STUDENT VILLAGE
AJAYI CROWTHER UNIVERSITY OYO
ENHANCING SOCIAL INTERACTION THROUGH ARCHITECTURE

BY

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CERTIFICATION

This project dissertation entitled students village, Ajayi Crowther University Oyo meets the regulations governing the award of the Degree of M.Sc. (Arch) of Ahmadu Bello University and is approved for its contribution to knowledge and literacy presentation

_____ _____

Chairman supervisory committee Date

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Member supervisory committee Date

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Dean of Post Graduate School Date

_____ _____

Chairman supervisory committee Date

DECLARATION

I, **ABAYOMI MOSHOOD,** hereby solely declare that this dissertation is an authentic documentation of my research work. It has not been accepted in any previous application for a higher degree. Find all the sources of information are specially acknowledged by means of references.

_____ _____

Moshood Abayomi A **Date**

DEDICATION

This work is specially, dedicated to my wife, parents, sisters, brothers and friends, above all to the Almighty Allah.

ACKNOWLEDGEMENT

This work definitely could not have been accomplished by me alone but by the Almighty Allah who expressed itself greatly through the following love ones.

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ABSTRACT

In an academic environment accommodation is of immense importance because student needs a place to retire to after a hectic day of taking lectures or other extra curricular activities.

Social activities have always been an integral part of any educational institution throughout the history of mankind. Man needs to exercise his limbs, mind and his creative imagination to achieve fulfillment and satisfaction. He has therefore required taking part in various forms of social and recreational activities since time immemorial.

Hence, there is a need to provide student accommodation that will enhance social interaction among the students.

Samuel Ajayi Crowther University Oyo one of the newly created private university is taking bull by the horn by making the control of social ills a top most priority. Let see how student village could enhance social interaction among students and considerably reduce social ills on our campuses, as the saying that an idle mind is the devil workshop.

The research shall create conducive environmental for social interaction among student with a well planned layout to integrate accommodation with recreational facilities which will serve as a core in the planning.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 PREFACE

The design of students' hostel and settlement in fields of architecture were the impression that every possible contribution has been made and hardly can any new contribution be made. The fact that students however are generally far from being satisfied with their residences as our investigations show readily displays the fact that much can still be done to improve contemporary standards of students living environments.

The housing of student is a problem which goes beyond just accommodating them as per sleeping area. The number of people privileged to obtained university education is on the increase. Every country depends largely on its students' population for development particularly the university students and their quality which is very much affected by the type of environment they are trained in.

Students housing like all cases of mass housing is an area where the designers or architects hands are tied to some extent by economy although this depends on the client considering the limits of money expended presently on student's accommodation. I still believe that better design solution can be generated than what prevails. Most of the existing hostels in Nigeria are so

rigid and so oppressive on the students who are generally expected to fit into the space like pieces of furniture. There is the need to stop sacrificing student's basic comfort, privacy and satisfaction on the altar of economy as is the general trend.

1.2 MOTIVATION

My motivation for this thesis comes from the endless lives and cries about most types of student's residences in the country which were designed to meet an urgent need for accommodation at low cost and therefore made no attempt to react student's communities. Students housing should not be a straight forward problem of accommodation as the student has needs of an intellectual kind, leisure as well as communal and individual welfare.

1.3 PROBLEM DEFINITION

Hostels that are ill equipped, ill ventilated, rigid and lack possibilities for individual privacy affect students well being. According to the research carried out, the result of the survey analysis shows that an ill ventilated room without privacy, choking and stinking toilets, accessibility to the toilet and multy storey floors is a problem to the social interaction among the students in the hostel.

Hence, this thesis hope to solve this problem to enhance the social interaction among student

1.4 AIMS AND OBJECTIVE

Designing of student's hostels, halls and or villages that would meet the students' needs for physical, psycho-logical and intellectual development is a challenge. The main thrust of this thesis is aimed at improving the conditions of student's village in Ajayi Crowther University Oyo.

This will be achieved by a well landscaped environment with recreational facilities and spacious rooms with toilet all en-suit.

The storey height shall be considered in the desire by limiting the design with storey

1.5 HISTORICAL BACKGROUND OF AJAYI CROWTHER UNIVERSITY

Ajayi Crowther University (ACU) is a missionary university founded in year 2000 by the Anglican community and approved by the NUC in January 2005. The aim is to upgrade the present St. Andrew college of education Oyo to a university standard where research are carried out and knowledge are impacted on the student who will be God fearing by the end of their programme in the university.

The university is located at the present college of education campus after the Oyo state government moved the school to another campus with a new name (Oyo State College of Education).

Therefore the administrative and academic activities will carried out on this campus while their proposed hostel is along Oyo – Ogbomoso road, 10km away form the main campus.

1.6 GEOGRAPHICAL LOCATION

The campus is located in Oke – Ebo, Atiba Local Government area, Oyo and it lies central district of Oyo state.

1.6.1 Physical Landscape

The entire region of Oyo state is a table land underlain by the lignite group of rocks consisting of clays and fine grained sands, liquate and carbonaceous shaley days. The terrain is relatively flat with an average slop of 1^{o} 38". There are projections southwards in the two directions. Over the area, elevation varies between 13 – 16 metres above sea level, smaller settlements comprising of village, markets and mid rise build are its surrounding settlers.

1.6.2 Drainage

The topographic unit is little streams which flow along the natural terrains and into the drainage lines into the oceans. There are normally drainage problems immediately after rain and takes up to four days for full drainage to take place.

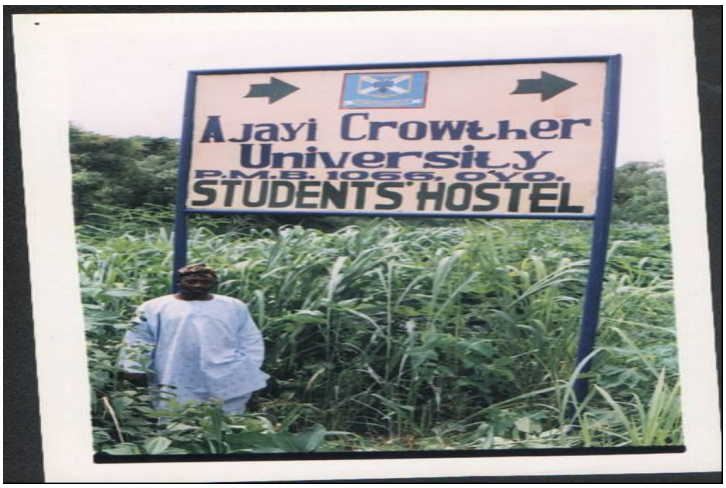
1.6.3 **Vegetation**

The predominant vegetation is the moist deciduous shrubs and wild grasses which is very rich in alluvial and green deposit manure and is more open than the rain forest which is in the North of its location although the site has been cleared already.

The traditional method for farming which is rotational bush following cultivation has left its mark on the vegetation. The over cultivated abandoned fields especially when on poor soils get colonized again by grasses and subsequently a new type of vegetation known as derived savannah, now replaces the original richer vegetation.

1.6.4 **Geology**

The soil types are foresails on loose sandy sediments. The soil is yellowish brown. The soils are less leached and consequently retain the advantage of a good rooting depth. Where they contain a fairly clayey content they provide good growing medium for fruits and other crops. The sedimentary sand and clay are known to have a low load bearing capacity and characteristics that occasionally can create foundation problem in building exceeding five floors.



Source: Ministry of Land and Survey Oyo State

Figure 1: Site Location

Source: Field Survey

1.7 CLIMATIC CONDITION

Oyo region experiences the humid tropical climate which is characterized with wet and dry seasons. The dry season which lasts between November and March usually coincides with the period of low sun while the wet season which lasts between April and October coincides with the periods of high sun.

1.7.1 Rainfall

The rain usually fall from the conventional storms and hence is unevenly spread throughout the days of the wet season. The mean annual rainfall is estimated to be 1.556mm. The months of July and September have highest rain falls while the months of December and January have lowest rainfalls in the year.

1.7.2 **Temperature**

The highest air temperature in the region are recorded between January and March while the lowest temperatures are recorded in June to July period and this is about 72^{o}F.

Over much of the area the attitude modifies temperature thereby eliminating extremes.

1.7.3 **Humidity**

The region is very humid with maximum relative humidity recorded between June and September. These values are appreciably constant and are higher than that of the comfort zone (30 – 70) for tropical regions.

1.7.4 **Solar Radiation**

The highest values are recorded in the months of February – April which coincides with the period of high sunshine and the lowest value in September which coincides with the period of low sunshine.

1.7.5 **Wind**

The site has two dominant winds. The dry northeast trade wind from across the Sahara, normally experienced during the dry season and the moisture laden southwest wind from the ocean normally experience during the wet season. The wind is very strong and could last for few hours.

1.7.6 **Climatic Effect on the Proposed Students Village**

Bioclimatic charts for the tropical zones dictates the climatic conditions necessary for comfort in the tropics. Whereby the comfort zones are exceeded, then artificial or other means are employed to bring about the required comfort. Students need a climate that is conducive for learning and maximum achievement of their goals with respect to academics. The tropical climate however acts to a large extent as a constraint in terms of comfort and therefore necessitates special design steps to help regulate this.

Proper orientation is necessary. Openings in building should face the north and south direction because they receive the least radiation. Where openings have to be provided in the east and west direction, shading devices should be provided. The building layout should be such that there is free air circulation. Buffers should be used to protect buildings, from strong winds. Courtyards planning in the tropics improve the microclimate conditions and facilitate cross ventilation.

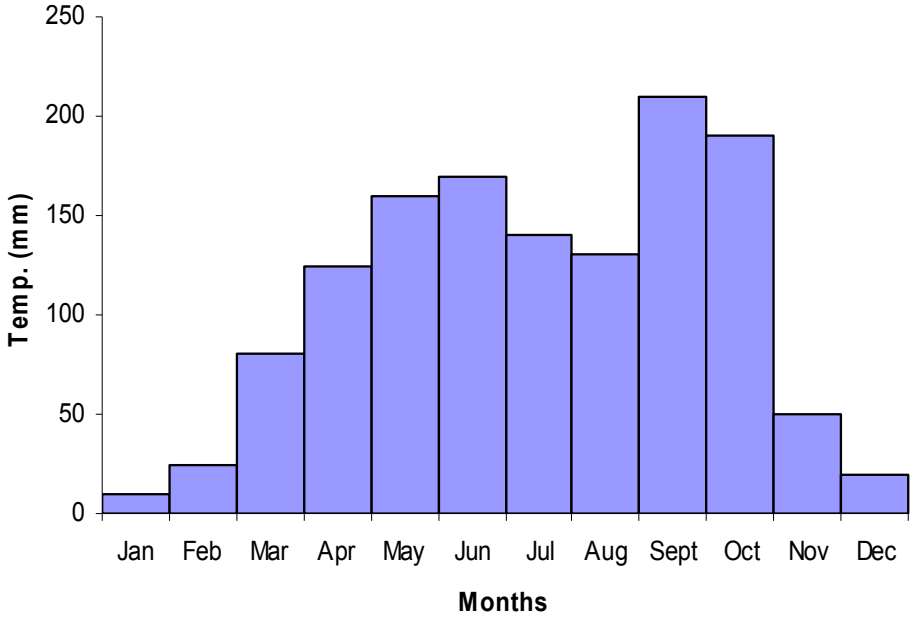


Fig. 1. Temperature

Source: Ministry of Land and Survey Oyo State

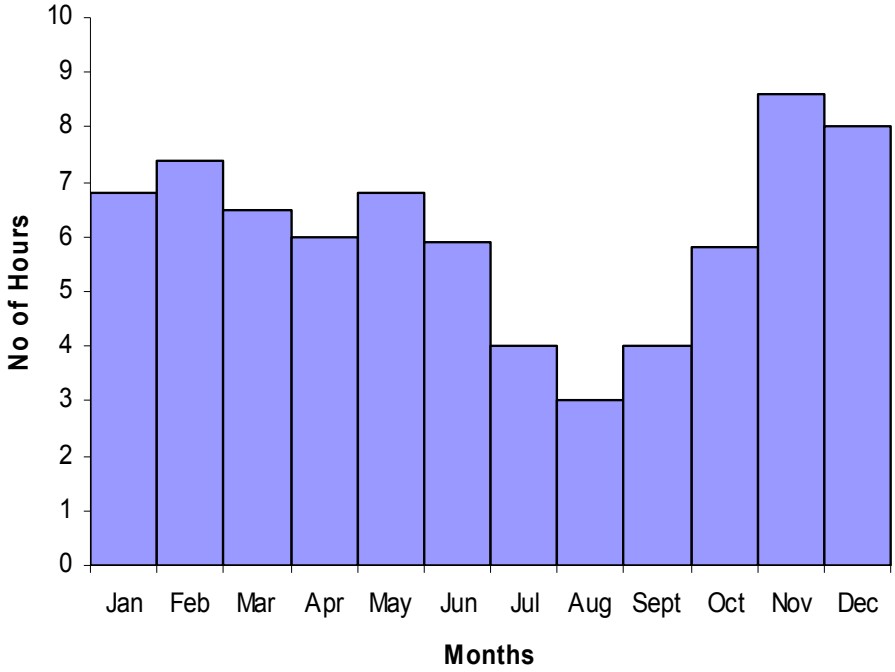


Fig.2. Rainfall

Source: Ministry of Land and Survey Oyo State

CHAPTER TWO

LITERATURE REVIEW

2.1 APPROACHES TO STUDENTS' ACCOMMODATION

Student residential buildings are mainly in the form of hostels. Hostels here denote an intermediate category between those ways of living and types of residential accommodation that are neither single family and household living on one hand nor hotel, inn and other commercial use patterns on the other. The range of hostel living and types of hostels are recognized by the terms such as "boarding school", "institution", "college" and "halls of residence".

A hostel is residential accommodation associated with a special purpose. Residence for education training employment, special learning professionalism, travel, sometimes holidays and other social or welfare need come into this broad range. However, whatever the type of special purpose the main objectives of any hostel should be similar to that of a good family home namely.

a. To cope with demands made on it.

b. To provide people with inspiration and support.

c. And to assist them in being capable and adaptable human beings.

There are three main types of residences provided for students which includes hostel, "college", and halls of residence. Each of these types has distinct characteristics though examples of each can be found which do not differ appreciably from the other in terms of the types of service they provide.

i. **Hostel**

Most activity spaces are located outside the hostel and the accommodation does not include board. Hostels generally provides sleeping, washing and sanitary accommodation, some authors refer to hostels as "students homes" because to a little extent students are in charge.

Hostel accommodation have taken a new dimension in that responsible and self administered accommodation is now needed by sensible young adults who are either students of a university or other establishment of higher education.

ii. **College**

Colleges are found in institutions that operate the collegiate system of university education. Colleges encompasses teaching and research spaces as well as residential for both male and female students. Space for tutors to hold discussions with their students was also provided. The dining hall as well as other communal spaces served both during and after lectures.

In the early colleges, residential accommodation was also provided for the tutors in the colleges and they ate on the high table provided for them in the dining hall. This system was operated by the university of Ibadan when it was a college of the university of London.

College membership is not restricted to residents but includes those in approved lodgings in town some of the undergraduates accommodated in college are in the actual college buildings, while others may be in separated building.

iii. **Halls of Residence**

Halls of residence provide facilities which range from something approaching the co-operate life of "living in college" to board and lodging, and a sharing of recreational accommodation. Membership of a hall of residence is often though not always limited to those actually resident.

The case for halls of residence for university students was made in the report of the subcommittee on halls of residence, the *Niblett report, University Grants Committee, HMSO 1957*. The membership list of the sub-committee did not indicate any student representatives. Thus the *Niblett Report* appears to have been an administrator's, management and academic assessment of student needs.

Based on the Niblett Report, halls of residence are basically study bedrooms blocks off a central corridor with communal ablution facilities on each floor, usually with a communal dining room, lounge games from laundry at ground level. It is usually single sex.

The residence hall came to be recognized as an integral part of the educational experience as it was here that students could learn to study and live together and prepare themselves for their responsibilities, as leaders of tomorrow. This approach has been adopted in the design of the proposed student village in Ajayi Crowther University, with some little modifications.

2.2 INNOVATION IN STUDENT ACCOMMODATION

Colleges and universities have in recent times provided a fertile ground for innovative housing designs. In many respects, a campus is analogues to the small town but is less restrained by the social and economic forces that operate in the housing market.

The concept of a village and town square are frequently utilized and the inclusion of food services, bookstores, auditoria, classrooms and offices complete the urban analogy and further sets the stage for design innovation.

The renaissance in campus housing dates back to the mid 1960's after a period of dull bureaucratic slab and box making in the fifties and early sixties, running parallel to the general decline in housing design.

In America two projects opened the way for the contributions that came later, *the jose leis sert scheme for Harvard's Peabody Terrace and Paul Rodolph's* married student housing at yale. Both use uban models as the basis of their organizations in contrast to previous dormitory archetypes.

There seems no limit to the ingenuity of architects to achieve endless variety in the plan form and circulation arrangements for hostel buildings. Most hostels are in some way communities in themselves and it is often desirable to crate smaller groups and units within these communities.

The schemes from Europe, America, Africa differ widely because of basic influences such as climate, site features or topography, site values building cost limits, client needs, traditions and prejudices. This illustrates how important imaginative sitting, planning and construction are, they show how their planning and circulation structure have helped to create the form of the building, internal spaces, the approach to a residents room, and the general atmosphere and pattern of living within the buildings.

2.3 **TYPES OF STUDENTS HOSTEL**

The types of students hostel varies from the design forms and the height of the buildings.

The blocks are either straight, or form some geometrical figures like L, U, or T etc. They have rooms arrange one after the other linearly adjacent to the corridor stair cases and toilets are located around the middle or ends.

The straight or I-geometrical plan forms normally are too long thus crating a monotonous façade. They are open in nature creating little or no privacy.

i. **L-Shape Configuration**

The advantage of the layout is its provision of private outdoor spaces sheltered by the building form and to which interior space can be directly related. The space along the inside diagonal corner is introvert while along its outer edge is extrovert.

ii. **U – Shape Configuration**

The shape defines a field or inward focus and outward orientation. At real the fields is enclosed and well defined. At the open end the field becomes extroverted in nature. It allows the fields to have spatial and visual continuity with the adjoining space. The configuration enclosed a courtyard which creates a communal feeling.

The enclosed courtyard system creates a feeling of intimacy, protection and security as well as defining territorial boundaries. The linear types are further categorized according to their room arrangement, along the corridors.

i. The single banked storey or multistory hostel block are commonly used, rooms are arrange on one side of the corridor.

ii. The double banked multistory hostel block.

a. **Double Banked Multi-Storey Linear Block**

To maximize economy room are arranged linearly on both side of the corridor. Toilets are at the far ends of the blocks while the single stair case is in the middle. People walking and talking along the corridor causes a lot of disturbance to those in their rooms. Rooms are not well ventilated, corridor not well lighted except by artificial means. The design is not suitable in the tropics e.g. (University of Nigeria Nsukka Campus).

b. **Enclosed or Open Courtyard System**

Hostel units are made up of two linear rows of student study bedrooms arranged on either sides of the communal areas in such a way as to enclose a courtyard. In case of hostel A – B of University of Calabar the courtyard are enclosed on two sides by toilets behind and lounges in front. The courtyards are paved with concrete slabs. They are single storey building.

The courtyards of RAMAT, Danfodio and Akenzua halls of A.B.U., Zaria are open on one side, being defined by students room on two sides. The third side parallel to the open and is defined by toilets, lounges have become a central common room and the blocks are single storey building.

c. **Continuous Courtyard System**

These blocks are intended as private houses, they make quite interesting accommodation for student. Communal interact etc. can be achieved if the courtyards are proportional to the number of students expected to use them. This type is generally needed by campuses with a lot of land to spare e.g. Bedde/Sarduna female hostel, A.B.U., Zaria.

2.4 TYPES OF STUDENT ROOMS

Students are being accommodated in different types of spaces ranging from single rooms to apartment types of houses.

i. **Single Student Bedroom**

The single room stands for privacy, independence, self-respect and a proper appreciation of ones importance. It is necessary to all types of students, but preference are given to graduate students (in Nigeria as case study readily shows) who might have accumulated property and have established friendships. It my open directly to a corridor or may be part of a suite or apartment. The student is able to indulge in recreational, activities (e.g. louding the radio) without creating an acoustical problem for his neighbours.

ii. **Double Rooms**

This is the present standard in student housing and is strongly recommended. It is economical; it provides social companionship with a minimum of social adjustment; it has been observed that students do more studying in their rooms when they have on room – mate than when they have more than one.

iii. **Split – Double Room**

This type provides the social contact obtained by two students sharing a common space but at the same time recognizes and solves the problem of conflicting interest in the students social an study activities. It consist of two spaces with a connecting opening. When connected with a door, there is a degree of acoustic privacy, without a door there is only visual privacy and shielding from illumination sources.

The split double room represents an optimum arrangement because of the easy choice of privacy or sociability and permits the students to treat each other of the two spaces as different with one as living/studying and the other as sleeping/dressing. This arrangement is only possible where room-mate are friends.

iv. **Triple Room**

This type also breeds interpersonal problems. The slight advantage is that the space is usually large enough to be subdivided by wardrobes and other elements into activity spaces. This type of rooms are found and provided on economical bases in some Nigerian universities.

v. **Four Student Room**

This type also breeds interpersonal relationships. The main advantage is that the spaces is usually large enough to be subdivided by wardrobes and other elements into activity spaces.

vi. **Suites**

This is an arrangement in which two or more students share the total space in single and double rooms, with or without a bathroom and at least an extra common space.

The major value of the suite plan is the opportunity it affords for closer student association and the freedom it gives students using the various spaces as they wish.

The common space within a suite reduces some of the pressures felt by room sharing; provides for social activities as does a residential living room and includes those students who might not have direct or easy association with other students in social activities.

To ensure that students in suites make friends outside their circle, it should be possible for students in different suites to inter – relate by sharing a common room which provides a larger base for friends and tends to reduce stress.

vii. **Apartments**

This differs from a suite in providing a kitchen. It consists of single or double rooms built around a common space. Three to eight students for an optimum group for apartment living. The common space in most cases includes a dinning area.

2.5 THE STUDENT'S ROOM

The student's room is the basin space in the housing facility. Here, the student studies sleeps, dresses, socializes and stores all his personal belongings.

2.5.1 Activities Carried Out in Student's Room

i. **Study**: The individual prefers to study in his room and for intense study by himself. The desk is provided for study but students often study on their beds and on the floor; using the desk only incases requiring extensive note taking or the use of several reference sources.

ii. **Sleep**: The students pattern of activity is rarely consistent. He may sleep at any time of the day or night. Two occupants of a room rarely follow the

same schedule. Beds with suitable acoustical light separation – screens is an answer in situations were one student wishes to study while the other sleeps.

iii. **Socializing**: With its split emphasis on study – sleep, the student room presents difficulties as a social environment. The bed being the chief offender. A bed which can be converted to a sofa is most desirable as a living room finishing and can be used for multiple seating.

iv. **Dressing**: The concentration of clothes storage in the room restricts its use for dressing. Both sexes require different volumes and types of storage. Smaller combinations of storage units might well accommodate students preference and allow flexibility of room arrangement.

The basic furniture requirement in a study bedroom consists of a bed, desk, chair, wardrobe, reading lamp and book shelves. Some hostels provide soft chairs.

An items of furniture automatically requires additional space around it to make its use possible. This space should be allowed for in the planning of the room. Though built – in furniture are more economical to provide, they are major source of student's discomfort. It is desired, according to behavioural sciences, that each student should have the maximum opportunity to arrange his furniture as he pleases.

The trend in student housing is away from moveable furniture and towards built – in furnishings. This, according to *Van der Ryn and Silverstein*, is unfortunate because built-in systems further limit the potential for variety and the ability of students to shape their room space to meet personal needs. It is clear that just as there is no ideal student, there is no fixed room arrangement, what is important is that students make a place their home by asserting their own preferences and changing it.

2.6 NECESSITIES OF DAILY LIVING ASSOCIATED WITH STUDY BEDROOMS SANITARY FACILITIES

The gang bath is one of the most persistent features of student residences and has been defended on the basis of economy and its contribution to socialization in place of smaller installations in several locations.

When a bathroom serves more than a few students, maintenances become nobody's business but the authorities who have to employ staff to maintain these (with the student paying extra). The initial extra expense for smaller units will actually result in long term cost savings if the student themselves maintain the smaller bathroom. The reduction in maintenance requirements will be more than amortize the increased first cost of smaller facilities while also considerably improving the human quality of the housing environment of the student.

Nevertheless the internal circulation of the hostel should allow flexibility in sharing nearby facilities. Gang bathrooms are not appropriate for participants in conventions. They are a great source of noise especially when placed at the core of the building.

2.6.1 **Recommended Provision of Sanitary Fittings in Hostels**

Sanitary Fitting	Recommended	Comment
Bath	One to every 4 – 6 persons	A combination of both baths and showers is generally advisable.
Shower	One to every 4 – 6 persons	Showers are more popular in male hostels than in females.
Water Closet	One to every 4 – 6 persons	1-4 persons if included in a bathroom. In women hostels, 1 incinerator should be included with each group of we's
Wash hand basin	One to every 4 – 6 persons	Ratio should be 1:2 or 3 dependent on size of washroom.

Gangbaths are not appropriate for participants in conventions.

Source: *Aj information sheet*
UDL: Spaces, fixtures hostels and hall of residence.

2.6.2 **Recommended Provision of Personal Laundries**

Washing	20 Users	50 Users	100 Users	200 Users
Washing	Sink + drainer	1 washing machine sink + drainer	1 or 2 washing machine sink + drainer	
Drying	Drying rack (open air drying	1 spin dryer	1 spin dryer 1 tumble dryer	1 spin dryer 1 tumble dryer
Ironing	1 Ironing board	2 ironing board	3 ironing board	4 ironing board
Recommended room size	$70ft^2(6.5m^2)$	$120ft^2(11.15m^2)$	$170ft^2(15.8m^2)$	$220ft^2(20.5m^2)$

Recommends 1 laundry sink per 10 students.

Source: *Aj information sheet*
UDL: Spaces, fixtures hostels and hall of residence.

2.6.3 **Kitchen/Common Rooms**

Food preparation problems cannot be solved by unenforceable prohibitions but only by construction of appropriate areas with cooking and food preparation facilities.

Self catering is popular amongst students and in cases of "group" arrangements kitchen common room provides the social or meeting space. Where main meals are available in a central dining room, it could be used for light meals and solves the student problem of in-between meal snacks. In cases where students do their own cooking, bigger rooms should be provided. 18.50 – 23.23m^2 is adequate for a kitchen serving ten-twelve residents. Hostel kitchens present a safety and sanitary problem and should be maintained by a management committee of elected user representatives.

2.7 COMMUNAL AREAS

2.7.1 Dining Room

Students prefer cafeteria service which provides a variety of choice. It is a special feature of hostels, halls and colleges, but is not necessarily in the same building as the study bedrooms. But the withdrawal of subsidy on meals by the government has affected the cafeteria system. Now student cook more in their halls of residence and use of "bukateria", meals are cheaper in the "bukateria" than in cafeteria. The "bukateria" operate on irregular basis unlike the cafeteria system. Therefore, the current trend in most universities is the "bukateria" system.

2.7.2 **Common Rooms**

There are also a special feature of hostels, halls and colleges. In general, where there is more than one common room, there is scope for a better distribution of the space. They should be attractively designed as they are used for a wide range of activities.

2.7.3 **General Guide for Planning Kitchens**

	Up to 8 Users	Up to 15 Users	Up to 30 Users
Sinks	1	Double sink	Double sink
Boiling rings	2 Combined	4	6
Grill	1 Combined	2	3
Depth of work top including cooking and sink area	4ft (1.2m)	6ft (1.83m)	9ft (2.74m)
Oven	Department on type of hostel and client policy could be provided in woman hostel		
Ventilated cupboards, Refrigerator communal	3 cuft ($0.08m^3$)	4 cuft ($0.11m^3$)	5 – f cuft (0.14 - $0.23m^3$)
Electrical socket outlet	Adequate socket outlets should be provided for the use of coffee percolators, blenders, electric kettle and toasters.		
Recommended room sizes	40 – 50sq ft ($3.72 – 465m^2$)	70 – 100sq ft ($6.5 -9.29m^2$)	120 – 160sq ft ($11.15 – 14.85m^2$)

Where kitchens should include eating space, areas should be double.

Source: Aj information sheet
UDL: Spaces, fixtures hostels and hall of residence.

A foyer common room should be designed and furnished so that residents could have private conversations with visitors whom they do not wish to invite to their group kitchen common room still less to their study bedroom. The important features are shape, furnishing, moveable furniture and lighting to give flexibility in arrangement and use rather than the actual floor size.

2.7.3 **Indoor Games and Music Facilities**

These facilities are often located in a separate building. It is not possible to provide amenities of this type for individual schemes and linking with other local amenities and local players are desirable. If in a college, these facilities could serve a group of halls or hostels. The sitting of the these room is of major importance not only to avoid noise nuisance, but also so that access areas can be attractively designed and easily maintained.

i. **Reading Room**

In hostels where rooms are shared by more than two students, reading rooms are necessary. People study at different rates, some subject themselves to long periods of monk like concentration; others apply themselves for relatively short periods interspersed with intervals of social or recreational activity. The reading room provides a place for the student to study when his room – mates do not.

ii. **Storage**

Seldom used student property should be stored in inexpensive yet accessible areas of a building. Where student rooms are used by convention delegates, storage should be provided for property left by the student.

Recreational spaces and facilities are important in providing environmental support to the personal interaction of students.

The following is a hierarchy of typical unity sizes in university housing.

Table 2.1:

Students Unit	Students
Room	1 – 2
Suite	4 – 12
Group	16 – 24
House or floor	48 – 72
Hall, building or college	120 – 800
Complex of halls	1,200 – 4,800
Campus	12,000 – 27,500

2.8 THE HOUSEHOLD GROUP

Current proposals for student housing recommend household group.

Student participation in the programming and planning their housing has affected the forms "hostels" have taken. Both management and residents welcome means whereby residence facilities could be broken down into smaller groups. The social size of an upper limit of three hundred for a students residence was put forward after much investigation by sociologist *Phllis Allen*. This, she claims is the number a hostel warden can conveniently handle, by breaking down this number into house groups which should not exceed thirty, students as well as management are happy, as this helps solve current administrative problems and tensions due to domestic staff shortages and financial difficulties.

The essential factor to make this arrangement work well representative in management, including costing, the size of the "household" group would depend on distribution of sanitary facilities and kitchen common rooms as well as other local circumstances.

Tomorrow housing will be built with the recognition that students are people as well as figures on a chart of projected enrolments.

2.9 INTERNAL ENVIRONMENT

2.9.1 Thermal

Student rooms require an appropriate thermal environment for the functions carried on within them. The environment is affected by temperature, ventilation, humidity, radiation and the quality of air produced by filiations.

Adequate openings for cross ventilation are necessary and where good wind orientation for the student room is not possible, sun-shading device should be used to create cool conditions inside. The position and size of window openings are very important. Generally, a small linlet opening with a large outlet ensures a large air velocity.

Best arrangements is full wall openings on both sides, with adjustable sashes or closing deices which can assist in channeling the air flow in the required direction following a change of wind direction. Air movement mute be ensured through the space mostly used by the occupants (i.e. up to 2m high).

2.9.2 Lighting

The quality of lighting in student rooms is determined by the quantity and brightness of both the light sources and their general surroundings. High illumination levels are appropriate to study but the brightness contrast

between the work and its surroundings must be at a minimum. Social functions require lower illumination levels.

In the day time, natural daylight should provide much of the necessary illumination of windows are well placed and the glare eliminated. Lighting sources in student rooms should be integrated with the moveable furnishing. This tends to minimize maintenance and fix the light's proper level. Because of the highly individualized nature of activities performed in student rooms, light from a number of well placed but relocated point sources is far more useful than light from one central source. External lighting is necessary requirement for safety, security ad control.

2.9.3 **Sound Insulation**

Good sound installation is expensive, and when it is present it is not noticed, like the absence of headache. Certainly it is expensive and money spent on it appears to be wasted. In the opinion of students, quite is the most desirable characteristic of any living arrangement.

Sound in buildings is generated in 2 basic ways. Firstly, airborne sound which radiates from the source to strike a surface in the building and physical contact causing that surface to vibrate, *British standards CP3* states that standards for hotels could be assumed to apply to hostels.

Recommended Standards of Sound Insulation of Hostels

Between bedrooms	45dB
Between bedroom and corridor	45dB
Between social room for music	50dB not less and social rooms for speech floor than grade II for airborne noise grade I for impact.

Research into noise in student residences shows that this is not accurate enough information. The elimination of noise is hostel building required a combination of careful planning and attention to detail which is not normally required in other forms of residential building. In dealing with airborne should, it is important to keep balance between walls, floors, ceilings and doors.

i. **Walls**

Airborne should insulation should be between 40dB and 45dB. It should not be below 40dB and is not necessary to go above 45dB, unless the room adjoins an increased source of noise. Impact sound insulation is not important.

ii. **Floors**

Airborne sound insulation should be between 40dB and 45dB. It should not be below 40dB and necessarily not above 45dB unless the room adjoins an increased source of noise.

Impact sound insulation is of great important and the use of soft surfaces, e.g. rubber, cork of carpet on the floor of study bedrooms, corridors and communal kitchens as well as stair treads is imperative unless floating form of floor construction is used.

iii. **Doors**

The degree of airborne sound insulation depends to a large extent on the play. 25dB is adequate for a door opening into a quite landing or corridor used only by a few people. For a door opening onto a noisy corridor or stair or into a communal areas up to 40dB will be required. Care should be taken to seal the cracks around doors.

iv. **Windows**

Windows can assist in reducing noise in rooms. Pivot hung or projected hung windows in upper storey may reflect sound from below into the room. In tropical climates where windows must be left open (thermal reasons), absorptive materials can be used in surfaces on which sound may be reflected.

2.9.4 **Planning Against Noise**

a. Stairwells should be isolated by doors to ensure that noise is not transmitted from one floor to another.

b. Noise is easily transmitted between adjacent rooms. Doors and windows should therefore to positioned as far from each other as possible.

c. It is advisable to stagger the positions of doors on two sides of a corridor so that no two doors face each other.

d. Corridors should be as short as possible.

e. Dead areas such as closets and storage areas could be used as buffers to set as sound barriers. Room wardrobes could be positioned on corridor walls to reduce the incidence of noise from corridor traffic.

The primary requirement for noise insulation is air tightness. In the tropics, aural and thermal requirements might clash. Question should be achieved mainly through planning and basic design decisions rather than on constructional details.

2.9.5 **Courtyards**

Externally rooms tend to be clustered around courtyards possibly to give a sense of community and enclosure. Airborne should will travel from one room to another across courtyard. Courtyards should therefore not be too small. The surface of the court will have little effect on airborne noise from room to room. If hard paved, it will however act as a reflecting surface and

aggravate the sound of voices and footsteps for people in the court. Grass and planting is useful to break up and absorb sound.

2.9.6 **Planning and Construction**

Care should be taken to plan source of noise (plumbing circulation) away from student rooms. Sound is caused by pressure wave and will leak through wherever there is a flaw in the sealing of room.

2.9.7 **Colour Texture Materials**

Materials should be chosen for their durability and case of maintenance yet should not give a sterile, institutional appearance. The students need for expression and the managements need for ease of maintenance need not conflict. Pinboards should be provided along the wall say over the study, desk to enable students pin up their posters and pictures instead of defacing the walls. Floor coverings should be of soft surfaces as these help reduce noise and will not restrict study and social activities performed on the floor.

2.9.8 **Appliances**

A large number of electrical appliances are now brought to the hostel by the student. This has precipitated problems of general safety, fire hazards, intolerable odour, noise levels and frequent interruption of electrical services in existing hostels. New buildings should recognize the evolution of electrical

use by providing initial high capacity with provision for easily adding to that capacity with minimum disruption.

CHAPTER THREE

2.0 CASE STUDIES

For the purpose of this research, it became necessary acquaint one self with existing example of buildings with similar purpose, that of housing students, to the issue which is to design a students village for Ajayi Crowther university Oyo. The case studies chosen for appraisal was based on site layout, facilities provided, design forms and the number of students sharing facilities.

2.1 CASE STUDY 1: RIBADU/ALEX HALL A.B.U., ZARIA

The hall accommodation only female students, it has six parallel blocks each having four floors and eleven triple rooms per floor ad five link blocks which form link between the six parallel blocks. The ground floor has nine single rooms and a common room, which the upper two floors consist of 13 rooms.

3.1.1 Site (Concept) Plan

The courtyard concept was used. Hall administrators office common rooms, games, snacks shop and security rooms are attached to the block at ground floor level.

3.1.2 **Sanitary Facilities**

These include, laundry on ground and second floor, the numbers of shower and we on each floors are inadequate at peak periods.

3.1.3 **Circulation**

The main access into the residence is from the main entrance, covered walkways link few blocks from the entrance hall.

3.1.4 **Social Facilities**

The only social facilities provide are around, the hostel this is the social centre about 20m away, sit out and snack bars are outside the hostel, which makes it very difficult for many student to patronize or use it. The common room and games room in the hostel are quite small. Infact they are empty room that could be called stores.

3.1.5 **Merits**

The courtyard system helps to promote communal relationship.

3.1.6 **Demerits**

i. Link rooms are very small for two students.

ii. Inadequacy of social facilities within the hostel walls.

3.2 CASE STUDY TWO: UMAR SULEIMAN HALL A.B.U., ZARIA

Suleiman hall is design to support one thousand two hundred and fourty three student 40 double rooms and 283 single study bed rooms. Sanitary and laundry facilities are located at the middle of all floors.

3.2.1 Site Layout

i. The block are arranged linearly in rows, attached to the end of each blocks is covered walkway on ground floor with occasional connection at other levels in the case of some blocks.

ii. The hostel is well landscaped, with green lawn every where the design, layout does not promote communal relationship (the courtyard approach was not used). The only facility provided that promote communal and social activities is the shop outside the hostel, where student gather always to relate this is possible because of the site outs.

3.2.2 Merits

i. Rooms are well ventilated and lighted.

ii. The blocks are properly oriented and there is a maximum of two occupants per room by design which promote privacy.

iii. Well landscaped environment.

3.2.3 Demerits

i. Inadequate sanitary facilities which are usually congested at peak period.

ii. Poor social facilities within the hostel the only form is the common room and the restaurant.

iii. The low level window along the corridors reduces the level of privacy and security.

3.3 CASE STUDY 3: JAJA HALL UNILAG LAGOS

The hall is designed to support one thousand three hundred graduate. It has 160 room spaces. The blocks are arranged in inter locking pattern creating a big courtyard in between. The convenience are of the corners of the courtyard making it very accessible from every corner.

3.3.1 Site Layout

The courtyard approach was used to create a feeling of communal setting. The block unit are repeated and connected by stair cases which is close to the conveniences each block are lined by walk way (covered) all round the block.

i. **Merits**

a. The single banking of the rooms help the ventilation of the rooms.

b. It has well in built ward copes making it easies for the occupants to accommodate, their properties, the courtyard approach is worthy of emulation.

ii. **Demerits**

i. The escape stairs are too far apart and is not incorporated in the design.

ii. Insufficient social facilities. The few ones i.e games room common room are on the ground floor.

iii. The toilet are located at the distances and at split level reducing privacy to the barest minimum toilet have open bath room spaces which is the most un-private organization.



Plate 1: Jaja Hall UNILAG Lagos
Source: Field Survey

3.4 CASE STUDY FOUR: BELLO HALL UNIVERSITY OF IBADAN

The hall accommodates only male students it has four parallel blocks each having two floors number of rooms are the same in all floors. Bello hall is designed to accommodate 400 students.

3.4.1 Site Layout

The courtyard concept was used hall administration office common room, games rooms bar, restaurant are affected at ground floor level.

3.4.2 Circulation

The main access into the residence is form the main entrance which is centrally located, parking spaces are well defined circulation between floors are well defined each room has a balcony to itself overlooking the courtyard.

i. **Merits**

Landscape is very well defined walkways (covered) are used to link blocks, spacious room with cross ventilation, Bello hall is worthy of emulating

ii. **Demerits**

In the rooms production for ward rope are not made for conveniences are not adequate.



Plate 1: BELLO HALL UNIVERSITY OF IBADAN
Source: Field Survey



Plate 2: Covered Site Bello Hall University of Ibadan
Source: Field Survey

3.5 INTERNATIONAL CASE STUDIES: PROTESTANT STUDENTS HOSTEL BERLIN GRUNEWALD, GERMANY

The hostel is for 150 protestant students, principally from the technical university, the institute of fine arts and the school of music.

3.5.1 Scope

At the time of scheme was planned, some double room for single students were included because it was thought that first year students would profer to share. Opinion has now changed and all rooms are occupied singly.

3.5.2 Site

The site is close to the Avus motor racing circuit and because of the noise, the scheme was restricted to two levels from a traffic point of view, the hostel is favourable situated.

3.5.3 Planning

The hostel is approached form the southern point, set site plan. Two storey building with a lateral corridor arranged in comb like fashion are facing the same direction open towards small green and embrace the central courtyard which features a fountain and a bronze sculpture “David”.

The rooms are approached through the “court” from the southwest end. By the main entrance are the office, kitchen, dining and main common room, there are eight residential houses of two storey with mainly single and

one or two double rooms on each floor. Each house has sixteen students who share common showers, baths and lavatories. The individual houses are outered pass a small common dining room which has a well equipped kitchen were students can prepare and eat their own meals. The eight common rooms face onto the central space and the student's room face onto the back of the adjacent house.

On the northern side is a structure with apartments of married students. It forms the connection with two pavilions, further combined with the building for married students in a section with six guest room and the rooms for the warden tutor.

3.5.4 **Furnishing**

Much of the furniture was designed by the architect. The rooms have a bed/settee made from plywood on top of which is a thick foam mattress which has a cover of zip – fastened furnishing fabric. The bedding can be put away into the wardrobe drawer and the bed made into a comfortable settee.

3.5.5 **Merits**

a. Interest is generated by the layout of the blocks which enclose a central court to give a feeling of community.
b. There is favourable relationship between public areas and living spaces.
c. All blocks are adequately ventilated due to uniform orientation.

d. There is a well defined entry point into the community.

e. The eight common room space onto the central space so that the locks have close social contact.

f. The gaps between walls connecting blocks provide security for residents without making them feel cage in.

3.5.6 **Demerits**

a. Entrance into the residential blocks are exposed to climatic elements.

3.6 CASE STUDY SIX: INTERNATIONAL CASE STUDY UNIVERSITY OF SOUTHERN QUEEN'S LAND

3.6.1 Introduction

The student village was purpose built for students, the first stage of the student village was opened in 1996. The final stage will be ready in time for September 1, 2004. The village will have 144 units.

3.6.2 Site Layout

The student village is surrounded by landscapes gardens full of Australian wafive shubs, and life abounds in this setting. The layout of the units, which range from 3, 4, 5 bedroom, gives a rue village feel and privacy of the residents is assured, a sense of space is evident.

An indoor geothermal swimming pool serves as a wonderful recreational area. A gymnasium of international standard is available, short walk form the student village. A coin laundry with clean modern washing machines and dryers is available 24 hrs a day.

3.6.3 Facilities

A Shopping centre is available, it provides day to day shopping activities. There is a bakery, chemist, hairdresser, doctor, liquor store, thrift shop.

3.6.4 Merits

a. Good privacy is assured.

b. Well landscaped gardens

c. Good security.

d. Adequate social facilities.

3.6.5 **Demerits**

a. Social facilities are far away form the student village.

3.7 CASE STUDY CONCLUSION

a. The problem of social interaction have always being very difficult to resolve in hostel design, basic facilities must be available to prompt this social interaction which is turn aid learning.

b. All the demerit and merits when properly identified will help in providing a conclusive student village flat is affordable well planned with modern facilities that will enhance social interaction among student.

c. The proposed student village Samuel Ajayi Crowther university will incorporate these merits which will make it indeed a student village ready to cater for social interaction through architecture.

CHAPTER FOUR

3.0 ENHANCING SOCIAL INTERACTION AMONG STUDENT THROUGH ARCHITECTURAL DESIGN

4.1 SOCIAL ACTIVITIES

This accounts for up to eighty percent of the activities carried out in the hostel and more consideration should be given to this in the design of hostels. As studios are designed strictly for drawing related activities, so are laboratories designed for experimental activities and so should hostels be designed for residential activities which has more of social activities than academics. Some of the activities are:

i. Cooking

ii. Eating

iii. Washing

iv. Bathing

v. Playing music

vi. Watching of films

vii. Entertaining friends

viii. Discussions

ix. Sleeping etc.

These activities are classified as social activities with respect to the hostels although they are all done for the main goal of education to be attain but the hostel becomes a place designed for these activities.

Hostel accommodation provides shared of unit residential spaces under the students control in which they can carry out the activities mentioned above. The degree to which privacy can be achieved depends on the type of accommodation provided and the space distribution.

The different types of hostel configuration (straight form, L-shaped, T-shaped, and U-shaped) and students bedrooms (single, double, split –double, triple, four student rooms, suites and apartments) all provide piracy to varying degrees.

4.2 ACADEMIC ACTIVITIES

This become the sole aim one have in mind leaving wherever to school and if the academic side is not fulfilled, no matter what you have achieved you have failed in the field. In the hostel context, the academic activities carried out can be named as follows:

i. Reading

ii. Drawing

iii. Assignments

These activities might look too scanty but all of academic has in one way or the other has to do with them apart from the major activities that need special environments and different capacities i.e. the experiments in laboratories, teaching in lecture theatre audio visual, field trips etc. this become the core of consideration in architectural designs of the academic environment but these are not the only activities carried out by students, the greater part lies in the life style the student and his approach to his academic relative to the social activities.

4.3 RELATIONSHIP OF HOSTEL ROOM BETWEEN PRIVACY, STUDY/SLEEP AND SOCIALIZING ACTIVITIES

Privacy is essential for the students' ability to carry out the sleep, study and socializing activities. The student living alone in single room has the advantage of controlled privacy with respect to all other students. He can control timing of activities at his own convenience. He can indulge in playing music at anytime which usually causes conflict amount roommate. This music can be played without creating acoustical problems for his neighbours. There is also the advantage of easy arrangement of furniture to individual astir and style.

On the other hand, students sharing rooms are at a disadvantages in terms of sleep, study, socializing privacy and some situations were examined to see how these activities clash.

a. Some students subject themselves to long house of study with high or low concentration while others read for relatively short periods interspaced with intervals of social or recreational activity in both cases, especially in the former, the individual prefers to study in his own room.

b. If an architecture study is paired with a pharmacy student, there is likely to be conflict of academic activities because the architect might blast his music while he works and the at full illumination this for sure, will disturb the pharmacy student to avoid this, a different study room might be provided or the two student will reach mutual agreement to avoid academics in the hostel.

c. In terms of cooking nobody is actually disturbed because in most cases roommate do contribute and cook together, the main inconvenience is the smell of the food being cooked in the room. This can handled by providing a kitchenette.

d. One might want to have privacy with the girl friends while the other might want to sleep, this is one of the major problem encountered by discussion and understanding, both parties will be satisfied.

e. Time taken to walk to the bathroom and back could be used elsewhere and the exposure of walking along long corridor is not pleasant at all especially when your room is the farthest to the toilet.

f. Hygiene, when toilets and showers are grouped to serve a group of students, its maintenance and cleaning is seen to be nobody business. It is not surprising to see some bathrooms and toilet is very bad hygienic conditions especially during weekends when cleaners do not work and the school is full session.

g. Space of conflict, sanitary facilities serving many students is the major source of conflict especially at peak periods. When you have a female visitor and she pressed, it is difficult to convince her to sue the general toilet even when she agrees, the place will be filthy or a man will be there.

h. Comfort, the lack of comfort can be related to the hygienic condition of the sanitary facilities. Students cannot seat on the toilet seats when it is dirty and free in the bathrooms for when there is mucks or growing on the wall for fear of contacting a disease.

Although the initial cost of one central gang bath is less than that of smaller installations in several locations, but initial extra expense of smaller showers will actually result in long term cost savings if the students

themselves maintain the smaller bathroom because it eliminates the need for external cleaners throughout the life of the building, with smaller and more private bathroom, sanitary comfort will be more attainable in the following ways.

a. Usual privacy
b. Avoidance of conflict
c. Individual sanitary needs can be met
d. Time will be saved (proximity)
e. Hygienic condition
f. Security
g. General psychological feeling of well being

4.4 ACCESS

Access to the student hostel is very important. There is the ability, freedom or permission to approach, enter or use the hostel. The entrance doors and corridors should permit easy access in terms of egress and ingress (diagram).

4.5 CIRCULATION

Circulation is the passage of persons or thing from one place to another or though area. It relates to the route that people follow as they move from one place to another. This not limited to hall space or corridor, but also

circulation within a room, when reviewing circulation, it is important to check not only what routes are followed but also how often they are used. The number of times a route in repeated in any given period of time is hauwn on the circulation frequency.

Generally, routes with high circulation frequency are short and direct in a good floor plan, the habit, need and special consideration of students also affect the quality of circulation.

Efficient space utilization requires that the circulation area comprises the smallest possible percentage of the total area. Studies of existing student housing show the efficiency percentage varying from 7% to 25%. Although it is advantageous to reduce circulation area, building safety codepreserible minimum areas and arrangements.

4.5.1 **Types of Circulation in Students Hostels**

a. **Students' Circulation**

Students have different activity schedule and habits so their circulation patterns cannot be similar. Students circulation pattern may be categories at follows:

i. **Within a Space**

- Bed to wardrobe
- Bed to table/study area

- Table tell or bed to door
- Cooking space to door, table and bed

ii. **Space to other Space**

- Room to dinning hall and back
- Room to bathroom/toilet and back
- Room to common room and back
- Room to other rooms

Circulation pattern should be adequately provided for there activities. However, the above mentioned activities cannot be similar since there are different types of hostel accommodation.

b. **Visitors' Circulation**

Visitors may consist of student's family member, lecturer, friends etc. normal routes can be taken to the student's room but where visitor own car, access must be provided for parking area to hostel entrance.

c. **Service Circulation**

There is the movement of people in and out of the hostel as they make service calls, dallier goods (to botchier), read meters, take garbage out and fix and clean sanitary facilities.

4.5.2 **Corridors**

Corridors are very essential for circulation outside the student's room. Most room in hostels open directly into corridor. Corridor are said to be single loaded (or banked) when there are rooms on one side, and double loaded (or banked) when there are room on both side. The width depends on the use and population it servers. Corridors which are mean cramped and possible dangerous in an emergency are not acceptable.

4.6 INTERRELATION OF SPACES

The relationship of students' room, one to another and to the public, and service rooms is very important. Distance and easy access are corridor in planning there spaces, most hostels are in some way communities themselves and it is often desirable to create and relate smaller groups or units within there communities. A variety plan forms and circulation arrangement for hostels are possible.

CHAPTER FIVE

4.0 GENDER SEPARATION AS CULTURAL FACTOR IN NIGERIA UNIVERSITY

The design of students hostel is a field of architecture where the impression that every possible contribution has been made and hardly can any new contribution be made. The fact that students however are generally far from being satisfied with their residences readily display the fact that much can still be done to improve contemporary standards of students living environments.

5.1 STUDENTS HOUSING

The housing of students is a problem which calls for more serious attention. The number of persons privileged to obtain university education is on the increase. Every country depends largely on its students population for development and their quality which is very such affected by the type of environment quality which is very much affected by the type of environment they live in. As Christopher Alexander said, "students housing becomes more interesting knowing the difference between the sexes which affects the amount of space to be invested with cost in mind" in his book a "Pattern Language"(1962).

Students housing like all cases of mass housing is a field where the designed hands are to some extent tied by economy and life style of the

genders to be accommodated but considering the limits of money expended presently on student accommodation, students housing becomes an aspect of design where first priority and great emphasis lies with the accommodating of large number of student in the cheapest possible manner. The individual needs of students is usually relegated to the rear, the gender of occupants are not considered and what usually results for the sake of economy are hostel blocks that are both mal-attractive and inadequately functional.

However, unlike aspects of feeding where students have been know to express their views in often riotous manner although these days due to economy, students especially the females now prefer to cook for themselves. Accommodation problems are usually borne out in silence for in most cases it is even a privilege to acquire hostel accommodation at all. It is probably in this light that more and more offending accommodation types continue to spring up all over campuses in Nigeria. In contrary view to the collective cheap approach of designing students' hostel, H.M. Rebinstein says that no matter the cost "students housing must be considered as very important for it must create a psychology very conducive for the student to attune himself/herself to his/her academic endeavour.

The problem of insufficiency of on – campus hostel accommodation with regards to the ever increasing students' population is not a new

phenomenon. The separation of male from female is also a cultural factor which is also seen in off campus hostel and solution to this could be the provision of new and more adequate hostels that can not only accommodate the students but also meet their basic housing requirements in terms of special requirements, privacy, security, sanitary facilities, mental and physical comfort requirement of the user. There should also be consideration for the gender of the users and how it affects them.

5.3 LITERATURE REVIEW

Looking into time, it is a tradition and culture in Africa that males are separated from females, even in our homes, there is always a limit between the male and female even if you are related no matter the age especially when it has to do with sleeping area. For instance at my home, myself and my sister share everything, eat, go out, play, even wear her jeans and shirts but I never go to sleep in her bedroom, it even gets to a time of the day, it looks abnormal for me to go to her room. This is a normal thing in most houses where some areas are restricted to the females only. This becomes an influence because of our varying cultural which has become a cultural factor. Cultural factor in the sense that our cultures differ from place to place but lets know the dictionary definition of culture.

Culture is said to be the state of manner, taste and intellectual development at time or place, this culture as defined show that it has a lot of influence from the society, tradition and exposure of an individual.

Although we are brought up in an environment where our parents becomes all we know and they build our culture as they want and feel will be good forus when we become adults so by the time you grown you find yourself in a culture that has concretized and very difficult for you to change your imposed culture.

5.3.1 **Religious View**

The religions of the world encourages gender separation where men and women are separated at certain areas. In Christianity, there is a dressing code to what a women wears and the level of her make – up, so that they do not get too attractive to the men. This creates a psychological gap between the genders and the morals preached shows that sexual relationships before marriage in highly against the ethics of the religion and this is checked not only8 by preaching but by due separation of the genders in terms of sleeping area accommodation. In some religions, women are not allowed to be leaders of the churches, some are not allowed to visit a certain class of men that have attained a high spiritual position and some are not even allowed to get married.

In Islam, women are separated from the men, even deep down in the residential houses where the women are kept in seclusion from the men. A woman is only allow to see her husband and children, at some age even her male children are not allowed free access to their mother likewise brothers and sisters. The architecture shows this very clearly, atimes you may pass though the master bedroom to get into the compound. As a visitor you may end up in the anteroom or "azure" this is because you are not allowed to even catch a glimpse of the female occupants in the compound.

The dressing of Moslem women is very unrevealing such that atimes the faces and hands are all covered up. All these has even caused due to religious views against gender mixture, sex and sexual provocation which is the main aim of gender separation. When you do not see, you do not think, when you do not have opportunities you keep to yourself. "see no evil, hear no evil, then do no evil".

5.3.2 **Traditional Views**

We can also see this culture through our traditional that males are always different from females. This gap always placed between the genders and used to monitor the relationship between these genders mainly in the residential areas, especially the sleeping areas. At the parental homes, there are always boys and girls room likewise boys and girls hostel in the

universities. At my place, as open as the living room is, the men are separated from the women, me sit on the right and women on the left even if you are married or related.

During any major festival, it is clearly seen that women's preparation area is different from that of the men and there are movement restrictions to the females as to what the wear and where to go. During a masquerade festival, the women are usually relegated to the cooking area, some food even, women are not allowed to cook, some masquerades women are to allow to see.

The issue of gender separation have always been with us and the African man will not soft pedal in its continuous attempt to be the head of the family and this will always led to the separation of genders, putting men always at the helm of affair while relegating women.

5.3.3 **The University System**

This tradition has been carried along to the university system where gender separation is fully manifested in the residential area. There are clearly male and female residential areas and facilities, which are either fully inaccessible or partially accessible. This is a winder scope of the family tradition and religious discipline being fully shown in the university system. It is stipulated that a minimum age of sixteen must be reached before being

admitted into the university. This simply proves that the freedom about to be given to the student must not be for premature ones and the level of our experience will be low so that we are groomed to full maturity by the time we graduate.

We are fully aware that our parents do not move into school with us in other to take care of us but in most cases, the students are just given what they need and are sent off to school. How they fare in school becomes their business, the dangers that come with this freedom is immense, meeting people with different characters, adjusting to the new environment where one is left alone may be for the first time to survive solely on him or her own plans.

This gap created between partial freedom at home and total freedom in school in what the university authorities have taken upon themselves to act as our parents by making rules and regulations which the students must obey to create harmony and peaceful co-existence between each other.

This issue of sexual harassment and sexual provocation is the main aim of gender separation which we know is very rampant amongst youths who make the greater population of students. When a boy and a girl is together, in a room, you cannot predict what will happen, this is why gender separation is better than other means of control over the certain result between the secret

meetings between the genders and this is very subtle and accurate. A single act between a man and women can sprint off a long time problem and responsibility the parties involved may not be ready to carry. This is the case of teenage mothers where a baby is having a baby. These often result to the dumping of babies as refuse at refuse dumps, abandoning babies, all these are the hazards which religions, society, universities, tradition etc. are working very hard to cub. This has lead to the case of gender separation becoming a cultural factor held commonly in all Nigeria universities in most residential facilities.

This culture have achieved its goal for it has reduced drastically if not totally eliminated the causes that led to lit. These days we do not hear boys fighting in girls hostels, rape cases no longer exists and due security an privacy is enjoyed by the female students who happens to be the tender sex. It has also instilled discipline and maturity to the male students. It has shown a strong impression of good morals on the students consciously and subconsciously on the relationship between the sexes and the males are forced to behave well so that if you send for the female, she will be happy to come out not unlike when the gates where open anyone could get in and do whatever feels him good, whether invited or not.

On the other hand, the males, are now the ones suffering the embarrassment of unexpected visiting by the females. But this has also made the boys work hard to make their rooms comfortable and neat so that anybody that visits them will be pleased and will always want to come back while the girls do not care for their rooms as we heard from them but spend a fortune in their clothing so that they can look presentable to attract the boys.

We may all have our different opinion to the approach of the university authorities toward the seclusion of the female residences but we should also have in mind that this system was not developed by the school but has been handed down through social, tradition and religious culture and this is also considered in the other parts of Africa as the way of maintaining the morals that has been embedded in us by family and this goes a long way to show the difference between the African women and the western women.

As our women obey their husbands as they have been trained all through their lives, the western women do not, instead they believe in the Beijin conference of women liberation, we do not give as much freedom to the female like the male for this has been an age old culture which has proven lesser flaws than the foreign tradition. At least we do not hear so much about women shooting their husband in Africa, or women smoking and using drugs or taking to alcohol, if they do at all, they are foreign influences on youths, we

may think that once the female residences are left open, all will be well and we might be referred to as matured and developed but will we behave maturely when you always meet men in the room of your loved one? If she pack men in her room in school today, she will also do that tomorrow in your house as a wife.

It can be identified that gender separation in the university is not a school culture but it comes all the way form the local culture through religion, tradition and the family to make the African women unique in its relationship with men and create a strong impression of discipline in men.

CHAPTER SIX

5.0 SURVEY ANALYSIS

Generally, the design of students' residence can be improved by surveying students activity patterns. One can discover how and how frequently the various spaces are used and whether the usage confirms to the anticipated functions. This kind of analysis will pinpoint spaces that are wasted and others which serve many functions more than they were designed for. It also will reveal quality of students life style such as its cohesiveness and the residence features if requires.

The survey was carried out by verbal questioning guided by a selected and restricted questions and also be discussions with students. This mode of approach to design is extremely necessary as opposed to what is termed by Robert B. Bechtels in "Enclosing Behaviour' (1962) as the paternalistic attitudes can be briefly described as a situation where the professional does not deem it necessary to consult the views of his client on matters of the services that he the professional is providing for the client, simply because he is assured to be an expert on such matters and thus knows everything there is to know about the clients needs.

However, what usually results from this type of approach is that even though the designs might incorporate what might be described as an "artistic

swoon" factor on paper they are disasters from the point of view of clients who live in them. Student housing in Nigerian universities is no exception. In order to avoid mistake the opinions of those affected (clients and students) and to use the findings as a basis for the design fame work.

These question were asked over one hundred students.

6.1 QUESTIONS

a. Are you resident on campus?

b. If not would you prefer on campus accommodation?

c. Do you like the existing accommodation structure on campus?

d. What facilities do you think should be provided additionally?

e. Do you own (i) Fridge; (ii) Sound system; (iii) Television; (iv) Fan

f. Do you prefer staying alone or to share rooms?

g. Do you prefer sharing utilities?

h. Do you own a car?

i. Would you like a walk-in dresser?

6.2 RESPONSES TO THE QUESTIONS

Out of a total of 100 students questioned, 50 male, 50 female.

Question 1:	Male on campus	-	85%
	Male off campus	-	15%
	Female on campus	-	80%

	Female off campus			-	20%
Question 2:	Male prefer campus			-	10%
	Female prefer campus			-	10%
Question 3:	Male	-	"No"	–	87%
	Male	-	"Yes"	-	13%
	Female	-	"No"	-	93%
	Female	-	"Yes"	-	7%
Question 4:	Male	-	Living room	-	30%
		-	Kitchenette	-	75%
		-	Balconies	-	12%
		-	Separate study	-	42%
	Female	-	Living room	-	82%
		-	Kitchenette	-	95%
		-	Balconies	-	40%
		-	Separate study	-	50%
Question 5:	Male	-	Fridge	-	30%
		-	Sound system	-	96%
		-	Television	-	42%
		-	Fan	-	90%
	Female	-	Fridge	-	70%

		-	Sound system	-	90%
		-	Television	-	22%
		-	Fan	-	90%
Question 6:	Male	-	Alone	-	40%
		-	Share	-	60%
	Female	-	Alone	-	28%
		-	Share	-	72%
Question 7:	Male	-	"No"	–	80%
	Male	-	"Yes"	-	20%
	Female	-	"No"	-	90%
	Female	-	"Yes"	-	10%
Question 8:	Male	-	"Yes"	–	80%
	Male	-	"No"	-	20%
	Female	-	"Yes"	-	90%
	Female	-	"No"	-	10%
Question 9:	Male	-	"Yes"	–	81%
	Male	-	"No"	-	90%
	Female	-	"Yes"	-	8%
	Female	-	"No"	-	92%
Question 10:	Male	-	"Yes"	–	98%

Male	-	"No"	-	2%
Female	-	"Yes"	-	98%
Female	-	"No"	-	2%

General comments on reply from questions and discussion, most people that live to share facilities and room preferred to do so with a selected friend or friends because it has been quietly observed that most students that manage to get rooms to themselves end up picking a friend who will not pose any inconveniences to him so that quest of privacy lies in the fear of being paired by another individual who might have a different understand to life or a different life style to him or her.

Privacy becomes stay with someone or having understanding with whoever you find yourself with. If this can be attained then privacy or a high degree of privacy can be said to have been attained.

6.2.1 **Conclusion from Discussions / Questioning and Observation**

From the discussion, questioning and observation it was clearly seen that the following facilities were needed;

i. For rooms;

   a. Fluorescent lamp

   b. Bed side wall bracket

   c. burglar proof on windows

d. Fly screen on all openings

e. Half upholstery chairs

f. Shelves

g. Reading desk where there is no study

h. Two bump wall socket outlet.

ii. Toilets;

a. Ceiling light fitting

b. One water closet

c. One ceramic wash hand basin

d. One shower tray

e. One shaver light mirror

iii. Dressing;

a. One wall dressing mirror

b. Well designed wardrobe partitioning

c. Scabled wardrobe for boxes

d. One ceiling light fitting

iv. Kitchenette;

a. One 12 amp wall socket out let

b. One single drain sink

Hostel Block Should Contain

i. Laundries

ii. Electrical Store

iii. Furniture store

iv. Well landscaped courtyard

v. Spare WC and showers

vi. Common room with electronic gadgets

Communal Facilities (Students Centre)

i. Cafeteria

ii. Video viewing centre

iii. Amphitheatre

iv. Post office

v. Telephone exchange

vi. Photocopy

vii. Computer room

viii. Video games

ix. Conference room

x. Salons

xi. Shops

xii. Games room

Recreational Facilities

i. Basket ball

ii. Hand ball

iii. Volley ball

iv. Lawn Tennis Court

v. Badminton Court

6.3 ARCHITECTURAL SOLUTION TO DESIGN PROBLEM AS IDENTIFIED FROM EXPERIENCE AND DISCUSSION

a. Large number of student's dataset occupying last floors because of roof leakage, water shortage and stress of elevation.

Solution:- Avoid the use of complex roofing which results into weak points for leakages to occur.

Avoid flat roof and use simple pitch roofs.

Reduce storey height.

Provide water storage tanks.

b. Large number of student's dataset occupying ground floors because of noise, rainwater splashing, privacy, flogging and student on upper floors throwing things down.

Solution:- Minimize opening at entrance wall to rooms along the corridors and to reduce the corridor length.

Pedestrian's walkways should not be close to window wall.

Windows along corridors should be at high or low levels.

Provide dust bias in each room.

The use of landscape to absorb input sound.

CHAPTER SEVEN

SITE ANALYSIS

7.1 The Site

The site for the proposed student's village is about 300 hectares approximately. This is about 10km from the main campus. The nearest school is Bode Thomas Secondary School and 1km away from Ijawaya village.

The site is a relatively flat land with a slope not up to 0.5% between 15 – 17. The soil is of medium bearing capacity in parts especially with the typical western soil. As such it is recommended that the structural engineers attention be drawn to this aspect. The use of strip or pad foundation might be employed.

7.2 Neighbourhood Context

The site is a virgin land in the sense that no building has been erected in the particular spot before although it has been cleared, it is 1km Ijawaya along Ogbomoso.

7.2.1 Natural Physical Features

The site is free from rock outcrops, however shrubs and grasses are the dominant features of the savannah. The site has since been cleared.

7.2.2 **Sensory**

There is continuity of view although the site. Due to the nature of the terrain possible noise generation is from passing traffics. The interval traffic is not persistent.

7.2.3 **Utilities**

Available on the site includes power supply which is presently about 25m away. The water treatment unit is in the same site with the neighbouring village.

7.2.4 **Storm Water Drainage**

The topography of the site is such that it is eminently unsuitable for fast store water drainage just like most parts of Oyo although a main drainage line has been laid to drain off water faster than normal.

7.2.5 **Sewage Treatment Methods (Central Sewage System)**

Septic tank is dug and built for a large deposit and with asbestos soil pipes and connecting man holes and chamber junctions ensures safe carriage of the sewer to the septic tank. Unstable organic matter is converted to a stable inactive matter with effluent taken to the soak away the principle of metabolism are;

a. Anaerobic bacteria break down solids in enclosed chamber.

b. Aerobic bacteria purify liquid passing through open filters, the major disadvantage of this system is the odour from the chamber which cn pollute the air around it and cost for constructing it for a large population.

The oxidation stabilization pond type which is economical in terms of capital cost. Maintenance and operation should be employed. It would require a large land area for its construction but this should be no problem as sufficient land is available.

About 15 to 20 hectares should be reserved for this purpose to cater for the university population.

7.2.6 **Circulation**

The minor road to the site will be tarred and walk ways, are large enough to take bikes and motor bikes.

7.3 **MORPHOLOGICAL ANALYSIS**

This is way of breaking down necessary actions or parts distinguished in principle and directed towards the practical realization of the element noting the relationship between the parts. This guides the formulation of concepts as well as alternative approaches to the problems.

7.4 CONCEPT DEVELOPMENT

7.4.1 Radial Concept

The development of organization patterns for design programme begins with the observation of the characteristic activity patterns of the users. The village setting arrangement is also considered.

The Ajayi Crowther University is located in the ancient city of Oyo town, hence the choice of Yoruba organizational pattern as the main concept.

7.4.2 Yoruba Organizational Pattern

Start with the Oba's palace at the centre, closely follow by the community social centre / market for easy dissemination of information. Other residential are farther away form the palace.

Consciously or unconsciously the people are forced to come to the palace either for market or social activities.

7.4.3 Yoruba Town Centre

The Oba's palace features as the most dominant structure in any traditional setting. The Oba is the head of the town and virtually the sole administrator. Communal place takes the form of the palace ground, there is usually a large open fore court in the palace premises used for social and religious gathering as well as for recreational purposes. Market is also located in front of the palace for effective management and administration by the

Oba, this also accommodated the shrines. Roads radiated form these two prominent facilities to the other parts of the towns.

7.5 **ZONING**

The site is zoned with the following aims:

a. A more convenient access into the hall area such that vehicular pedestrian interference are reduced.

b. The radiation from the communal facilities automatically divides the site, with the female hotel at the centre for proper check on the male students beahviour.

c. The recreational facilities are located towards the entrance into the site so that outside users will not have to interfere with the residents.

d. The communal facilities (the students centre) is well located in the main entrance of the site for easy access to all users.

CHAPTER EIGHT

8.0 DESIGN REPORT

8.1 THE BRIEF

The brief is to produce designs for male and female students hostel at Ajayi Crowther University land on Oyo – Ogbomoso road. This is to accommodate approximately 2 thousand five hundred (2,500) students being 80% of the total students expected to be admitted into the pioneer faculties.

It also includes the provision of communal centres comprising of chapel, business and indoor relaxation accommodation and the recreational areas for out door ball games.

8.2 PLANNING

As could be seen in the master plan, there is no building on site. The village and the supporting facilities are integrated so as to take advantage of each other. The hostels contains one storey buildings all room en-suite with toilets and kitchenettes, there is common room for every floor shared by 4 rooms.

8.3 THE HALL

This a prototype design of I shape which is comprised of four bedrooms with private toilets, walk in dressers and a kitchenette with alternating study

areas. This block accommodates 64 students, single block which is of two floors with 8 rooms on each floor making 16 rooms each block.

Each of the halls have common rooms, general laundries and toilets at the extremes of the hall blocks. This is to be supplement for the private toilets incase of any breakdown and it will also serve as sanitary facility for the hostel staffs.

There are stores for furniture, mattresses etc. and also electrical stores for electrical services equipments.

8.4 SCHEDULE OF ACCOMMODATION

Space	Unit (No)	Areas (m^2)	Total Area (m^2)
Bedrooms	502	$12m^2$	$6,024m^2$
Common Room	76	$24m^2$	$1,824m^2$
Toilet	502	$2.6m^2$	$1,305.2m^2$
Stair Hall	38	$8m^2$	$304m^2$
Porter Office	2	$12m^2$	$24m^2$
Assistant Porter	2	$9m^2$	$18m^2$
General Store	2	$2m^2$	$18m^2$
Hall Admin.	2	$18m^2$	$36m^2$
Security	2	$12m^2$	$24m^2$
Chapel	1	$299m^2$	$299m^2$

Multipurpose Hall	1	200m^2	200m^2
Cafeteria	1	200m^2	200m^2
Internet Café	1	120m^2	120m^2
Shops	22	18m^2	396m^2
Toilets	2	18m^2	36m^2
Parking Space	2	525m^2	1,050m^2
Kitchenette	76	8m^2	608m^2
Snacks Bar	1	170m^2	170m^2
Total	1,235 Units	1,673.6m^2	12,674.2m^2

The total land areas = 90,000m^2. Therefore the total percentage of land area used is 14.8% approximate 15%. Hence it is a good planning.

8.5 **EVALUATION**

The accommodation spaces for the male (1,500) and females (1,000) students totals up to 2,500 general spaces.

Two thousand five hundred spaces (2,500) are provided of which the ratio of distribution in percentage is 55%for male and 45% for the female.

The general population of Ajayi Crowther University students is three thousand five hundred students approximately which accommodation has been provided for 80% of them. Although this development will be done in

phases, the federal government makes it that the school should provide accommodation for at least 40% of its students.

8.5.1 **Cost**

Generally, a fee of ₦90 is paid as accommodation in most universities and taking that as a reference point, a cost evaluation can be made for new proposed students accommodation fees for rental.

Taking a case study of Ahmadu Bello University, the general approximate sizes of rooms is 12m^2 but when the laundry and toilet space is calculated too, it comes up to 15m^2 for two students. If one water closet cost ₦7,500 a sink costs ₦3,500 making it ₦11,000 and this is shared by 8 students, then for 2 students, sanitary cost will be ₦2,750 therefore for two students, a space of 15m^2 with a sanitary cost of ₦2,750 cost ₦90 in most universities.

In my design proposal, 4 students have a room of 20m^2, with private water closet (₦7,500) and sink (₦3,500) which makes the sanitary cost ₦11,000 for 4 students. Therefore four students with 20m^2 and ₦11,000 sanitary cost will pay.

ABU = 2 students, 15m^2 and ₦2,750 sanitary costs pays ₦90.

Therefore ACU = 4 student, 20m^2 and ₦11,000 sanitary cost will pay?

= 15 x 2,750 = ₦90

= 20 x 11,000 = X

= 42150 x 90

= 220,000 x X

$= x = \frac{90 \times 220{,}000}{41250} = \frac{19800000}{41250}$

= x = 480

Therefore x = ₦480

Then for each student = 480 ÷ 4 = ₦120

Accommodation fee for each student will be ₦480 for gold room.

Hence the ₦90 accommodation fee is not adequate.

8.5.2 **Cost Rental Value Calculation**

Floor area the proposed hostel;

$$\frac{2}{12} \times 26 = 312m^2 = 624m^2$$

Approximate cost of the building using floor area method.

= ₦15,000 (based on the type of finishes)s

Approximate cost

= 624 x 15,000 = ₦9,360,000

Assume ₦10,000 per bed space.

The room design is for 4 people = ₦40,000

Therefore for a block of 16 rooms of 64 students.

Total rental value of a block per annum

= 64 x 10,000 = ₦640,000

Repayment year = $\frac{₦9,360.000}{640,000}$ = 14.6 Years

Approximately 15 years

Hence after 15 years of running the village the actual cost of construction will be realized but add loan secured and cost of social facilities, therefore assume 25 years of repayment, hence a variable project.

8.6 CONSIDERATIONS

Considering the location of my site i.e. Oyo state, it would have been a good idea to combine the male and female hostels but with due consideration to privacy and the ethics of gender separation in all aspects of the sexes both at home, I decided to consider a little demarcation by locating them differently by just separating them by spacing.

The road is the only definition and separation space between both hostels. The general compound environment are left open but access into the halls proper are regulated although there is no barrier in receiving male and or female visitors at anytime but this is so for ordinary security reasons and control.

The hostels are laid out in the gird form with the communal facilities located at the centre of the hostels for easy access to both the males and females.

8.7 ORIENTATION

The hostels were sited in such a way that the shortest side of the building as exposed to the east – west (sun path) but adequate horizontal sn breakers are fabricated.

At the same time, all buildings are positioned to enjoy the fully advantages of the prevailing winds and of good view to the surrounding. The games area is also well located to prevent direct sun penetration into the eyes and no player is disadvantage at any time due to weather.

8.8 LANDSCAPING

The courtyard outside the blocks will be well landscaped with grasses and high growing trees to serve as sun shading and to create visual obstruction and also create a conducive micro climate.

The larger trees in the courtyards will have concrete seats around them, and all covered walkways will have hedges alongside will concrete flower and plant pot kept at strategic positions to add to the beauty of the compound.

8.8.1 Application of Landscape Elements

a. **Soft Landscape**

   i. **Trees**: These are the plants, which vary in size, than flowers and shrubs. Shrubs; they are plants that have medium height and

foliage. They are used to relate buildings to the site, direct pedestrian circulation, given privacy, demarcate boundaries and shelter from wind, dust, sun and noise.

ii. **Groundcover**: They are relatively growing plants that used to set off other features in the garden. They are used, as low growing carpet, to suppress weeds, to provide pleasing effect, to control erosion on steep slope.

iii. **Flowers**: They are mostly shorter than shrubs. They come in variety of colours and have different leaves and sizes. They are used to control/ direct circulation, demarcating boundaries and spaces, and they provide pleasing effects.

iv. **Water Bodies**: These include the river, ponds, the stream and fountain which give pleasant sounds and they are normally used to provide focal point to divert the attention of the viewers. Other functions include, used to provide a feeling of coolness, calmness and tranquility, to enhance social interaction.

b. **Hard Landscape**

i. **Road and Pathway**: These are the access for vehicular, drainage and pedestrian. They are hard surface made from asphalt / tiles

and cast insist / precast concrete respectively. They are used to direct both the vehicular and pedestrian circulation.

ii. **Parking**: These can be made from asphalt or any other hard surface materials. The precast concrete kerbs / paint are used to demarcate the parking into lots.

iii. **Sculptures**: These are decorative images that are made from woods, concrete, metals and stones. They are used to provide artistic, aesthetic, and value to he surrounding where they are found. They are also used to keep the record of the historical events.

iv. **Furniture**: These include the seats, tables, litterbin, and plant containers and sign posts. They may be constructed from wood or concrete. They are relatively small in scale but present in large numbers. When choosing furniture, the function it's to perform and the condition required to enable it serve this function effectively must be considered. Durability consideration is also very important.

8.9 COMMUNAL CENTRE BUILDING (STUDENTS CENTRE)

The main purpose of this building is to serve the communal, social and business needs of the hall. It has been sited centrally so as to be within convenient walking distance from any residential cluster.

Accommodation in this building consists of the following.

Space	Area
Telephone	$20m^2$
Computer Room	$20m^2$
Post Office	$20m^2$
Games Room	$36m^2$
Conference Room	$36m^2$
Salon (2)	$36m^2$
Shops (2)	$36m^2$
Video Viewing Centre	$84m^2$
Cafeteria	$120m^2$

8.10 PARKING

Parking space provided to each hall of residence is twenty five, the parking space terminate the vehicular access into the hall.

8.11 METHOD OF FINANCING STUDENTS HOUSING

The method of financing student housing include government finance, loan, finance, and private investors.

a. **Government Finance**

Students housing for university students is normally under taken by the academic institution and solely depends on the government for finance. Unfortunately, government grants can no more meet the need created by rising student numbers. The situation combined with students pleasures for more involvement in management and ownership and the introduction of private developers has encouraged efforts at alternative approaches.

b. **Loan – Finance**

It involves the borrowing of capital from any source (banks, building societies, insurance companies) for new residence and repaying it with interest over an agreed number of years. University laid with resale value can be accepted as security.

The residences must generate enough revenue to pay back the original loan and interest in the same way as a private house – owner pays back his mortgage.

i. **The Lancaster Experience (United Kingdom)**

The 1968 scheme was to accommodate 608 students in the college, $500,000 was borrowed from a private source at an interest of 8% to be repaid over a period of 30 years. A total yardstick of $700 per student was fixed and this includes site works and landscape costs but excluded furniture and equipment. The university grant commission later undertook to contribute 25% per students towards furnishing and capital costs in all loan – financed student housing projects.

In Canada and Scandinavia, the government provides a part grant / part loan system for student housing. Education in the Nordic countries is modeled on the German pattern. The universities restricted themselves to the task of being research and lecturing institutions, student's welfare was outside their responsibility.

The students obtained amendments to housing legislation which gave them access to sources of capital at below market interest rates. They also borrowed extensively from private sources. At the some time, several students organizations were increasing their revenue and lowering students rent by branching out into commercial development. In Finland for example, the student union of Helsinki university is the largest property developer in the city.

This system if emulated by the student union in Nigeria will provide enough and satisfying accommodation to the students and keep them in touch and busy wit the business world instead of having conflicting ideas with the school authority and government.

ii. **Sweden**

In 1962, Swedish obtained amendments to their housing acts which gave the Swedish National Housing Board responsibility for student housing. Loans of up to 100% of building cost are available to the students co-operatives, 30% of the loan is interest free. After 10 years the government may exercise its option as to whether this part of the loan should be paid off through installments or whether it should be written off.

Of the balance, 60% is treated as a first mortgage and 10% as a second mortgage amortized over 40 years, both mortgage interest wages being subsidized.

A 100% furniture loan is available and is paid in full after 15 years (not by installment) land is provided free by local government.

iii. **Private Investors**

Incentives should be introduced to encourage the private developers to invest in student accommodation. This incentives can be in the following from.

a. The propose standard design of the students accommodation should be sold to interest developer at reasonable consultancy charge.

b. The school authority should provide the analytical assistance to private developers by making available the cost benefit analysis of investing in student accommodation that is continuous availability of tenant for the rents and short period of recovering the capital invested.

c. The school authority should provide the land for such development.

d. A time limit should be defined for which any plot can be revoked if not developed from the date they are allocated out.

iv. **Management**

The individual should manage the affairs of their accommodation. However, there should be an area of interrelationship with the university authority.

The various private accommodation owners should register their properties with the universities students' accommodation officer. The university should have a liaison office (hall administrator) who should keep the records of vacant accommodation with the detail records of facilities available in those accommodations, rent charges and the allocations of the accommodations.

This liaison officer should be charged with the responsibility of giving introductory letters containing rules and regulations to desirable students, this measure will protect the aim for which these accommodations are meant for.

v. **Implementation Policy**

Students housing will continue as a central element in campus planning for both qualitative and quantitative reasons. Thus, it is the social responsibility of the university to ensure the survival of student housing.

In the proposed design the school authority should develop the communal building and the recreation garden. As these supporting facilities are not profit oriented, all other profit oriented facilities such as the residence halls, should be developed by private interested investors or the student union.

A target period should be given for the development of all allocated plots. If not developed within this period the plots should be revoked and given to another interested investor.

vi. **Phasing**

The proposed project can be developed in two or four stages. Considering the area proposed for students housing in Ajayi Crowther University Oyo, it is desirable to start the housing programme on the selected

site. An estimated period should be set for executing and reaching the expected target. Within this period of development the layout of the supplementary new site should be made to this effect and consequently given out for development.

The proposed strategies in this thesis will go a long way in arresting the problems created by squatters in student's hostels and also reduce the burden on the school authority in running the students village.

8.12 CONCLUSION

The aim of this project is to provide the student with accommodation conducive for learning and to promote social interaction living environment, case studies, survey analysis and clients brief, where the basis for the design of the proposed student's village. Hence the success or failure of this project can be assessed in two parts; the suggested solutions to the problems and the architectural design.

From this research the author has proposed ways by which student housing can be financed by private investors since the government can not longer finance student's accommodation. Also if the proposal is properly implemented would go a long way at solving the problems of squatting and reduction of social ills on our campuses, since hide out for students are eliminated in the design.

It may be misleading to discuss the workability of an architectural design that is yet to be implemented, since it is possible to pave way for unforeseen design problem in the process of solving others. Hence a design project can be best assessed after it has been implement and put into use. However, if a design on paper must be assessed, the criteria used are to judge the degree of research conducted and the design methodology used in arriving at the design solutions. On this basis, the proposed design for student village, Ajayi Crowther University Oyo can be said without bias to the viable.

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