Evaluation on Integrating Sustainable Ideas into Interior Design Students Project

R.B. Talib1  M.Z. Sulieman2

1Senior Lecturer  2Senior Lecturer and Program Head
School of Housing, Building & Planning
Universiti Sains Malaysia
Penang - 11800, Malaysia
E-mail: roslanuism@gmail.com, mzs_lan@yahoo.com

Abstract

Interior Design works has become more important than it used to be as the interior works takes quite a big chuck in an overall construction works. Nowadays, the clients want to play bigger role in implementing the interior task and eager to use or have the green or sustainable building idea to be implemented into their interior and also on their exterior project. So, interior design with sustainable factors has become more important.

Thus, we must look back into the academic sectors where this field must play an important role in producing the designers especially the interior designer with fair knowledge on environmental friendly designs or in today term as design with sustainable or green design factors. Therefore, with the above goals, this research become an initial platform trying to measure on the students sensitivity in applying interior design sustainable issues into their academic studio projects. This study however will discuss on design studio project that addresses sustainability through an environmentally based research focus.

Keywords: sustainable education - teaching sustainable - sustainable interior - sustainable design.

1. INTRODUCTION

In order to educate the next generation that sustainability is not a method, but as a standard practice; it is critical that we consider teaching practices that incorporate in depth understanding of sustainable practice. The sustainable envelope proposes the use of a more than typical building materials and decision in designing within an unarticulated shell - and as design process of conceiving a sustainable interior design. The investigation of sustainability in Interior Design necessitates the exploration of sustainability beyond the specification of materials to incorporate an appreciation for the limitations of the environment (Schneiderman, 2008) [4]. Having agreed with the quote, the paper investigates the latest batch of students in intention to know how they apply the sustainable knowledge into their studio project systematically.

The research had been started earlier with the involvement of 33 Year 3 Interior Design students enrolling in 2009; a so-called Batch 1 for segregation in the study. There are also 16 third (final) [Batch 2] year students been selected in this research and for Phase 1; their Interior Design Studio projects conducting in Semester 1 Session 2010/2011 beginning in July 2010 and ends in November 2010 become part of the survey. There is Phase 2 study which is the continuation of Phase 1 being done in
Semester 2 for more detail survey research. The students are in Universiti Sains Malaysia in Penang, Malaysia and all are the Malaysian citizens of Malay and Chinese descendent with one Saudi Arabian student. Initial also has been done on the previous batch focusing on 33 students; all local Malaysian with two Iranian students, two People Republic of China students and three Indonesian students.

Knowledge on local and even global companies involving in producing green products can easily been gained in the internet. Even bamboo floor is now quite a big trend hitting the Malaysian market in recent times. There are quite a number of Malaysian companies having the market offer in installing the bamboo type of floor. These establishments of the bamboo floor market are good positive trend in getting the students exposed on the green products solution. It is our hope that using sustainable material consciousness attitude would be widespread and pervades into the system of every human mindset, Malaysian and the world at large (Abdulrahman, 2009) [1]. Furthermore, with the Malaysian Federal Government policy in encouraging better living environment as shown in the Federal Government staff double storey terrace housing in new city like Putrajaya, Malaysia; looking into the comfort of having sustainable homes with sustainable interior feature can become the Malaysian trend lately (Talib, 2011)[6].

By the end of Semester 2, 14 students managed to submit their projects for final presentation. The six graphs below were derived from the study from the report done by the students together with their submitted drawings. The report contains explanation of the project including the concept and also showing the building specifications including the costing and the materials sample. The series of graphs below were derived from the formulation of identifying sustainable inputs from the literature research and also from the easy access of the internet. Among the focus of study at this juncture is touching on the sustainable floor input, wall material, recycle materials, sustainable lighting issues and also to the rain water harvesting idea.

Also, the type of ventilation use for the roof types are including for the graph analysis. These are the basic green design ideas which always been mentioned in the studio briefing individually or in a group to be taken care-off. The afford of having this series of graphs help to analyze on the degree of input from the students in inserting the sustainable issues into their tasks after work it out for about a year. After this, they will be out in the market taking the challenges on having green interior design issues in real practice. For ranking purposes, again number 4 is for the most popular choice for rating purposes (with some graph using 3 and 5 as their highest ranking) where 1 is the least popular input for the survey.

2. SUSTAINABLE ANALYSIS ON STUDIO WORKS FOR BATCH 2 SEMESTER 2

![Figure 1. Summary on sustainable input for flooring (Sem.2 Batch 2).](image)

Bamboo and natural timber seems being the most popular choice for flooring. However, the students seems still making quite a positive awareness on all other flooring materials to be considered to be used within their project (see Figure 1). Having identified 10 types of sustainable
floor materials and getting most of the students to be able to have these materials within their projects indicating quite a success in making green design awareness as far as having the green floor is concern.

Figure 2. Summary on sustainable input using for wall (Sem. 2 Batch 2).

Few students dedicated a specific chapter located within their report explaining the usage of the said sustainable wall materials (see Figure 2). The pattern show good students practice in applying sustainable wall materials within their projects thus giving better chances on having green design when they out practice.

Lighting is one of the important sustainable criteria in green design feature. The lighting graph shows fair range of sustainable lighting inputs to be handled by the students. Having sun shading i.e. building external window sun shading or simply letting natural sun light deep into the interior space can greatly reduce the usage of artificial lighting (see Figure 3). Students are ensuring in knowing the morning and evening sun principles while arranging window position in getting a maximum morning sun light into their café area for example.

Figure 3. Summary on sustainable input for lighting (Sem. 2 Batch 2).

Bigger building foot prints are encourage to have a courtyard in letting more natural light coming in. Those having good size of internal space are advised to add a skylight in order to get better sun. Overall this category also indicated quite comfortable feeling in injecting the green lighting input into the student studio works.

Figure 4. Summary on sustainable input for air ventilation (Sem. 2 Batch 2).

All the 3 inputs are for having natural air running through the buildings. Having natural air running across the building is good green design practice in term of health factor for the occupant. Certain students having the vast glazed opening within their glass wall for good internal-external air flow. The graph shows some consideration in implementing air ventilation as one of the green design factor to be implemented into interior design issues (see Figure 4).
The issue on having rain water harvesting as part of individual design always mentioned but hardly been considered seriously by the students. This is reflected in Figure 5 above as quite a small number of students really keen to explore this idea. Most of the LEED gold or platinum projects in the USA seems having this kind of green feature located at the lobby of the building to be enjoyed by the users. Thus having rain water harvesting for the internal building use become a popular feature in the USA.

With economic factor is considered the least, having recycle glass chandelier to light-up the internal space is a superb thing to do. The above graph in Figure 6 shows more students having recycled textiles being put in studio practice as well as recycle sisal carpet. These recycle materials drawn from the literature study are more frequently been find and interestingly found in some student’s material sample board.

Consideration of environmental issues in construction projects has economic, ecological and social implications. It must be put in an overall context and undertaken in an objective and rational way (Gauzin-Muller, 2002) [2]. Having sustainable design knowledge for students to apply it into their studio works is as important when they are in real practice. There is more demand out there now for healthy earth-friendly products and manufacturers; large and small; are meeting the need with stellar alternatives (Sharkey, 2008)[5]. As a summary, the graph (see Figure 7) indicated consistence input has been achieved for this exercise in ensuring sustainable design issues being rightly exposed at academic level first for the students to face the practice with real sustainable environmental design element practice.

3. CONCLUSION

Through the sample taken during the survey, respondents seems giving fair feedback in ensuring the importance’s of having positive environmentally friendly...
design. Better score seems being shown in the first three rows of the graph indicated the frequency of green impact inputs has been considered by most of students. This sign giving good indication in having environmentally sustainable design at academic level can generate better understanding in implementing the green factors being tackled at real design practice level. More studies about environmentally, economically and socially sustainable interior design will be necessary to contribute to the further refinement of an interdisciplinary body of knowledge in sustainable design. It is important to know the state of environmentally sustainable interior design practice (Kang, 2009) [3].

The green approach is simply ‘responsible design’. Having a responsibility to sustain life and land with every design decision made are the great things to do. As we see bigger role playing by the Interior Designer in contributing the process of designing the built environment; ‘green’ is an umbrella term for a myriad of elements considered as part of the design process. With the option we have now of having no planet B, future generation of Interior Designer must well equip and well aware how important to have sustainable green design. Thus certain initial conclusion can be derived from the study where most of graphs indicated that by stressing the importance of the green design, students can be guided and produced satisfied results.

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