# STUDENTS' PERCEPTION OF INFORMAL INTERACTION SPACES OF FACULTY BUILDINGS IN FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA, NIGERIA

Olatunde Folaranmi Adedayo<sup>1\*</sup>, Stephen Ayodele Oyetola<sup>1</sup>, Anthony Ikechukwu Anunobi<sup>1</sup> & Oluwatoyin Abiodun Adebayo<sup>2</sup>

1 Department of Architecture, Federal University of Technology, Minna, Niger State, NIGERIA 2 Department of Architecture, Bells University of Technology, Ota, Ogun State, NIGERIA \*Corresponding author: arcadedayo@gmail.com

#### **Abstract**

Faculty buildings have often been considered as a place for formal activities in terms of learning and teaching by both lecturers and students. Emphasis has always been placed on the formal learning environment by the management of such institutions and also the accrediting bodies of such institutions. The designs of such faculties have also reflected the same emphasis with attention being placed on the formal learning spaces and offices for staff. The informal spaces often found in faculty buildings are treated as secondary with such spaces often evolving as the uses of the building continues. They are usually unplanned places which are created by the students as their needs arise. The aim of this study is to examine how effective these informal interaction spaces have served the students. Four out of Eight faculties were purposively selected from the study area based on the student population, while the students were randomly selected. The data obtained were analysed using descriptive statistics and the results were presented in tables, charts and plates. It was observed that the students were dissatisfied with the designated informal interaction spaces provided by the designs of the buildings, it also showed that informal interaction spaces evolved as solution for waiting periods outside lecture rooms. The study concludes that there was need to design faculty buildings that had lecture rooms linked to open spaces and overflow areas aside from corridors that were predominant in the study area.

**Keywords:** buildings, faculty, informal, interaction, spaces, students

Article history:

Submitted: 24/07/2017; Revised: 15/11/2017; Accepted: 18/11/2017; Online: 25/02/2018

## INTRODUCTION

Faculty building is a public building and like any other public building it has varied users with different characteristics which often determine their experience of the building. The challenge for designers of the building has always been to meet the needs of the users which according to Zubairu (2006), should be paramount in any building design for it to be considered a success. Cuperus (2003), opined that there is always the need to seek out the users of a building and determine their needs with the view of creating a design that meets the users' requirements. A faculty building has several users which could be categorised into staff, students and auxiliary users. Their needs usually vary and the architects usually seek to provide basic solution for these categories of people with emphasis on the formal needs of the users, which in this case are the staff and students of the faculties. While it might be easier to document the needs of the staff and implement the findings because the staff are assumed to have a longer stay at the institution, the same cannot be said of the students whose duration is usually between eighteen months and sixty months depending on the programme and studentship. The physical environment particularly the formal and planned informal spaces have been given attention in many universities as attested to by some researchers (NGLS 2008; Markwell, 2007; Radcliffe, et al 2008; Mathews, 2008)...

The spaces in every building are expected to be planned for in order to avoid chaos when the building is put to use. The attention paid to formal learning environment by universities management is usually due to the assumption that the students simply come to the faculty area to attend classes and use academic facility. This assumption has however been refuted by several researchers (Temple, 2007; Fournier, Lane, & Lyle 2010; Cox, 2011) who have stated that the informal learning environment also plays a major role in how students perceive their institution and their learning experience. This goes to show that the focus on formal learning spaces alone in the design of faculty buildings in many universities in Nigeria is misplaced and there is need to ensure an inclusive learning environment that also caters for informal interaction which according to Thomson (2007) improves a student's experience at the University.

http://spaj.ukm.my/jsb/index.php/jbp/index

While a lot of research has been undertaken on many universities outside Nigeria on students experience and learning environment little is however available in Nigeria as many researches have been focussed on the condition of the buildings and environment, the maintenance of such facilities, see (Ofide & Jimoh, 2016; Zubairu & Olagunju 2003). There exists a gap on the study of informal spaces utilization in Nigerian Universities hence the aim of this study to examine students perception of informal interaction spaces which is a part of a large research focus into the study of faculty buildings provision and utilization. This study seeks to determine how the informal spaces were created, the type of informal spaces available to student, which ones are frequently use and how they are used.

## **CONCEPT OF INFORMAL INTERACTION IN THE UNIVERSITY**

Social interaction is opined by Lansdale, et al (2011), to provide some form of emotional and work related support for the people within a formal environment, this can be expanded to the students. It is postulated by Kraut, Fish, Root, & Chalfonte, (1990), that informal communication or interaction is most dominant in work places, this should form the need for such phenomena to be examined and provided for in office or campus designs. The educational curriculum of tertiary institutions such as the university is designed in such a way that it is delivered in a formal manner with the informal learning not catered for and left for the students to decide. It has been shown overtime by researchers that the informal interaction that students undertake is often determined by the environment they find themselves in (Unlu, Ozener, Ozden, & Edgu, 2001). Informal interaction which is often referred to as informal communication was opined to mean any form of information or interaction that usually does not follow any laid down format or set rules, it is usually considered a natural means of interaction (Anon, 2015). It can be argued that any form of interaction that does not follow the laid down procedure of formal learning be it in the class or outside the class falls within this category of informal interaction. Brown, Efstratiou, Leonatiadis, Quercia, Mascolo, Scott & Key (2014), argued that communication between people in any organization is critical to success within that organization. This was further expressed by Pentland (2012); Stryker, & Santoro (2012), that for informal interaction to be effective it has to be face to face between the interacting parties. This probably explains why student usually hang around in groups when they are not in their formal learning environment scenario.

Kraut, et al (1990), opined that informal interaction will normally occur due to close proximity of people in a physical space, they further stated that individual members in any group must communicate with each other and it could be formal or informal depending on the location and the format of interaction. They also argued that it is a good mechanism for feedback on issues as more elaborations on matters being discussed could be made. This could be the case when students use informal interaction to explain positions on matters discussed at the lecture without controlled process by the lecturers. It was argued by Allen & Henn (2006), that three types communication usually occur in the workplace which are. coordination, information and inspiration. It can be deduced that these types of communications occur amongst students. However it appears that a fourth type of communication was left out which is communication for relaxation purposes. This can be considered as a greater form of communication requiring adequate space for interaction in Universities (Onwuka, Adedayo & Adedokun 2016), This form of communication should be expressed as informal communication because is spontaneous and the duration not determined as stated by Anon (2015). These forms of interactions are expected to take place in selected spaces within a built environment, but while it is possible to plan for these areas it would be difficult to plan for all forms of interactions. The type of communication found in offices were broken into as shown by Kraut et al (1990), in table 1.0. According to Holland, Clark, Katz, & Peace (2007), informal interaction takes place between people within the context of the community they are found in, hence it can be inferred that considering the University as a community, informal interaction will definitely occur amongst the users of which students are a significant part of such community. The question that remains to be answered therefore is how architects and designers of the university built environment have catered for this form of interaction in Nigerian Universities.

Table 1.0: The formality of dimension of communication. Source: Kraut, et al. (1990) Formal Informal Unscheduled Scheduled in advance Random participants Arranged participants Participants in role Participants out of role Preset agenda Unarranged agenda One-way Interactive Impoverished content Rich content Formal language & speech register Informal language & speech register

Source: Kraut, et al. (1990)

## **SPACE ALLOCATION IN FACULTY BUILDINGS**

The use of spaces in University is said to be for activities that primarily support the teaching research and any other component that should enhance the performance of the mission of that institution (Anon, 2016). It is therefore not farfetched to include informal interactions as part of the activities that support teaching and learning. The design of spaces is governed by the benchmark set by the Nigerian Universities Commission (NUC), it stipulates the spaces that should be provided for different faculties within Nigerian Universities. It is the benchmark as shown in table 2.0 that the physical planning units of Universities use to assess designs brought for new faculties before construction. It can be observed from table 1.0 that attention is basically on formal form of interaction spaces as this is often considered the basis for tertiary education but the manager of these institutions forget that the students cannot undertake formal interaction always.

Table 2.0: School of Life Science (SLS) Department of Animal Biology

Space Type	Standard	No. of Units		Total A	rea (m²)
•	(m²)	Phase I	Phase II	Phase I	Phase II
Professorial Office	25.0	3	6	75	150
Head of Department Office	25.0	1	1	25	25
Senior Lecturers Office	16.0	5	11	80	176
Other Academic Staff	12.0	7	13	84	156
Senior Technical Staff	12.0	4	10	48	120
Junior Technical Staff	12.0	4	7	48	84
Secretariat Space	16.5	2	2	33	33
School Staff Research Laboratory	16.5	10	10	165	165
Seminar Room	4.6/person	-	-		
Laboratory (Undergraduate @ 20 students per Laboratory)	7.5/person	5	5	750	750
Laboratory (Postgraduate @ 10 students per Laboratory)	7.5/Person	4	4	600	600
Other Departmental Office	0.75/Person	-	-		
Classroom Accommodation	0.75/Student	2(30)	2(30)	45	45
	v.rorotudent	5(80)	5(80)	300	300
Total		•	•	2253	2604

Source: FUT Minna Master Plan 2013

The spaces for social activities by students are something that should be planned and fully integrated into the university building management with the requisite facilities to function properly provided (Anon, 2013). Students spaces such as set(s) of rooms or spaces that are accessible to all users in a university of which faculties are, and are used for relaxation, recreation and other informal activities are required in faculty building designs (Anon, n.d). Wolff (2006), further stated that where these spaces are not provided for in the design, the students create such spaces as they deem fit. Fournier et al (2010), opined that spaces such as lounges, eatries, cafes, building entrances and libraries are places where students usually make use of when on campus. It implies that since they constantly make use of these places then Kruat, et al (1990), assertion that informal communication will take place is valid. It should be noted that these spaces are often integrated in many universities in developed countries as examined by many researchers, see (Fournier et al, 2010; Cox, 2011; Wolff, 2006; Whiteside, & Fitzgerald, n.d; Wulsin, 2013; Brooks, 2010; Kumar & Bhutt 2015). Given that the spaces in universities are to be planned for, it is however clear that many Universities still have challenges in determining how much space to allocate to certain activities within its campus. In summarizing space management in Universities, Anon, (2012), opined that space is not readily available in the Universities and as such it has

to be managed properly to ensure that the goal of the University is achieved at all times. The wellbeing of the students is always a goal for the University hence their informal interaction spaces should be considered.

## Informal Interaction Spaces in Universities

The need to examine the informal interaction spaces in Universities is quite important as it affects the general wellbeing of the students of such institution in terms of performing optimally. According to Unlu, et al (2001), the gathering areas of students while on campus in addition to their social behaviour around and inside the buildings in Universities should be made important issues for Architectural design performance. It is always necessary to look at such issues along with the cultural background of the users which in this case, are the students. They went further to state that how these spaces are planned will greatly affect how the building is used. Holland, et al (2007), opined that public spaces that are inclusive will allow people of different ages to make use of such facilities without any barrier, this can be interpolated to the university environment that any social space that is found with the faculty that is not restricted would serve the students properly. It means that informal interaction spaces in faculty buildings should not be restricted from students but can be properly monitored to avoid social related problems. The concept of collaboration is guite important particularly in institution and the experience of a student is better improved through this means. According to Knoll (2013), the social spaces in buildings or offices allows for innovation to be cultivated by the process of informal interactions amongst peers because people are freer in such environment. These environments should be close to the building and existing social spaces could be upgraded to meet the current need of the users (UVA CHARGE Internal Evaluation Team, 2014). Informal interaction spaces in faculty buildings have been said to include; lounges, bar, entrances, corridors, courtyards, waiting areas, gardens, open spaces around buildings, walkways and café, (Knoll, 2013; GSA, 2006; Kilic-Calgici, Czerkauer-Yamu & Cil 2013; Lansdale, 2011; Fournier et al 2010)

A barrage of various activities occur within these spaces. According to Sailer and Penn, (2009); Mackay (1999), this are usually for the purpose of interaction and collaboration. This explains why the design of the space for interaction should not be made formal with rigidity. Temple (2007) opined that learning spaces should be flexible so that different groups of individuals could make use of the place for the different type of activities they may so desire of which informal interact is paramount. It is believed that today's students seem to love digital learning. However, according to Lomas & Oblinger, (2006), the students still want direct interaction hence they seek out spaces where they could achieve both objectives. According to Rashid, Kampschroer, Wineman, & Zimring, (2006), informal interaction spaces in buildings should be designed in such a way that they are interconnected with high possibility for visibility, accessibility and openness so as to encourage and increase informal encounters which is an ingredient for informal interaction. These spaces should have provision for seating and should be in such an arrangement that allows for informal discussions. It is spaces such as these that students can easily share their experiences with colleagues and also learn about things not normally taught in classes. It is expected that these should be provided at the design stage of faculty buildings, however in many universities this is not as opined by Gebhardt (2014), this situation is also common in many Nigerian Universities hence the students are left to create such spaces for their own use. The need to examine their perception of these space becomes necessary so as to determine how this can be incorporated into future designs of faculty buildings and possibly suggest how existing spaces could be improved upon.

## **RESEARCH METHOD**

A sample frame of four Schools (Faculties) were selected from the Eight Faculties at Federal University of Technology Minna. The Choice of Federal University of Technology Minna, was due to the fact that the University is presently constructing new Faculty buildings hence the need to examine the utilisation of the existing Faculty buildings. The four Schools (Faculty) were purposively selected based on the current student population as at the time of the study and whether the building were purposely built as shown in Table 3.0.

Table 3.0: Selected Schools and their student population

Space Type	Student population	Building Category	Status
School of Engineering and Engineering Technology	3495	Purpose Built	Selected
School of Environmental Technology	3395	Purpose Built	Selected
School of Agriculture and Agricultural Technology	2068	Purpose Built	Selected
School of Information and Communication Technology	979	Purpose Built	Selected
School of Entrepreneurship and Management Technology	1098	Adapted	Selected
School of Life Sciences	1349	Adapted	Selected
School of Physical Science	2965	Adapted	Selected
School of Technology Education	1744	Adapted	Selected

Source: Academic Office of FUT Minna 2016

The Schools were visited and the informal spaces were documented while 600 copies of questionnaire were distributed to the students based on a stratified random sampling method that allowed for opinions to be obtained from a cross section of the students within these Schools. The process adopted according to Vischer (2002) allows for a proper understanding of the relationship that exists between the users of the building and the building itself. This was considered appropriate because it is expected that the results of the study could help shape the nature of future designs of Faculty buildings in Nigeria. Watson (2003), on the other hand suggested that evaluation of buildings from the users point of view help determine the quality of the building through the identification of success and failure areas. The use of the questionnaire allowed for the students' views on the informal spaces to be noted while the observation guide assisted in determining the informal interaction space that were created by the designs of the faculty buildingsand the ones by the students as a result of either frequent use or need.

The obtained data was collated and sorted into the different Schools, thereafter they were entered into SPSS where descriptive statistics was used to analyse the data. The result of the analysis was transferred to Microsoft-Excel where the tables and charts were generated. The use of pictures taken from the field was to assist with explanation of certain existing situations and are presented as plates.

## **DISCUSSION OF RESULTS**

# Location of Informal Interaction spaces

An observation of the informal interaction spaces were examined in the faculty buildings with the view of determining the spaces that students used for informal interactions, thereafter the spaces were collated and sorted to ensure that these spaces were available in all the four faculties that were selected. The list was presented to respondents to select the space they used most frequently for informal interaction in the faculty. Table 4.0 shows the frequency of space selection by the respondents.

ISSN: 2180-2106

Table 4.0: Location of frequently used Informal Interaction Spaces

Informal interaction Space	Frequency of Use	Ranking
Entrance Porch	73	1 <sup>st</sup>
Relaxation Areas around the Faculty Building	54	2 <sup>nd</sup>
Relaxation lounge at Building Entrance	43	3 <sup>rd</sup>
Courtyards within Faculty	35	4 <sup>th</sup>
Faculty car park	25	5 <sup>th</sup>
Corridors within Building	23	6 <sup>th</sup>
Corner Shops	18	7 <sup>th</sup>
Praying Areas	12	8 <sup>th</sup>
Stair hall	8	9 <sup>th</sup>
Data Room of Departments	0	10 <sup>th</sup>
Toilets	0	11th
Total	291	

It can observed from table 3.0 that the entrance porch was the space selected by the respondents as the space most used for informal interaction while at the faculty, this probably explains why this area is usually the busiest of all the spaces within the faculty. The relaxation area carved out around the building ranked second were basically fitted with concrete seats located under trees which provided some form of shade for the students and provided a cool environment. The choice of courtyard which is ranked 4th could be as a result of the lack of sitting facilities within and also the type of plants located within it. The least options of Data room and toilets could be explained based on the fact that many respondents considering the nature of activity that formed the primary function of such spaces. An understanding of these spaces would greatly influence the design of these spaces.

## Rating of Informal Interaction Spaces

In examining the rating of the adequacy of the informal interaction spaces there was need to determine the adequacy of the variables using a Likert Scale measurement calculation.

## Likert Scale Measurement of Rating of informal Interaction Spaces

The weighted score of 1 to 4 was allocated to the rating options of adequacy based on the perception of the respondents regarding the variable measured;

Very Adequate 1
Adequate 2
Inadequate 3
Very Inadequate 4

It can be observed that majority of the students who responded to the questionnaire considered majority of the variables studied as being inadequate, except for the case of ventilation of the spaces of which majority considered it as being adequate as shown in table 5.0. In the case of prayer area the number of the respondents was less, this was due to the fact that the only places available for prayer within the faculty was for the Muslim students hence majority of the Christian students did not respond to this variable. Table 6.0 shows the sum of the scores as calculated based on the weighted score of the options.

Table 5.0: Number of Respondents per of Opinion of Adequacy of Informal Interaction Spaces

Item Description	Very Adequate (X1)	Adequate (X2)	Inadequate (X3)	Very Inadequate (X4)	Total
Number of informal interaction spaces in School	29	53	152	56	290
Size of relaxation lounges	21	44	107	112	284
Size of corridors	40	86	105	58	289
Size of entrance porch into School	39	59	108	83	289
Location of lounges within School	10	43	167	65	285
Proximity of informal interaction spaces to lecture halls	39	74	136	43	292
Flexibility of informal space	14	47	113	112	286
Comfort of prayer area within School	35	52	52	36	175
Comfort of outdoor seats	16	33	119	119	287
Comfort of indoor seats	45	70	136	36	287
Protection from harsh weather elements	16	44	121	108	289
Privacy obtainable at informal interaction spaces	17	47	128	98	290
Number of seats available within lounges	3	29	151	104	287
Number of socket outlets	31	34	153	71	289
Number of corner shops	14	36	107	123	280
Number of seats in courtyards	4	14	89	183	290
Lighting of the informal interaction spaces	27	57	150	57	291
Number of televisions within the informal interaction spaces	5	28	160	88	281
Circulation within the interaction spaces	33	50	153	45	281
Ventilation of the interaction spaces	131	48	59	18	256
Waste disposal method in the spaces	8	31	118	123	280
Security of personal items within spaces	1	18	101	165	285
Noise control within the spaces	0	0	129	161	290

Table 6.0: Sum of respondents' responses on Opinion of Adequacy of Informal Interaction Spaces

Item Description	Very Adequate	Adequate (X2)	Inadequate (X3)	Very Inadequate	Total
	(X1)			(X4)	
Number of informal interaction spaces in School	29	106	456	224	815
Size of relaxation lounges	 21	88	321	448	878
Size of corridors	40	172	315	232	759
Size of entrance porch into School	39	118	324	332	813
Location of lounges within School		86	501	260	857
Proximity of informal interaction spaces to lecture halls	39	148	408	172	767
Flexibility of informal space		94	339	448	895
Comfort of prayer area within School	35	104	156	144	439
Comfort of outdoor seats	 16	66	357	476	915
Comfort of indoor seats	<u>4</u> 5	140	408	144	737
Protection from harsh weather elements	16	88	363	432	899
Privacy obtainable at informal interaction spaces	17	94	384	392	887
Number of seats available within lounges	3	58	453	416	930
Number of socket outlets	<del></del> 31	68	459	284	842
Number of corner shops	 14	72	321	492	899
Number of seats in courtyards	4	28	267	732	1031
Lighting of the informal interaction spaces	<del></del> 27	114	450	228	819
Number of televisions within the informal interaction spaces	5	56	480	352	893
Circulation within the interaction spaces	33	100	459	180	772
Ventilation of the interaction spaces	131	96	177	72	476
Waste disposal method in the spaces	8	62	354	492	916
Security of personal items within spaces	1	36	303	660	1000
Noise control within the spaces	0	0	387	644	1031

The interpretation of the results obtained based on the Likert scale calculation is based on the range of scale stated as follows:

1.0	-	1.49	Very Adequate
1.5	-	2.49	Adequate
2.5	-	3.49	Inadequate
	>	3.5	Very Inadequate

In determining the adequacy of the option for each measured variable the weighted score was divided by the number of valid respondents for each section and the value is presented against it as shown in table 7.0 it could be observed that the variable measuring the ventilation of the informal interaction space is considered as the only adequate option. This was due to the fact that majority of the informal interaction spaces were not bounded with walls while some were outdoor. The courtyard that formed the major congregation point for the students was considered to be very inadequate in terms of seats provision. It was observed that only 1 out of 23 of the variables could be considered as adequate, this could be linked to the fact that there was no conscious design consideration for the informal interaction spaces as many simply evolved.

Table 7.0: Respondents' opinion on adequacy of Informal Interaction spaces in faculties interpretation

Measured Variable	Sum	Mean	Interpretation
Number of informal interaction spaces in School	815	2.810345	Inadequate
Size of relaxation lounges	878	3.091549	Inadequate
Size of corridors	759	2.626298	Inadequate
Size of entrance porch into School	813	2.813149	Inadequate
Location of lounges within School	857	3.007018	Inadequate
Proximity of informal interaction spaces to lecture halls	767	2.626712	Inadequate
Flexibility of informal space	895	3.129371	Inadequate
Comfort of prayer area within School	439	2.508571	Inadequate
Comfort of outdoor seats	915	3.188153	Inadequate
Comfort of indoor seats	737	2.567944	Inadequate
Protection from harsh weather elements	899	3.110727	Inadequate
Privacy obtainable at informal interaction spaces	887	3.058621	Inadequate
Number of seats available within lounges	930	3.240418	Inadequate
Number of socket outlets	842	2.913495	Inadequate
Number of corner shops	899	3.210714	Inadequate
Number of seats in courtyards	1031	3.555172	Very Inadequate
Lighting of the informal interaction spaces	819	2.814433	Inadequate
Number of televisions within the informal interaction spaces	893	3.177936	Inadequate
Circulation within the interaction spaces	772	2.747331	Inadequate
Ventilation of the interaction spaces	476	1.859375	Adequate
Waste disposal method in the spaces	916	3.271429	Inadequate
Security of personal items within spaces	1000	3.508772	Very Inadequate
Noise control within the spaces	1031	3.555172	Very Inadequate

# Adequacy of Number of Informal Interaction Spaces

The basic data for the provision of spaces in any building is usually the number of users of such building or space, and examination of the four faculties in table 2.0 showed that they have a combined population of 9937 students. This figure shows that there would be periods when the building is fully occupied and students will generally need spaces to wait and hold discussions with their friends considering that not all of them would be in class. The other issue is the number of people that the space can accommodate which is quite small. It is therefore understandable why 72% of the respondents in table 8.0 considered the number of informal interaction spaces as inadequate. This implies that a new faculty should cater for an increased number of informal interaction spaces to accommodate a significant number of the students, because it has be stated by Matthews, Adams & Gannaway (2009), that informal interaction spaces have impact on the students' general performance in an institution. I was observed that when designated informal interaction spaces are not adequate the students would make use of the corridor more which will affect the flow of traffic within the building. Example of informal interaction spaces are shown in plate 1.0 which shows that some of these spaces were simply carved out from the entrance lounge provided within the faculty.

Table 8.0: Adequacy of Number of Informal interaction spaces in Faculty buildings

			,
Very Adequate	Adequate	Inadequate	Very Inadequate
10%	18%	53%	19%



Plate 1.0: Sample of Informal interaction spaces in selected Faculty buildings

# Comfort with outdoor chairs

The outdoor informal interaction spaces with seats is one of the most frequently used space by students, this spaces allows them to chat with friends between lecture periods. In developing these spaces the seats are usually planned around trees planted within the courtyard and around the building. The seats are concrete or a mixture of timber and iron and were designed to sit a maximum of three people as seen in Plate 2. The comfort of the seats will determine how long and how the students will make use of the space. In table 9.0 an average of 41% of the respondents considered the comfort of their seats as being inadequate, this was attributed to the fact that many stated that the seat were usually hot during the day and they could not adjust the seats to their taste. The inability to rearrange the seats to suit the discussion forum that might arise when the space is put to use also affected the perception of the comfort of seats. The design of the seats also ensured that the concrete seats collected water during the rainy season and dust during dry season. This meant the students had to continuously clean whenever they had to use the seats. The lack of proper canopy to shield the seats created the avenues of quick wearing off of the seats which affects the students' perception. According to Fournier, et al (2010), the little details in providing comfort for the students in the informal interaction spaces was import and this established by the students based on the level of inadequacy associated with the comfort of the seats.

Table 9.0: Perception of Comfort of outdoor chairs in Faculty buildings

rable c.c. i creeption of connect of catacor on all our in a catty ballange				
Very Adequate	Adequate	Inadequate	Very Inadequate	
6%	12%	41%	41%	



Plate 2.0: Sample of outdoor chairs within the courtyard of Faculty buildings

## Comfort with Indoor seats

The indoor seat at the lounges carved out by the students at the entrances of the faculties are upholstery or hairs padded with foam leather, usually designed to seat between three to four people. This is usually the space that get filled up because the television is located within this space. Overtime these seat have sunk down, thereby making it uncomfortable for students to seat conveniently. It can be observed in table 10.0 that 60% of the respondents considered the seats as being inadequate in terms of comfort, plate 3.0 shows the nature of seats available within these spaces. In some other indoor spaces it is wooden seats with metal frames are what is available hence the level of discomfort can be understood and this contributed to the 60% inadequate rating given to the seats. This implication is that when intended users are not satisfied with the seats provided in an informal interaction space they are most likely not to use the space. It is therefore important to note that it is just not enough to provide the space but also the furnishings within the spaces particularly the seats are also important.

Table 10.0: Perception of Comfort with Indoor seats in Faculty buildings

Very Adequate	Adequate	Inadequate	Very Inadequate
16%	24%	47%	13%



Plate 3.0: Sample of seats used in Indoor spaces of Faculty buildings

## **CONCLUSIONS**

Informal interaction spaces are a key component of any faculty building design and where this is not made available the students will always carve out such spaces. The determination of the adequacy of such spaces goes a long way in improving the students experience and aid the architects involved in such designs. This study showed that the spaces and facilities provided within faculties for informal learning were inadequate hence this would have some form of negative effect on the students. The paper establishes the need for faculty administrators to provide more sitting areas for students so as to allow them relax better in between lecture periods. It was observed that majority of the informal interaction spaces were carved out by the students in the faculties as they were not part of the initial design. The changes carried out on the faculty buildings to accommodate the students' informal interaction spaces shows the need for such space allocations. This study has shown that informal interaction spaces needs in faculties should not be overlooked in future designs while there should be a conscious attempt at improving the adapted spaces within existing faculty buildings to improve the students experience while using the space.

#### References

- Allen, T.J. and Henn, G. (2006). The Organisation and Architecture of Innovation. Managing the Flow of Technology. London: Butterworth-Heinemann.
- Anon, (2012), Guidelines for Office Space Allocation at UMBC. Retrieved from www.umbc.edu/policies/pdfs/GuidelinesForOfficeSpace.pdf on 28th July 2016
- Anon, (2013). York University Keele Campus Student Common Spaces for Casual Use. Retrieved from www.vpfa.info.yorku.ca/files/2013/10/131017-Student-Space-for-Casual-Use.pdf on 15th July 2016
- Anon, (2015). Differences between Formal and Informal Communication. Retrieved from www.keydifferences.com on 30th July 2016.
- Anon, (2016). Use of University Space, Facilities & Grounds. Retrieved from www.uafacilities.ua.edu/grounds/information/facilitiesand-grounds-use-policy.pdf on 14th April 2016
- Anon, (n.d), Space Classification Schemes. Coucatdef.pdf. Retrieved from www.osm.utoronto.ca/website/PDFs/coucatdef.pdf on 22nd May 2016
- Brooks, D.C. (2010). Space matters: The impact of formal learning environments on student learning. British Journal of Educational Technology doi:10.1111/j.1467-8535.2010.01098.x. 1-8
- Brown, C. Efstratiou, C., Leonatiadis, I., Quercia, D., Mascolo, C., Scott, J. & Key, P., (2014). The architecture of innovation: Tracking face-to-face interactions with ubicomp technologies
- Cox, A.M. (2011). Students' Experience of University Space: An Exploratory Study. International Journal of Teaching and Learning in Higher Education. 23(2), 197-207. Retrieved from http://www.isetl.org/ijtlhe/ ISSN 1812-9129
- Cuperus, Y. (2003). Mass customisation in housing an open building/lean construction study. Retrieved from http://www.y Cuperus-obom.org on 24th February 2009.
- Fournier, J., Lane, C. & Lyle H. (2010). Designing Campus learning Spaces: A Report on Students' Current and Future Needs. Retrieved from https://itconnect.uw.edu/wp-content/.../12/Designing\_Campus\_Learning\_Spaces.pdf on 28th July 2016
- Gebhardt, C. (2014). The Spaces between the Rooms: A Post-Occupancy Evaluation of Informal Social Spaces in the HEDCO Education Building. Unpublished BSc Thesis Presented to the Department of Architecture and the Robert D. Clark Honors College. Retrieved from https://scholarsbank.uoregon.edu/xmlui/handle/1794/18241 on 8th March 2016
- GSA, (2006). Innovative Workplaces: Benefits and Best Practices. GSA Office of Government wide Policy. Retrieved from http://www.gsa.gov/graphics/pbs/Innovative\_Workplaces-508\_R2OD26\_0Z5RDZ-i34K-pR.pdf on the 25th June 2016
- Holland, C., Clark, A., Katz, J. & Peace, S. (2007). Social interactions in urban public places. Plymouth, UK, The Policy Press.
- Kilic-Calgici, P. Czerkauer-Yamu, C. & Cil, E. (2013). Faculty office building as work environments: Spatial configuration, Social interaction, collaboration and sense of community. ITU AZ, 10(2), 178-197
- Knoll, M. (2013). Creating Collaborative Spaces that Work: A Performance-based Approach to Successful Planning. Retrieved from www.knoll.com/research/index.jsp on 17th June 2016
- Kraut, R.E., Fish, R.S., Root, R.W. & Chalfonte, B.L. (1990). Informal Communication in Organizations: Form, Function, and Technology in I.S. Oskamp & S. Spacapan (Eds.). Human Reactions to Technology: The Claremont Symposium on Applies Social Psychology. Beverly Hills, CA: Sage Publications. (1990)
- Kumar, A. & Bhutt, R.K. (2015). Astudy of Using Informal Learning Spaces at Indian Institute of Technoogy, Delhi. Library Philosphy and Practice (e-journal). 1-18
- Lansdale M., Parkin J., Austin S., Baguley T. (2011), "Designing for Interaction in Research Environments: A Case Study", Journal of Environmental Psychology, 31, 407-420
- Lomas, C. & Oblinger, D.G. (2006). Student Practices and Their Impact on Learning Spaces. Retrieved from www.educause.edu/learningspaces on 17th July 2016
- Mackay, W.E. (1999). Media Spaces: Environments for Informal Multimedia Interaction. Computer Supported Cooperative Work, Edited by Beaudouin-Lafon ,John Wiley & Sons Ltd, 56-83
- Markwell, D. (2007). A large and liberal education: Higher education for the 21st century, Melbourne: Australian Scholarly Press.
- Matthews, K.E., Adams, P. & Gannaway, D (2009). The impact of social learning spaces on student engagement. Retrieved from http://www.fyhe.com.au/past\_papers/papers09/content/pdf/3A.pdf on 22nd of June 2016
- NGLS. (2008). "Next generation learning spaces colloquium", Retrieved from http://www.uq.edu.au/nextgenerationlearningspace/colloquium-2008, on 16th June 2016

ISSN: 2180-2106

- Ofide, B. & Jimoh, R. (2016). Building Condition: Rating of Higher Institutions in Niger State. Covenant Journal of Research in the Built Environment (CJRBE) 4(1), 32-48
- Onwuka B.N., Adedayo, O.F. & Adedokun Adebayo John (2016). User Assessment of Staff Perception on Relaxation Spaces in Selected Offices of Tertiary Institutions of Niger State. Environmental Technology & Science Journal (ETSJ), 7(1), 63-75
- Pentland, A., (2012). The new science of building great teams. Harvard Business Review, 90 (4), 1-11
- Radcliffe, D., Wilson, H., Powell, D., and Tibbetts, B. (2008). "Designing next generationplaces of learning: Collaboration at the pedagogy-space-technology nexus" Retrieved from http://www.altc.edu.au/resource-designing-next-generation-places-learninguq-2008, on 31st July 2016.
- Rashid, M., Kampschroer, K., Wineman, J. & Zimring, C. (2006). Spatial layout and face-to-face interaction in offices: A study of the mechanisms of spatial effects on face-to-face interaction. Environment and Planning B: Planning and Design, 33, 825-844.
- Retrieved from https://www.microsoft.com/en-us/research/publication/the-architecture-of-innovation-tracking-face-to-face-interactions-with-ubicomp-technologies/ on 29th June 2016
- Sailer, K., Penn, A. (2009), "Spatiality and Transpatiality in Workplace Environments", 7th International Space Syntax Symposium Proceedings, Stockholm.
- Stryker, J. B. & Santoro, M. D. (2012). Facilitating face-to-face communication in high-tech teams, Research-Technology Management, 55 (1), 51-56
- Thomson, P. (2007). Working with invisible geography of school exclusion, In K. N. Gulson. & C. Symes (Eds.), Spatial theories of education (pp. 111-130). New York: Routledge.
- Unlu, A., Ozener, O.O., Ozden, T. & Edgu, E. (2001). An Evaluation of Social Interactive Spaces in a University Building. Proceedings 3rd International Space Syntax Symposium Atlanta 2001. Retrieved from www.ucl.ac.uk/bartlett/3sss/papers\_pdf/46\_unlu.pdf on 13th June 2016
- UVA CHARGE Internal Evaluation Team, (2014). An Analysis of Space Allocation in STEM and SBS Departments at the University of Virginia. Retrieved from http://www.advance.virginia.edu/images/Analysis\_Space\_Allocation\_STEM\_%20SBS\_Departments\_UVA.pdf on 29th March 2016
- Vischer, J. (2002). Post Occupancy Evaluation: A Multifaceted Tool for Building Improvement, Federal Facilities Council, The National Academy Press, US, Chapter 3, pp. 23 34.
- Watson, C. (2003). Review of building quality using post occupancy evaluation, Journal of Programme Education Building, 35, 1 5. Whiteside, A. & Fitzgerald, S. (n.d). Designing Spaces for Active Learning. Impilcations, 7(1), 1-6. Retrieved from www.informedesign.umn.edu
- Wolff, B. (2006). Laptop Use in University Common Spaces. Educause Quaterly, 1, 74-76
- Worpole, K. and Knox, K. (n.d). The Social Value of Public Spaces. Retrieved from http://www.jrf.org.uk on 16th June 2016
- Wulsin, L.R. (2013). Classroom Design-Literature Review. Retrieved from https://www.princeton.edu/provost/space.../SCCD Final Report Appendix B.pdf on 8th July 2016.
- Zubairu, S. N. and Olagunju, R. E. (2003). A Study of Space Planning in Private and Government Office Buildings in Abuja and Minna, Federal University of Technology (F.U.T.), Minna, Nigeria, FUT/UBR/SET/005.
- Zubairu, S.N. (2006). Participatory design Community and User Input in Design. Journal of the Association of Architectural Educators in Nigeria, 5(1), 55-58.