

Shifting in Architecture: Investigation of “New Edge” Design Studio

Aviruth Charoensup*, Ohm Panatkool, Rapihong Kulthamyothin, Anutorn Polphong,
Sasathorn Borisutnarudom and Supayada Praditvaitayakorn

Faculty of Architecture, Rangsit University, Thailand

*Corresponding author, e-mail: aviruth.c@rsu.ac.th

Abstract

The faculty of Architecture of Rangsit University established a big change in their educational program, but in similar content of curriculum, since the academic year of 2017. The change was mostly done in studio arrangement of design courses, from 2nd year studio to 4th year studio. Previously, the studios were arranged and divided into small groups in each academic year. Nearly all students and lectures of the institution (excluding the first year) have been organized in 9 individual studios which are different in their interest and expertise. The “New Edge” studio is one of these design studios that gear to establish a new paradigm in architectural methodology. The studio has its philosophy of “Shifting” to discover new expanding knowledge for design to correspond to the new world’s society which has been growing in our changing world. The design learning had been practiced for 4 months of 1/2017 semester. The number of 110 students and 6 lecturers had experienced in this new notion and methodology of architectural study. The outcome was obviously fruitful if compared to what wasn’t expected. The next step needs to be continued, therefore, the questions of what will be the right direction, what will need to be adjusted, what should be more concentrated, needs to be investigated and revealed. The study aim is to investigate the “shifting in Architectural Learning of “New Edge” design studio of the Faculty of Architecture of Rangsit University. To evaluate all studied objectives and activities throughout the process by the shown outcomes as students’ score and their participation and satisfaction, is a second purpose of the study.

The entire study was implemented by, firstly, the definition and philosophy were described, secondly, all principles, activities and design outcomes were analyzed and summarized, lastly, analyzed results were discussed and evaluated. Study results were displayed and explained throughout students’ presentation started from programming step to design final presentation step in each horizontal design studio by each year and vertical studio of a.

After completing the investigation of 5 underlined objectives of this studio, the outstanding benefit from the concept of “New Edge” is that students were able to expand their vision or scope of knowledge. The topics of study and the area of study projects were broadened to many countries outside Thailand. Most students paid more attention in the world’s changing society. The results also showed that students could obtain more innovative programs, if they could choose alternatively desired topics and place to study. “New Edge” studio concept could fit better for senior students than junior ones. This may be because of the maturity and architectural experience.

Keywords: *architectural design, design studio, architectural education, architectural learning, shifting, new edge*

1. Introduction

In 2017, the Faculty of Architecture of Rangsit University adopted a big change of its educational mainstream, especially the core courses, which are “Architectural Design” courses. The new practice is changed from formerly traditional classes which each class consists of students from the same academic year that can be also called “Horizontal” studio, owing to this change. This new classification is called “Vertical Studio” which each studio combines students from 4 academic years, (excluding the first year) and a group of lecturers. The entire institution contains 9 vertical studios, which are differentiated by their own philosophies, expertise, or interests, as declared in Table 1 below. Groups of lecturers and students separately conduct their own studying culture, but the results of the study have to fulfill all requirements of each previously “horizontal” traditional studio as being set in the curriculum.

“New Edge Studio” is one of the nine architectural design studios that vary in their own direction towards architecture and they are aimed to establish their own way of teaching and learning. This new

action in architectural study of the faculty of architecture, Rangsit University just has been conducted only in the first academic semester, from August to December 2017. See their name and direction in Table 1 below.

Table 1 List of design studio and each individual direction, Faculty of Architecture of Rangsit University

No.	Vertical Studio	Direction/Interest or Expert field
1	New Edge	Visionary/ New Change
2	ENO	Everything + Innovation
3	Professional	Professional Practice
4	Spatial	People and Environment
5	Flex	Universal systems for the F-L-E-X ible world
6	Parametric	Parametric Design
7	S.O.S	Save the Earth issues, environment, sustainable, venecular
8	Design Lab	Experimental Design
9	SIA	Innovative Design for Sustainable Community

New Edge Studio: Shifting in Architecture?

Many things in our world have been changed in many ways, which cause many consequences such as global warming, globalization, social media impact, technology concerns, etc. World society, also, has changed which cause many changing lifestyles, activities, and requirements. These changes affect all architectural design practices. Therefore, the study of architecture in any institution should be shifted from old traditional to a new paradigm that corresponds to our changing world. Many institutions have focused on this approach as written in the description of curriculum and courses on the Master Programme of Architecture of University of Applied Arts Vienna (2017)

“Architecture is the three-dimensional expression of a society. Accordingly, as mentioned in the preamble, the programme is geared toward the acquisition of technical and theoretical knowledge in connection with the development of design ideas. However, it also gives students an awareness of the fact that architecture is part of the culture and that they bear a responsibility with regard to the given tasks. By critically reflecting on “practical necessities” and standardized procedures, their specific expertise regarding space and organization enables them to devise solutions to current and, above all, future problems and to meet the demands of society”.

The direction of how to teach architecture students is focused on workshops and time spent in the studio. Like uniquely successful undergraduate programmes of the Bartlett Architecture BSc (ARB/RIBA Part 1), the course is elaborated “as an architecture student at The Bartlett, your time will be spent in both the studio and the workshop, with approximately 70% of the course taught and assessed through your design portfolio. Design teaching is delivered by leading practitioners, specialists and academics in small groups or on a one-to-one tutorial basis with frequent review sessions” (The Bartlett Architecture program undergraduate Architecture BSc, 2017)

The “New Edge” design studio is interested in discovering what will be the shift (or new movement) of our architectural education, what else can do more than today’s traditional school, what are the new frameworks of architectural study, what programming and design can be done next, and etc.

To experience this new architectural study method, in the first semester of the academic year of 2017, the studio has tried to shift “how to do” design teaching and learning in many ways, from previously routine practice to new fresh ones, which were still under-testing. There are 5 underlined principles of “New Edge” studio that were set in last semester as followings:

1. Attempting to force/motivate students to create an extending boundary of architectural study, both programming, and design.
2. Individual or group design projects of the students are freely selected by themselves, referring to “student center” basic of PBL (Problem-Based Learning). This freedom aims to encourage the students to be proud of their own searching, not only the program but the site and location of the project they choose.
3. The more students do research, the more “design tools” they will get. “Design Tools” is the set of data which are brought (by the designer) from the programming step to the design step.

4. Transferring from concept to design may alternatively use various methods to achieve design objectives. Study of how to transfer the concept from case studies is seriously necessary.

5. Design Project Presentation of student members in “New Edge” studio is set to be attended by the entire “Vertical” group, from 2nd-year to 4th-year members. They can present and give comments to one another. This doing aims to expand sharing knowledge among them. The seniors may give comments, the juniors may help seniors take short-note comments from lecturers. The “sharing and respect” society is expected to emerge in the studio. Moreover, students can increase intellectual levels by having more listening and presentation skills.

The studio had about 110 student members and about 70 design projects. After finishing the courses, the students’ production is satisfactory among studio’s lectures, but the learning outcome is still in doubt. Thus, the question of “Shifting in Architectural Learning” is still required to answer. The learning method needs to be testified. The learning outcome needs to be measured. This study aims to investigate studio’s learning method and evaluate the studio’s goal by each setting principles.

2. Objectives

1. To demonstrate the philosophy of the “New Edge” Studio.
2. To investigate all architectural design learning methods and practices of “New Edge” Studio

3. Materials and Methods

The investigation of “New edge” design studio was conducted by implementing the procedure of study as;

- 3.1 Definition and principle of the studio were demonstrated thoroughly.
- 3.2 The learning methods were described respectively.
- 3.3 Each step and studio activities of design learning were presented, analyzed, and discussed.
- 3.4 Displayed outcomes, the discussion then evaluate and summarize all investigation.

4. Results and Discussion

Many things in our world have been changed in many ways, which cause many consequences such as global warming, globalization, social media impact, technology concerns, etc. World society, also, has changed which cause many changing lifestyles, activities, and requirements. These changes affect all architectural design practice. Therefore, the study of architecture in any institution should be shifted from old traditional to a new paradigm that corresponds to our changing world. Many institutions have focused on this approach as written in the description of curriculum and courses on the Master Programme of Architecture of University of Applied Arts Vienna (2018)

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The direction of how to teach architecture students is focused on workshop and time-spending in the studio. Like uniquely successful undergraduate programme of the Bartlett Architecture BSc (ARB/RIBA Part 1), the course is elaborated “as an architecture student at The Bartlett, your time will be spent in both the studio and the workshop, with approximately 70% of the course taught and assessed through your design portfolio. Design teaching is delivered by leading practitioners, specialists and academics in small groups or on a one-to-one tutorial basis with frequent review sessions” (The Bartlett Architecture program undergraduate Architecture BSc, 2018)

The “New Edge” design studio is interested in discovering what will be the shift (or new movement) of our architectural education, what else can do more than today’s traditional school, what are the new framework of the architectural study, what programming and design can do to the extent possible, and etc.

To experience this new architectural study method, in the first semester of the academic year of 2017, the studio had tried to shift “how to do” design teaching and learning in many ways, from previously routine practice to new fresh ones, which were still under-testing. There are 5 underlined principles of “New Edge” studio that were set in last semester as followings,

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Table 2 List of Lecture in “new edge” design studio and number of responsibly advisory students

Vertical Studio (Lecture Name)	Horizontal Studio		
	ARC 228	ARC 328	ARC428
Aviruth Charoensup	5	6	6
Ohm Panatkool	6	6	7
Rapiphong Kulthamyothin	6	6	6
Anutorn Polphonng	6	6	7
Sasathorn Borisutnarudom	5	6	7
Supayada Praditvaitayakorn	6	7	7
	34	36	40

The first vertical studio assignment “Shifting” was like a “mini project.” Students did it the first week, then, all lectures evaluated and gave the score which was 10% of the total. After, starting from the second week of semester, the horizontal studio assignment began with each academic year design program. The score of this part was 60%. Then, finally, each student or each group of students (each design project) had to attend final examination in the last week of semester, so called “Academic Week,” to be judged by selective means. There were 3 means of judgment for students’ final design project that were “Tect Talk,” “Powerpoint,” and “Exhibition.” Students could choose freely. The score was 30% of the total.

Vertical Studio Assignment:

Mini Project “Shifting” (for group of all year students)

The faculty of architecture gave policy to each studio to manage their own proportion of score 70% and handle study activity itself. In “New Edge Studio,” the minor portion score assignment was given as the notion of “collaboration not competition,” in the title of “Shifting.” This assignment was the first assignment, starting from the first week of semester. Each group had to consist of members from all academic years. The question was they had to find out what was the shifting phenomenon or doing in this

world that the member were interested in (see Figure 1). And then what was the solution of that architecture could answer. The result of the big picture of studio was satisfactory. They achieved studio hint of “collaboration not competition” as students explored many imaginative design outcomes.

The objectives of study from each course of each academic year are different. The assignments for design projects for students in each horizontal studio are consequently varied. The following paragraph is the description of each course of the so-called horizontal studio.

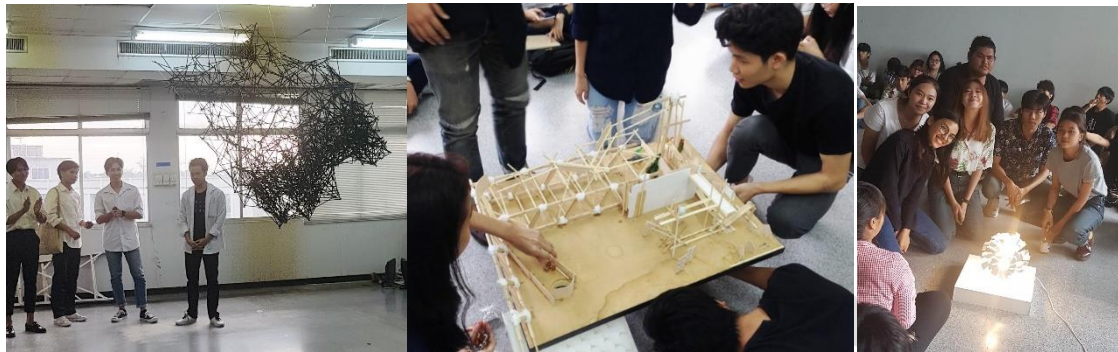


Figure 1 Study of “Shifting” was presented by groups of student, expressed their own attitude toward “Shifting” in our world and what architecture could do to solve or to help

Horizontal Studio

Branding of 2nd year

The 2nd year students were assigned to do the project I the title of “Branding.” The objective was students could learn any business story and get the notion from that development to set up each student’s brand, then the ideas of how they achieved and how they were done successfully turn to use in any architectural matter. For example, how the cooperate identity comes from the nature of the products, or how the identity comes from the selling point of the product, or how the identity came from history or legacy of the brand, were analyzed and summarized to be a set of “design tools” for the design thereafter. The study of pre-design was assigning studio’s students to study about the words of the brand “Vision,” “Positioning,” “Personality” of their own individually selected brand (see Figure 2). The 2nd year student had to present what they studied to the group of the vertical studio, which were separated into 3 groups. Senior and junior members could attend the presentation. This practice was so useful for students that they could gain new knowledge about many brands.

How to measure the objectives of this “branding” study and the results are,

1) The students could understand the logic of branding which is the knowledge of marketing or business field (see Figure 3).

2) The students could adopt those notions of business, such as vision, positioning, and personality, then these ideas could turn into any architectural concepts, both programming and designing.

3) The students could develop design program of their own project to any rightfully practice in architectural study. The limitation of each individual project was the size of the designed building and should not exceed 1,000 square meters (see Figure 4). The project should not be residential, because they already learnt in the past semester. The measurement of this design step would be as actually done in any architectural design studio, such as “Did the program respond to the brand (owner) and site?” “Did the design is respond to users in term of function, form, space?” The students’ design were responded to the brand, partly in terms of form.

4) The specific question of “new edge” studio is that did the program and design shift (support change) in any aspect? Most of them were able to create “new edge” architecture (see Figure 3 and 5).

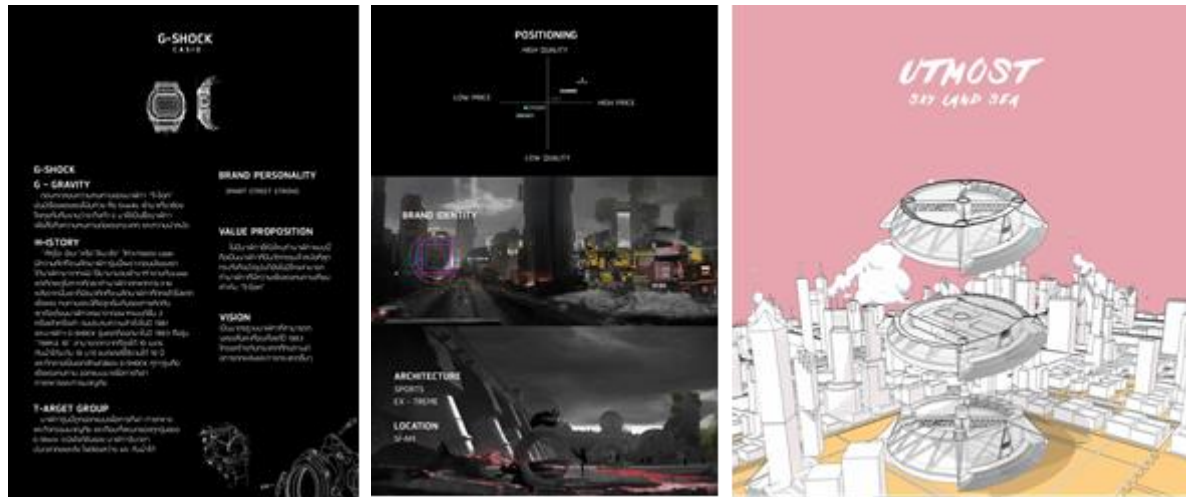


Figure 2 Study of “G-Shock” Brand by a student, afterward, he proposed a project concerning with extreme sport venue which architecture was interpreted from G-Shock. The location was proposed to set in an area around Siam Square Patumwan district known as the center of teenager in Bangkok

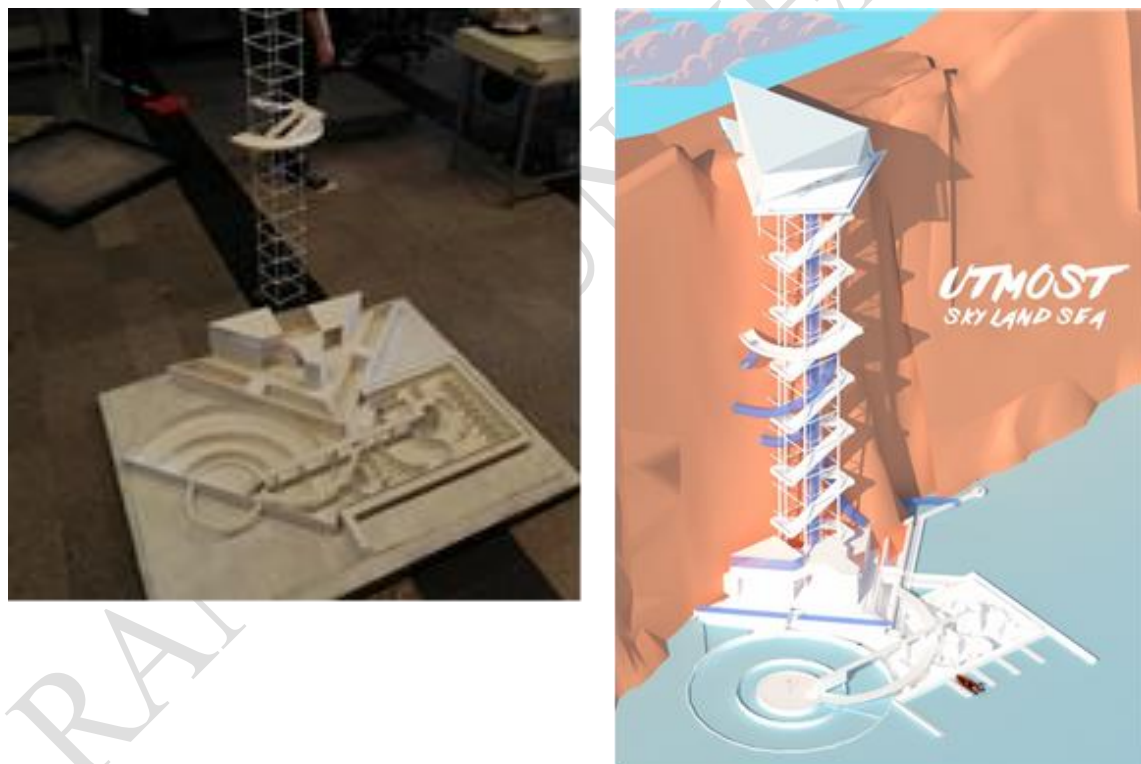


Figure 3 The project of “G-Shock” Brand form figure 3. The extreme sport venue was programmed for design with a hint-concept mass model of tower-like sport center for leisure and recreation purpose. The “Utmost” was the brand which this student created himself for designing extreme sport center. But the site location was shifted (from the first program) to a beach with high cliff at background



Figure 4 “Freitag,” a brand with unique personality and positioning was studied by a student of the 2nd year. The bags of Freitag are all made from recycled materials such as used truck tents, used seat belt, which, this student conveyed the message from fabric bag to fabric architecture



Figure 5 The fabric architecture of “Freitag” brand was applied to create the architecture of a “pavilion.” Then, this student explored designing by doing experiment of wind, sunshade, and structural form, to create a “new edge” architecture

“Public Building” of the 3rd year students

All students in this horizontal studio were given the assignment of public building. Individual projects could be situated anywhere, for any users, contain any functions, which is far from residential building like house, apartment, etc. The purpose of the course was aimed that the students could be able to learn how to set the program and design a building which is more publicly used, more complicated in function, more buildable in areas that are concerned with the law, the engineering systems, managements, etc.

How to judge and give score to the achievement of this project are;

- 1) Each student could create or choose his own designed projects, choose site and program with a logical set of ideas.



Figure 6 Pattaya City Transportation Hub was selected by a student, Kevin. “The city has changed and went worse (shifting), enhancing transportation system can make a better place” was a logical reference of this student in choosing this project

2) Each student could apply the notion of shifting for his own project, the shift could be in society, technology, time, climate, geography, etc. For example, the Pattaya City transportation Hub emerged from change of the city in many aspects (see Figure 6).

3) Each student could manage all collected data (the data might be activity contents, characters of users, case studies, context of location, local attributes) to any useful architectural design requirement.



Figure 7 “Gunpla Stadium” was a project in 3rd year, emerging from the “like” of a student himself. Its site location was at the Odaiba, Area of Tokyo where is well-known as a place of the big Gandam standing. This project was shifted in the way of designing the function of the stadium that the area seats could be moved/rolled allow over in 3 dimension relating to the view of 2 robots move while fighting

4) Each student was able to design from these digested data to express in an architectural design properly. The checkpoints of the lecturers for this assignment were “the program and site of the project answered all aspects as being set” “the design was respond to public use or not” “the design was attractive enough to commercialize” “the function and flow were good enough” and etc. The design outcome of some students was very pleasant in terms of using innovative space that could respond need of use (that was supposed to be real in the future), like the “Gunpla Stadium (see Figure 7) and “Learn Space (see Figure 8).”



Figure 8 “Learn Space” was a project of a 3rd year student, which could be a representative of effective data usage (design tools.) for designing. The activities and space could be combined and interacted between them all. The program was so close to a real practice.

“Asean+3 Project” of 4th year students

This “Asean + 3 project” has been adopted for 4th year students of Faculty of Architecture of Rangsit University for many years. It was intended to open a wider world for students by learning different environments, expanding to Thailand’s neighboring countries. But in the last two years, the border of study area was wider to include 3 big countries as China, Korea, and Japan. Specifically in “New Edge” design studio, as the assignment of this project was more concentrated in various shifting conditions. The scope of the site location was the same, but the story or phenomenon must have been so important that “the doing” in architecture could be able to help or improve or innovate those selected study area and their population.

For example, the project of a newer airport of Bali, Indonesia, that would be served for future demand of international aviation. Also, the project of “The Revival” could solve the natural problems of sea life in an area of Phillipines (see Figure 10).

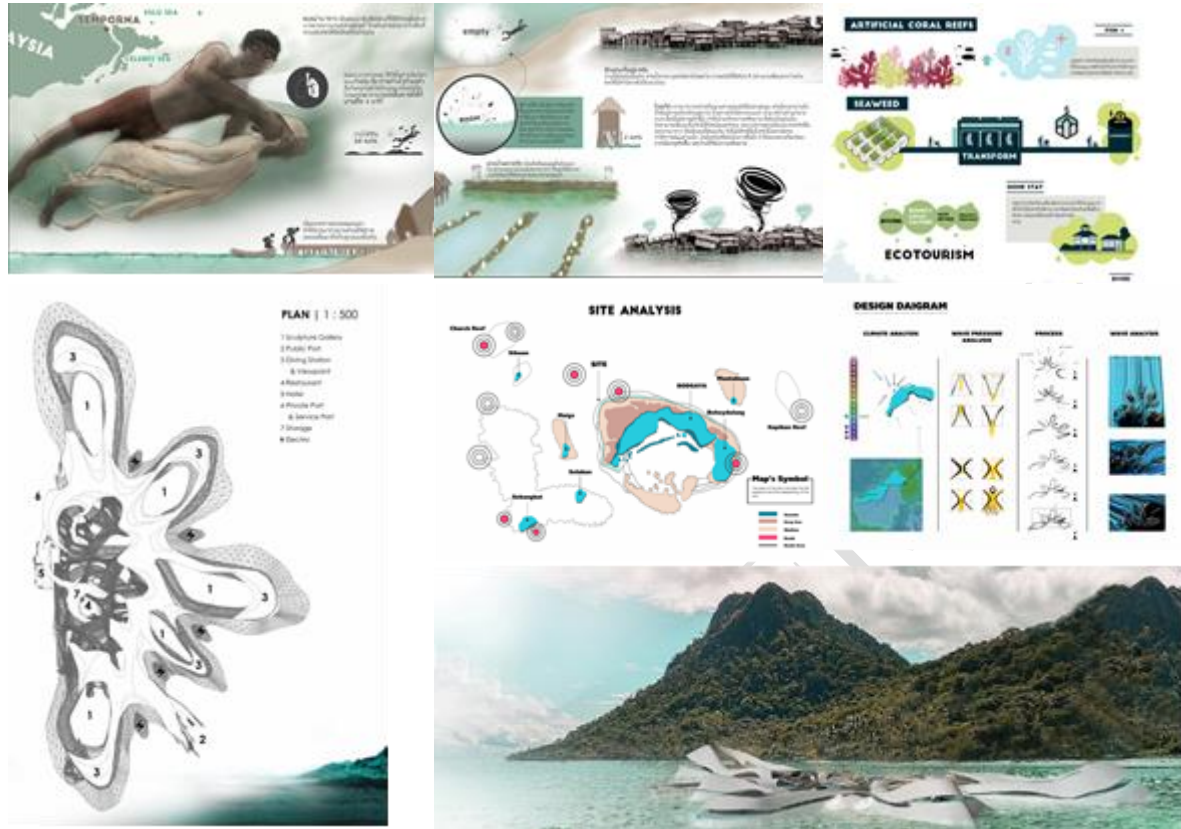


Figure 9 “The Revival”: The coral restoration in Malaysia was a project which was not located but floated in the ocean area between Phillipines and Malaysia. Bajau is the name of a fishery village. The concept was living together between human, nature, and architecture. The architecture is functioned artificial coral reef which can be a shelter for sea life. The building also performed as “watchguard” from fishing by blast.

The index to measure the achievement of studio for the “Asean+3 Project” was set as,

- 1) Was the project, design program and site location, innovatively enough to be new thinking of “the extent of architecture?” All student projects were created from the basis of real problems and possessed innovation.
- 2) Did the group of students make use of data sufficiently for their design? Some of them (about 50%) had tried to collect and were achieved.
- 3) What were the techniques of design process that applied to transform those concepts to the group design? In a project called “The Land of Fire,” many design transformation techniques had been used (see Figure 10) such as wind circulation program, 3D printing, and parametric design.
- 4) Did the architectural design respond to the site context in all important aspects?



Figure 10 The “Land of Fire” was a students’ project which derived from real phenomenon occurred in Indonesia. People of this community live nearby the area where fire always flame out from the ground. The study of this group was trying to preserve their lives in communities by creating an architecture which was able to protect a flame to diffuse in a living zone of a community. The designed building was able to control the wind direction to a designated way that could enhance the fire display but not spread out of the way to people’s houses. Museum and tourist center was the function of this building offered by the group.

Discussion

As tables and pictures demonstrated above, with the grade distribution (see Figure 11), the results can be displayed by Vertical and Horizontal consequently.

Vertical Studio results were categorized into two parts. Firstly, as “Collaboration not Competition” the students had shown the unity and spirit of being together. At the beginning, there might be some obstacle of not-knowing each other, but they went to find out their member and group. The assignment was not simple, but there were many discussions among lectures and group members. Searching for a new way of carrying out architectural solution which might be shifted from traditional ones. The students’ final work of this mini project had been presented to the entire class. Content of the “Shifting” presentation was so very interesting and that all students joined along throughout the whole class, and it lasted about 8 hours.

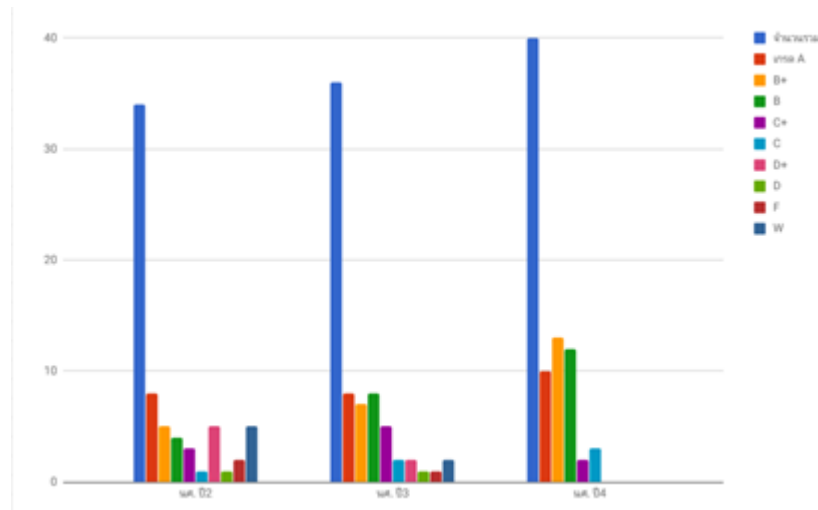


Figure 11 The chart of student final score shown by the grade distribution of each horizontal class

Horizontal Studio results

1) The Branding of 2nd year students was accomplished in terms of gaining broader knowledge, getting more business points of view. They could experience how to transfer marketing thinking to architectural aspects.

2) The “Public Building” of 3rd year students was able to testify knowledge of students in the way of carrying out collected data and turn them to programs and design. Some students understood the hint of the studio, some did not, depending on their background in architecture. They still practiced their own design in a traditional way. The lectures needed to explain how to design, create, form and space, together with the regulation and other professional practice.

3) The “Asean+3” project of the 4th year students could be claimed to be the authentic “New Edge.” Their approach to site selection had so much variation of nations, phenomenon, social aspects, etc. Design elaboration done by them were differentiated by using many design tools, such as metaphors, parametric, spatial experiments, etc. The final presentation could express their power of determination. Many innovative projects for a shifting world were discovered by proper means of design practice.

5. Conclusion

Studying vertical studio was the outset of a new era of Faculty of Architecture of Rangsit University. Especially, in “New Edge” design studio, it had been found that expanding any thinking framework could motivate students to pay more attention to the research, to our world realization, to any future predictions that might have any impact to our world. Analyzing and synthesizing data for creating new architectural design was also the key of the studio. This new paradigm in architecture learning had shifted so far from a formerly traditional one, aiming to serve new life-styles, new technologies, of the changing world. Obviously, this direction could not only encourage students’ imagination and vision. It was also building a better attitude toward remaking a framework of study in architecture, which was that architecture could not only solve future problems but meet the demand of the new world’s society.

Nevertheless, according to the study of this studio new teaching course of 1/2017 semester, was discovered that there still was a shortage of elaboration in architectural design, in many aspects, such as engineering concern, flow and space organization, feasibility in reality, etc. The largest lesson learned from this experience was many obviously increased skills of creating a program innovatively for architectural design.

The “shifting” was only a project of “vertical studio” which 3rd year students had done together could be potentially achieved in terms of collaboration, openness, unity, and respect to each other. The other activity of “vertical studio” was attending the class of the entire studio to listen and give

comments as they felt comfortable to do. Students could increase listening and presentation skills. The students' expression of a presenter, listener, and commentators could finally improve their self-confidence as well.

The "Horizontal Studio," that students received design hints by each academic requirement, finally obtained 3 levels of achievement. The outstanding success of implement studio's concept to their students' design outcome could be clearly seen among the 4th year students. This might happen because many ideas of expanding scope of thinking threw in to students were quite difficult and complicated to understand and apply to architectural study. It depended on the students' maturity and experience in architecture. The "branding" study of 2nd was very satisfied in terms of broadening knowledge among them, with only little advisory from lecturers. The "Public Building" for the 3rd year students was good in the first half, when the program was being set. But, later in the design part, the design and knowledge about their project were not able to reach all the studio's goals. The students' design did not respond to the public needs and functions.

6. Acknowledgements

Thanks to all "New Edge" design studio members of semester 1/2017 that shared ideas and spent time for experiencing a new paradigm of study in architecture together.

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