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BEYOND SUSTAINABILITY
Reflections Across Spaces

EMERGENCE OF INFORMAL LEARNING SPACE IN UNIVERSITY CAMPUS:
A COMPARATIVE SCENARIO IN THE CONTEXT OF KHULNA CITY

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Abstract: Ancient education system was developed from a semi-outdoor environment. While developing the learning spaces it developed into indoor environment to ensure controlled environment, focus, discipline and compactness. These properties lead to formal education and formal learning space which replaced the informal learning environment. Formal learning space usually drive students towards a single expertise or knowledge. The limitations and boredom of formal education often causes depression and annoy towards education that result in limited learning and one-sided education. This research indicates the role of "informal learning environment" which helps university students to achieve multi-disciplinary knowledge through a simple, contextual and informal way. To establish the emergence, we tried to do a quantitative analysis among the students studying different universities in Khulna city. We have tried to understand the perspective of the students whether they feel the importance of informal learning or not in their daily life. While working on this paper, we have experienced unique scenario for each university but by any means Khulna University and Khulna University of Engineering & Technology serves their student the environment where students can meet and share knowledge with their natural flow of gossiping with food or drinks while Northern University of Business & technology and North-Western University have shown different scenario.

Keywords: *Informal Learning space, Learning environment, Academic Environment, Multi-disciplinary Learning, Knowledge sharing platform, Khulna City Campus,*

1. Introduction

With development of time, the learning environment has become a focus of research and evolved the sectors of academics inquiry within elementary, secondary and post-secondary research (Barry J. Zimmerman, 2013). The relationship between the environment and learning reflects the combination of system of education, environmental psychology, campus ecology cycle and architectural conceptualizations (Zandvliet & Broekhuizen, 2017). The achievement of students in higher education is mostly dependent on several different aspects such as his own skills, experiences, learning environment and outcomes. Indeed, the learning environment or school climate is one of the most important key factors of school's impact on students learning (Bascia, 2014). Basically, learning environment can be widely composed into school safety, interpersonal relationship, teaching and learning practices, and organizational structures (Bully & Efforts, 2013).

Across the world, facilities staff, learning specialists, academic researchers, architects, and designers have launched a broad range of investigations to address the questions being raised by the new research on learning space design. In addition, there are a number of articles that review the existing literature and provide more philosophical approaches for how teaching and learning activities can be effectively housed and deployed but the field is still at an early stage of development. At a practical level, it is important for educators to recognize the importance of where students actually learn. Learning is not all going on purely in the classroom or even online. As teachers, we need to think more about the spatial demands of independent and especially group learning, e.g. when setting up group work. New spaces for learning in departments must accommodate a variety of activities. In this context, there is a need to be alert

to the hidden curriculum aspect of space, the cultural messages unintentionally conveyed by how space is used that can have the effect of creating inequalities in access to learning (Costello 2000). The main objective of the study has been to identify the emergence of informal learning space in higher education and to achieve that we have interviewed huge number of students from KU,KUET,NUBTK and NWU to know their perspectives and opinions.

2. Literature Review

2.1. LEARNING ENVIRONMENT

According to Fisher (2005a, 2005b), there are three approaches to learning concepts: instructional instruction, practical learning, and informal learning or self-learning. The implementation of these three approaches is manifested in the form of a lecture hall or classrooms, laboratory space and public space on campus.

2.2. INFORMAL LEARNING

Mona Anggiani and Bambang Heryanto (2018) states that Informal learning or self-learning often occur through informal activities which in the learning process conducted by students. In the campus a library, cafeteria, atrium, hall, terrace, garden, corridors, tea-stalls, juice corners, teachers-students center and other facilities provided by the university can be used as informal space. These spaces are public forms that can be shared by students, teachers and staffs but mostly by students only. In these informal spaces, the students can conduct their learning activities independently and self willingly, together or in groups. Students are free to choose places to study, subjects of study, companions of study based on their preferences. The term preference is technically widely used in the fields of psychology, economics, and philosophy related to the behavior of students in choosing one place among several places to learn. Student preference, in this case, is an element in the student's decision-making process of one of the most preferred places, topics, companions on the existing set of choices. Often while making decisions students choose topics out of their own major subject or academic subjects that involves companions from different subject background in a neutral area preferably public space and the whole process lead themselves to multi-disciplinary learning process. There is a complementarity between pedagogical theory that is student-oriented, mobile technology enabling personalized, learner-centred, situated, collaborative, and ubiquitous learning (Collinson, 1999; Solvberg & Rismark, 2012), and learning environments that accelerate the possibilities of where, how and when learning occurs. Thomas (2010) recognizes that the majority of learning occurs in spaces not intended as learning spaces. Informal learning environments afford a space where these transformative drivers may potentially intersect.
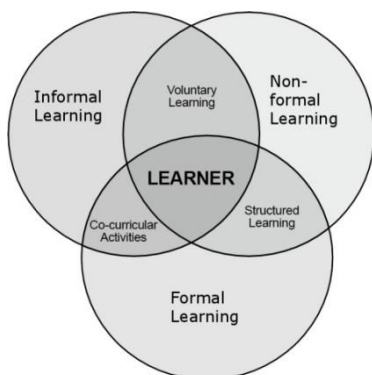
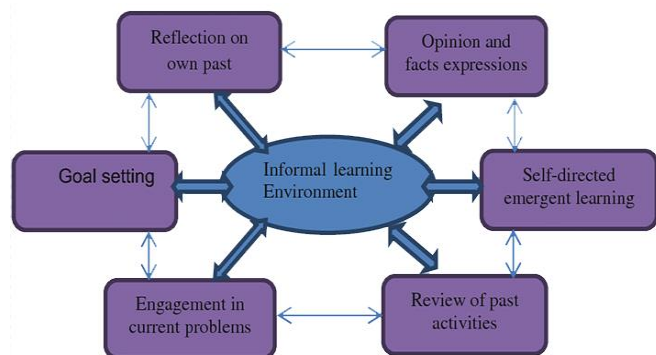Figure 01: Relation among different forms of learning

Figure 02: Integration model for informal learning (Otto and Williams, 2014)

2.3. INFORMAL LEARNING SPACE IN UNIVERSITY CAMPUS

The campus environment should not limit the learning process in the classroom with a tight schedule, but the campus should also provide more than one potential and effective informal learning spaces for students.

The atmosphere of a comfortable and accessible environment on campus affects the success of students in the learning process is informal, both knowledge and skills (Wolff, 2003).

Brown and Lippincott, (2003) again claimed that more learning are taking place in informal learning space than in the formal classroom. As mentioned by Matthews, (2011), students who utilize the informal learning spaces delineate the higher level of students' engagement and positive correlation compared to non-users. In fact, there is a fair interdependence between the quality of Informal learning space and learner's behaviour and success (Doshi, Kumar, & Whitmer, 2014). Oldenburg, (1998) identifies that the concept of informal learning is very much associated with the idea of Third Space which is a space where social gatherings that take place in the first space (home) and the second space (work) occur. Miller Cunningham & Walton, (2016) researched the concept of third space and found that its seen as hybrid spaces, neither home or personal space nor a formal classroom or public setting. Conversely, it an area where learners can choose to study independently, mingle with friends and collaborate with stuff as preferred. As a result, it is embodied by accessibility, purposefulness and its ability for informal gatherings. The design of informal learning spaces should have elements, flexibility, nuances of the future, clear, creative, supportive and interesting (JISC, 2006). Basically, the informal learning spaces should be designed to support students' freedom in their learning activities outside the classroom. Thus, the attributes that these informal spaces must possess are inviting, friendly, comfortable, aesthetic, flowing, reasonable, diffuse, flexible, interactive, and accommodating (Souter et al., 2010). In these spaces, students are free to study independently or together, complete assignments or discussions on their desired topics either academic or non-academic. Informal learning spaces should transform from pedagogical learning to a shift in the nature of social collaboration and group work. (Raish and Fennewald, 2016).

3. Objectives

In order to examine the research aspects involved in the presented study, following objectives were thought of the observation –

- To know if students recognize "informal space"
- To know the students opinion about the space regarding their visit, time spent, purpose and worth;
- To know if students use informal space as learning space
- To know merits and demerits of using informal learning spaces in academic environment;
- To find out the factors making the students to use the informal learning spaces for academic purpose;
- Further, the last objective was set as open-ended question to know the suggestions about the development of that space to serve the purpose efficiently.

4. Methodology

- In order to accomplish the above set of research objectives a survey was conducted through a well-structured and precise questionnaire for the students and during the time of mid 2021 among 400 students of **K**hulna **U**niversity(**KU**) ,**K**hulna **U**niversity of **E**ngineering & **T**echnology(**KUET**) , **N**orthern **U**niversity of **B**usiness and **T**echnology (**NUBTK**) and **N**orth-**W**estern **U**niversity(**NWU**).
- All the respondents in responding showed great enthusiasm and based on the responses received data is presented in the form of tables, charts and analyzed by using a simple method of calculation.
- Final discussion &, analysis based on our research objectives
- try to Draw a conclusion and few more scopes for future analysis

5. Analysis

Table 1 indicates that out of 400 questionnaires circulated among the students 336 (84%) filled in questionnaires were collected back from the respondents both online and offline. Further the table reflects that response rate of Khulna University (KU) and North Western University (NWU) are very high (92% & 94% respectively) while the response rate of Khulna University of Engineering and Technology (KUET) and Northern University of Business and Technology (NUBTK) are below 80% (72% and 78% respectively).

	Total Number of Questionnaires	Khulna University	Khulna University of Engineering & Technology	Northern University of Business and Technology	Northwestern University
Distributed	400 (100)	100	100	100	100
Received	336 (84)	92	72	78	94

Table 1: Response Rate of the Students (University wise and in Total)

5.1. IDENTIFICATION OF INFORMAL SPACE

Table 2 indicates that majority of the students of all universities think that cafeteria and library are ideal spaces for informal learning. A high percentage of students of KUET identifies TSC (Teachers-Students Centre) as an ideal space for informal learning. On the other hand students of Khulna University doesn't have TSC or swimming pool as a result they didn't identified those places as informal learning spaces. The students of NUBTK and NWU identified common stairs and corridors as their informal learning spaces as they don't have field area, memorial plazas or open stages on their campus premises. Lakeside plaza is highly used in KU as an informal learning place while KUET campus doesn't have that kind of space in their campus area.

	Khulna University (%)	Khulna University of Engineering & Technology (%)	Northern University of Business and Technology (%)	Northwestern University (%)
Cafeteria	92	85	76	97
TSC	00	100	00	00
Library	71	82	87	93
Tea Stalls	96	20	17	31
Juice corners	94	25	00	00
Field area	78	95	00	00
Corridors	27	43	94	89
Lakeside area	51	00	00	00
Swimming Pool area	00	78	00	00
Common Stair	02	00	56	65
Memorial plaza	77	53	00	00
Open Stage	58	16	00	00

Table 2: Identifying Informal learning space in campus area (University wise)

Figure 03: Informal learning space in Khulna University identified by the students
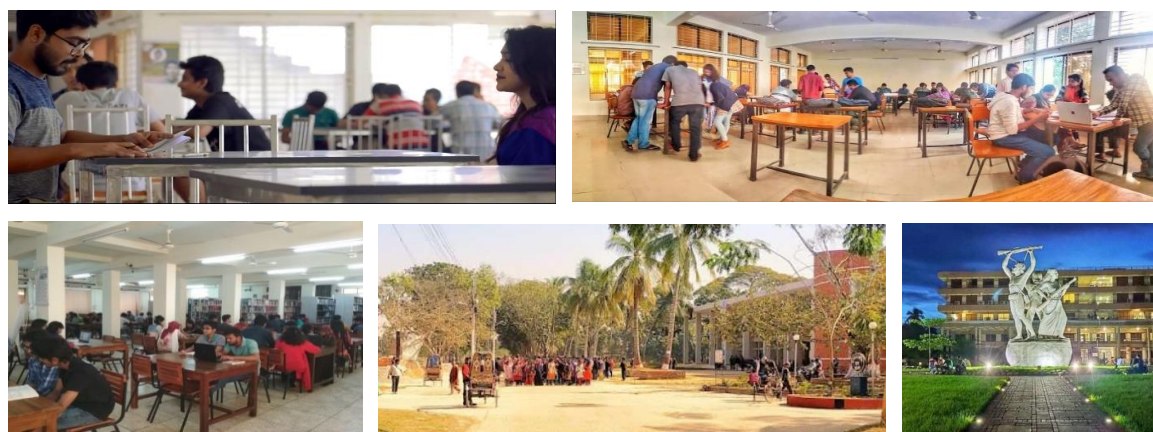
Figure 04: Informal learning space in KUET identified by the students

Figure 05: Informal learning space in NUBTK identified by the students

Figure 06: Informal learning space in NWU identified by the students

5.2. TIME SPENT IN INFORMAL SPACE

We have tried to measure average time students spend in informal space for any purpose. According to the students opinion Table 3 here shows that most of the students of NUBTK and NWU prefers to stay in their informal learning spaces less than 2 hours out of class while on the contrary students of KU and KUET prefers to stay in the range of 2 hours to 6 hours in their informal learning spaces out of class. A certain percentage (12-14%) of students of those particular institutions likes to stay at the informal learning space more than 6 hours per day.

	Khulna University (%)	Khulna University of Engineering & Technology (%)	Northern University of Business and Technology (%)	Northwestern University (%)
Less than 30 minutes	07	04	54	39
More than 30 minutes – Less than 2 hours	21	14	35	54
More than 2 hours – Less than 4 hours	32	32	12	05
More than 4 hours – Less than 6 hours	27	38	00	02
More than 6 hours	14	13	00	00

Table 3: Usual spent time on Informal learning spaces out of Class (University wise)

5.3. PURPOSE OF USING INFORMAL SPACE

In table 4 shows that while the questionnaires were offered to the students to fill up majority students of KU (63%), KUET (61%) and NWU (56%) were engaged in any kind of learning or academic exercise. On the other hand most of the students of NUBTK (54%) were not engaged in any kind of learning or academic work.

	Khulna University (%)	Khulna University of Engineering & Technology (%)	Northern University of Business and Technology (%)	Northwestern University (%)
YES	63	61	46	56
NO	37	39	54	44

Table 4: Currently using the space for learning/academic work or not (University wise)

Below here table 5 represents the student's opinion regarding best description of the space they were found while the quecstionnaire was given to them. Majority of the students of KU and KUET refers that space as group study place or a space for debate/discussion. On the contrary, the students of NUBTK and NWU refers that place as a place for relaxation, socializing or eating/drinking.

	Khulna University (%)	Khulna University of Engineering & Technology (%)	Northern University of Business and Technology (%)	Northwestern University (%)
Space for individual study	13	04	03	09
Space for group study	21	38	14	19
Space for relaxation	14	11	30	22
Space for socializing	09	15	24	10
Space for debate/discussion	29	20	10	12
Space for eating/drinking	14	13	19	29

Table 5: Opinion regarding best description of that space (University wise)

5.4. CONTRIBUTION OF INFORMAL SPACE

Table 6 indicates that out of those students who thinks that informal spaces contribute to their knowledge most of the students of KU (56.6%) and KUET (77%) stated that these knowledge are often out of their study field which is very positive to multi-disciplinary knowledge sharing. On the contrary most of the NUBTK (67.6%) and NWU (56.9%) students stated that these knowledge are inside their study area or field. Again the portion of these students who thinks that they also gather outside knowledge is also non negligible (32.4% and 43.1% respectively).

	Khulna University (%)	Khulna University of Engineering & Technology (%)	Northern University of Business and Technology (%)	Northwestern University (%)
Inside respondent's study area	43	23	67	57
Out of respondent's study area	57	77	33	43

Table 6: Opinion regarding the specific learning about/out of respondent's study area (University wise)

5.5. ADVANTAGES AND DISADVANTAGES OF INFORMAL SPACE

Figure 1 and 2 finds that the majority of the students of these institutions (more than 90%) opined that informality as the best advantage of the informal learning space whereas very less no. of students (less than

50%) opined comfortable sitting as the best advantage. Again the majority of the students (more than 65%) opined that non-availability of study material and distraction are the biggest disadvantages of informal learning space which proves the need for designed spaces for informal learning spaces in university areas.
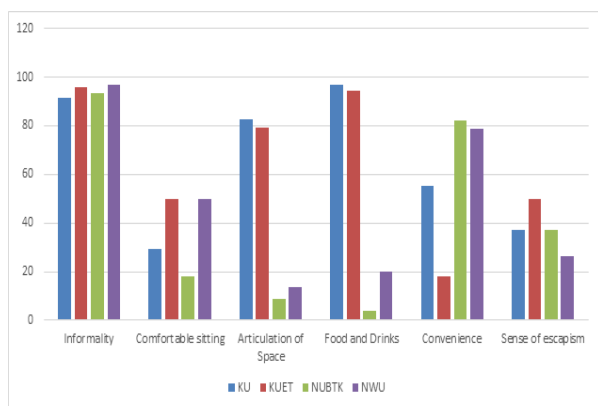

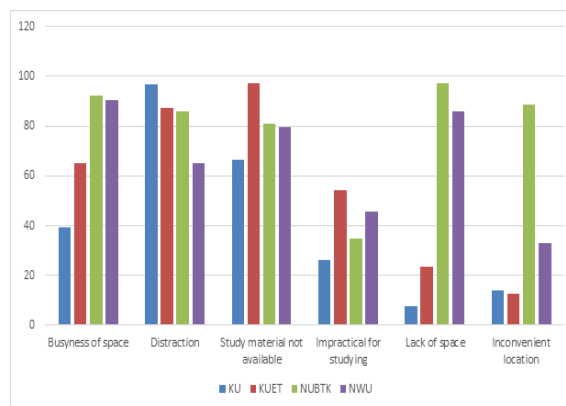Figure 07: Positive impact of studying at this space in percentages (University wise)

Figure 08: Negative impact of studying at this space in percentages (University wise)

5.6. INVOLVMENT OF STUDENTS

Table 10 indicates that Majority percentage of the students studying in KU (52%) and KUET (50%) are involved with minimum 1 club or co-curricular activity. 26% of KU respondents and 30% of KUET respondents are involved in multiple co-curricular activities or clubs besides their academic works. A opposite reaction was represented by the students of NUBTK and NWU. Majority of the respondents were not involved in any kind of co-curricular activities that is 69% and 61% respectively.
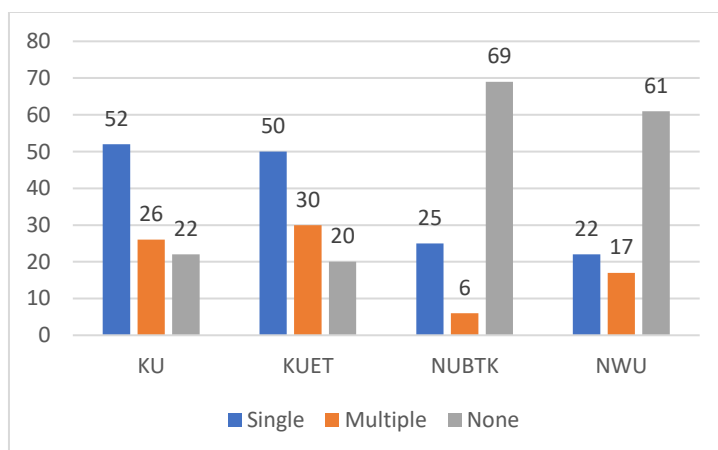

Figure 09: information about his/her participation to co-curricular activities i.e. clubs, social works, culture etc. in percentage (University wise)

5.7. INFORMAL SPACE AS IDEA DEVELOPMENT SPACE

Table 11 represents that majority students of all universities agrees on that informal space contributes to their knowledge and helps them develop their wildest imaginations or ideas. Around 20% respondents from NUBTK believes it doesn't help them at all and around 14% respondents of NWU shares the same belief. This percentage of same belief is comparatively very low in the respondents of KU and KUET.

	Khulna University (%)	Khulna University of Engineering & Technology (%)	Northern University of Business and Technology (%)	Northwestern University (%)
YES	96	98	79	86
NO	04	02	21	14

Table 7: Opinion regarding respondents thought about the contribution of informal learning in developing his ideas/thoughts (University wise)

At last, the students of these universities were asked to advice their perceptions for the betterment of the particular places to increase their efficiency towards becoming a multi-disciplinary learning space. A majority of students commented about their thoughts and many students asked to modify these places keeping their root intact that means they think these places should be taken care of organically.

6. Discussion

- The majority of the students of all universities think that the cafeteria and library are ideal spaces for informal learning. A high percentage of students of KUET identifies TSC (Teachers-Students Centre) as an ideal space for informal learning. On the other hand, students of Khulna University don't have TSC or swimming pool as a result they didn't identify those places as informal learning spaces. The students of NUBTK and NWU identified common stairs and corridors as their informal learning spaces as they don't have field area, memorial plazas or open stages on their campus premises. Lakeside plaza is highly used in KU as an informal learning place while KUET campus doesn't have that kind of space in their campus area. (table 02)

- Because of less informal space facilities most of the students of NUBTK and NWU prefers to stay in their informal learning spaces less than 2 hours out of class while on the contrary students of KU and KUET prefers to stay in the range of 2 hours to 6 hours in their informal learning spaces out of class. (table 03)

- Majority of the students of KU and KUET prefer that space as a group study place or a space for debate/discussion. On the contrary, the students of NUBTK and NWU prefer that place as a place for relaxation, socializing or eating/drinking. The majority of the students studying in KU (82.6%) and KUET (66.7%) are very positive about the informal spaces they use for daily use. They think these spaces as contributors to their knowledge. Whereas the majority of students who are studying in NUBTK (52.6%) don't think these spaces are contributing to their knowledge enrichment but again there are 47.4% of NUBTK students who think positively about those same spaces which is also a positive sign. The students of NWU represent a different scenario such as majority portion (54.2%) thinks that these spaces are contributing to their knowledge enrichment but those who don't think like that are also a great portion (45.8%).

- Out of those students who think that informal spaces contribute to their knowledge most of the students of KU (56.6%) and KUET (77%) stated that these knowledge are often out of their study field which is very positive to multi-disciplinary knowledge sharing. On the contrary most of the NUBTK (67.6%) and NWU (56.9%) students stated that these knowledge are inside their study area or field. Again the portion of these students who think that they also gather outside knowledge is also non negligible (32.4% and 43.1% respectively).

- Following these activities, students of KU and KUET participate in more co-curricular activities such as culture, clubs, organizations etc. Students involving themselves in such a manner and social culture allows them to learn different philosophies, keep them more hours in the learning process out of classes, help them grow interest in different issues and so on.

7. Recommendations

- Informal learning spaces need to be designed and used as multi-disciplinary learning spaces that will led the students becoming more socially adaptive with students out of their own study area or department.

- University design masterplans should adopt more mix space design principle to spread knowledge both formally and informally.

- Architectural spatial quality, design and functional arrangement can act as a catalyst to break the learning pattern of the students and their contribution to the society.

- Planners and Architects should focus on semi-outdoor and outdoor places which can be used as multipurpose spaces. As example the cafeteria function of KU and KUET serves both dining and knowledge sharing function because of the semi-outdoor and outdoors they have and others don't.

8. Conclusion

The spatial quality of a leaning space affects the mind-set of its users. From the beginning of education system it was meant to be informal, self-willing and multi-disciplinary. With developing the education pattern and design strategies the space pattern has changed to more indoor and formal. The study here found an emergence of informal learning space not only by the authors but also by the opinion of the students.

Since the study is confined only to the students of Khulna city universities about the students' opinion on the use of informal learning space, the research results are limited to this context only and should not be generalized. However, considering the worth of informal learning spaces in academic environment, it is advised that more studies should be conducted in a comparative nature covering more contexts involving more academic institutions together to know the students' opinion and behavior towards informal learning spaces.

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