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The Reflective Impact of Different Teaching Strategies in Teaching Architecture and Interior Design Practical Courses

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Abstract. Achieving learning outcomes in a creative manner, actually considers a vision for all instructors whether theoretical courses or practical courses, in a reflective way where such reflection interfere to boost students' self-confidence while enhancing their knowledge. The research investigates some effective teaching strategies that attempt to bridge the gap between theories and real application trying to close the loop of getting both interior/architectural design projects, and construction technology integrated. The research adopts an ontological assumption of applying questionnaire and surveys to recognize this silent war, is it in the students' mind as just fear of MAKE NO MISTAKE or fear from the future career. According to Tony Robbins. He said if you want a better result then ask yourself a better question. The main research problem is thinking about the rational beyond the reflection of effective teaching strategies as well as solving the problems that fear junior architects and interior designers, to know exactly where is the battle field? A whole mechanism of some teaching and learning strategies as well as direct assessment tools, in accordance with well-defined rubrics were applied. The researcher presents a considerable hypothesis that assures that believing in the architecture and interior design students' abilities and the instructor's variable teaching strategies can bring out examples of best practices in teaching philosophies.

Keywords: Flipped classroom strategy, One to one basis, circle talk, assessment tools



1. Introduction

The UK Professional Standards Framework supports the initial and continuing professional development of staff engaged in teaching and supporting learning, which can be tracked in a sequential activity accordingly mapped to the core knowledge and its values. [Fig.1] Starting from this understanding, the research emphasizes on the design and planning of the learning activities in practical courses' labs, which will further be discussed.

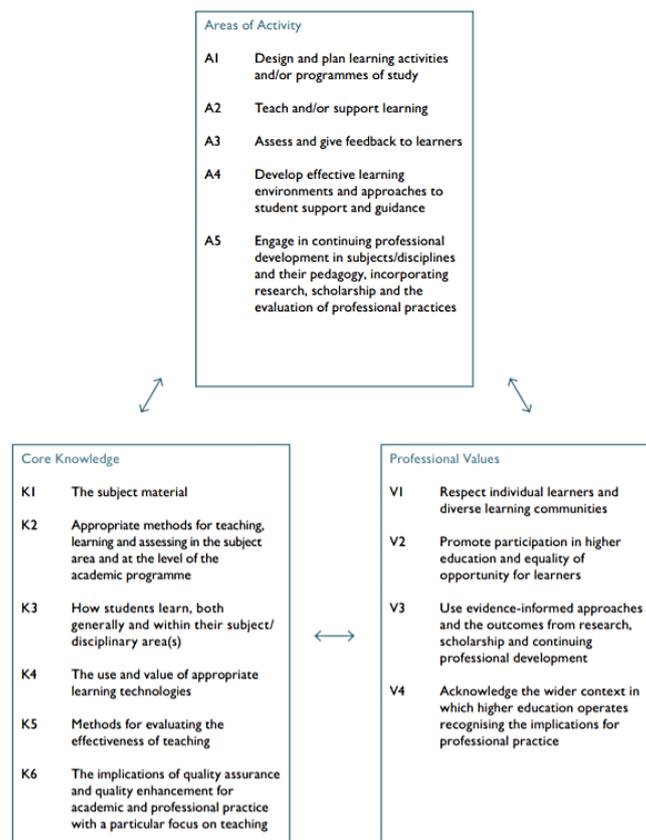


Figure 1: UK professional Standards Framework

The main problems identified revolved around how students encounter difficulties when trying to link a theoretical detail learnt in class with real life projects. Students tend to have a pre-set fear of incorporating an idea they are imagining in their projects because of their worry of not being able to actually execute it in the right way. Therefore, the main challenging task can be viewed as how to grab the students' attention when delivering the theoretical part of a studio course while making sure the students' confidence in their ideas remains stable. The matter which puts some obstacles in the way of the whole learning and teaching cycle, raising the question of WHY junior architect or interior design

students feel they are part of a long lasting *silent war*; in particular, students feel they are part of a jury throughout the entire time leading to involuntary defensive character.

The researchers planned to apply several teaching strategies, such as flipped classroom where the lecture is devoted to discussions and activities, in order to test the students' skills in applying knowledge and interacting with one another throughout hands-on activities. In studio sessions, the researchers tried to address different students' learning styles and needs, adopting one-to-one basis to accommodate individual differences.

In regards to students' sharing ideas, it has been noticed that once they are given opportunities to participate and share their thoughts with their peers, good results can be achieved; circle talk teaching strategy has therefore proven itself as a successful one.

An additional strategy employed, revolved around the self-critique concept. This idea improves the students' visualization of their own weaknesses, which stimulates one's self-enhancement. As a strategy, self-critique can be allocated as one of the most successful ones as its results derive from the students' themselves; defensive behavior towards the instructor is therefore evitable in this scenario.

Moreover, examining field trip experiences was a very interesting and effective application placing it at the top of the list. During a field trip, students are given important moments in learning in a shared social experience that provides them with the opportunity to meet and discover new things in an authentic setting.

Surveys and charts were conducted to find out how close or far the relationship between the applied strategies is, allowing measurable outcomes to show the success or failure of the applied strategies.

2. Methodology

The research adopts both quantitative methods as surveys and qualitative methods as interviews with both students and instructors. The feedback of all stakeholders was gathered to come up with a SWOT analysis that highlights some alternatives that have been set as solutions for developing more successful learning activities.

Learning and teaching strategies will be triangulated to their direct effects on the students, which will lead to suggestions for improvement resulting in the best practices.

3. Applications of the different teaching strategies on students

An effective teaching is not solely linked to the course content, it is rather measured by the process that an instructor follows to deliver that content. With the availability of such a big variety of teaching strategies, every instructor has the freedom to pick the ones proven to be the most successful: online searching, book related research, in-class activities. The key is to be able to decide on the usefulness of a

teaching strategy resides in understanding the background of the students along with the environment they are coming from and their learning goals. Students have different abilities when it comes to demonstrating their knowledge, which opens the door to the urge of using various learning styles to accommodate all the students' needs and equalize their opportunities to learn. Nevertheless, no matter the differences among the students, praise will always result in positive outcomes.

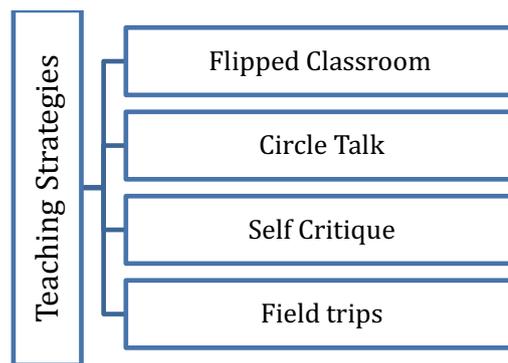


Figure 2: Different applied Teaching Strategies

3.1 Strategy: *Flipped classroom*

As a first teaching strategy, students are given the opportunity to share their own understanding and knowledge within the classroom. Students have the freedom to gather information from whatever sources they have in relation to a certain topic; after that they would meet with their instructor and peers and discuss what they have found. This method allows to broaden students' knowledge along with receiving deeper insights from the instructor and enhancing their problem solving skills. Thus, the classical roles of students and teachers, as well as the chronology of a course or lecture are 'flipped'. To develop our flipped-classroom's structure, we followed the suggestions of Prober and Khan (2013) which helps create an innovative design of students' learning environment,[Fig.3] along with an evaluation of the students' experience[1]

To help ensure student preparation for class, students were expected to prepare drafts for their chosen architectural and interior details to be applied in their projects, the challenge was they were suppose to search for specific details that they inspired from other implemented famous projects, seeing how this can be fit with their projects. Their efforts were randomly collected and graded. The students got benefits from their instructors' feedback,[Fig.4] which was positively influencing helping in understanding and connecting corresponding courses together and in the same time help saving time for a good results.

Flipped classroom strategy¹ does in fact allow better use of class time, increases the one-on-one time between instructors and students at the same time as it gives the opportunity for active learning techniques.

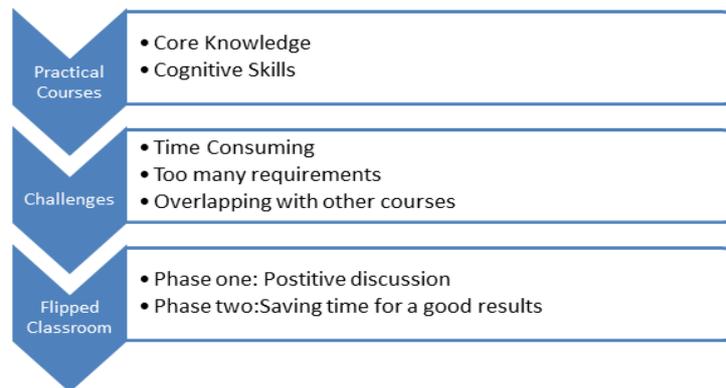


Figure 3: Flipped classroom's Structure, Source: the researchers

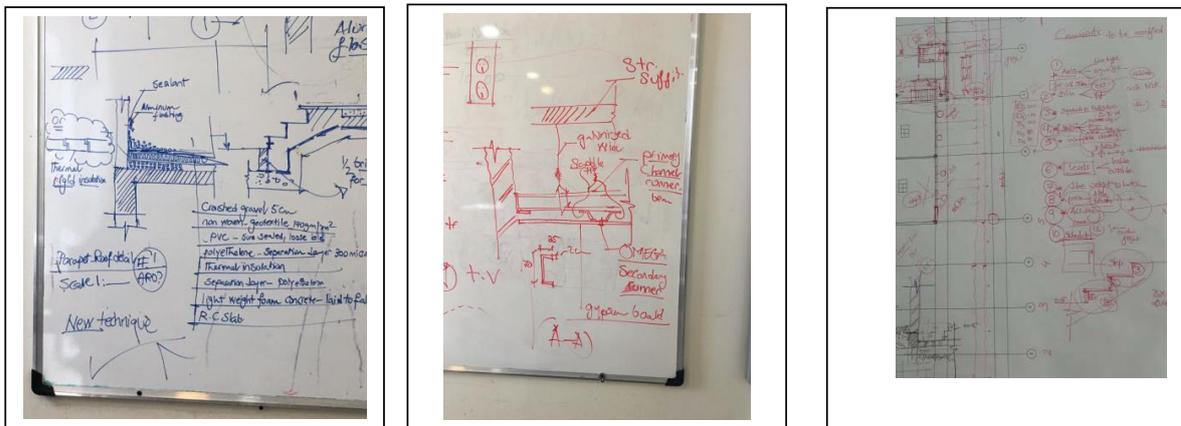


Figure 4: Sequence of given feedback to students in accordance with the approached flipped class, Source: researchers

¹Flipped classroom frameworks improve efficacy in undergraduate practical courses – a quasi-randomized pilot study in otorhinolaryngology, Tobias Dombrowski, Christian Wrobel, Stefan Dazert & Stefan Volkenstein

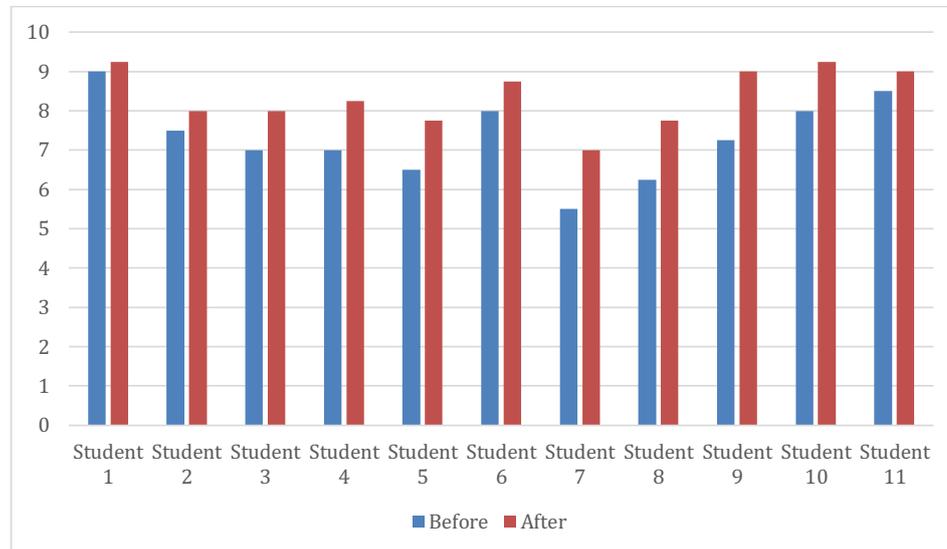


Figure 5: Showing the comparison of grades before implementing the flipped classroom strategy versus after implementing it
Source: Researcher

Analysis:

By looking at the above graph, the average of grades before implementing the strategy was 7.3/10, whereas after implementing the flipped classroom strategy it became 8.4/10. These results show an incremental rate of 15%. As a result, these numbers clearly show that students have evolved since the flipped classroom strategy was implemented, which proves its successfulness.

Since the researcher's introduction of the flipped classroom model, the role has changed; most of the time was spent in class walking around helping the students who struggle the most. This may be the single most important reason students thrive for the flipped model.

3.2 Strategy: circle talk²

Logically speaking, there is always a certain gain when sharing ideas among peers, or when asking for more than an opinion in regards to a certain idea. Throughout experiencing this second teaching strategy, all of the students along with their instructor were gathered to discuss all the projects together. The main challenge of this strategy was to make sure every student gave their opinion objectively and freely. What was noticed during this experience, is that students shared their opinions wisely while trying to help their classmates come up with better outcomes. The atmosphere residing was not like a typical classroom anymore, it became much more enjoyable for the students as they forgot about grades and cared only about discussing each other's work as if they were doing so outside of class[Fig.5].

² Brame, C., (2013). Flipping the classroom. Vanderbilt University Center for Teaching. Retrieved [today's date] from <http://cft.vanderbilt.edu/guides-sub-pages/flipping-the-classroom/>.

In fact, students always find it easier to handle feedback given from their peers rather than from their instructor; therefore allowing students to critique each other's work and give out positive and/or negative feedback helps to promote their critical thinking, opening the door for continuous development.

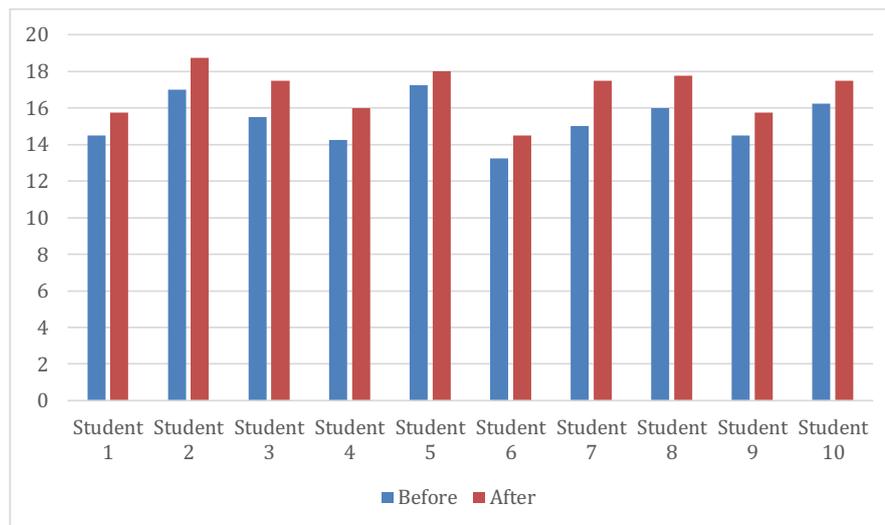


Figure 6: Comparison of grades before implementing the circle talk strategy versus grades after implementing it

Source: researchers

Analysis:

By looking at the above graph, the average of grades before implementing the strategy was 15.25/20, whereas after implementing the circle talk strategy it became 16.9/20. These results show an incremental rate of 10.8%. As a result, these numbers clearly show that students performed better after having implemented circle talks in the classroom.

Discussing in circle talks can be used for critiques, problem solving, and/or decision making. The basic purpose of a talking circle is to create a safe, non-judgmental place where each participant has the opportunity to contribute to the discussion of difficult and/or important issues.

3.3 Strategy: Self-critique

*“Involving students in this live marking activity engages both them and the tutors in further understanding the criteria...”*Dr. Darrall Thompson, UTS.

In order to increase the students' self-esteem, letting them criticize their own work is a thoughtful strategy. Self-critique does in fact help every student reflect on their own work, which might very often end up with the students correcting their own work for themselves. In fact this teaching strategy gives the students the opportunity to dig deeper into their own thoughts and their outcomes to understand why they have done so and so and maybe reflect on a better way to having solved a certain issue.

It has been noticed that self-critique is an overall very beneficial strategy not only for the students, but for us instructors as well. Taking time to think about a certain course syllabus, or about a certain grading criteria or even about projects' requirements, allows instructors to thoroughly organize their work for better learning/teaching outcomes' achievements.

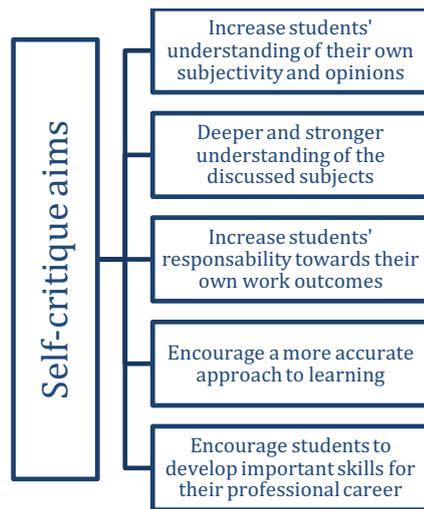


Figure 7:Self critiques objectives

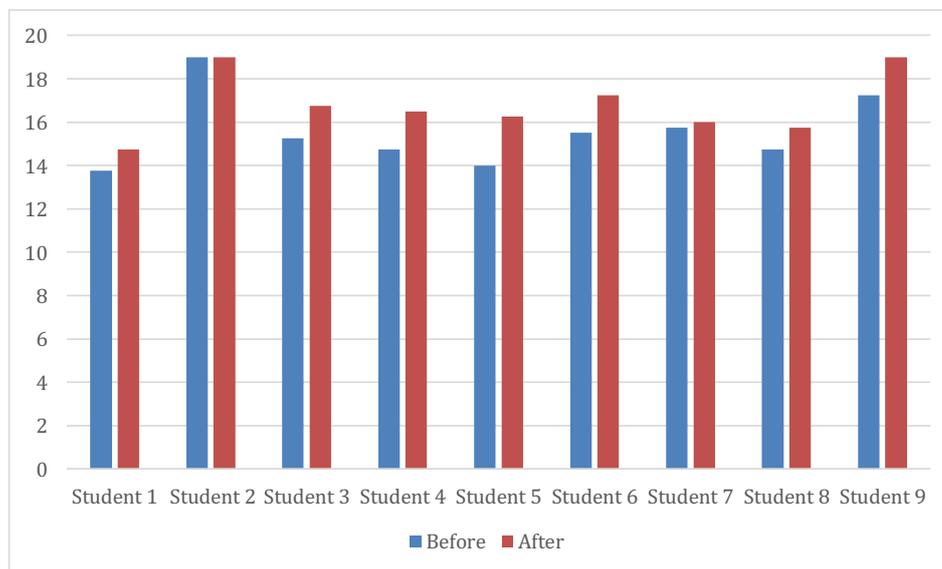


Figure 8: Showing the comparison of grades before implementing the self-critique strategy versus after implementing it

Source: researches

Analysis:

By looking at the above graph, the average of grades before implementing the strategy was 15.5/20, whereas after implementing the circle talk strategy it became 17/20. These results show an incremental rate of 9.7%. As a result, these numbers clearly show that students performed better after having implemented circle talks in the classroom.

In fact, students felt that sharing ideas out loud in a professional setting, helped them perform better during their projects as they had more ideas to implement, and more feedback to achieve better outcomes.

3.4 Strategy: Field Trip

‘LEARNING FROM FIELD TRIPS’ researchers have had varying degrees of success in measuring cognitive learning resulting from a school field trip, but the evidence generally suggests that such trips can have a positive impact on learning of facts and concepts (Anderson, 1999; Anderson & Lucas, 1997; Bamberger & Tal, 2006; Beiers&McRobbie, 1992; Feher& Rice, 1985; Flexer&Borun, 1984; Gottfried, 1980; Knapp, 1996; Mallon & Bruce, 1982; Miglietta, Belmonte, &Boero, 2008; Orion &Hofstein, 1994; Stronck, 1983; Tuckey, 1992a).

In regards to this other teaching strategy which involves off-campus activities, students were taken to a specific location related to their major and were asked to provide a report. The report requested had to include 20 negative and/or positive points of the visited site, which students had to analyze and prove with images taken from the site. An interesting fact during the visits was the amount of questions asked by the students to the personnel in charge, in order to understand every structural detail which lead to a specific outcome in the architecture/interior design of the site.

Once submitted, the reports were assessed by the instructors, and very positive feedback was remarkable from the students. The purpose of these trips was to assess their results in the projects given afterwards and compare them to the ones previously assessed. The astonishing outcomes were noticed right away in the projects given, where students showed great link to real life sites. Students acknowledged great development in their way of problem solving, and demonstrated outstanding improvement in achieving the intended learning outcomes of the new projects.



Figure 9: Real photos from a field trip to ALWAH ALKHALEG TECHNOBOND CLADDING, PSU

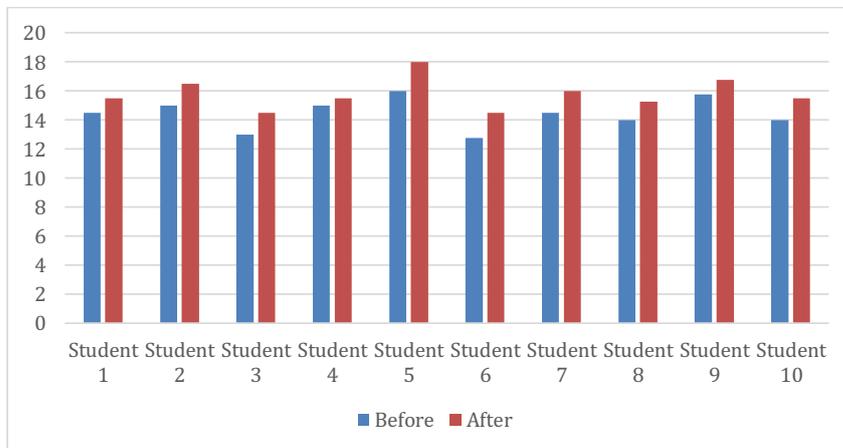


Figure 10: Showing the comparison of grades before implementing the field trip strategy versus after implementing it. Source: researchers

Analysis:

By looking at the above graph, the average of grades before implementing the strategy was 14.45/20, whereas after implementing a field trip it became 15.8/20. These results show an incremental rate of 9.34%. As a result, these numbers clearly show that students performed better after having a field trip added to their class schedule. Students have recognized the positive aspects of a field trip as they better imagined a detail in their project or an interior element. Moreover by pointing out the negative points of their visited site, students made sure not to include such undesirable detail in their projects.

4. Surveys/Interviews

The research debates the satisfaction levels of students towards which teaching strategy they feel more comfortable to be applied through quantitative methodology where a survey consisted of 5 multiple-choice questions and 10 questions that the respondents had to answer with a 5-point scale.

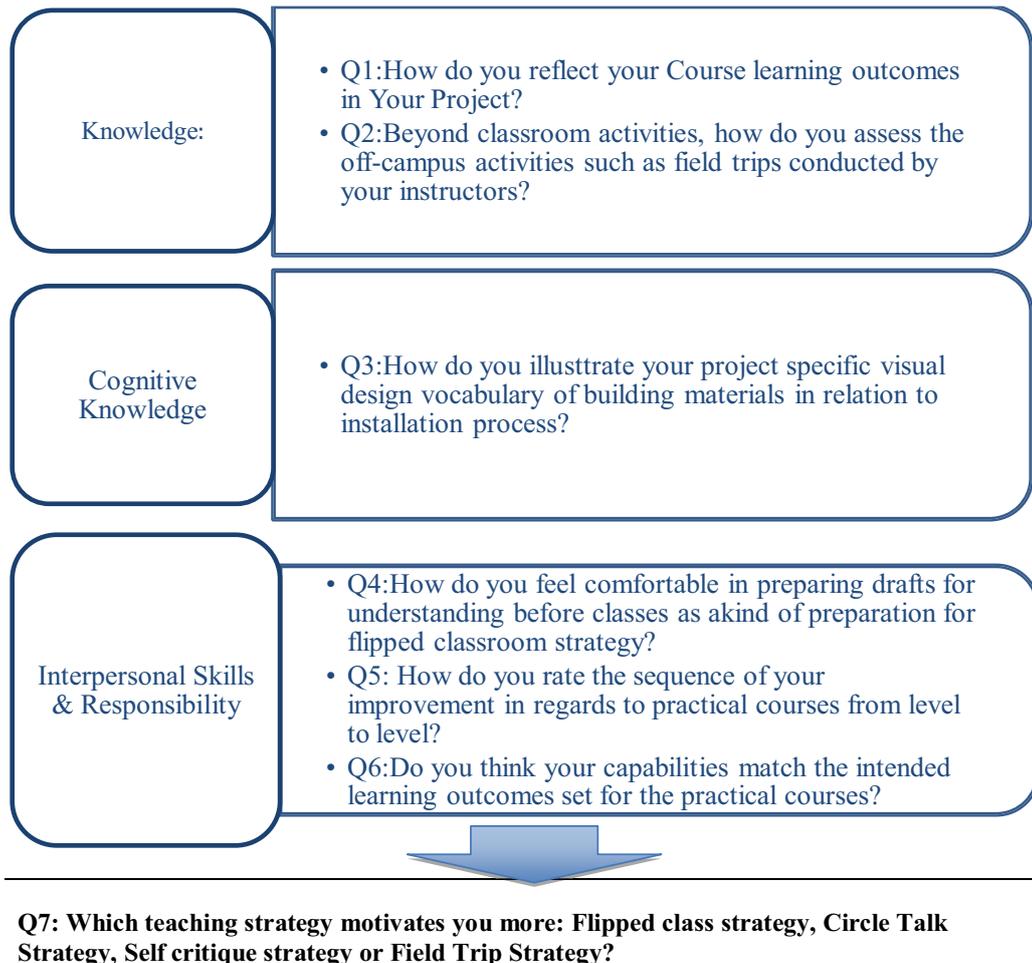


Figure 11: Scheme of Questions adopted in the questionnaire in accordance with NCAA main Domains

5. Findings

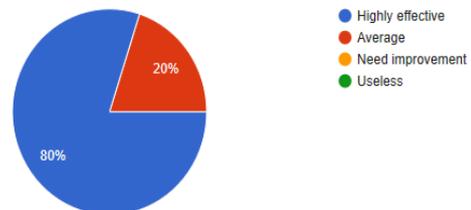
Students were able to observe, understand and recognize how building materials can be assembled on site in a comprehensive way. The matter, which was very useful and had been reflected in their

drawing sheets; they got the researchers' feedback in accordance with their submissions, which gave them more opportunities to modify their work, trying to get their projects more understandable

The research will present some of the questions answered by students, showing the analysis for each. Which helps understanding and stating the improvement that have been recorded by the researches, assuring that the research hypothesis whereas, believing in the architecture and interior design students' abilities and the instructor's variable teaching strategies can bring out examples of best practices in teaching philosophies.

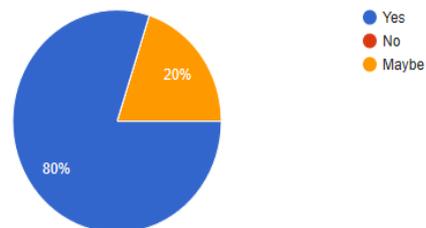
Q1: Beyond classroom, how do you assess the off-campus activities such as field trips conducted by your instructors?

For question(1) about 80% of surveyed students found that off-campus activities were very effective as it helped them better imagine their projects' outcomes in real-life and be able to assess whether a specific idea can actually be achieved in a successful way or not.



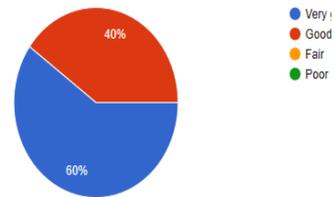
Q2: Do you think your capabilities match the intended learning outcomes set for the practical courses

For question(2) about 80% of surveyed students found that their capabilities match the intended learning outcomes, which means that the practical courses' level of difficulty is acceptable.



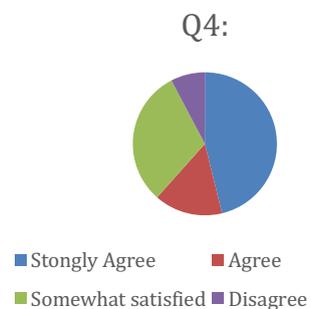
Q3: How do you rate the sequence of your improvement in regards to practical courses from level to level?

For question (3), 60% of surveyed students rated their sequence of improvement in regards to practical courses from level to level as very good. This shows that practical courses evolve fairly in regards to the students' capabilities and performances.



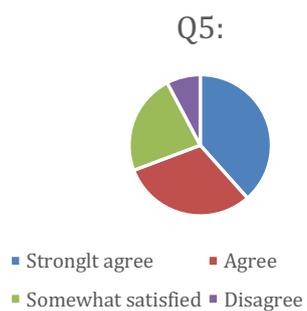
Q4: How do you feel comfortable in preparing drafts for understanding before classes as a kind of preparation for flipped classroom strategy?

For question (4), majority of the surveyed students rated their feeling comfortable in preparing drafts for understanding before classes as a kind of preparation for flipped classroom strategy. This shows that their own perception towards this strategy is positively recorded and performances.



Q5: How do you rate the sequence of your improvement in regards to practical courses from level to level?

For question (5), majority of the surveyed students rated sequence of your improvement in regards to practical courses from level to level in an ascending progress. This shows that their own performance and acquisition has been improved positively because of the applied strategy.



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