIBUTION OF RESPONDENTS TO METHODS OF HOW TO OBTAIN WASH HAND BASINS FOR THE SCHOOLS

Method	Trained Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No.	%	No.	%
From Government Funds	15	9.87	2	7.41	17	9.49
A class teacher who is health conscious can organise pupils to raise money for wash-hand basins	47	30.92	8	29.63	55	30.73
No way to obtain basins	1	.66	1	3.70	2	1.12
P.T.A. should solve the matter	81	53.29	16	59.29	97	54.19
Other (specify)	8	5.26	0	0	8	4.47
Total	152	100	27	100	179	100

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From the table 4:7 it can be observed that the majority of the teachers, 51.6% out of 179 are not aware of the dangers of a latrine which is about to fill up. Such a latrine becomes a breeding ground for house flies and other vectors of disease can have access to it. The smell from such latrines drives pupils away. In all, such kind of latrines become a health hazard. Only 48.04% of teachers knew that at about ½ metre to fill up a latrine should be sealed up and a new one should be opened up for use.

From the x^2 table 4:8 it can be observed that there is no association between the two variables being compared. Discussions with the teachers revealed that many of them had a hazy notion of the dangers of such a latrine to man. Those who knew were not willing to take a lead in solving the problem. It is wrong for teachers to wait for advise because a latrine which is about to fill up is likely to constitute a health hazard. Teachers are expected to take up actions and open a new latrine for use.

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TABLE 4:10

Variables	Take Correct Action	Take Wrong Action	Total
	No.	No.	No.
Trained Teachers With Health Education	81	71	152
Untrained Teachers	16	11	27
Total.	97	82	179

D.f. $(2 - 1)(2 - 1) = 1$

$x^2 = 0.3301$ $P > 0.05$

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From the table 4:9 it can be observed that 54.19% of teachers out of 179 thought of involving the P.T.A.. Even if teachers know this procedure, observations and discussions with the teachers revealed that wash hand basins in schools were either inadequate or totally absent. There was not a single latrine which was provided with wash hand basins for its users. 45.81% of the respondents had mixed feelings on how to obtain wash hand basins. The normal procedure as revealed by the Ministry of Education and teachers, is to involve the P.T.A. in this exercise. The responses further indicate that there is no definite agency which can claim to be a sole provider of wash hand basins to schools. Charitable organizations, if they have funds can help to solve the problem.

From x^2 table 4.9, the analysis reveals that both types of teachers being compared have similar social attitudes which are unfavourable. Their attitudes hinder them from making individual efforts to obtain wash hand basins for schools. The teachers with correct knowledge are also not putting what they know into practice and as a result Primary Schools remain without wash hand basins. Both types of teachers have unfavourable attitudes because even if they know what to do they have not taken a correct action.

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TABLE 4:11 (Question 22)

DISTRIBUTION OF RESPONDENTS PRACTICES ON WHO KEEPS THE SCHOOL LATRINE CLEAN

	Trained Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No.	%	No.	%
Pupils under punishment	-	-	-	-	-	-
Pupils from a noisy class	-	-	-	-	-	-
Pupils under Teachers' supervision	60	39.47	13	48.15	73	40.78
Pupils under group leader responsible for that week	90	59.21	14	51.85	104	58.10
Other (specify)	2	1.32	-	-	-	-
Total	152	100	27	100	179	100

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TABLE 4:12

	Pupils who are involved to keep the latrine clean	Pupils under Teachers supervision	Total
	No.	No.	No.
Trained Teachers with Health Education	90	62	152
Untrained Teachers	14	13	27
Total	104	75	179

D.f. $(2 - 1)(2 - 1) = 1$

$\chi^2 = 0.5097$ $P > 0.05$

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Most of the school latrines were found dirty any time the author visited the schools.

From table 4:11 it has been revealed that 58.10% of 179 teachers stated that the normal practice of cleaning latrines in schools is by a roster system by pupils of a class under a group leader. This method is good for practical education purposes and to train pupils the role of leadership. However, although the above responses are favourable, teachers do not do what they are supposed to do.

The responses indicate that although teachers have an idea of who should keep the school latrines clean, the latrines in schools are always filthy.

From the x^2 table 4:12, it was revealed that there is no association between the trained and untrained teachers. Both sets of teachers share the same social attitudes and practices. These group feelings do not allow individual teachers to act positively and correct the filthy conditions of school latrines. Cleaning school latrines under teacher's supervision has certain disadvantages i.e. pupils may not clean the latrine when the teacher

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is absent. Also the teacher's supervision deprives the pupils initiative to clean the latrine when they want and how they want to clean it. Leadership training is also out. However, the teacher must set a first example and later encourage pupils to carry it out satisfactorily on conviction that there is nothing more dangerous than a poorly maintained latrine. Thus the 11.90% of the teachers who opted for the teacher's supervision should be alerted of such consequences

4.4 Refuse Disposal

During the field study the author observed that the method of refuse disposal in all five Primary Schools was below standard. All schools had neither incinerators, controlled tipping, composting nor dustbins. However, each of these schools had an incinerator before, but when such incinerators broke down, efforts were not made by teachers to restore them. Refuse is being dumped indiscriminately on old sites of incinerators and burning rarely takes place. Christ Gospel Day School and Abiola Jacobs School throw their refuse into Gege and Ogunpa streams respectively. Domestic animals such as goats,

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sheep and pigs were seen frequenting the dumping sites of schools. In all, refuse in schools is neither properly stored nor properly disposed of.

During the interview/discussions with the Waste Disposal Officials they revealed that refuse from schools can be collected provided the concerned headmasters/ mistresses of such schools make written applications to the Ministry of Works and Housing. The charge is only £1.00 per dust bin in a month. Teachers also confirmed this information, but they have not as yet made any applications requesting for the services of the refuse collecting crews. Discussions also revealed that teachers have not organised their P.T.A.'s for the restoring of school incinerators. They also confirmed that they had no dust bins for use in schools.

It is very unlikely that refuse from the Inner-core schools will be collected unless teachers make contacts with the waste disposal office. The maintenance of school grounds had become difficult because of large enrolments. Children who attend afternoon classes come very early to school and remain outside unattended. As

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there is no teacher to supervise them they tend to be very careless and throw rubbish indiscriminately. There is therefore much time spent in tiding up the classrooms and School grounds before the afternoon closing rooms. The complaint by teachers on the lack of refuse depots close to their schools was also noted.

TABLE 4:13 (Question 26)

DISTRIBUTION OF RESPONDENTS' ATTITUDES ON HOW A SCHOOL CAN OBTAIN DUST BINS

Channels to use	Trained Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No	%	No.	%
Seek Ministry of Health support	11	7.24	1	3.70	12	6.70
No need for dust bins	4	2.64	1	3.70	5	2.79
Ask Ministry of Education	31	20.39	11	40.75	42	23.46
P.T.A. can solve the problem	103	67.76	14	51.85	117	65.37
Other (Specify)	3	1.97	-	-	3	1.68
Total	152	100	27	100	179	100

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TABLE 4:14

	Know the action to take	Do not know the action	Total
	No.	No.	No.
Trained Teachers with Health Education	103	49	152
Untrained Teachers	14	13	27
Total	117	62	179

D.f. $(2 - 1)(2 - 1) = 1$

$x^2 = 2.5646$ $P > 0.05$

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From table 4:13 it can be observed that 65.36% of 179 teachers know that the P.T.A., when well contacted and motivated can provide dust bins. However, even if the percentage of the teachers who know what to do is great, not much is being done by them at present to obtain dust bins for schools.

Further observation and discussions indicate that teachers have unfavourable attitudes to obtain dust bins, and those attitudes have led to the accumulation of refuse in schools. Even if some teachers are aware of the dangers of refuse i.e. that refuse attracts flies and rodents, that it harbours germs, and that it can cause serious fires, they do not act positively to remove it from schools. In all, theoretical knowledge, learnt in classrooms is quickly lost when pupils do not put it into practical use. From the table 34.64% of 179 teachers have mixed feeling on how a school can obtain dust bins.

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The x^2 table 4:14 indicates that whether or not a teacher had been trained in health education does not help him or her to know how to obtain dust bins for use in schools. The headmasters of the studied schools were among the teachers who saw the problems but failed to exert favourable influence to overcome the problems. Even though a majority of teachers say that dust bins are very important for sanitary refuse disposal in schools, observation had revealed that the teachers had not taken steps to provide dust bins.

Dust bins have not been provided in schools because teachers have been handicapped by the poor encouragement from the Ministries of Health and Education officials.

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TABLE 4:15 (Question 28)

DISTRIBUTION OF RESPONDENTS' ON WHAT AGENCY TO INVOLVE WHEN ERECTING SCHOOL INCINERATORS

Name of Agency	Trained Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No.	%	No.	%
Ministry of Health + Waste Disposal Office	18	11.84	3	11.11	21	11.75
Ministry of Health and Waste Disposal Office	11	7.24	3	11.11	14	7.82
Ministry of Education	13	8.55	3	11.11	16	8.94
Head teacher/ mistress to apply to Ministry of Health and Waste Disposal Office	110	72.37	17	62.96	127	70.95
Other (specify)	-	-	1	3.71	1	.56
Total	152	100	27	100	179	100

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TABLE 4:16

	Know how Incinerr.-tors can be restored	Don't know	Total
	No.	No.	No.
Trained Teachers with Health Education	110	42	152
Untrained Teachers	17	10	27
Total	127	52	179

D.f. $(2 - 1)(2 - 1) = 1$

$x^2 = 0.984$ $P > 0.05$

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The absence of incinerators in all the five primary schools was noted. Other waste disposal methods such as controlled tipping and composting were not being practised. From table 4:15 it can be observed that 70.95% of 179 teachers know the practical measure they could adopt to have incinerators restored. The head-masters/headmistresses are required to make applications for the technical advice from the Ministry of Health and the Waste Disposal office. Through the participation of the P.T.A. of each school, school incinerators can be restored.

Despite the theoretical knowledge which both trained and untrained teachers have, they have not practically made any attempt to solve this existing problem. During the discussions, some alternative methods to replace incinerators were brought up. The pupils can dig some pits and make composting or carry out controlled tipping. This is more economical and pupils can learn to value their labour. Later they can get a good school garden in that area.

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From the x^2 table 4:16, it is revealed that teachers with health education learnt from Teacher Training Colleges have better ideas than untrained teachers on the procedure to adopt in order to get incinerators restored. In addition to this, discussions revealed that most of the trained teachers know that refuse which accumulates is dangerous, that refuse can cause serious fires and cause extensive damage to the school. Also these teachers know of the methods of composting and controlled tipping but the present school sites are small and there is no room for practising these refuse disposal methods in schools.

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TABLE 4:17 (Question 30)

DISTRIBUTION OF RESPONDENTS' ATTITUDES ON THE SITING OF REFUSE DEPOTS CLOSE TO SCHOOLS

AGENCY/ AGENCIES	Trained Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No.	%	No.	%
Waste Disposal Office	8	5.26	1	3.71	9	5.02
Ministry of Health + Waste Disposal Office	118	77.63	24	88.89	142	79.33
Only Ministry of Education	24	15.79	1	3.70	25	13.97
Other (specify)	2	1.32	1	3.70	3	1.68
Total	152	100	27	100	179	100

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TABLE 1:18

Variables	Know the Agency to involve	Don't know Agency to involve	Total
	No.	No.	No.
Trained Teachers with Health Education	118	34	152
Untrained Teachers	24	3	27
Total	142	37	179

D.f. $(2 - 1)(2 - 1) = 1$

$\chi^2 = 1.774$ $P > 0.05$

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Observations and discussions with teachers revealed that the schools covered in the study are quite far from public refuse depots. From table 4:17 it can be observed that 79.33% of 179 teachers know that the responsible agencies to involve are the Ministry of Health and the Waste Disposal Office. Despite this knowledge possessed by a majority of teachers, they have not made any attempts to the agencies to have depots sited close to schools. The agencies confirmed this to the author. However, the agencies have also not taken up any initiative to see to it that schools are provided with convenient recognized refuse depots. Those agencies rarely inspect the schools.

In this case no proper practical health education on refuse disposal can be imparted to pupils who practise indiscriminate dumping of refuse in their schools. The pupils take it for granted that indiscriminate dumping of refuse is tolerated and so it should be continued.

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From table 4:18 further analysis has shown that whether a teacher was trained in health education or not does not make him to respond favourably or unfavourably. In such cases, teachers respond in conformity with the feelings held by the group to which they belong as members.

4.5 Mid-day Meal:

The author observed that all the five schools have no separate buildings for the mid-day meal. Pupils were observed always taking their meals anywhere within the school premises. Food vendors sell this food either in the classrooms, in classroom verandahs or in the open field. The recommended menus are protein intensive but vendors tend to sell very little to each child in order to make more profit. Teachers who have been assigned to this programme inspect the food just by looking at the food and tasting a little of it. The dishes which vendors use in bringing the food and their woven covers are always dirty. It is a habit for unauthorised vendors to crowd around the schools and sell their unhygienic food to school children.

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From the interview/discussions with the teachers the author found that although the teachers know the importance of medical examination for food vendors, they do not encourage them to go for this kind of medical examination. Vendors themselves confirmed this information. It was discovered that most of the registered and authorised food vendors had had no medical examination for the past three years or so.

Discussions also revealed that a majority of teachers are not thinking of improving the method of bringing food to schools by food vendors. They do not know the sanitary conditions at the homes of food vendors and the way meals are being prepared. From interviews, a majority of teachers said that they had no time to visit food vendor's premises.

From discussions and mere observation of the teacher's practices towards mid-day meal, it appears that teachers are not aware that contamination of food can occur due to insanitary handling of food. They hinted strongly that it was the duty of the Health Inspectors to carry out periodic sanitary inspections of vendor's premises.

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Further discussions with health officers at Obireke and Ipo Health offices confirmed that food vendors are not being visited but they come under the job description of both the teacher and health inspector.

School mid-day meals are being enjoyed by all pupils in primary schools although the method of bringing food to schools by food vendors is not satisfactory. When teachers were asked how they felt about the present system of bringing food to schools many of them opted for the present method. It was surprising to the author because he thought that all trained teachers would opt for a better method to replace the present method which the author considers to be unsatisfactory.

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TABLE 4:19 (Question 31)

DISTRIBUTION OF RESPONDENTS' ATTITUDE ON THE BEST METHOD OF BRINGING FOOD TO SCHOOL BY VENDORS

	Trained Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No.	%	No.	%
The present method is good	73	48.03	12	44.44	85	47.48
Approaches to be made to the Ministries of Health and Education for a standardized safe container	55	36.18	13	48.15	68	37.99
Other (specify)	24	15.79	2	7.41	26	14.53
Total	152	100	27	100	179	100

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TABLE 4:20

	Call for new safe containers	See no need for improvement	Total
	No.	No.	No.
Trained Teachers with Health Education	55	97	152
Untrained Teachers	13	14	27
Total	68	113	179

D.f. $(2 - 1)(2 - 1) = 1$

$\chi^2 = 1.4192$ $P > 0.05$

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Table 4:19 reveals that only 37.99% of 179 teachers knew that the present system of bringing food to schools was not safe. They have demonstrated this by suggesting to approach the Ministries of Health and Education so that a standardized container for use by food vendors could be recommended. Due to the fact that those few teachers are working against the 62.01% of the teachers who see no need for improvement, there are no efforts being made at present to improve the school meal.

From table 4:20 further analysis reveal that there is no association at all between the two variables being compared. In this case health education which teachers learnt from colleges is not put into practical use. Discussions revealed that teachers have no knowledge of a good method to adopt and so they see no need to aspire for another method.

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TABLE 4:21 (Question 33)

DISTRIBUTION OF RESPONDENTS' PRACTICES ABOUT WRITTEN PROOFS TO SHOW VENDOR'S MEDICAL EXAMINATION

Answers given	Trained Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No.	%	No.	%
Yes, at the Ministry of Health (Jericho)	42	27.63	6	22.22	48	26.81
No proof but vendors claim that they had it	33	21.71	2	7.41	35	19.56
Health Inspectors should seek of such a proof	37	24.34	11	40.74	48	26.31
None for the majority in 1978	40	26.32	7	25.93	47	26.26
Other (specify)	-	-	1	3.70	1	.56
Total	152	100	27	100	179	100

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TABLE 4:22

Variables	They asked for written proofs	Used very ineffective methods	Total
	No.	No.	No.
Trained Teachers with Health Education	40	112	152
Untrained Teachers	7	20	27
Total	47	132	27

D.f. $(2 - 1)(2 - 1) = 1$

$\chi^2 = .0018$ $P > 0.05$

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Discussions with teachers revealed that medical examination is essential to screen out those who might be carriers of diseases such as Tuberculosis. However, discussions with food vendors revealed that teachers do not encourage or remind vendors to undergo medical examination. A written proof is a good evidence to show that a vendor was medically examined in 1978.

However, from table 4:21 only 26.26% of 179 teachers sincerely revealed that a majority of food vendors were not medically examined in 1978. This information was verified by the author. A systematic scrutiny of all vendors' medical records was carried out including some visits to Jericho Chest Clinic where vendors claim to be having their routine medical examinations.

From table 4:22 a further analysis to test the association between trained and untrained teachers revealed that trained teachers do not put what they know into practice. 112 of 152 trained teachers are not keen enough to find the truth of whether their school vendors are medically

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examined. They forget that it is the duty of the teacher to safeguard the health of the pupils in school. From the table therefore there is no significant association between the trained and untrained teachers. If a teacher sees no value or does not understand the need for medical examination he is very unlikely to encourage the food vendors to go for it.

TABLE 4:23 (Question 36)

DISTRIBUTION OF RESPONDENTS' ATTITUDES TO VISITING FOOD VENDORS BY TEACHERS OR HEALTH INSPECTORS

	Trained Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No.	%	No.	%
Teachers and Health Inspectors should visit food vendors	77	50.66	14	51.85	91	50.84
Only the Health Inspectors	58	38.16	5	18.32	63	35.19
Only the Teacher	17	11.18	8	29.63	25	13.97
Other (specify)	-	-	-	-	-	-
Total	152	100	27	100	179	100

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TABLE 4:24

Variables	Know who should visit food vendors	Don't know the right person or persons	Total
	No.	No.	No.
Trained Teachers with Health Education	77	75	152
Untrained Teachers	14	13	27
Total	91	88	179

D.f. (2 - 1) (2 - 1) = 1

χ^2 = .0129 P> 0.05

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Discussions with the Ministries of Health and Education officials revealed that both the teacher and Health Inspectors have a right to visit the homes of food vendors. From this table 4:23 however, 50.84% of 179 teachers know that both officers in the question are required to visit vendors in their premises. 49.16% of the rest of the teachers had mixed feelings to this question. Nevertheless, the survey carried out by the author concluded that there were no practical efforts by both officers concerned to visit vendors in their respective homes.

The x^2 test reveals that there is no difference between the two types of teachers trained and untrained when it comes to knowing the officer who should visit the food vendors.

However, teachers who had favourable attitudes stressed that there was a need to visit food vendors and advise them continuously on methods of food hygiene (preparation and handling of food). Food vendors too need to be alerted of any deviations from standards i.e.

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insanitary conditions can lead to the contamination of food and such conditions should be corrected without delay.

4.6 Buildings

From the author's observations classrooms were swept before lessons began. Classrooms blocks in all five schools are quite old and worn out. One classrooms at Ansar-Ud-Deen School which became dangerous to occupants was abandoned. The only sound buildings observed are the storey buildings which accommodate the classrooms at Christ Gospel and two single building with two classrooms. At Seventh Day Adventist School there are three U.P.E. blocks with four classrooms and an office to each classroom.

Observations also revealed that some classes are still housed in temporary shelters e.g. at Baoku Memorial and Abiola Jacobs School. Observations and discussions with teachers revealed that many classrooms are defective.

Lighting and ventilation in classrooms were adequate as long as classroom windows remained open.

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During the interview/discussion teachers claimed that some windows had to remain shut for various reasons.

1. To cut the awful smell coming from the gutters and the faeces which neighbouring houses throw indiscriminately.
2. To keep off the flies.

The demand for school fences is an urgent matter to all three schools which have no fence.

1. To safeguard the school buildings and its property from any acts of vandalism.
2. To cut off any insanitary practices caused by neighbouring residents.
3. To cut off any illegal or unauthorized vendors from selling uninspected food to school children in the school premises.
4. To protect the authorised vendors from competing with illegal vendors.

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TABLE 4:25 (Question 39)

DISTRIBUTION OF RESPONDENTS' ATTITUDES TO THE NEED FOR A SCHOOL FENCE

Responses	Trained Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No.	%	No.	%
Not yet until the school expands	3	1.97	-	-	3	1.68
Very essential to cut interferences	130	86.53	23	86.19	153	85.47
To cut illegal vendors	19	12.50	3	11.11	22	12.29
Other (specify)	-	-	1	3.70	1	.56
Total	152	100	27	100	179	100

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TABLE 4:26

Variables	See the need for a fence	See no need for a fence	Total
	No.	No.	No.
Trained Teachers with Health Education	130	22	152
Untrained Teachers	23	4	27
Total	153	26	179

D.f. (2 - 1) (2 - 1) = 1

x^2 = .0021 P> 0.05

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From the table 4:25 it can be observed that 85.47% of 179 teachers know that the fence is essential to prevent intruders. Discussions with the teachers revealed that the school premises are at present being interferred with by the surrounding residents who often come to dump their refuse in the school compound. Domestic animals have also been found wandering in school grounds especially on dumping sites.

From table 4:26 it is revealed that there is no significant association between the trained and untrained teachers in knowing the need for a fence. All two types of teachers know the value of a fence to a school. Further discussion with teachers revealed that it is not easy to get a school fence because the P.T.A.'s do not value a fence much despite several times schools have been broken into.

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TABLE 4:21 (Question 40)

DISTRIBUTION OF RESPONDENTS' ATTITUDES ON WHOM WE CAN CALL TO CARRY OUT THE NECESSARY REPAIRS AT A SCHOOL

Agency to do the job	Trained Teachers with Health Education		Untrained Teachers		Total	
	No.	%	No.	%	No.	%
The contractor who built the school	14	9.21	1	3.70	15	8.38
Ministry of Works and Housing	-	-	3	11.11	3	1.60
P.T.A. School look for a contractor	138	90.79	23	85.19	161	89.94
Other (specify)	-	-	-	-	-	-
Total	152	100	27	100	179	100

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TABLE 4:28

Variables	Know the action to take	Don't know the right action	Total
	No.	No.	No.
Trained Teachers with Health Education	138	14	152
Untrained Teachers	23	4	27
Total	161	18	179

D.f. (2 - 1) (2 - 1) = 1

χ^2 = .7958 P> 0.05

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From observations in schools, some corners have become dumping places for defective furniture. From table 4:27 it can be observed that 89.94% of 179 teachers responded in favour of the P.T.A. Discussions with the teachers revealed that the government is at present encouraging self help activities in schools for the repair of any defective school property.

From table 4:28, further analysis reveal that both types of teachers being compared have the same attitudes as regards the repairing of defective school furniture. The table shows that 90.79% of the trained and 85.19% of the untrained were in favour of involving the P.T.A. to look for a contractor to repair the school furniture.

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From the analysis above it appears that teachers with health education work during teacher training are not effective in putting into practice what they know about health and disease. For example they know the importance of orifice covers but they do not make any attempt to get more covers or to see to it that the existing covers are well maintained and put into correct use.

In case of children's practices it would appear that they are very much influenced by their home environment. Environmental Health facilities in the Inner-core are very inadequate and children do not see it bad to practice insanitary methods of waste disposal. As observed by the author, pupils have bad practices towards personal hygiene. However, non-availability of finance to provide health facilities in the schools and communities may be a major contributing factor to those insanitary practices.
Also the failure by teachers to put their health knowledge into practical use as regards the provision, use and maintenance of environmental health facilities in schools should not be ignored.

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CHAPTER FIVE

5.1 IMPLICATIONS FOR HEALTH EDUCATION AND DISCUSSIONS OF THE FINDINGS

From the analysis of the findings in Chapter Four it was observed that the general attitudes of teachers are not favourable to the provision, uses and proper maintenance of these facilities. This has been caused by many factors. The most important of these is the fact that the teachers have not been properly prepared during their training to be active in the general health education rather than the physical aspects of health education. Another factor that affects the attitudes of the teachers is because the Ministries of Health and Education have not been providing the services that ought to be rendered on environmental health facilities. From the discussions which the author had with the senior officials of both Ministries, as well as with the teachers, environmental health facilities have been left to be provided by Parents Teachers' Association (PTA) of schools.

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It has been difficult to convince the parents to provide these facilities because the government had created the impression that primary education is free. The parents are therefore reluctant to provide environmental health facilities to the schools. Moreover, the parents of the pupils in the five schools live in an area where environmental health facilities do not exist so they do not regard the facilities as very essential to the schools. The teachers therefore experience difficulty in providing the facilities.

Since the facilities are grossly inadequate and in many cases they are not existing and because of the large enrolments in schools, it is very difficult for the pupils to use them properly. Also the pupils are very difficult to educate on the proper use and maintenance of the facilities because similar facilities do not exist in their homes. Therefore, the teachers tend to develop non-chalant attitudes towards the provision, maintenance and use of environmental health facilities in the schools.

The author's observations and discussions with the teachers revealed that water supply is inadequate in all schools. For this reason, it is very difficult to teach

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pupils the practical aspect of how to keep the school latrines clean. The emphasis of washing hands after visiting the latrine is also made difficult. Pupils therefore have no chance to learn practically how to scrub the floors and orifice covers of pit latrines. In theory, pupils learn that dirty latrines encourage fly breeding, and that they are potential sources of the spread of germs by flies. Diseases such as enteric fever, gastro-enteritis, Bacillary Dysentary and cholera can be spread by flies from such dirty latrines. Therefore, when water is not available for use in schools, practical instructions in health education such as the ones mentioned above cannot be carried out by pupils.

Since the teacher is employed to educate the pupils on better health behaviour, he is supposed to motivate the Parents-Teachers' Association (P.T.A.) and the government so that adequate and constant supply of water is provided for use in schools. However, at present teachers are not carrying out this important duty to make the P.T.A. aware of the problems of not having water storage facilities and wash hand basins in schools. These must be provided to enable the pupils to practise the needed health activities mentioned above. As of now, pupils are not strictly

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drilled everyday to fill the containers provided with water so that it becomes their habit to do it.

Latrines in schools are inadequate. Pupils were observed using other insanitary alternative methods such as defaecating inside urinals, on the vicinity of school latrines and urinating on dumping sites in the school grounds. This occured most when the latrines were dirty. The teachers rarely try to motivate the P.T.A. to make them aware of the stated problems in schools. The teachers are not willing to contact the Ministry of Health for expert advice and for help to put up additional pit latrines in schools. However, when this help is not granted the teachers should drill the pupils by actions to maintain the existing latrines. This continuous exercise is a learning experience to pupils in that pupils learn to use existing latrines with care so that they are not easily soiled. In this case pupils learn to value school latrines as their own and as part of their school environment.

At present pupils do not care how they defaecate and where they defaecate. Studies in the Inner-core of Ibadan revealed that there are no latrines and it is common to see people urinating anywhere along the roadsides. The pupils have picked up this bad practice in schools taking

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it as normal, they continue to do it even when school latrines are provided. When pupils are not drilled against this bad practice both in class and during out-door activities they grow up with this bad practice.

Latrines whose floors are not reinforced can collapse easily, also latrines which are about to fill up have excessive bad odour. Pupils and teachers do not like to use these kinds of latrines. This is a barrier to health education because the users will find other insanitary methods. Pupils who do not learn how to use latrines effectively and how to maintain them cannot develop good attitudes towards better sanitation. The provision of adequate latrines for a school provides a learning experience to pupils. The use of orifice covers is also a learning experience, pupils learn practically, how to control fly brooding and how to control the spread of disease germs by flies. Pupils will ensure that pit inlets are always covered when the latrine is not in use, so that flies do not come into contact with excreta.

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Competition in schools among grades on how to maintain the environmental health facilities is an important health education exercise. Pupils develop a sense of responsibility and aspire to be the best in keeping such facilities clean. This is a good exercise for pupils and leads to permanent habits and practices. However, this opportunity will continue to be hidden until teachers are made aware of the importance of practical activities to reinforce classroom instructions. Pupils are required to participate actively to enable them know how to overcome the existing problems in schools.

There are many problems confronting the mid-day meal. Eating shelters in schools are not provided. There is no health knowledge imparted when pupils take their meals anywhere outside the classrooms. Pupils do not learn the acceptable social behaviour when they are not encouraged to act orderly as a group and when teachers are not keen enough to supervise them when they are buying or eating their mid-day meal. There is no health knowledge imparted when pupils have no water to wash their hands and bowls after meals. In order to make the mid-day meal effective, classrooms can be used for mid-day

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meal purposes until eating shelters will be provided. While using classrooms pupils will learn how to wipe out desks, clean classroom floors and wash their ~~hands~~ and bowls soon after meals.

Mid-day meals can be contaminated in the vendors' homes due to bad sanitation. Discussions with teachers revealed that they do not visit the homes of food vendors. to check on the hygienic preparation of food. From observations also teachers are not making any attempts to organize this school meal programme properly.

Lack of proper organization of the mid-day meals provides poor learning experience to young teachers and pupils. In schools where the medical examination of food vendors is not strictly adhered as in the studied schools, young teachers will learn to tolerate it and will regard it as normal or not very essential practice. Such incorrect attitudes and practices of teachers can lead to the contamination of food by carriers such as vendors with typhoid. This is true at present because teachers are not vigilant on the medical check up exercise to screen out carriers of disease.

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Refuse has been allowed to accumulate in school premises. No practical health education to pupils can occur when Pupils are not practically involved in the removal of refuse from school Grounds. Pupils need to learn that refuse is dangerous if it is allowed to accumulate. Decomposed refuse harbours germs and attracts flies. Dry refuse attracts rats. Mosquitoes can breed in discarded tins which might hold water. At present, pupils are not given such chance by teachers to do practical work to remedy such situations.

The teaching of the dangers of overcrowding and of inadequate ventilation in classrooms is defeated when the enrolment in each class is over forty pupils and when windows of some classrooms remain shut during lessons. The teachers do not guard against such dangers by seeing that classrooms are not overcrowded, also teachers rarely drill the pupils to keep windows open every day to allow adequate light and ventilation. When pupils are not given any chance to carry out practical health education, they only become "health informed" and not "health educated". Also, health education breaks down when pupils in class learn what they cannot practice outside due to the inavailability of facilities.

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Pupils who are brought up under bad conditions such as in the studied schools are not likely to be healthy. Although the present syllabus "Family Health" (see appendix) is adequate, teachers revealed that they were not exposed to practical instructions in health education in colleges. They only covered physical education and the rest was theoretical, covering such areas as food, water, diseases and environmental hygiene. This therefore calls for the re-training of teachers in better approaches to health education in schools.

5.2 Conclusion

From the study the author can deduce that the trained and untrained teachers share the same knowledge, attitudes and practices related to the use, provision and maintenance of environmental health facilities in schools. There are certain situations where trained teachers use their health education knowledge which they acquired from Teacher Training Colleges. This information confirms the first assumption of this study which states that there is no difference between trained and untrained

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teachers as regards : knowledge, attitudes and practices on the use, provision and maintenance of environmental health facilities in schools. There is a need therefore to make teachers aware of the importance of practical health education. The present syllabus "Family Health" (see appendix) shows sufficient theoretical work but what remains is to motivate the teachers in Colleges and during Seminar/Workshops to adopt outdoor activities for the solution of the existing problems in schools. This will reinforce the theoretical knowledge being acquired by the pupils.

At present the environmental health facilities in all five schools are inadequate and are of very low standard. These facilities fail to cope with the existing number of teachers and pupils, in addition to this the facilities are poorly maintained by teachers and pupils. There are no latrines in the Inner-core community of Ibadan and the refuse disposal methods which are being used at present are very unsatisfactory. Water supply is not constant in this area. In such situations pupils are at a disadvantage because they cannot

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put into practice what they learn inside the classrooms when they are in their homes or when they are outside their classrooms. The above statements confirm the second and the third assumptions of this study. The second assumptions states that, without proper use of selected environmental health facilities in schools pupils do not grow to value the use of proper sanitation. The third assumption states that, the theoretical knowledge about health imparted to pupils according to the syllebus "Family Health" cannot be meaningful when environmental health facilities are absent in the schools and in the homes of pupils. To improve the low standard of environmental health facilities in schools the following recommendations are suggested.

5.3 General Recommendations

1. Communities surrounding the schools must be motivated to improve their environmental health facilities to enable pupils to use those facilities at home, which are similar to the facilities that exist in the schools.

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2. The government should assist by providing the essential basic requirements in all inner-core schools of Ibadan e.g. adequate latrines and urinals, well lighted and ventilated classrooms, sufficient suitable desks and chairs, ensure adequate supply of water for drinking and wash hand facilities. The government should also assist in the proper collection and disposal of refuse. Small size incinerators or improved refuse disposal devices can be of great help. However, if the government is unable to provide all these facilities, the teachers should also make the parents aware of the existing problems in schools and then motivate the parents to provide some of these facilities on self help basis.

3. It has been observed that some classrooms are coming up without the knowledge of the Ministry of Health and without the engineer's supervision. It is essential that all plans for new school buildings should be approved by the appropriate authority.

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4. The Ministries of Health and Education should conduct seminar workshops during long vacation for teachers in health education to acquaint them with the skills needed to overcome the problems of environmental health facilities in schools. Lectures and practical demonstrations of such seminars must be given by experts in health education. The aim is to make health education a living subject in which demonstrations and field work are important, for example collecting and burning of refuse, washing plates after the mid-day meal, scrubbing latrine floors and many more practical activities. This will enable the teachers to develop suitable attitude to provision, use and maintenance of environmental health facilities in schools.

5. Ceilings are very essential in Nigerian class-rooms because of the tropical sun. It is essential that defective ceilings in schools get repaired and provide ceilings for other classrooms which don't possess them. This will safeguard comfort and health of the pupils during hot periods.

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6. Pupils take their mid-day meal anywhere without teachers' supervision because there are no eating rooms provided for this purpose. It is essential that such rooms get provided to enable the pupils to enjoy their meals better. Classrooms can also be used for mid-day meal purposes.

Recommendations for Future Research

1. Research should be carried on to correlate the health knowledge, attitudes and practices of the parents and students to disease causation and prevention. This should also include a study of the facilities available at home which may encourage or hinder the practice of healthful living. This is important in that the primary school child spends more time at home than at school and as such is more likely to be influenced by things found at home than at school. Therefore any health eduoction programme to be effective in schools, it has to be supported by a similar programme at home.

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2. A research to find out how much health education given to school children filters to their homes and what are the effects on its implication on the health behaviour of the parents and other members of the family. In addition to this study, one would find out how much of health education given to parents filters to children. This study would show where more emphasis should be laid and to which group in the community. It may be possible to find out what parents would easily accept, if told by their children rather than by an outsider and what children would readily accept if it is from their parents rather than from teachers. A programme could be planned accordingly to maximize the resources and impact.

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APPENDIX A

WESTERN REGION MINISTRY OF EDUCATION
PRIMARY SCHOOL SYLLABUS

1978 SCHOOL YEAR ONWARDS

HEALTH EDUCATION

P R E F A C E

Practice in Health Education

The daily routine of the school should include PRACTICE in the rules of health. This should be kept separate from what is taught in CLASS LESSONS.

There should be a daily inspection of the children by the teacher, when head, face, teeth, hands, feet and clothes should be examined.

The latrines and urinals must be kept clean and in good order, and pupils taught how to use them properly.

The latrines should be built in a corner of the compound and should be well screened.

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The children should be trught to wash their hands before and after meals and after using the latrine. Bowls of drinking and washing water should be kept in the school. If possible a small washstand should be provided for each class. A "Health Shield" might be made and awarded each week to the cleanest class. A shed with tables and benches should be provided for mid-day meals. Long narrow tables with benches to match running the same way as the building, give the most accommodation. Proper utensils should be provided and facilities for washing them. Great care should be taken that the food provided is clean. Meals should be supervised by teachers who should teach the children good table manners and care of utensils.

Practices in keeping classrooms clean and tidy. How to sweep the floor, brush down walls, dust desks and benches.

What to do with rubbish collected. Senior pupils to be in charge of cup-boards. Children to put away apparatus and tidy seat and desk before leaving school. Waste paper brskets to be kept and used. No paper or books on the floor.

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Refuse from the compound should be placed in a pit near the vegetable garden.

Records should be kept of the ages, heights and weights of the children throughout the course.

Simple health charts and pictures should be displayed and used.

A first-aid box containing simple remedies should be kept in the school.

All the above activities should be carried out apart from class lessons.

The aim should be to turn out children in the end of the course who will wish to be clean and healthy in mind and clothes to eat clean and wholesome food, to live in clean and neat surroundings, and to practice good manners and decent behaviour at home and in public.

PRIMARY 1

FOOD - Kinds of food and drinks.

- Meal times - when to eat and what to eat.
- Clean teeth - to prevent dental decay.
- Uses of water - Pure and impure sources.
- Clean and dirty water - Emphasis on personal hygiene.
- Drinking only clean water with personal cup.

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Safety- Keeping away from fire, electrical appliances, sharp instruments, keeping playgrounds safe.

- How to cross the road.

Diseases - Dirt and germs, washing hands: why, when where, how etc.?

Environmental hygiene:

- Clean houses and compounds, clean classrooms space and playgrounds.
- Keeping animals out of rooms, verandahs, classrooms and school compounds, clean furniture.
- Daily inspection of school compound and environment by the class teacher, also inspections of buildings and compounds practically by Public Health Personnel.

PRIMARY II

Food - Kinds of food and fruit. Where to eat, what to eat, how to eat.

Water- Collection of water, storage of water. Avoid contamination of water with dirty hands. Use cups with handles. Prevent guinea worm patients wadding in streams which are sources of drinking water.

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Diseases - Tooth-ache, Sore throat, Headaches, and Fever, Ringworm, Scabies, Diarrhoea, Guineaworm.

Environmental hygiene:

- Refuse Disposal, Clean houses and surroundings.

PRIMARY III

Food - Beverages, soft drinks, Cocoa products.

Water- Uses of water, Misuse of water, Forgetting to turn off taps, bathing, urinating in streams that supply drinking water.

Diseases - Tooth-ache, measles, smallpox, sore throat, headache, mumps, ringworms and scabies.

Environmental hygiene:

- Care of animals (pets) and danger of pests, bedbugs, rats, mice, cockroaches, jiggers and other local pests. Bad effects of wrong disposal of refuse.

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PRIMARY IV

Food - Food hygiene. School meals. Eating houses. Sheds. Balanced diet. Reasons for school meals. Risks of hawked food.

Water - Sources of water. Dangers of water-borne diseases. Maintennnce of wells and streams.

Diseases - Round worm. Tape worm. Thread worm. Hook worm. Guinea worm. Coughs and colds. Malaria. Headache. What to take. Bilharzia.

Environmental hygiene:

- Sanitary facilities to includo drains, toilets latrines, dust bins, bathrooms, Disposal of refuse with reasons. Methods of excreta disposal, throwing on the street, latrines, pits and water-closet.

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PRIMARY V

Food - Classification of food - proteins, fats, sugar or starches, vitamins, minerals; Need for food; Need for vegetable garden and fruit. Food beliefs. Effects of bad feeding.

Water - Purification of water - Methods of boiling, filtering and storing. Visits to water works, misuse of water, wastage, economics of water.

Diseases - Dirty, germ, spread of germs, airborne Tuberculosis, water-borne - dysentery. Insect - malaria, smallpox and measles.

Environmental hygiene:

- Housing, types of house siting, overcrowding, ventilation, drainage, Red Cross. The deaf and blind, Motherless home, leprosy relief.

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PRIMARY VI

Food - Food values, Budgeting related to food values in terms of money and content. Preserving cooked and uncooked food. Dangers of tinned food. Where spoilage is discovered report to MOH or PH Inspectors.

Water - Revision of clean water. How to improve clean water supply in your locality.

Diseases - Venereal diseases, Leprosy, Mental health.

Environmental Hygiene:

- Air pollution, Small incinerators, Construction of simple types. Types of latrines, water carriage system. Visits to nearest places of construction of latrine.

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Source:

OYO STATE OF NIGERIA
MINISTRY OF EDUCATION
PRIMARY SCHOOL SYLLABUS
GENERAL PUBLICATION SECTION
MINISTRY OF EDUCATION, IBADAN

Introduced in 1978.

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NAME OF SCHOOL:

	SCHOOLS	No. of Pupils	Total No. of Pupils	Number of Pit-holes	No. of Pupils Per Pit-holes	Ministry's Recommendation
1. Ebiolu Jacobs	I	375	703	16	46.98	1:1
	II	328				
2. Ansar-Ud-Deen	I	446	924	18	49.55	1:1
	II	478				
3. Boys Memorial	I	313	651	4	156.5	1:6
	II	338				
4. Girls School Dry	I	426	842	4	213	1:6
	II	416				
5. Ansarul Deen Ajegunle	I	326	907	4	213	1:6
	II	481				

Pupil to latrine ratio up to .16 pupils per pit hole

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TEACHERS TO LATRINE RATIO

NAME OF SCHOOL	SCHOOL	No. of Teachers	Total No. of Teachers	No. of orifices	No. of Teachers per latrine hole	Ministry's Recommendation
1. Abiola Jacobs	I	8	27	2	13	Up to 16 per pit hole
	II	19	18		9	
2. Ansar-Ud-Deen	I	15	25	2	13	
	II	10	23		6	
3. Baptist Memorial	I	3	27	2	14	
	II	5	22		12	
4. Christ Gospel Day	I	5	27	2	14	
	II	5	22		12	
5. Seventh Day Adventist	I	15	19	1	19	26 only one orifice for whole Family
	II	9	20		9	
	I	3	19	2	15	
	II	5	20		15	
	I	3	21	2	16	
	II	5	15		15	
	I	3	26	1	26	
	II	5	21		21	
	I	3	21	2	16	
	II	5	16		16	
	I	3	19	2	14	
	II	5	14		14	
	I	3	14	2	13	
	II	5	9		9	

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THE CONDITIONS OF PIT LATRINES IN SCHOOLS

NAME OF SCHOOL	NO. OF LATRINES	CONDITIONS OF LATRINES
1. Abiola Jacobs	16 orifices for pupils and 2 for teachers.	Toilets for pupils are in a filth condition. The entire pit latrine is about ½ metre to fill up. The faeces and waste papers on the floor of the pit latrine reveals that pupils are not seriously educated how to keep latrines clean.
2. Ansar-Ul-Deen	18 latrine holes for pupils and 2 for teachers.	Very unsatisfactory disposal of faeces and urine all over the floor and outside the latrine. Mostly pupils' latrines are badly littered with faeces. The pit latrine is also about ½ metre to fill up maggots were found on the floor.
3. Baoku Memorial	4 latrines for pupils and 2 for teachers.	All latrines are very unsatisfactory. There appears to be negligence by the teachers to educate the pupils on the proper use and care of pit latrines.
4. Christ Gospel Day	4 latrine holes for pupils and 1 for both male and female teachers. 2 urinals for pupils	Very inadequate and quite dirty.
5. Seventh Day Adventist	4 latrines for pupils and 2 for teachers. 2 urinals for pupils.	Very dirty, faeces and waste papers all over the floors, urinals are filth too and pupils shun using them.

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METHOD OF REFUSE DISPOSAL IN SCHOOLS

	NAME OF SCHOOL	WARD IN IBADAN	METHOD OF REFUSE DISPOSAL
1.	LEIOLA JACOBS	S.W.5	Refuse is dumped into Ogunpa stream
2.	ANSAR-UD-DEEN	S.W.4	Sometimes burning
3.	BLOOD MEMORIAL	S.W.4	Sometimes burning
4.	CHRIST GOSPEL DAY	S.W.5	Refuse is dumped into Gego stream
5.	SEVENTH DAY ADVENTIST	S.W.4	Sometimes burning
TOTAL	5	2	Very unsatisfactry methods of refuse disposal in all five schools.

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TOTAL NUMBER OF TEACHERS IN THREE SOUR PRIMARY SCHOOLS SHOWING NUMBER OF RESPONDENTS TO THE QUESTIONNAIRE

TOTAL NUMBER OF TEACHERS = 226 = 100%

TOTAL NUMBER RESPONDED = 179 = 79.2%

BREAKDOWN PER SCHOOL IS AS FOLLOWS:

Name of School	Total No. of teachers in the school	Total Responded	%
ABIOLA JACOBS	46	37	80.4
ANSAR-UD-DEEN	49	35	71.4
BLOOM MEMORIAL	39	32	82.1
CHRIST GOSPEL D.T	47	40	85.1
SEVENTH DAY ADVENTIST	45	35	77.8

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QUESTIONNAIRE SCHEDULE

ON

ATTITUDES AND PRACTICES OF TEACHERS AND PUPILS TO ENVIRONMENTAL FACILITIES IN IBADAN SCHOOLS

Read each question and put the number of answer you think is correct in the box provided.

Questionnaire No. [1 2 3]

1. NATURE OF SCHOOL

- Government .. 1.
- Mission 2.
- Private 3.
- Untrained teachers or other 4. [4]

2. EDUCATIONAL LEVEL OF TEACHER

- Grade III 1.
- Grade II 2.
- Grade I 3. [5]
- Untrained, other (specify) 4.

3. DID YOU TAKE HEALTH EDUCATION COURSE DURING YOUR TEACHER TRAINING?

- Yes 1.
- No 2. [6]

4. TIME SINCE YOU QUALIFIED AS A TEACHER

0 - 5 years ago 1.
6 - 10 years ago 2.
11 - 15 years ago 3. [7]
16 - 20 years ago 4.
21 and over 5.

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5. WHAT KIND OF LATRINE DO YOU USE AT HOME?

- a family latrine (for a single family) 1.
- a communal latrine (for use by all tenants in the house) 2.
- a Public Latrine 3.
- Other (specify) 4.

8

6. WHERE IS YOUR RESIDENCE?

- Inner-core 1.
- Private lay-out area 2.
- Government Reserved area 3.
- Government Housing Estate 4.
- Other (specify) 5.

9

7. WHAT IS THE SOURCE OF WATER IN YOUR HOME?

- a private water connection (for your flat alone) 1.
- a public tap (for all the tenants in the house) 2.
- we get it from a well 3.
- Other sources (specify) 4.

10

8. HOW DO YOU DISPOSE REFUSE IN YOUR HOME?

- It is deposited in a stream or gutter 1.
- We use a dust bins which gets collected 2.
- Refuse is not collected at all 3.
- Other (specify) 4.

11

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9. HOW MANY WATER TAPS HAVE YOU GOT IN YOUR SCHOOL?

- One 1.
- Two 2.
- More than two 3.
- None at all 4.

12

10. HOW CAN YOU PUT UP ADDITIONAL WATER TAPS IN YOUR SCHOOL?

- Ask the Ministry of Works and Housing 1.
- Inform the Ministry of Education and through the P.T.A.'s efforts water taps can be put up. 2.
- Leave the situation as it exists at present 3.
- Other (specify) 4.

13

11. WHAT CAN YOU DO WHEN A WATER TAP BREAKS DOWN IN YOUR SCHOOL?

- Call the Water Board to repair it. 1.
- Wait until the Ministry of Education will raise a Contractor to repair it. 2.
- Call an urgent P.T.A. meeting and discuss how to raise a Contractor to repair the tap. 3.
- Leave it for the Health Inspector to solve. 4.
- Other (specify) 5.

14

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12. DO YOU NEED ADDITIONAL WATER TAPS IN YOUR SCHOOL?

- Not at the moment 1.
- Until the Inspector of Schools will find it fit. 2.
- Very much indeed if we are to maintain personal hygiene, school cleanliness and avoid overcrowding of pupils when filling their drinking cups. 3.
- Other (specify) 4.

15

13. ARE WATER STORAGE FACILITIES NEEDED IN YOUR SCHOOL?

- Not at all since we have water taps 1.
- We need them because the present water taps often run dry. 2.
- Other (specify) 3.

16

14. DO YOU NEED WATER STORAGE FACILITIES IN YOUR CLASSROOMS?

- Yes, to ensure the presence of water for use by pupils in our classrooms. 1.
- No need for water storage facilities since we have water taps already. 2.
- Other (specify) 3.

17

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15. ARE THERE PROBLEMS CONCERNING WATER SUPPLY IN YOUR SCHOOL?

- Taps are inadequate and they often run dry. 1.
- The school has no water tap/taps of its own. 2.
- The present tap is not running 3.
- Other (specify) 4.

18

16. WHAT DO YOU CONSIDER TO BE AN IDEAL NUMBER OF PUPILS PER LATRINE COMPARTMENT IN YOUR SCHOOL?

10 - 25 pupils 1.
26 - 50 pupils 2.
51 - 80 pupils 3.
10 - 15 pupils 4.
Over 80 pupils 5.
Other (specify) 6.

19

17. HOW MANY LATRINES COMPARTMENTS HAVE YOU GOT IN YOUR SCHOOL?

- Teachers MALE FEMALE
- Pupils MALE FEMALE

20

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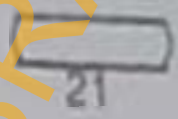
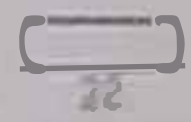
18. ARE LATRINE PARTICIPANTS ADULTS?

- Yes 1.
- No 2.
- Other (specify) 3.



19. WHAT SHOULD BE DONE TO BUILD ADDITIONAL TOILET FACILITIES IN YOUR SCHOOL

- There is no need for more toilets. 1.
- Consult the Ministries of Health and Education and through the P.T.A.'s efforts more toilets can be constructed. 2.
- Leave this entirely to the Ministries of Health and Education to raise funds. 3.
- Other (specify) 4.



20. WHAT PRECAUTIONS SHOULD BE TAKEN WHEN A LATRINE IN USE IS BECOMING FULL?

- We should call a Health Inspector. 1.
- We should inform the Ministry of Education 2.
- At about 60cm below ground level a pit latrine which is about to be full should be abandoned, and a new latrine opened for use. 3.
- Other (specify) 4.

21. HOW MANY HAND WASH BASINS HAVE YOU GOT IN YOUR SCHOOL?

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22. WHO KEEPS THE SCHOOL LATRINES CLEAN?

- Pupils under punishment 1.
- Pupils from a noisy class 2.
- Pupils under Teacher's supervision 3.
- Pupils of a class responsible for that week under a group leader. 4. [25]
- Other (specify) 5.

23. WHAT ARE THE USES OF COVERS TO PIT LATRINES?

- It is a health rule 1.
- To prevent the entry of flies and the escaping of foul odours 2. [26]
- To hide the excreta 3.
- Other (specify) 4.

24. HOW CAN YOU OBTAIN WASH-HAND BASINS FOR YOUR SCHOOL?

- We ask for funds from the Government. 1.
- A class teacher who is health conscious should organize pupils to raise money for wash hand basins 2. [27]
- There is no way to obtain such basins 3.
- We leave the matter to the P.T.A. to solve 4.
- Other (specify) 5.

25. HOW MANY DUST BINS HAVE YOU GOT IN YOUR SCHOOL? [28]

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26. HOW CAN YOUR SCHOOL OBTAIN DUST BINS NOW USED?

- Seek Ministry of Health Support 1.
- No need for dust bins at present 2.
- Ministry of Education can supply us. 3.
- Inform the P.T.A. of such a need and then organize pupils and teachers to raise money for new dust bins. 4.
- Other (specify) 5.

29

27. HOW REGULARLY SHOULD DUST BINS BE EMPTIED?

- As soon as they become full and always at the end of each school period 1.
- Once a day in the evening 2.
- Twice a day after each school period 3.
- Get directives from the Health Officers. 4.
- Other (specify) 5.

30

28. WHO IS IN CHARGE OF ERECTING SCHOOL INCINERATORS?

- Ministry of Health and the Refuse Disposal Office at Agodi 1.
- Ministry of Health, Refuse Disposal Office and P.T.A. 2.
- Only the Ministry of Education 3.
- Head teachers/mistress should make an application to the Ministry of Health and Refuse Disposal Office, with the P.T.A.'s efforts incinerator can be built. 4.
- Other (specify) 5.

31

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29. WHAT ARE YOUR REACTIONS TO THE POOR ENVIRONMENTAL HEALTH FACILITIES IN YOUR SCHOOL?

- If it were possible I would close the school 1.
- Increase the inadequate like water supply, latrines, refuse collections, carry out the necessary repairs to buildings and no additional intake. 2.
- Put up storey classrooms 3.
- Other (specify) 4.

32

30. WHO DO YOU THINK YOU SHOULD INVOLVE IN SITING A REFUSE DEPOT CONVENIENT TO YOUR SCHOOL?

- The Waste Disposal Office at Agodi 1.
- Arrangements can be made through the Ministry of Health and the Waste Disposal Office to help site a convenient refuse depot. 2.
- Only the Ministry of Education 3.
- Other (specify) 4.

33

31. WHAT DO YOU CONSIDER TO BE A SAFE METHOD OF BRINGING FOOD TO SCHOOL BY GOOD VENDORS?

- The present method is good 1.
- Approaches must be made to the Ministries of Health and Education so that a standardized safe container for carrying food is recommended. 2.
- Other (specify) 3.

35

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32. IS THERE ANY NEED FOR FOOD VENDORS TO GO FOR MEDICAL EXAMINATION?

- Very essential to screen those who might be carriers of diseases e.g. Tuberculosis 1.
- Not very essential since they were examined when they took up employment 2.
- It is time consuming to line up in hospitals 3.
- Other (specify) 4.

36

33. HAVE YOU ANY WRITTEN PROOF TO SHOW THAT YOUR FOOD VENDORS HAD MEDICAL EXAMINATION THIS YEAR 1978?

- Yes, from the Ministry of Health (Jericho) 1.
- No proof, but Vendors claim that they had it 2.
- It is the duty of Health Inspectors to ask of such a proof. 3.
- Majority of them have had no medical check-up this year 1978. 4.
- Other (specify) 5.

37

34. DO YOU CONSIDER THE TRAINING WHICH FOOD COOKS IS SUFFICIENT?

- Yes, since the food they bring to school is the same type they cook in their houses. 1.
- Not at all, since the days they spent were few to cover all essential aspects of food hygiene. 2.
- Other (specify) 3.

38

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35. WHAT IMPROVEMENT ON FOOD VENDORS IS NEEDED?

- No improvement is needed at present 1.
- The Ministries of Health and Education to decide 2.
- Teachers who are in close contact with food vendors should make recommendations to the above Ministries so that Vender's weakness are rectified in refresher courses. 3.
- Other (specify) 4.

38

36. WHICH OF THE TWO "TEACHER" OR HEALTH INSPECTORS" IS RESPONSIBLE TO VISIT THE HOMES OF FOOD VENDORS?

- They are all required to visit the homes of food vendors. 1.
- Only the Health Inspectors 2.
- It is the duty of the teacher since the food being prepared is for the pupils 3.
- Other (specify) 4.

39

37. IS THERE ANY NEED FOR A TEACHER OR HEALTH INSPECTOR TO VISIT FOOD VENDORS AT THEIR HOMES?

- Yes, because some food vendors stay far from school. 1.
- Vendors are already trained so there is no need to visit them. 2.
- Yes, because food vendors need constant advise on methods of food hygiene and to ascertain the suitability of vendor's homes as regards to food sanitation 3.
- Other (specify) 4.

40

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38. WHO SHOULD BE INVOLVED IN ELECTING EATING SHELTERS FOR PUPILS?

- It is the duty of food vendors 1.
- The Ministry of Health 2.
- The Ministries of Health and Education and through the activity of the P.T.A. 3.
- Not yet time to involve anybody 4.
- Other (specify) 5.

39. DO YOU CONSIDER A FENCE NECESSARY FOR YOUR SCHOOL?

- Not yet until the school expands 1.
- Very necessary to prevent the local people around from dumping their 'wastes' in the school premises after school hours 2.
- Yes, to prevent illegal vendors from entering the school premises. 3.
- Other (specify) 4.

40. WHOM CAN WE CALL TO CARRY OUT THE NECESSARY REPAIRS TO BROKEN WINDOW SHUTTERS, DESKS, AND POT-HOLES ON FLOORS?

- Call the contractor who built the school. 1.
- Ministry of Works and Housing 2.
- Get organized with the P.T.A. and look for a contractor to carry out the necessary repairs. 3.
- Other (specify) 4.

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41. WHO SHOULD PROVIDE THE ENVIRONMENTAL HEALTH FACILITIES FOR YOUR SCHOOL?

- The P.T.A., but the technical advice should come from the Ministries of health and education. 1.
- Teachers and Pupils 2.
- The School Committee alone 3. [ ] 44
- The contractorwho built the school. 4.
- Other (specify) 5.

42. IS THE PRESENT SITE OF YOUR SCHOOL SUITABLE?

- Very much. 1. [ ]
- Not at all. No more room for latrine construction and other facilities. 2. [ ] 45
- Other (specify) 3.

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