

Teaching Approach in the First Year of Architectural Design Studio

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Introduction

The article describes the design teaching approach applied in the teaching and learning of the Year 1 students in the Bachelor of Science in Architecture program. It also explains the teaching methodology, the projects and their objectives towards the achievement of the Year 1 academic and soft skills requirements. The teaching approach used is the OBE (Outcome-based Education) Approach. The OBE approach meets the program requirement as stipulated in the curriculum guidelines recommended by the professional bodies. According to Spady (1994), OBE starts with a clear picture of what is important for students to be able to do, then organising the curriculum, instruction, and assessment to make sure that this learning ultimately happens.

The appropriately designed projects, which encompass short and long projects, are assigned by the group of instructors in the early part of the year. The learning activities are aligned to meet the Learning Outcomes (LO) and sets of assessment criteria and rubrics are also developed aptly to ensure that the students are achieving the LO specified in the curriculum.

Projects and Process in the Design Teaching

For the first semester, the students were given several short projects to ensure that their excitement and motivation are kept at a high level. The objective or LO for the first semester is the manifestation of understanding of basic architectural design vocabularies and abstract ideas. Next, is the exploration of fundamental design elements and principles, and their application in the design projects which consist of the analysis of ergonomic and anthropometric in architecture. The manipulation and transformation of

2-dimensional (2D) to 3-dimensional (3D) designs is another important LO in the first semester. From 2D sketches of an object, the students transformed them into 3D by using transformation principles (such as subtraction, addition, stretching and change of scale) and design principles simultaneously. The design derivatives were further challenged by infusing functions into the designed objects. Examples of project that went through this process are 'Lantern', 'Folly' and Shelter. Deriving a solution from the development of their conceptual ideas obtained from self-expression, music, artworks or movies was also another source of their design cognition and inspiration.

In the second semester, students had the chance to design two smaller projects namely Foot Bridge (Figure 1) and Studio Tower (Figure 2). Both projects allowed the students to explore observatory and living spaces, and also efficient vertical and horizontal circulations. The LOs for the final project see the students gaining skills in analysing and evaluating habitable space. The students' understanding in spatial organization was explored when they designed a living space in a Camper's Retreat (Figure 3). Spatial organization principles were taught and relationship between or of spaces were manifested in their design proposals which involved several functional interior spatial designs. The students were expected to apply the design principles learnt earlier to achieve their design intentions. Conceptual design ideas were derived from the site and contextual analyses and expected to be maintained through-out the design development. Basic sustainability issues were also introduced particularly in space efficiency and the incorporation of passive design solutions such as appropriate sun shading devices, suitable opening sizes and



Figure 1: Foot Bridge (by Ayu Amira)



Figure 2: Studio Tower (by Ahmad Amirul)



Figure 3: Backpacker's Retreat (Ezri Faiz)

Experiencing and Exploring Site Analysis

According to Moon (2004), "experiential learning" is the process of making meaning from direct experience. Going to site visits and experiencing the site tangible and non-tangible factors fall under the realm of experiential. The role of emotion and feelings in learning from experience has been recognised as an important part of students' learning (Itin, 1999). Most educators understand the important role of experience in the learning process. For their final project in the first semester, students (in a group of two) designed a shelter to be placed on a beach in Port Dickson. The conceptual design of the shelter was derived from the essence obtained from their favourite movie. For this project, the students were required to consider the basic site context information only, such as views and sun direction.

On the other hand, for their final project in the second semester, the students designed their Camper's Retreat by taking into consideration numerous site or contextual factors. The site was located at the foot of a hill over-looking the Mount Kinabalu, Sabah. The students explored the small roads leading to the site on foot, while engulfing all their six senses. The flora, fauna, smell of the fresh air, and the majestic views offered by the site were the basis of their conceptual design ideas. Besides, the incredible feelings that they experienced once they reached the site also became the inspirations for their design ideas. They considered the positive and negative points of the site, be it the small meandering and slippery pathway, or the blooming flora greeting them at the entrance.

The Use of Precedent Studies and Active Learning

It is important to maintain the high inspiration and motivation of the first year students. Opening their minds into the world of design and architecture are best represented or practiced through their own research and going to actual site visits. Typically, students are given with the new topic and asked to conduct a short research assignment on the topic before the actual topic is introduced in the coming week/class. For example, before the project 'Folly' was assigned, the students were asked to find out the meaning of 'Folly' and required to search at least two examples (visuals) of 'Folly' and its definitions. When the topic or 'Folly' Project was introduced, students found it easy to grasp the meaning of the term 'Folly' and that allowed them to actively participate in the class discussion and exploration of the project when it was presented to them. This is one of the teaching techniques that is recommended even to the higher year students. Requesting precedent studies to be conducted before issuing the actual project opens their minds and helps them to better internalize new information when presented at the later stage.

Cooperative Learning in Peer Review Process

In coming up with a design solution, students were encouraged to get comments from their fellow peers as much as getting feedback from lecturers. They were advised that in architectural education, learning from the peers contribute hugely to their architectural learning process.

In emphasizing this, the lecturers implemented peer review sessions. They were done two-by-two (with the person who sits next to them) and also in a group of 8 or 9 students (as per design tutorial group). In the two-by-two session, which is commonly termed as "think-pair-share", the first student took about 5 minutes to critique his partner's work and subsequently exchange the role. Later, the instructor called on random students to explain the process and share the comments that he or she had made. It was observed that they actively participated in the critique sessions and more often than not, they asked for extra time to comment on their partner's work. The role of the instructor was to walk around, listen and supervise the process to ensure that the students were contributing well in the process.

The peer review, in the bigger tutorial group session (8 to 9 students) enhances the students 'group (and individual) accountability' and also their group-processing skill'. The students' analytical thinking skill is honed well in this process. It is noted that the peer review session applies the Cooperative Learning (CL) principles successfully. The student depends on each other in their learning and that is in-line with the 'positive social interdependence' characteristics in CL. The 'face-to-face promotive-interaction' that happens during the session is also another important principles in CL that are seen in the Year 1 studio peer review session. Undoubtedly the students also had a chance to improve on their effective communication, interpersonal and group skills. The design

projects given to the students consisted of individual and group projects as to promote the collaborative and cooperative learning amongst the students. Social skills that are ingrained in the CL include the leadership, decision making, trust building, communication and conflict management skills (Brown & Ciuffetelli Parker, 2009).

Conclusion

Based on the feedback received from the students and external program assessors, and also from the students' results manifested on their design portfolio review day, it seems that the first year studio is successful in its implementation of the Design Teaching program. The learning outcomes are met and the appropriate design activities and assignments have been well received and executed by the students. The assessment results have shown that the group has improved on their design thinking ability and skills and the improvement occurred in all aspects, including their academic and soft skills. It is proposed that the 'fun learning' introduced in the first year is continued in the higher semesters. Students learn best when they are having fun and are actively engaged as they observe and act more. It is suggested that the current implementation of various 'active learning' activities in the design teaching approach of the Year 1 to be continued on, as it is highly recommended by the OBE curriculum design.

References

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