**Research Article**

# Impact Of Informal Activities In Transitional Spaces On Informal Learning Of Students In Architectural Education

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| ARTICLE INFO | ABSTRACT |
|---|---|
| | A campus is a place where students acquired knowledge from colleges in the form of lectures. Now in the recent years, the study space has changed from conventional form to contemporary form. The concept of learning in future will change from closed space learning to open space learning (Transitional spaces). Transitional spaces are spaces located in between outdoor and indoor envoirment acting as both buffer speel and physical links. There spaces are mostly used for conducting various internal activities in colleges. In architecture education, formal education should be supported with informal education in order to equip students with general architectural knowledge and improve their architectural design power. Informal learning activities will help to develop informal learning of the students. A study was conducted in pune by selecting two architecture colleges and 90 students from these two colleges. The selection of colleges and respondent students were done purposively. The study was undertaken to examine the effect of informal activities conducted in transitional space on informal learning of architecture students.<br><br>The results of the study indicated that amongst different transitional spaces, Courtyard Amphitheatre, Common area, student's plaza and corridors were ranked high on the basis of mean score. While model making, workshop and students presentation were most important learning activities. Overall increase in learning was observed in transitional spaces as against class room situation. The informal learning is relatively more in transitional spaces and as such it establishes the importance of transitional spaces in Architectural education.<br><br>**Key words:** Transzonal spaces, Informal activities, Informal learning, Composite index of learning. |

## INTRODUCTION

Transitional space is that space of experiencing, between the inner and outer worlds and contributed to by both, in which primary creativity exists and can develop (Transitional objects 2 Transitional phenomena " Winnicott 1951 further developed in Winnicott, 1971) These spaces are generally used as linking space between two or more spaces. Courtyard, verandas corridors, staircases and ramps. are common example. These spaces are most important as they make other static spaces, related to each other.

Space can be classified in to three types of geographical space. Living space and (interior or central) architectural space. " Bruno Zevi " considered spaces as basis of architecture which architecture obtains its characteristics based on it. Space encompasses the volume of a structure, the parts of a building we move through and experience. But space can only be created through the use of form. Form is the mass or grouping of materials, used for to give a building its shape. Transitional spaces have played major role in Indian Architecture. It has major varied in scale, type, use and typology. They have played a major role in the division and contention of spaces and has also helpful in maintaing privacy.

## HISTORY OF TRANSITIONAL SPACES

Right from the prehistoric architecture, there was apparent evidence of the usage of transition spaces. In the Neolithic period we can see the confined spaces for transition in the adjoining excavated dwelling at skara Brae.

Egyptian, pre-Columbian and Persion periods these spaces got a new dimension. In Indian Architecture, the transitional spaces played a very significant role especially in residential buildings. They played a role in both dividing and connecting the inner and outer spaces.

Transitional space is a space that processes a change from one condition to another, is located in between outdoor and indoor environments & alt act both butter space and physical link other than being functional as circulatory routes for the building. It forms an integral part of any public building.

## RESEARCH IN TRANSITIONAL SPACES.

Transitional space is a requisite part of any building be it residential, commercial, educational, and industrial or any other form of structure (Garvita singh Kushwaha oct 2018). if we look at the definition of Transitional space, Adrian pitts et al (2008) express entrance corridors, lobbies and other spaces through which people travelling between the exterior and interior envoirment. In Indian Context, the typology and nature of the transitional space have been changing with time. In earlier days cities were dense hence the transitional spaces were tight and mostly bounded by all sides. As settlement grew, it became more planned and organised, hence the transitional spaces were. organized and no more acted as left out spaces. In principle transitional spaces in this type of buildings have an elastic environment because people tend to spend shorter period of time in them. Recent architect argued that using the design of transitional spaces can create a learning environment that is invaluable to the education of process. A Nassar et al (2014) in their study discuss the essentiality of transitional spaces in higher education building as a part for students gathering areas to improve their interaction behaviour, and also improve their informal learning.

## IMPORTANCE OF TRANSITIONAL SPACES.

Every type of spaces be it Courtyard corridor lobby, atriums play an important role at some point in designing. All of these informal learning spaces serve as a destination for students to learn. Students choose to study in campus transitional space while waiting for the next lecture, before the start of the class, or after the class in the college campus. Students choose transitional spaces for their place of their study because spaces are available with all facilities like electricity plugs internet network, and chairs, and enjoy studying because the atmosphere of transitional space is comfortable, quiet and also shady. Studying in campus transitional spaces students feel free to explore in learning. These spaces are mostly used for conducting various informal learning activities in colleges.

## INFORMAL LEARNING ACTIVITIES IN ARCHITECTURE

In architecture education, formal education should he supported with informal education in order to equip students with general architecture knowledge and improve their architectural design power. In architectural design education where formal education is effective, informal activities are a complementary role to formal events Adiguzel (2012) informal activities, where students can move away from limitations, act on their own initiative, develop design, ideas and products. At the same time informal education areas are also very important for the students to follow the professional agenda. Ciravoglu (2003) work shoppers stated that they constitute the weight of informal education. The difference between the workshops and other organizations. (Conference, seminars, exhibitions, performances) is that they are producing an envoirment of mutual interaction where they come together for certain purpose whatever the audience is taking about " for this reason, the study is addressed through workshops in informal activities.

## INFORMAL LEARNING

Informal learning is the learning that take place outside of a formal and structured environment. It includes learning from experience and self-directed study like self-study, looking at videos, participating in chat rooms, reading articles and taking part in informative discussions. (Hitesh Bhasin 2021) Human resources, estimates suggest that about 70-90 percent adult learning take place informally and outside educational institutions. Students need campus transitional spaces for social interactions, such as debate, discussion, group working, and presentation. All these informal learning. activities will help to develop informal learning of the students.

In view of this the, the study was under taken to examine the effect of informal learning activities associated in traditional spaces on informal learning of the students.

## METHODOLOGY

## LOCATION OF STUDY AND SELECTION OF COLLEGES.

The study was conducted in Pune selecting two leading architectures colleges under pane university. The selection. of colleges was done purposively on the basis of relatively higher level of availability of transitional spaces.

## SELECTION OF RESPONDENT STUDENTS.

In all 90 students. i.e. - 45 students from each college were selected by using nth simple Random sampling method.

## RESEARCH DESIGN

The study was conducted wing Experimental Research Design. The design consisted of conducting experiments on the selected subject activities related to course work of the students. The student was exposed in the classrooms in formal. learning situation & the same group of students were exposed in Transitional spaces to the same activities for informal learning. experience. The difference between two measure the change in informal learning.

## IDENTIFICATION AND RATING OF TRANSITIONAL SPACES, AND THEIR CHARACTERISTICS.

In all twenty transitional spaces were identified on the basis of review of Literature. The identified transitional spaces were referred to two groups of Judges one who were Architects with more than ten years of experience and another were college teacher's with more than ten years of experience in teaching for judging relevance and rating their importance. Rating was subjected to three-point continuum namely Most Relevant, Relevant and Not Relevant with 3, 2 and 1 score. After obtaining rating from judges, mean score, SD and C.V. for each transitional space was worked out. Transitional. Spaces with more than 30 C.V. were deleted (Elsevier). Finally, ten transitional spaces were selected and ranked on the basis of mean score. (Likert scale 1969)

### CHARACTERISTICS OF TRANSITIONAL SPACES.

The characteristics of transitional spaces were identified on the basis of review of Literature. In all 37 Characteristics were identified and referred to Judges for relevance and rating. The rating was done by the same two groups of Judges on three points continuums i.e., most relevant and not relevant. with 3,2 and 1 score respectively. After obtaining rating from judges, mean score, S, D. and C.V. for each characteristic was workout. Characteristics with more than 30 C.V. where deleted. Lastly 27 Characteristics of transitional spaces were selected and ant ranked on the basis of mean score.

## IDENTIFICATION AND RATING OF INFORMAL LEARNING ACTIVITIES.

In all 15 different informal learning activities were identified from review of Literature. The identified informal learning activities were subject to Judges rating on three points continuums namely most important, important and not important with 3, 2 and I score. The group of judges consisted of 23 teaching faculty from different Architecture colleges of pune. After receiving rating relevance form judges mean score, SD. & C.V. was workout. Informal learning activities with more than 30 CV were deleted and finally ten activities were selected. Out of these ten activities Three activities with less C.V. were selected for experiment.

## INFORMAL LEARNING.

Informal learning refers to any learning i.e., not formal, self-directed away from class room or learning from experience (Deborah Harrop 2013). However, in the present study informal learning has been operationally define as the knowledge gain by the respondent students about various architectural subjects through different informal activities conducted in transitional spaces.

## MEASUREMENT OF INFORMAL LEARNING INFORMAL

Informal learning was measured in terms of difference in knowledge gain by the respondent Students in class room vs transitional spaces. For this, students were exposed to various informal learning activities through standardized and tested informal learning / knowledge instrument / test.

## DEVELOPMENT OF INFORMAL LEARNING TEST

A comprise List of informal learning items was prepared and for standardization of items, they were refereed to judges who were expert and experience in the field of Architecture teaching. Advise to decide relevance on 3 points continuum, mainly most relevant, relevant & not relevant with 3, 2 and 1 scoring. Based on the responses of the judges and rating given by them, mean score and C V (coefficient of vacation). for each item was worked out Informal indicators with more than 30 C.V. were deleted.

Considering the time for research, only nine most important informal learning indicators were studied. Reliability and validity of the informal reaming indicators were tested using Test - retest and internal consistence reliability method.

## EFFECT OF INFORMAL ACTIVITIES ON LEARNING INFORMAL LEARNING.

In order to study the effect of informal learning activities on informal learning, the experimental study on Anthropometry was designed and experimented in classroom and as will as in transitional spaces. The experiment was conducted about three hours i.e., 1½ hrs in classroom and 1½ hrs in transitional spaces. The responses of the students were obtained on 5 points continuums i.e., fully increased, increased, partially increased, not increased and not at all increased with 5,4,3,2 and 1 score respectively. Thus, the raw score obtained for each item was multiplied by weight given by expect indicating its importance. Thus, in this way weighted score was worked out and it was used to compute the weighted index (WILI). The formula used to compute composite index of informal learning was.

**Composite index (WILI) = weighted obtained score / weighted obtainable score X 100**
The composite index, so obtained indicate the knowledge gain / informal learning by each respondent students.

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## RESULTS AND DISCUSSION.

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The results obtained are presented under the Following heads.
 I.  Identification of Indicators
a)  Identification of transitional spaces with their characteristics and ranking.
b)  Identification of informal learning activities.
II. Distributional analysis.

## I.  IDENTIFICATION OF INDICATORS
### IDENTIFICATION OF TRANSITIONAL SPACES.
The identification and selection of transitional spaces where done using the procedure described in methodology, 10 transitional spaces out of 20 were selected and presented in Table 1.

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**Table 01 -** Identification of Transitional spaces & their Rank

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| Sr. No. | Transitional Space | Total Score | Mean | SD | CV | Cronbach's Alpha | RANK |
|---|---|---|---|---|---|---|---|
| 1 | Courtyard | 29 | 2.9 | 0.32 | 10.90 | .957 | Rank 01 |
| 2 | Amphitheatre | 28 | 2.8 | 0.42 | 15.06 | .852 | Rank 02 |
| 3 | Common Area | 28 | 2.8 | 0.42 | 15.06 | .823 | Rank 03 |
| 4 | Verandas | 27 | 2.7 | 0.48 | 17.89 | .821 | Rank 04 |
| 5 | Student's Plaza | 25 | 2.5 | 0.71 | 28.28 | .811 | Rank 05 |
| 6 | Corridors | 24 | 2.4 | 0.70 | 29.13 | .805 | Rank 06 |
| 7 | Ramp | 24 | 2.4 | 0.70 | 29.13 | .785 | Rank 07 |
| 8 | Entrance Steps | 24 | 2.4 | 0.52 | 21.52 | .771 | Rank 08 |
| 9 | Canteen Area | 24 | 2.4 | 0.52 | 21.52 | .769 | Rank 09 |
| 10 | Passages | 23 | 2.3 | 0.48 | 21.00 | .752 | Rank 10 |

It is seen from table 01that amongest ten transitional spaces, Courtyard, Amphitheatre, Common area and verandas were ranked high on the basis of mean score. The mean score wore 2.9.2.8, 2.8, 2.8 and 2.7. respectively. However, C.V. of all transitional spaces is observed to be 18.75 (less than 30 within acceptable limit) these by indicated that there is less dispersion around the mean i.e., consistency in the effectiveness of these ten transitional spaces in facilitating informal learning about architecture subjects.

### IDENTIFICATION AND RATING OF INFORMAL ACTIVITIES
The activities selected and conducted in transitional spaces are as follows along with their mean Score and rank in table 02.

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**Table 02:** Informal learning activities with Rank on the basis of mean score

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| Sr. No. | Activities Conducted | Total | MEAN | SD | CV | RANK | Cronbach's Alpha |
|---|---|---|---|---|---|---|---|
| 1 | Students Presentation | 58.0 | 2.5 | 0.7 | 26.4 | 1 | .893 |
| 2 | Model Making Activity | 56.0 | 2.4 | 0.7 | 29.9 | 2 | .886 |
| 3 | Workshop | 51.0 | 2.2 | 0.6 | 27.0 | 3 | .878 |
| 4 | Academic Activity | 48.0 | 2.1 | 0.6 | 28.6 | 4 | .785 |
| 5 | Student Meeting | 42.0 | 1.8 | 0.5 | 26.9 | 5 | .771 |
| 6 | Discussion with Teachers | 41.0 | 1.8 | 0.5 | 29.1 | 5 | .762 |
| 7 | Jury / presentations | 40.0 | 1.7 | 0.4 | 25.8 | 6 | .756 |
| 8 | Sharing of Practical Knowledge | 38.0 | 1.7 | 0.5 | 29.5 | 6 | .752 |
| 9 | Experiential learning | 39.0 | 1.7 | 0.5 | 27.7 | 6 | .748 |
| 10 | Reading | 24.0 | 1.0 | 0.2 | 20.0 | 7 | .712 |

It is observed form table 02 that amongest different informal learning activities, activities where students involvement is relatively more viz students presentation, model making and workshop play higher effective role in providing informal learning in Architecture Subject.

## II. DISTRIBUTIONAL ANALYSIS.
## STUDENTS CHARACTERISTICS

In distributional analysis four important characteristics / situations of the 90 respondent student have been studied. The results are presented as follow.
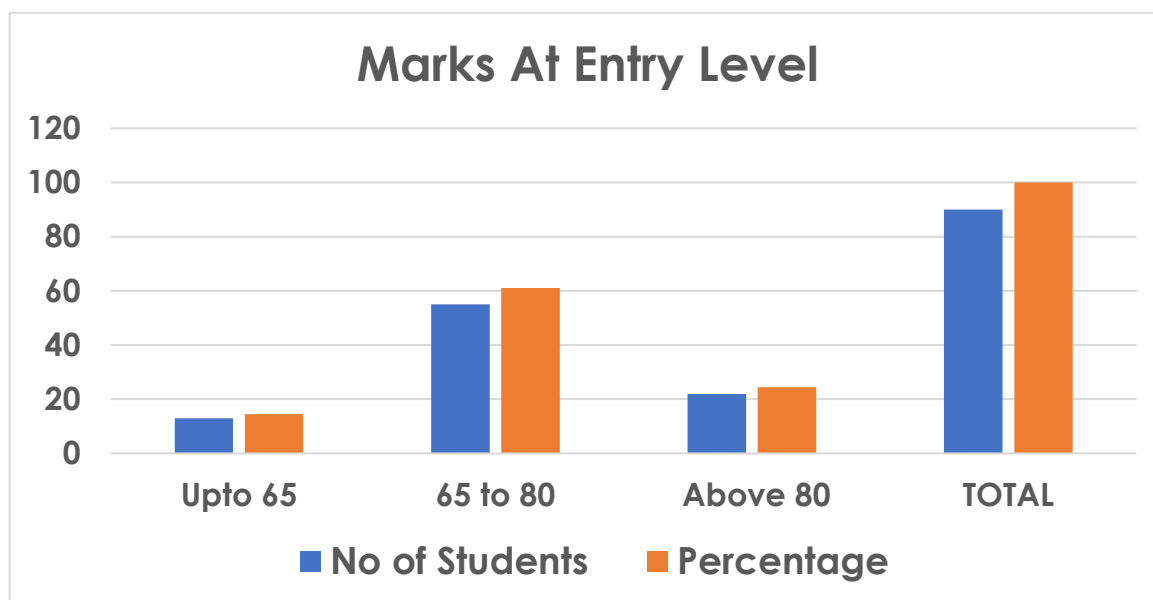
### 1. ENTRY LEVEL MARKS:

This has operationally defined as the percentage of marks of a student at 12th standard admissible for entry in Architecture college.

The distribution of respondent's students according to their entry level marks is presented in table - 4.

**TABLE 03:** DISTRIBUTION OF RESPONDENT STUDENTS ACCORDING TO ENTRY LEVEL MARKS

| Sr. No. | Entry Level Mark Category (%) | No of Students | Percentage |
|---|---|---|---|
| 1 | Upto 65 | 13 | 14.44 |
| 2 | 65 to 80 | 55 | 61.11 |
| 3 | Above 80 | 22 | 24.44 |
| | Total | 90 | 100.00 |
| | Mean | 72.12 | |
| | SD | 7.52 | |
| | CV | 10.43 | |



It is observed form table 4, that relatively higher number of sample students i.e. 61.11 % had 65 to 80 percent marks at entry level. in Architecture college followed by 24.44 % respondent student's with above 80 % marks. Average level of percentage of marks at entry level was 72.12%. The C.V. was found to be 10.43%.

### 2. RESIDENTIAL STATUS.

the selected respondent student's, some of them are fulltime residing in college Hostel referred as hostlers and some of them are residing outside the college hostel called as dayscholar. In order to study the distribution of hosteller's and dayscholar students, they were categories in two groups with score 2 and 1 for Hostellers and Dayscholar respectively and shown in table 5 .

**TABLE 04:** DISTRIBUTION OF RESPONDENT STUDENTS ACCORDING TO RESIDENTIAL STATUS

| Sr. No. | Residential Status Category (Students) | No of Students | Percentage |
|---|---|---|---|
| 1 | Hosteler | 54 | 60.00 |
| 2 | Dayscholar | 36 | 40.00 |
| | Total | 90 | 100.00 |
| | Mean | 1.8 | |
| | SD | 0.49 | |
| | CV | 27.22 | |
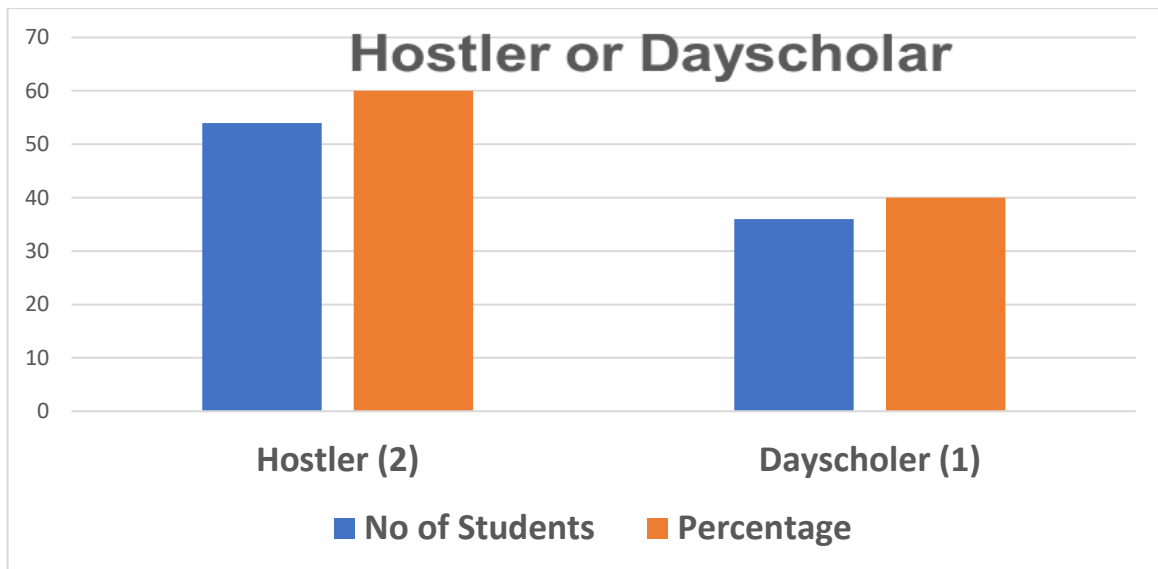
It is observed from table 04 that relatively higher proportion of selected students i.e., 60 % were hosteler while remaining 40 % were Dayscholar. Hosteler were found to be residing in college hostel while dayscholar were residing outside of the college premises.

### 3. NATA MARKS AT ENTRY LEVEL.

For the admission in Architecture college, NATA (National Aptitude Test in Architecture) examination is compulsory. This has operationally defined as marks of a student at NATA examination. The respondent students were categories accordingly to their NATA marks and presented in Table 05.

**TABLE 05:** DISTRIBUTION OF RESPONDENT STUDENTS ACCORDING TO MARK OBTAINED IN NATA

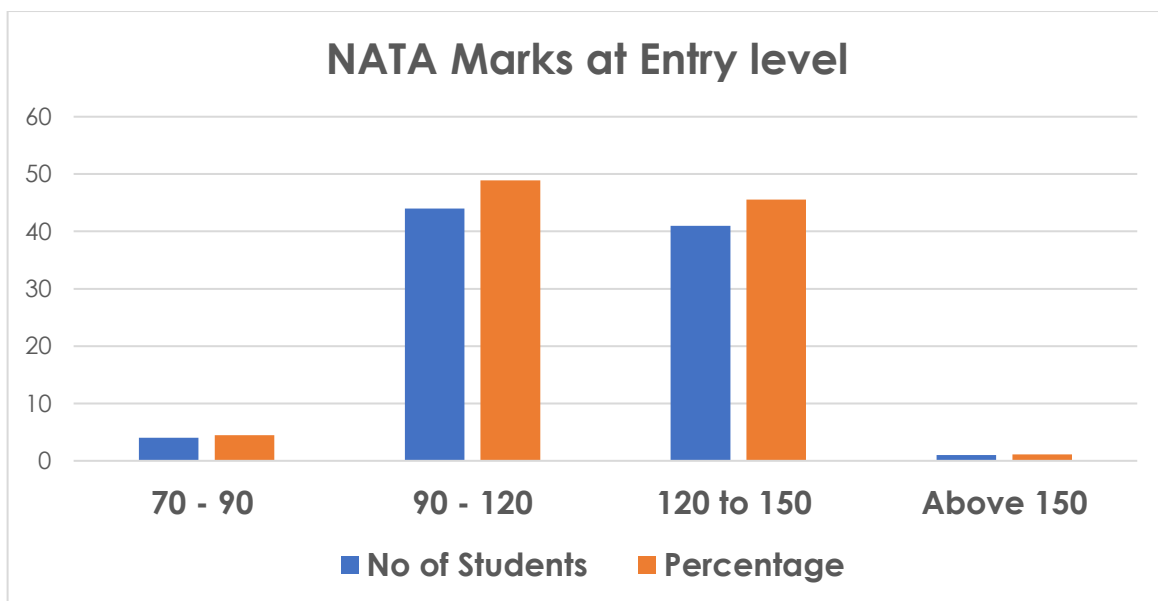| Sr. No. | Mark Obtained in NATA Exam Category | No of Students | Percentage |
|---------|-------------------------------------|----------------|------------|
| 1 | 70 - 90 | 4 | 4.44 |
| 2 | 90 - 120 | 44 | 48.89 |
| 3 | 120 - 150 | 41 | 45.56 |
| 4 | Above 150 | 1 | 1.11 |
| | **TOTAL** | **90** | **100** |
| | **Mean** | **117.42** | |
| | **SD** | **16.99** | |
| | **CV** | **14.47** | |

Table 05 presents that half of the respondent students i.e., 48.89 % were in the range of 90 to 120 marks. while slightly low proportion i.e., 45.56 % respondent students were in the range of 120-150 marks at NATA examination. Only 1.11 % student is in the range of above 150 marks. The mean level marks obtained by respondent students in NATA examination were 117.42.

## 4. COLLEGE ATTENDANCE OF RESPONDENT STUDENTS.
Punctuality in attendance referred as percentage of attendance of an individual student in attending different lectures. The respondent students were categories on the basis of percentage of attendance & presented in table 06.

**TABLE 06:** DISTRIBUTION OF RESPONDENT STUDENTS ACCORDING TO COLLEGE ATTENDANCE

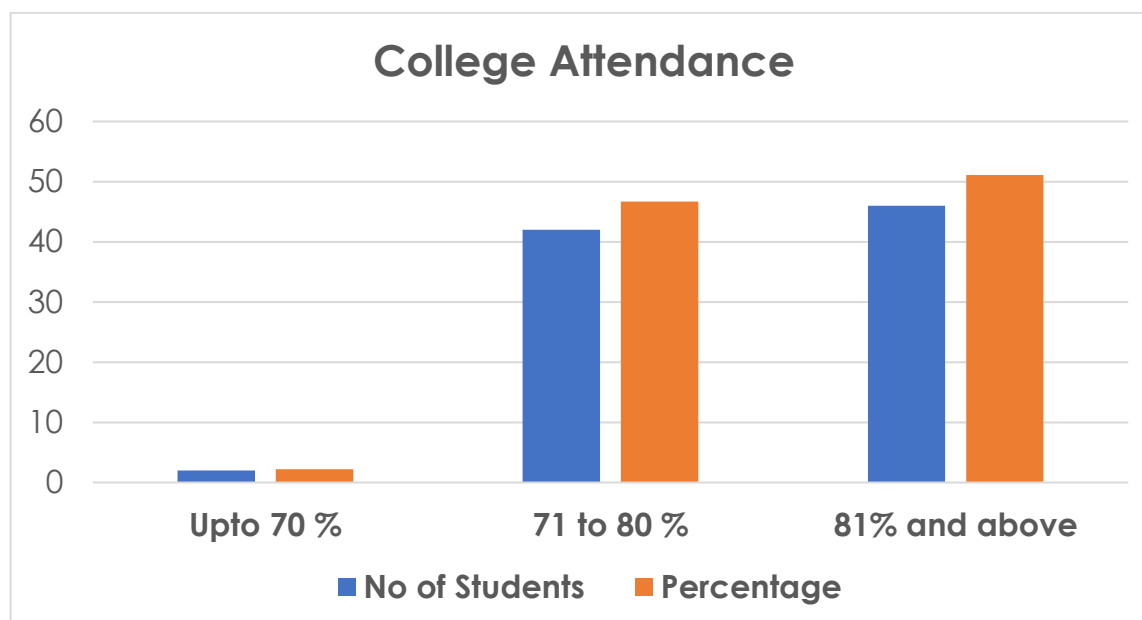| Sr. No. | Percentage Attendance Category | No of Students | Percentage |
|---------|-------------------------------|----------------|------------|
| 1 | Upto 70 | 2 | 2.22 |
| 2 | 70 - 80 | 42 | 46.67 |
| 3 | Above 80 | 46 | 51.11 |
| | **TOTAL** | **90** | **100.00** |
| | **Mean** | **82.5** | |
| | **SD** | **7.1** | |
| | **CV** | **8.60** | |



Table 06 refers that half of the respondent students had more than 80 % attendance in college where as 46.67% respondent students are in 70-80 percent categories. On an average, attendance of respondent students worked out to 82.5 %. It shows that majority of the students were regular in attending college.

## 5. ECONOMIC STATUS.
Economic status referred as student's total family income in rupees per annum. It was categories as follows and shown in table 8.

**TABLE 07:** DISTRIBUTION OF RESPONDENT STUDENTS ACCORDING TO ECONOMIC STATUS

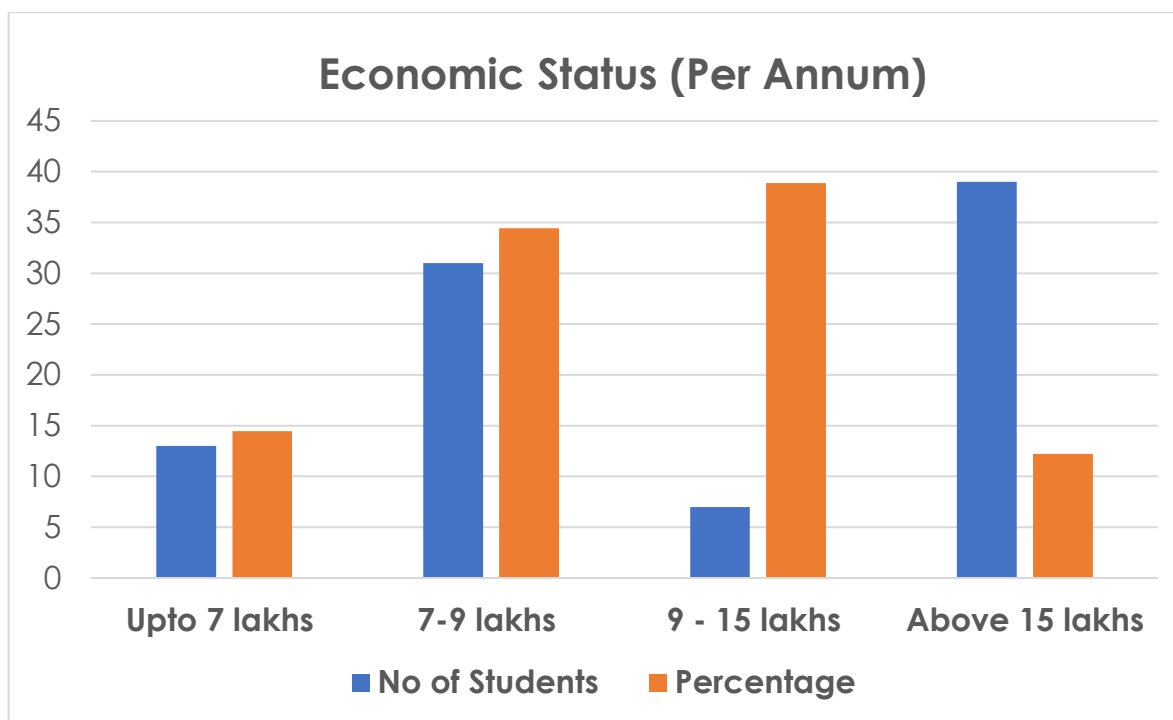| Sr. No. | Category (Per Annum) | No of Students | Percentage |
|---------|---------------------|----------------|------------|
| 1 | Upto 7 lakhs | 13 | 14.44 |
| 2 | 7-9 lakhs | 31 | 34.44 |
| 3 | 9 - 15 lakhs | 35 | 38.89 |
| 4 | Above 15 lakhs | 11 | 12.22 |
| | **TOTAL** | **90** | **100.00** |
| | **Mean** | **13.82** | |
| | **SD** | **7.39** | |
| | **CV** | **53.45** | |

Economic Status (Per Annum)

Table 07 shows that relatively higher proportion of the respondent students were from 9-15 lakhs per annum family income followed by 34-44 % in the family income group of 7-9 Lakhs per annum. The average annual family income of respondent student was 13.82 lakh per annum.

## DISTRIBUTION OF RESPONDENT STUDENTS ACCORDING TO INFORMAL LEARNING LEVEL.
The informal learning level of respondent students was measured in two situations namely class room and Transitional spaces. The group of respondent students studied was common in both the situation and they were exposed through selected learning activities. The subject delt with anthropometry. The distribution of respondent students according to the internal learning level acquired was studied and presented in Table 03.

**TABLE 08:** DISTRIBUTION OF RESPONDENT STUDENTS ACCORDING TO INFORMAL LEARNING LEVEL

| Sr. No. | Informal Learning Level (Percentage) | Class Room Group | | Transitional Space Group | |
|---|---|---|---|---|---|
| | | No of Students | Percentage | No of Students | Percentage |
| 1 | 57 to 64 | 19 | 21.11 | 5 | 5.56 |
| 2 | 64 to 71 | 48 | 53.33 | 11 | 12.22 |
| 3 | Above 71 | 23 | 25.56 | 74 | 82.22 |
| | Total | 90 | 100 | 90 | 100 |
| **Mean of Informal Learning Level** | | **67.90%** | | **74.60%** | |
| **Difference in Informal Learning Level** | | | **6.7%*** | | |
| **Increase in Informal Learning Level in transitional spaces over Class room in Percentage - 9.86%** | | | | | |
| **Note: The different was tested with the help of paired 't' test and found significant at 1% level of significance** | | | | | |
| **Calculated t = 4.09 and table value t = 2.06 at n-1 d.f.** | | | | | |

It is observed from table 03 that large majority of the respondent students i.e., 82.22 % from transitional spaces gained highest learning level i.e., above 71%. While in classroom situation only 25.55 % respondent students gain above 71 % learning level. In classroom group nearly half of the respondent student achieved 64 to 71% learning level, overall, 9.86 % increase in learning level was observed in transitional spaces as against classroom situation. The change in informal level was tested using paired Z test and it was found significant at 1% level.

## EFFECT OF TRANSITIONAL SPACES AND INFORMAL LEARNING ACTIVITIES ON INFORMAL LEARNING OF STUDENTS.
### • TRANSITIONAL SPACES
The level of informal learning was studied according to different important transitional spaces namely Courtyard, Amphitheatre, common area, students plaza and corridors. The results obtained are presented in table 04.

**TABLE 09:** TRANSITIONAL SPACES AND LEVEL OF INFORMAL LEARNING.

| Sr. No. | Transitional Spaces | No. Of Students | Mean Level of Informal Learning |
|---------|---------------------|-----------------|--------------------------------|
| 1 | Courtyard | 23 | 66.40 |
| 2 | Amphitheatre | 22 | 74.80 |
| 3 | Common Area | 22 | 75.00 |
| 4 | Student's Plaza | 11 | 75.20 |
| 5 | Corridors | 12 | 72.40 |
| | **Total** | **90** | **74.60** |

It is observed form table 04 that overall learning effect of the transitional spaces included in experimental design have exhibited subsential effect on informal learning of the respondent student with regards to Architectural subject.

- **LEARNING ACTIVITIES PERFORMED AND LEVEL OF INFORMAL LEARNING.**

The effect of various learning activities on level of informal learning was studied. Three most important learning acidities namely model making, workshop and students presentation were studied and presented in Table 05.

**TABLE 10:** LEARNING ACTIVITIES PERFORMED. AND ITS EFFECT ON INTERNAL LEARNING OF THE RESPONDENT STUDENT

| Sr. No. | Informal Learning Activities | Mean Level of Informal Learning | |
|---------|------------------------------|---------------------------------|---|
| | | **Class Room** | **Transitional Spaces** |
| **1** | **Model Making** | **71.7** | **77.70** |
| **2** | **Workshop** | **66.9** | **73.20** |
| **3** | **Student's Presentation** | **64.8** | **72.80** |
| | **Overall Informal learning** | **67.9** | **74.60** |
| **Difference in Informal Learning level in transitional spaces over Class room in Percentage – 6.7 %** | | | |
| **Percentage increase in informal learning over Class room 9.86%** | | | |
| **Calculated Z = 4.09 and table value Z = 2.06 at n-1 d.f.** | | | |

It is observed from table 05 that model making activity has been found to be most effective learning activity in classroom and transitional space situation. Further, it is observed that student presentation has exhibited relatively low level of learning in transitional spaces as compared to work shop and model making. Thus, it may be concluded that considering all three activities, overall learning is relatively more in transitional spaces as compared to class room. It establishes the importance of transitional spaces in learning Architecture subjects.

The overall increase in learning in transitional spaces over class room situation was to the extent of 9.86% which is found to be significant.

- **DISTRIBUTION OF RESPONDENT STUDENTS ACCORDING TO ACTIVATES PERFORMED IN DIFFERENT TRANSITIONAL SPACES AND INFORMAL LEARNING LEVEL.**

In order to examine the effect of various activities conducted in transitional spaces on informal learning, the composite index of informal learning of each student was workout and then respondent's students were distributed in different category on the basis of mean level of learning. The results obtained are presented in Table 06.

**TABLE 11:** EFFECT OF ACTIVITIES CONDUCTED IN TRANSITIONAL SPACES ON INFORMAL LEARNING OF STUDENTS

| Sr. No. | Transitional Space | Characteristics of Transitional Spaces | Learning Activities | No. of Students | Mean Levels of Informal Learning (%) |
|---------|--------------------|-----------------------------------------|---------------------|-----------------|--------------------------------------|
| 1 | Courtyard | Octagon,20%, Open to sky, Seating Arrangements for students, centrally located in college building, centrally located in college building, Hard,1:2, Open Space, Electrical Facility/ Wi-Fi | Model Making Activity | 23 | 77.3 |
| 2 | Amphitheatre | Octagon, Open to sky, Seating Arrangements for students, Hard,1:2, Open Space. Electrical Facility/ Wi-Fi, Near to Canteen,5% | Students Presentation | 22 | 73.2 |
| 3 | Common Area | Notice Board, Seating Arrangements for students,20%, 1:4, Octagon, centrally located in college building, Semi Open Space, Paneling, Hard, Rectangle, Electrical Facility/ Wi-Fi, At Entrance of Building, Near to Class | Work shop | 22 | 73.2 |

| | | Room,1:5, Enclose Space, Level Difference | | | |
|---|---|---|---|---|---|
| 4 | Student's Plaza | Octagon,20%, Open to sky, Seating Arrangements for students, centrally located in college building, Hard,1:2, Rectangle, Open Space, Electrical Facility/ Wi-Fi, Square | Model Making Activity | 11 | 74.2 |
| 5 | Corridors | 1:4,20%, Seating Arrangements for students, Notice Board, centrally located in college building, Semi Open Space, Hard, Paneling, Rectangle, Near to Amphitheatre, Electrical Facility/ Wi-Fi, At Entrance of Building, Near to Class Room, Near to Canteen,1:5, Level Difference, Enclose Space | Students Presentation | 12 | 70.6 |

It is observed for table 06 that model making activity conducted in courtyard and student's plaza were found to be most effective activity and exhibited highest informal learning i.e. 80.3 % and 79.2 % respectively followed by Jury presentation activity in Amphitheatre (73.2%) and corridors (72.6%). Further, it is observed that workshop activity presented in common area has shown relatively low level of informal learning (70.6%). Thus, it may say that, overall learning is relatively more with in model making activity conducted in courtyard and student plaza.

## CONCLUSIONS.

The results of the study conclude that
1. Amongst different transitional space, courtyard, Amphitheatre, common area and verandas were found to be ranked high on the basis of mean score.
2. Informal learning activities like Students presentation, model making and workshop play higher effective role in providing informal learning in Architecture subjects.
3. The effect of transitional spaces and learning activities conducted in transitional spaced exhibited that, Student Plaza followed by common area and Amphitheatre play a effective role in increasing informal learning through model making and student presentation activities.
4. Overall, 9.86 percent increase in learning level was observed in transitional spaces as against class room situation.
5. The increase / change in informal learning was tested using z test and it was found to be significant at 1 percent level.

## REFERENCES

1. Anggiani, M. dan Heryanto, B. (2018). Smartphones and Student Behavior in Public Spaces. Case Study: Public Space Campus of Mercu Buana University, Meruya. Unpublished.
2. Anggiani, M. dan Heryanto, B. (2018). Sense of Attachments among Students in Using Campus Public Space at Mercu Buana University, Meruya. Proceeding of Asia Urban Research Group, Nanjing.
3. Barr, R., & Tagg, J. (1995). A New Paradigm for Undergraduate Education from Teaching to Learning. Change, pp. 13-25.
4. Brown, M. (2005). Learning space design theory and practice. Educause Review, 40(4), 30.
5. Brown, M., & Long, P. (2006). Trends in Learning Space Design. In D. G. Oblinger (Ed.), Learning Spaces: EDUCAUSE.
6. Creative Research System. (2017). Sample size Formula for Sample Size Calculator. Retrieved from https://www.surveysystem.com/sscalc.htm on October 1, 2017.
7. Fisher, K. (2005a). Pedagogy & Space: Aligning Learning & Learning Environments.
8. Fisher, K. (2005b). Research into Identifying Effective Learning Environment. Evaluating Quality in Educational Facilities, 9.
9. Harrop, D., dan Turpin B., (2013). A Study Exploring Learners' Informal Learning Space Behaviors, Attitudes, and Preferences. Retrieved from: http:/shura.shu.ac.uk.
10. Ibrahim, N., Fadzil, N. H., & Sauron, M. (2013). Learning Outside Classrooms on Campus Ground: A case study in Malaysia. Asian Journal of Environment-Behaviour Studies.
11. JISC. (2006). Designing Spaces for Effective Learning. Retrieved 10 05, 2012, from http://www.jisc.ac.uk/eli_learningspaces.html.