



Evaluation of the Expectations, and Acquisitions of Architectural Project Atelier Participants from Fall 2020 to Spring 2021 Online Education Period Regarding Learning Styles of Individuals

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Abstract

This Study emphasizes on the Atelier participant Students' ideas and opinions of their early Expectations and final Acquisitions from the Architectural Project and how the way of learning types of each student is effected by their expectations and acquisitions (or vica versa) during an online education period between Fall 2020 to Spring 2021. By applying a questionnaire to a group of atelier participants that consist of varying age and experience levels that value their opinions on their personal gains on varying aspects of architectural design at two semesters of one education year. It was possible to understand and evaluate the Atelier participant Students' ideas and opinions of their early expectations, and final acquisitions from the architectural project and how varying types of learning styles of each student is significantly reflected when their primary expectations and final acquisitions are comparatively evaluated in a fully online education year.

1. INTRODUCTION

Architectural Project Lessons in Gazi University Faculty of Architecture Department of Architecture (GUFADA) took place on online Platform in Fall 2020 and Spring 2021. A total number of 64 Students of 5th,6th,7th, and final semester students attended the Atelier Think Imagine. The main Design Problem was selected as choosing and attending an Appropriate Student Architectural Design Competition online.

The main objective was firstly to encourage students to choose a student competition that interest them and are within two weeks of deadline with the end of each education semester and applying it online. Secondly Students were obliged to understand and give a complete response to the competitions requirements via their projects that were discusses throughout the education year (14+14 weeks in Fall and Spring semester) with the Atelier instructors. Finally, Students were required to Submit a Project to the Atelier at the Final's week of each semester and also prepare the online student competitions submission at the deadline of each competition. The grading of the projects was completed within the Finals period and submitted by the Atelier instructors. According to each competitions deadline date the study of the students and the instructors went on to perfect the competition submissions even after the schools were closed after each semester. All the students that applied to online student competitions on each semester submitted and completed these requirements.

In both semester the students formed 3to 4 person groups to enter these online student competitions. The groups were formed from varying level of experienced students taking 5th, 6th, 7th semester Architectural Projects and Final Project. All student's effort and contribution to the group study and personal achievements were closely observed and evaluated by the Atelier instructors and grades were give accordingly without regards to any successful results that may or may not have been achieved from the competitions Juries.

Evaluating the Expectations, and Acquisitions of the students via surveys at the beginning and at end of each semester proved to be helpful and productive for the Atelier organizers to understand and reevaluate the practice.

Research conducted by R & Wright, A (2020) was The University of Bath's a survey of the impact of COVID-19 on studio teaching in architectural education. Students and teaching staff at 25 schools of architecture responded to the questionnaire. The satisfaction among students had decreased following the move to remote teaching. There was a 58% fall in student satisfaction after the move to online learning and only 7% of students preferred online delivery over its face-to-face equivalent. As for the teaching staff 58% of tutors were satisfied with their online teaching experience, this fell from 94% satisfaction of in person delivery. Only 4% of tutors preferred online delivery to its face-to face equivalent. [1]

The first implementation of this type of research was conducted at the Architectural Project Atelier at the (GUFADA) in 2019 Fall Semester. The results were published by the researcher in 2020. [1] In that study, the students' expectations were observed to be high at the beginning of the semester. During the semester, another survey was applied to reflect the effects of their ongoing assignments and their feedback from the midterm Jury. The second survey at the middle of the semester results showed that the students 'belief in their project preparation for the critical day decreased in time and resulted in lower valued answers to the Assignments survey. The Acquisitions survey at the end of the semester showed that the students were mostly satisfied by their final projects.[2]

The Researcher Applied this Surveys to Students in 2020 Spring Semester where COVID 19 Pandemic forced the closures of Schools, and the Atelier Project study was concluded online after 3 weeks of face-to-face education. That study showed that students primary expectations on building mock-ups of their projects and working with different materials were the most important downside of the disrupted education period and their acquisitions on those answer dropped. [3]

Another scope of this research is to determine if the learning styles of each atelier participant effect the satisfaction of the students from the learning environment. A study by Kolb, D., (1984) [4],[11] emphasizes on individuals' ways of learning can be determined by applying a series of questions and can be classified in subcategories. [4],[11] This Questionnaire was applied to the atelier participants to determine their learning styles.

Mumford A. and Honey P. (1992)'s study Looks briefly at the origins of the authors' Learning Styles Questionnaire and the differences between it and Kolb's Learning Styles Inventory. Gives answers to the most frequently asked questions and includes the accuracy of self-perception, what to do if the results are not believed, explanations for changes in scores and the Questionnaire's structure. [5],[12].

There are other studies by Smith, M. K. (2001, 2010). About the Kolb's Learning Styles and its implementations were conducted. [6]

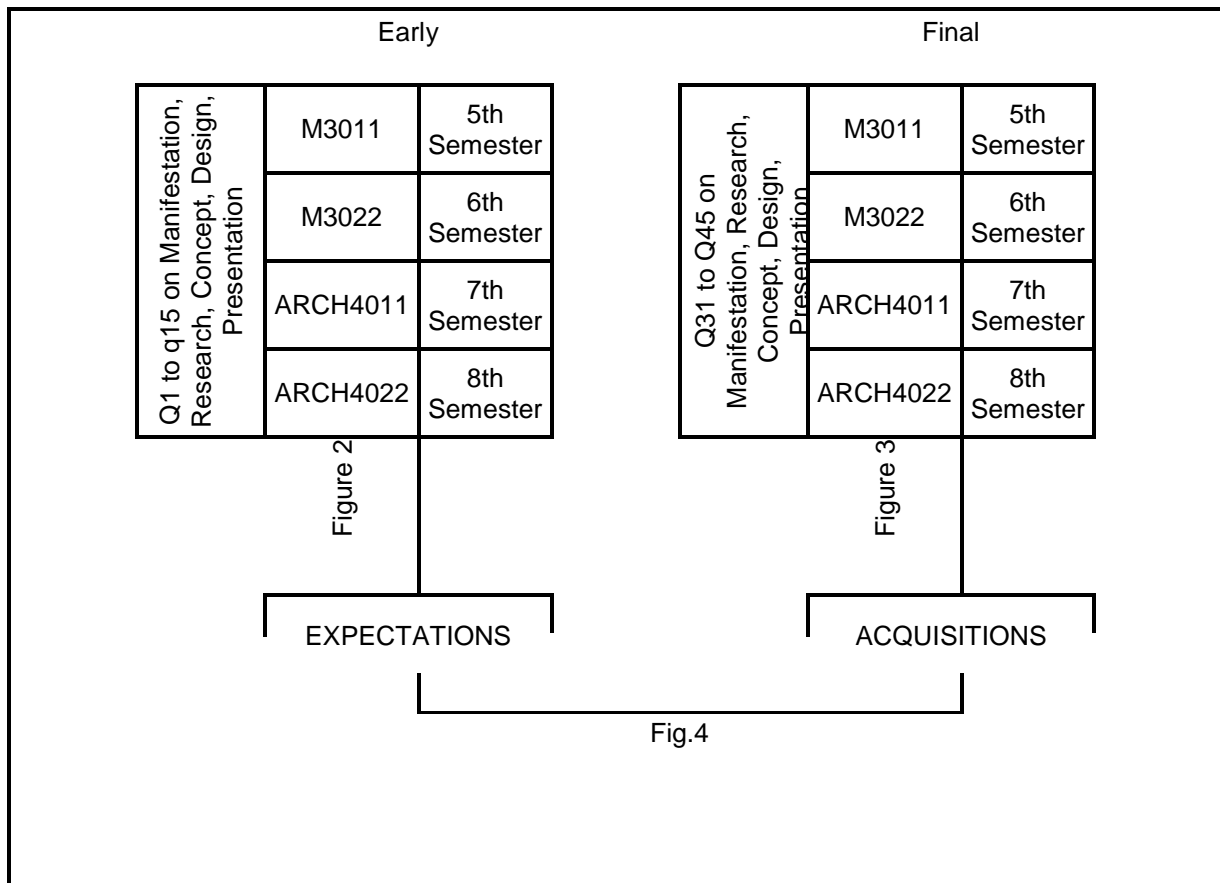
Wayne Attoe & Robert Mugerauer (1991) also argued that design studios are the heart of most architecture curricula, yet few efforts have been made to determine what makes for excellent studio teaching. Their study identifies 14 factors that can contribute to effective studio teaching. [7]

2. METHOD

The main purpose of this Study is to understand the Atelier participant Students’ ideas and opinions of their early Expectations and final Acquisitions from the Architectural Project as an important shareholder of the Architectural education. Also, this study emphasises on how each type of learner responded to the surveys applied at the beginning and the end of the semester and how the way of learning types of each student is effected by their expectations and acquisitions (or vica versa) during a fully online education period.

The hypothesis of this study is; This insight (as mentioned at the purpose) can be achieved by applying a group of atelier participants that consist of varying age and experience levels (5th-6th-7th and Final semester students) a questionnaire that value their opinions on their personal gains on varying aspects of Architectural Design (Atelier Manifestation, Research on subject, Concept development, Design Making, Presentation Preparation), at two different stages of the semester (early & final).

Table 1. Structure of the Study: Applying a group of atelier participants that consist of varying age and experience levels (5th-6th-7th and Final semester students) a questionnaire that value their gains on varying aspects of Architectural Design (Manifestation, Research, Concept development, Design Making, Presentation), at two different stages of the semester (early & final).



This study emphasizes determining and evaluation the varying expectations, and final acquisitions of architectural project studio participants throughout the 2020-2021 Education year at Gazi University Faculty of Architecture Department of Architecture (GUFADA). The method has been determined by the researcher as to provide each student with 2 survey forms that consist of 14 questions each: one at the beginning, and one at the end after the final submission. These survey forms were prepared with 14 questions which are related to each other to follow the variations on the same aspects a project such as understanding architectural manifestations of the atelier (MANI), research methods on the site and its history (RESE), concept development (CONC), design thinking and making (DESI) and drafting and presentation (PRES). The structure of the questions was altered with the time of the survey and were designed to gather valuable data on the following.

Survey 1: Primary expectations (EXP) of the student on the subject and the atelier prior to selection. (Figure 2)

Survey 2: The level of students' acquisitions (ACQ) they believed they gained after the final submission. (Figure 3)

The achievement level of that aspect from a scale to 1 to 5 (1 Lowest-5 Highest)

At the end of the study the following evaluations were made:

1. The evaluation of Students Primary Expectations versus Students Acquisitions They Believe They Derived During the Semester (Figure 4)

The Researcher collected the percentages (%) of answers of all participating students for each question and then compared them with all the cross related answers of each student at the first and second The Percentile differences between answers to cross related questions were presented by figures at the RESULTS AND DISCUSSIONS sections of this study. These figures represent the changes in students' evaluation of their own selves and their beliefs in their gains and improvements throughout the semester as a main shareholder in the Architectural Education.

2. Another evaluation of this study was the comparative evaluation of the answers of each student individually regarding the learning styles of each student according to KOLB learning styles.(4,11) (Figure 5,6,7,8,9)

The Researcher collected the answers of the students to the learning types survey (Survey 3) [4],[11] applied at the beginning of the semester and classified their answers to reflect which types of learners each of them were. Then their primary expectations (EXP) and final acquisitions (ACQ) answers were matched with their learner types and a comparative evaluation were made regarding their answers to all surveys in the RESULTS AND DISCUSSIONS sections of this article.

Survey 1 The “Expectations Survey” (EXP) applied on the beginning of the semester, consists of 14 questions focused on five main aspects of the design process which the students believe they will achieve by working in this atelier. The questions were in future tense and revealed intensions/expectations of the students’ achievement level and rated it from 1 to 5 (1: Lowest, 2 Low, 3: Average, 4 High, 5 Highest). The questions were:

- Q1: Atelier Manifesto: I learned and understood the atelier program and its layout and the project subject
- Q2: Atelier Manifesto: I have studied and assimilated the atelier principles and manifesto
- Q3: Research: I will learn the connections and development from the historical process related to the project location
- Q4: Research: I will explore the past and present use of the place and its possibilities in the future
- Q5: Research: I will learn the requirements for a project that can be implemented today in accordance with this location
- Q6: Concept: I will be able to develop my inspirations with other science / art / culture branches
- Q7: Concept: I will develop an original and tailored program in the context of the project
- Q8: Concept: I will analyze the strengths and weaknesses of the program I have developed and the opportunities and problems
- Q9: Design: I will go through a creative process by working with different materials and tools in the approach to design
- Q10: Design: I will be able to reflect my design decisions in my work by reflecting my ideas on my project
- Q11: Design: I will be able to propose more than one solution in the development of the project.
- Q12: Presentation: I will make my drawings that will best describe my project in the layout
- Q13: Presentation: I will learn how to make presentations and visuals using programs
- Q14: Presentation: I will be able to prepare my presentation sheets and make a regular presentation
- Q15: Other: Blank line on which written expectations that could be mentioned by the student.

Survey 2 The “Acquisitions Survey” (ACQ) applied on the end of the semester, consists of 14 questions focused on five main aspects of the design process which the students believe they achieved by working in this atelier. The questions were in past tense and revealed beliefs of the students’ achievement level and rated it from 1 to 5 (1: Lowest, 2 Low, 3: Average, 4 High, 5 Highest) . The questions were:

- Q1: Atelier Manifesto: I have gained efficiency by contributing with research on what I understand about the project subject
- Q2: Atelier Manifesto: I was able to work in accordance with the atelier layout and became productive
- Q3: Research: I used the information I gained about the location of the project to develop my project and I was productive
- Q4: Research: I have identified the past and present use of the place and its future possibilities
- Q5: Research: I have learned and solved the requirements for a project suitable for this place
- Q6: Concept: I developed my sources of inspiration with other science / art / culture branches and reflected them to my project
- Q7: Concept: I developed an original and site-compatible program that will be the subject of the project
- Q8: Concept: I solved the strengths and weaknesses of the program that I developed,
- Q9: Design: I worked with different materials and approached a creative design process and became productive
- Q10: Design: I presented my design decisions in my works and received feedback and reflected them to my project
- Q11: Design: I was able to offer an efficient solution for the project and the competition.
- Q12: Presentation: I made my drawings that would explain my project in the best way within the layout
- Q13: Presentation: I learned how to make presentations and visuals using utilities
- Q14: Presentation: I was able to prepare my presentation sheets and make a regular presentation
- Q15: Other: Blank line on which written notes on acquisitions that could be mentioned by the student.

3. THE RESEARCH FINDINGS AND DISCUSSION

In the 2020-21 Education Year, Atelier Think Imagine (ATI) challenged architectural project students to enter online student competitions. In Fall 2020 and Spring 2021 semesters 64 Students successfully completed the ATI of whom were varying form all project levels.(Figure 1)

Firstly, All of the students answered the Learning Types Survey (Survey 3) [4], [11] at the beginnings of each semester.

The students read the atelier manifesto and the project subject from the online documents the ATI provided and discussed them at the first day of both semesters. Then they answered the first survey (EXP). After the submittal of the project and before the declaration of the project grades to the students the students were asked to complete the second survey (ACQ) at the end of each semester.

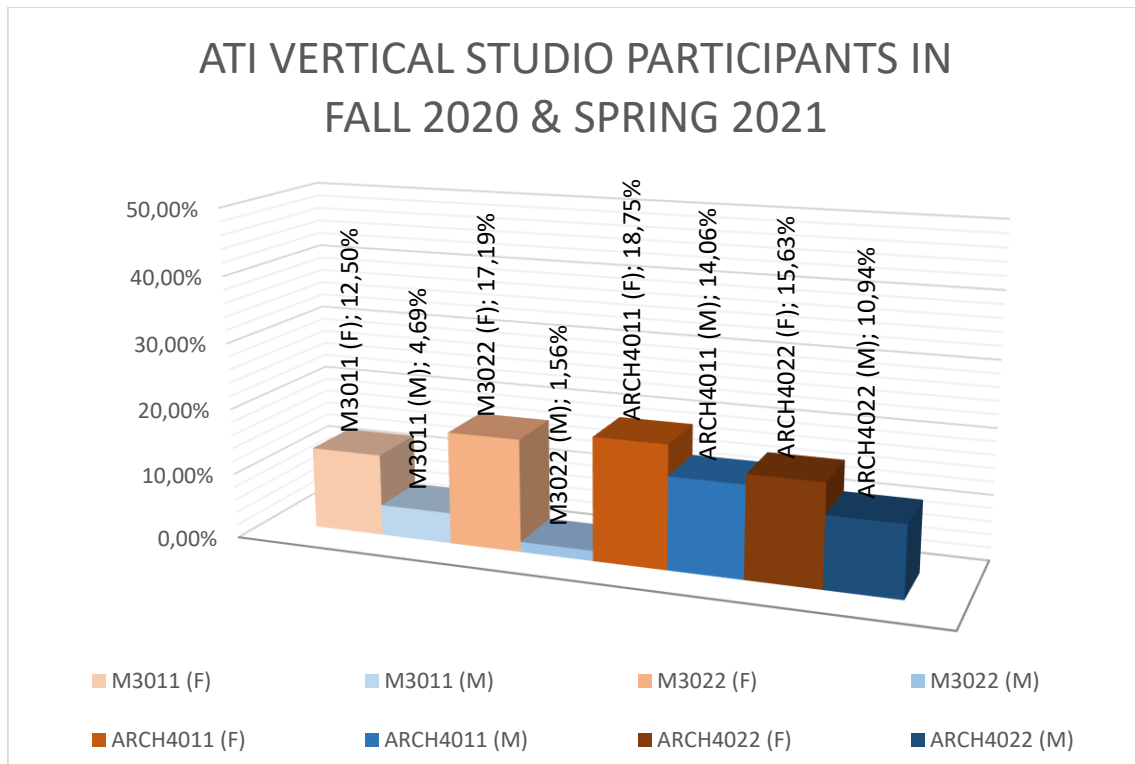


Figure 1. Student percentiles and the projects they are attending and total percentage of repetitions of their project ((M):Male / (F):Female) (M3011: Architectural Project 5, M3022: Architectural Project 6, ARCH4011: Architectural Project 7, ARCH4022: Final Project)

A total of 64 Students attended the Atelier from the beginning of the Fall 2021 and Spring 2022 Semesters. All of them submitted a Project and answered all the surveys. There were 14 M3011 students (11F/3M), 12 M3022 students (11F/1M), 21 ARCH4011 students (12F/9M) and 17 ARCH4022 students (10F/7M).

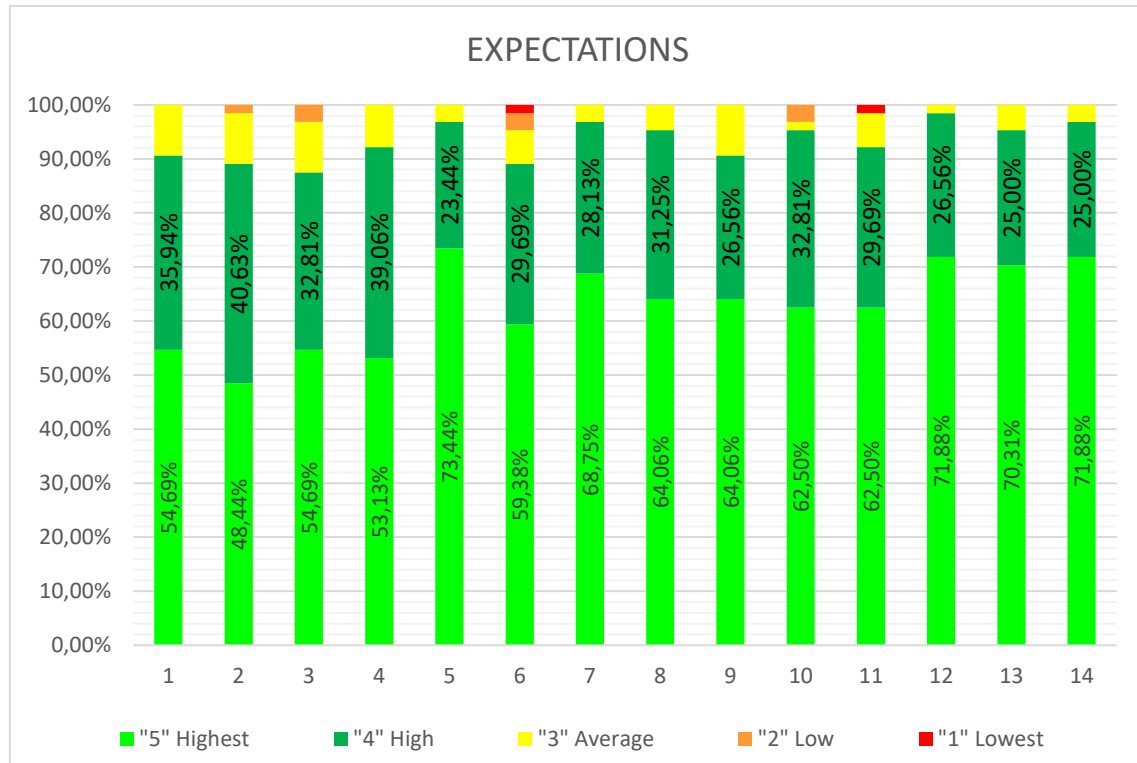


Figure 2. Students' level of expectations about improving their skills questioned in Survey I(EXP) Q1 to Q14

An important part of the selection is the students' expectations from the atelier. The first survey on what they believe they will achieve working in this atelier was determined with 14 questions related with different aspects of architectural design.

Q1 and Q2 Manifesto: "5:highest" evaluation was 54,69% and 48,44% respectively. The other results were 35,94% and 40,63% "4:High". This shows that *the students' expectations on understanding of the manifesto* were moderately high.

Q3 to Q5 : Research: "5:highest" evaluation was 54,69%, 53,13% and 73,44% respectively. The "4 high" results were 32,81%, 39,06% and 23,44% respectively. This shows that the students' expectations on *their research and understanding the history of the site and the values that come with it* were moderately high.

Q6 to Q8: Concept: "5:highest" evaluation was 59,38%, 68,75% and 64,06% respectively. The "4 high" results were 29,69%, 28,13% and 31,25% respectively. This shows that the students' expectations on *achieving success on presenting their concepts* were significantly high.

Q9 to Q11 : Design: "5:highest" evaluation was 64,06%, 62,50% and 62,50% respectively. The "4 high" results were 25,56%, 32,81% and 29,69% respectively. This shows that the students' expectations on *achieving success on their designs* were significantly high.

Q12 to Q14: Presentation: "5:highest" evaluation was 71,88%, 70,31% and 71,88% respectively. The "4 high" results were 26,56%, 25,00% and 25,00% respectively. This shows that the students' expectations on *achieving success on their presentations* were significantly high.

It is possible to understand that the students were very expectant and optimistic of the atelier, however they were mostly dubious on *learning the connections and development from the historical process related to the project location(Q3), exploring the past and present use of the place and its possibilities in the future(Q4) and developing my inspirations with other science / art / culture branches(Q6)*. They were also very dubious on *studying and assimilating the atelier principles and manifesto(Q2)*.

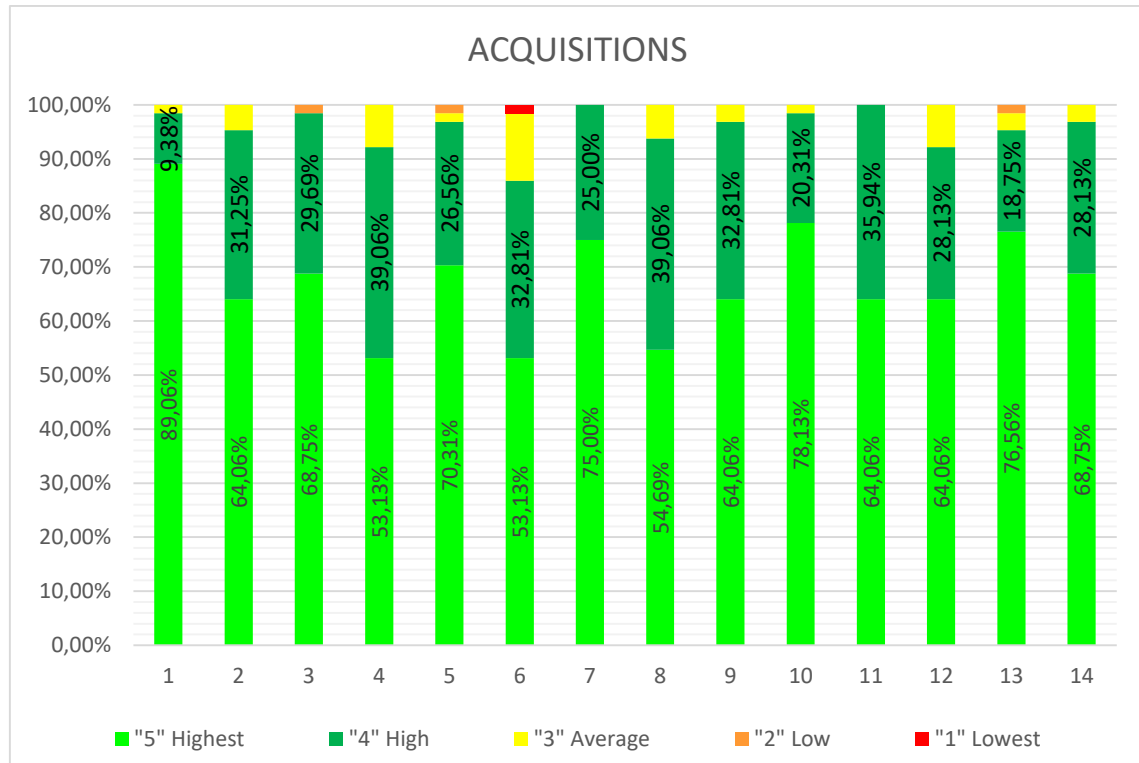


Figure 3. Students' level of acquisitions from the project at the end of the semester questioned in Survey 2 (ACQ) Q1-Q14

Q1 and Q2 Manifesto: “5:highest” evaluation was achieved in the *understanding of the manifesto* questions were 89,06% and 64,06% respectively. The other results were 9,38% and 31,25% “4:High”. This shows that the students’ acquisitions on understanding of the manifesto were significantly high.

Q3 to Q5 : Research: “5:highest” evaluation was 68,75%, 53,13% and 70,31% respectively. The “4 high” results were 29,69%, 39,06% and 26,56% respectively. This shows that the students’ acquisitions on their *research and understanding the history of the site and the values that come with it* were moderately high.

Q6 to Q8: Concept: “5:highest” evaluation was 53,13%, 71,00% and 54,69% respectively. The “4 high” results were 32,81%, 25,00% and 39,06% respectively. This shows that the students’ acquisitions on *achieving success on presenting their concepts* were significantly high but slightly low on getting inspiration from other fields (Q6).

Q9 to Q11 : Design: “5:highest” evaluation was 64,06%, 78,13% and 64,06% respectively. The “4 high” results were 26,83%, 24,39% and 29,27% respectively. This shows that the students’ acquisitions on *achieving success on their designs* were moderately high but slightly low on using different materials for design.

Q12 to Q14: Presentation: “5:highest” evaluation was 64,06%, 76,56% and 68,75% respectively. The “4 high” results were 28,13%, 18,75% and 28,13% respectively. This shows that the students’ acquisitions on *achieving success on their presentations* were significantly high.

It is possible to understand that the students were mostly dubious about their acquisitions on *having identified the past and present use of the place and its future possibilities(Q4)* and *having developed their sources of inspiration with other science / art / culture branches and reflected them to their projects(Q6)*. They were also very dubious on their acquisitions on *having solved The strengths and weaknesses of the program that they developed(Q8)*

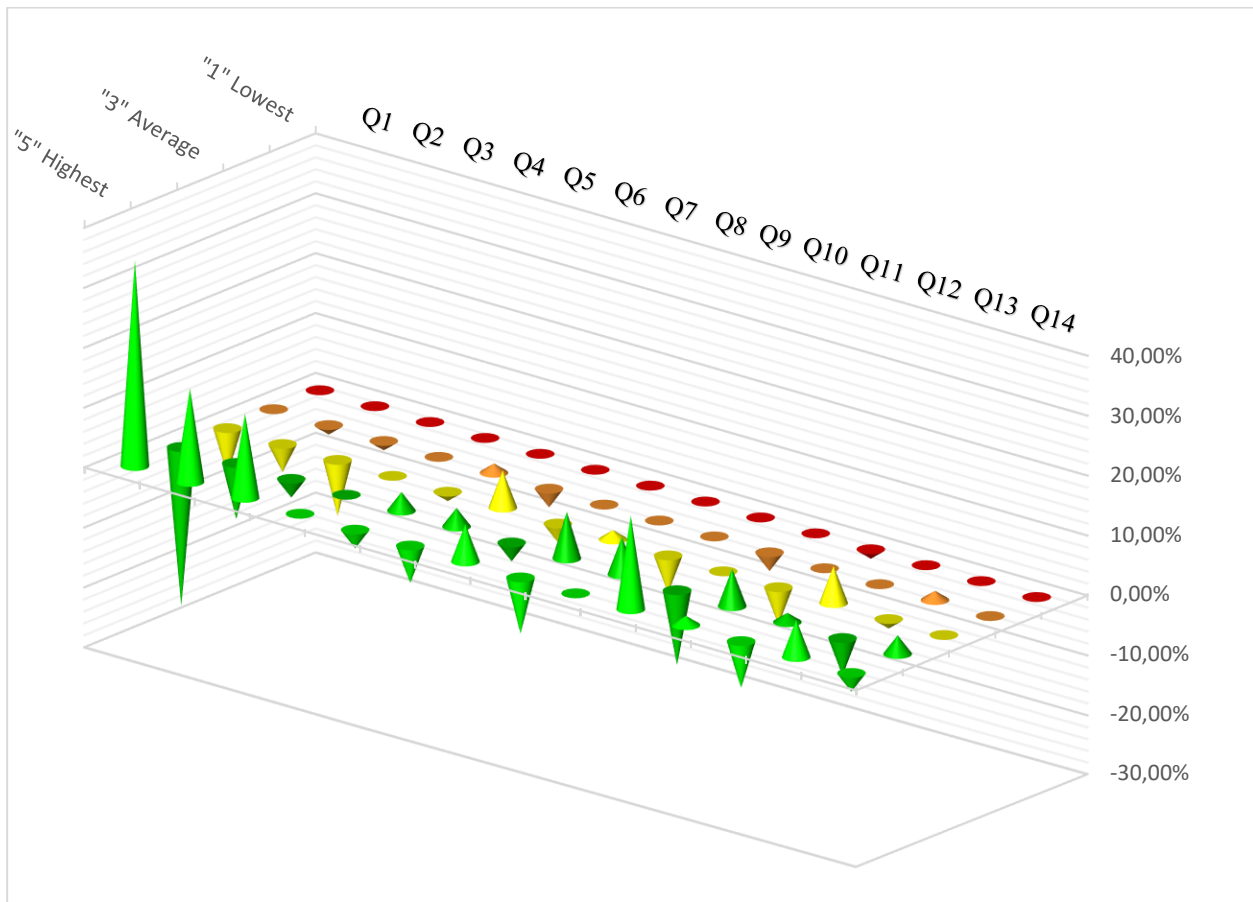


Figure 4. Students' Primary Expectations versus Students' Acquisitions They Believe They Derived at the end of the semester (Percentile differences between answers to cross related questions Survey 1 (EXP) Q1-Q14 and Survey 2 (ACQ) Q1 to Q14) (Direction of cones, represent INCREASING / DECREASING values in respective answers)

The first evaluation of this study emphasizes on the differences between the acquisitions and expectations of atelier participant. After the final submission, the students' Acquisitions survey shows their *understanding the subject and the workshop program(Q1)* and the question about *applying the manifesto to project(Q2)* has significantly increased since beginning of the semester.

The "5: Highest" answers for all 3 questions (Q3-5) decreased slightly about *learning from the history / understanding possibilities of the site / and deploying the requirements of the program to the project* when compared with their expectations.

Remarkably the question related to *developing a program by learning from other sciences (Q6)* have decreased significantly in "5: Highest" answers Also, the questions (Q8) about *analyzing the strengths and weaknesses of the site use it in the project* seems to have decreased significantly at the end of the semester.

Another Interesting result was the significant increase of the the "5: highest" answers for questions about *presenting their design decisions in their works and received feedback and reflected them to their project(Q10)*.

The "5: highest" answers for the questions about *making the necessary drawings(Q12)* and *preparing presentation sheets (Q14)* slightly decreased at the final submission when compared to the expectations of the semester. Along with that the question about *learning to use different presentation programs(Q13)* slightly increased at the end of the semester.

The second evaluation of this study emphasizes on how each type of learner responded to the surveys applied at the beginning and the end of the semester and how the way of learning of each type of learner is effected by their expectations and acquisitions (or vica versa)

Below lists how intense of each learning type are distributed among students in this study

There Were 8 Very Strong Activist Learners (ACTI) And 8 Strong Activist Learners

There Were 6 Very Strong Reflector Learners (REFL) And 24 Strong Reflector Learners

There Were 3 Very Strong Theorist Learners (THEO) And 11 Strong Theorist Learners

There Were 5 Very Strong Pragmatist Learners (PRAG) And 4 Strong Pragmatist Learners

The learning styles according to Kolb’s learning styles [4],[11] are determined by the survey applied to the students show that there is a very high number of very strong (6) and strong Reflector Learners (24) that feel and watch for learning. Also, a high number of very strong Activist Learners (8). There are few Very Strong Pragmatist Learners (5) and very few Very Strong Theorist Learners (3) are among students that answered the survey in the atelier in 2020-2021 Education year.

This is an indication that participating students tend to feel, watch, and do their designs rather than thinking about it. Similarly, there are a lot of students tend to watch and learn from the lecturer (or other students) while designing their projects rather than thinking about it. The use of feeling when designing is also a very important part of their design process rather than thinking about it. A comparative evaluation between the 4 Types of learning of students’ Primary Expectations versus Final Acquisitions from the Atelier Study was made to clarify the hypothesis of this study.

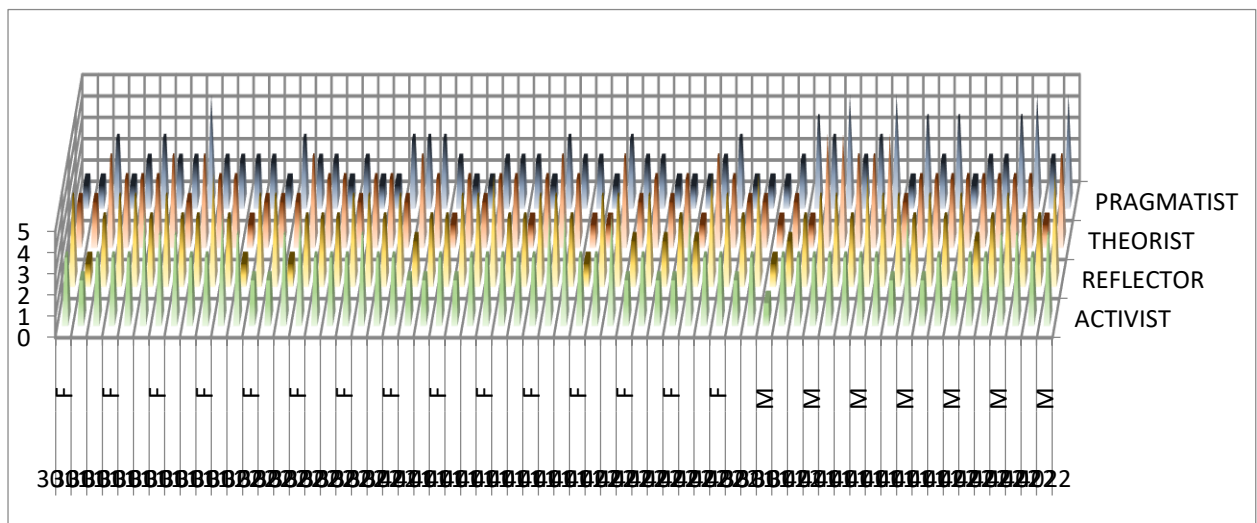


Figure 5. The distribution of each Learning Type of all participating student including the intensity of each type of learning (5: Very Strong, 4: Strong, 3: Moderate, 2: Low, 1: Very low) shown as pyramidal representation

This group of students that participated in this study were firstly reflector learners (30) (feel and watch), secondly activist learners (16) (do and feel), thirdly theorist learners (14) (watch and think) and finally pragmatist learners (9) (think and do).

Figure 5 shows that each student can be more then one type of learner. (i.e. A very strong activist student can also be a strong reflector. A very strong theorist can also show results for a strong pragmatist. i.e.)

Pure learners:

Among 16 Activist Learners 7 of them showed no strength in other learning types (43,75%)

Among 30 Reflective Learners 19 of them showed no strength in other learning types (63,33%)

Among 13 Theorist Learners 3 of them showed no strength in other learning types (23,07%)

Among 9 Pragmatist Learners 2 of them showed no strength in other learning types (22,22%)

Collective Learners:

Six Students were (at least) strong Activist and strong Reflector at the same time.

Five Students were (at least) strong Activist and strong Theorist at the same time.

Three Students were (at least) strong Activist and strong Pragmatist at the same time.

Nine Students were (at least) strong Reflector and strong Theorist at the same time.

Four Students were (at least) strong Reflector and strong Pragmatist at the same time.

Four Students were (at least) strong Theorist and strong Pragmatist at the same time.

- One students showed strength in all four learning types (2 very strong / 2 strong)
One student was a very strong reflector & very strong pragmatist
- Three students showed strength in 3 learning types (exclusion: pragmatist)
Two of those students were very strong reflectors
One student was a strong learner at each type.
- Two student showed strength in 3 learning types (exclusion: activist)
Both students were very strong theorist and pragmatist
- One student showed strength in 3 learning types (exclusion: theorist)
That student was a strong learner at each type.
- Among all, 3 of 8 very strong activist learner students were also strong theorist learners.(37,50%)
- Among all 3 of 6 very strong reflector learner students were also strong theorist learners (50%)
- Among all, 4 of 5 very strong pragmatist learner students were also strong theorist learners.(80%)
- All, 3 very strong theorist learner students were also strong reflector learners (100%)

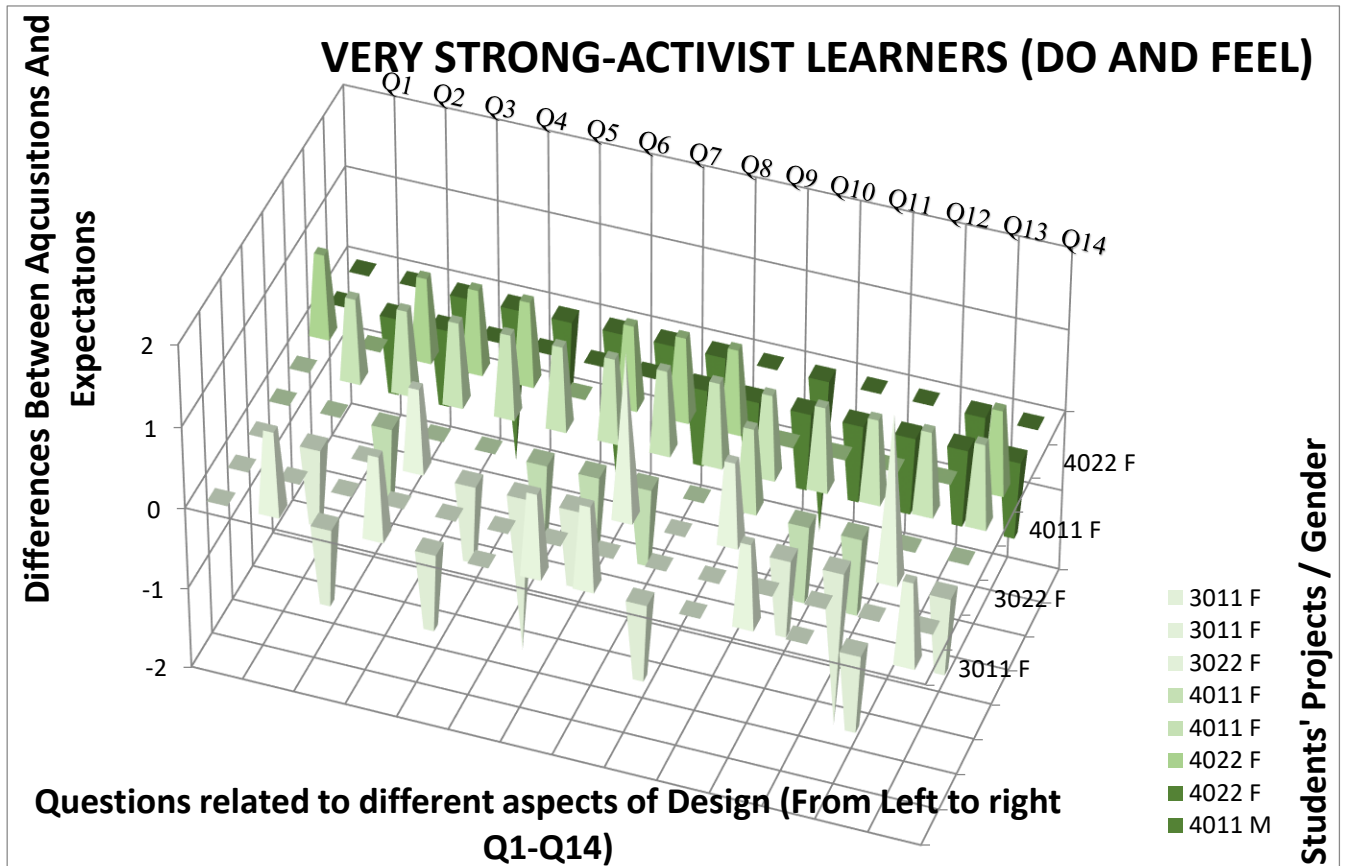


Figure 6. Eight Very Strong Activist Learner (do and feel) versus The Difference between their Final Acquisitions and Primary Expectations (Positive values reflect the increase in satisfaction at the end of semester over different aspects of design questioned in the surveys)

Q1 and Q2 Manifesto: Among 8 Very Strong ACTIVIST Learner 3 Students Showed +1 increase in their satisfaction at the end of the semester about *understanding the subject and the workshop program*(Q1) and the question about *applying the manifesto to project* (Q2). Only 1 Student showed -1 decrease.

Q3 to Q5 : Research: Among 8 Very Strong ACTIVIST Learner Students, 4 showed +1 increase in their satisfaction, at the end of the semester about their *learning from the history* (Q3) *understanding possibilities of the site* (Q4) and *deploying the requirements of the program to the project*(Q5) when compared. Other 3 students showed -1 decrease. One student showed a +1 increase in two questions (Q3,Q5) and a -1 decrease at (Q4) simultaneously.

Q6 to Q8: Concept: Among 8 Very Strong ACTIVIST Learner Students, 1 showed +2, 5 showed +1 increase in their satisfaction at the end of the semester about *developing a program by learning from other sciences* (Q6) about *developing an original program for the subject* (Q7) *analyzing the strengths and weaknesses of the site use it in the project*(Q8) The same 1 student that showed +2 increase in (Q8) showed -2 decrease in (Q6). 1 student also showed -2 decrease in (Q6) 3 students showed -1 decrease in multiple questions.

Q9 to Q11 : Design: Among 8 Very Strong ACTIVIST Learner Students, 5 showed +1 increase in their satisfaction at the end of the semester about *working with different materials and tools* (Q9) *presenting their design decisions in their works and received feedback and reflected them to their project* (Q10) *propose multiple answers to both to competition and the project* (Q11) 1 Showed -2 decrease in (Q10) 2 showed -1 decrease in multiple questions.

Q12 to Q14: Presentation: Among 8 Very Strong ACTIVIST Learner Students, 2 showed +1 increase in their satisfaction at the end of the semester about *making the necessary drawings* (Q12) *learning to use different presentation programs* (Q13) *preparing presentation sheets* (Q14) 1 Student showed -2 Decrease in (Q12) and 4 showed -1 decrease in multiple questions.

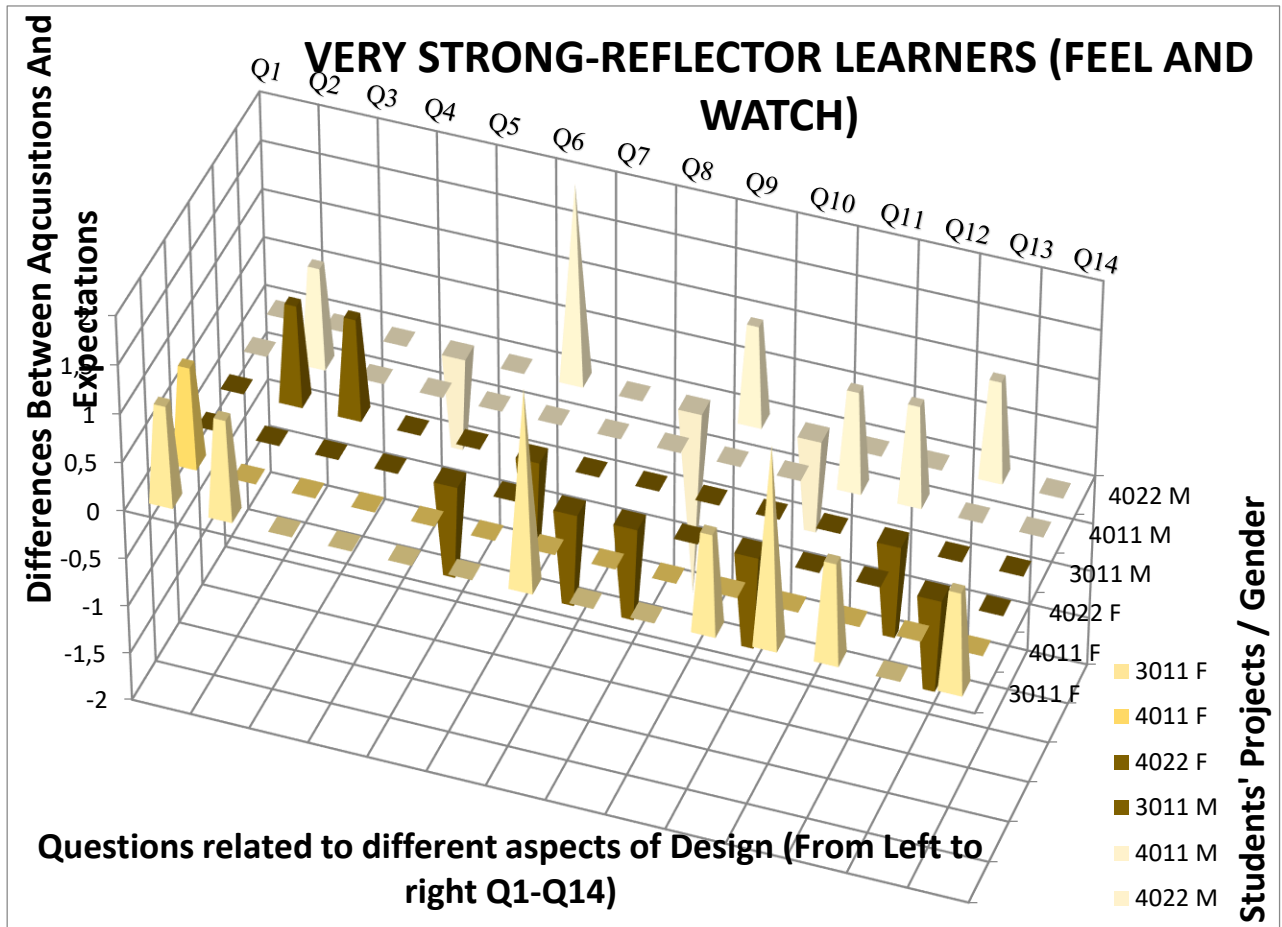


Figure 7. Six Very Strong Reflector Learner (Feel And Watch) Versus The Difference Between Their Final Acquisitions And Primary Expectations (Positive Values Reflect The Increase In Satisfaction At The End Of Semester Over Different Aspects Of Design Questioned In The Surveys)

Q1 and Q2 Manifesto: Among 6 Vey Strong REFLECTOR Learner Students, 4 Showed +1 increase in their satisfaction at the end of the semester about *understanding the subject and the workshop program(Q1)* and the question about *applying the manifesto to project (Q2)*. No student showed decrease.

Q3 to Q5 : Research: Among 6 Vey Strong REFLECTOR Learner Students, 1 showed +1 increase in their satisfaction at the end of the semester about their *learning from the history / understanding possibilities of the site / and deploying the requirements of the program to the project* when compared. 2 student showed -1 decrease in multiple questions.

Q6 to Q8: Concept: Among 6 Vey Strong REFLECTOR Learner Students, 3 Showed -1 decrease in their satisfaction at the end of the semester about *developing a program by learning from other sciences (Q6)* about *developing an original program for the subject (Q7)* *analyzing the strengths and weaknesses of the site use it in the project(Q8)* One Student showed +2 Increase in (Q6) and -2 decrease in (Q8) simultaneously. Another student showed +2 increase in (Q7).

Q9 to Q11 : Design: Among 6 Vey Strong REFLECTOR Learner Students, 2 Showed +1 increase in their satisfaction at the end of the semester about *working with different materials and tools (Q9)* *presenting their design decisions in their works and received feedback and reflected them to their project (Q10)* *propose multiple answers to both the competition and the project (Q11)* 2 students showed -1 decrease in multiple questions. One student showed +2 increase in (Q11).

Q12 to Q14: Presentation: Among 6 Vey Strong REFLECTOR Learner Students, 3 Showed +1 increase in their satisfaction at the end of the semester about *making the necessary drawings (Q12)* *learning to use different presentation programs (Q13)* *preparing presentation sheets (Q14)* 2 student showed -1 decrease.

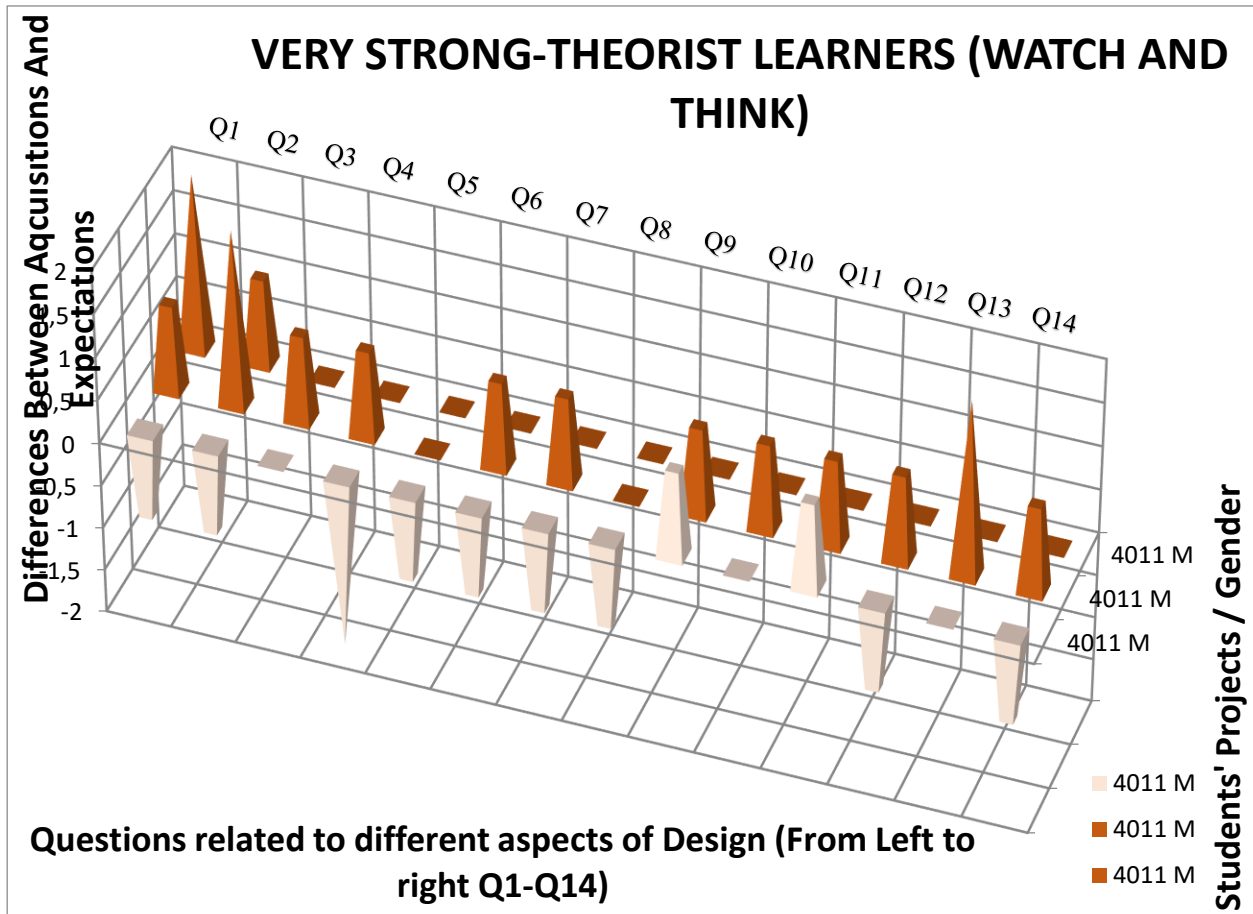


Figure 8. Three Very Strong Theorist Learner (Watch And Think) Versus The Difference Between Their Final Acquisitions And Primary Expectations (Positive Values Reflect The Increase In Satisfaction At The End Of Semester Over Different Aspects Of Design Questioned In The Surveys)

Q1 and Q2 Manifesto: Among 3 Vey Strong THEORIST Learner Students, 2 Showed +2 increase in their satisfaction at the end of the semester about *understanding the subject and the workshop program(Q1)* and the question about *applying the manifesto to project (Q2)*. One student showed -1 decrease in both questions.

Q3 to Q5 : Research: Among 3 Vey Strong THEORIST Learner Students, 1 Showed +1 increase in their satisfaction at the end of the semester about their *learning from the history / understanding possibilities of the site / and deploying the requirements of the program to the project* when compared. Only 1 student showed -2 decrease in (Q4).

Q6 to Q8: Concept: Among 3 Vey Strong THEORIST Learner Students, 1 showed +1 increase in their satisfaction at the end of the semester about *developing a program by learning from other sciences (Q6)* about *developing an original program for the subject (Q7)* analyzing the strengths and weaknesses of the site use it in the project(Q8). One student showed -1 decrease in all there questions.

Q9 to Q11 : Design: Among 3 Vey Strong THEORIST Learner Students, 2 Showed +1 increase in their satisfaction at the end of the semester about *working with different materials and tools (Q9)* *presenting their design decisions in their works and received feedback and reflected them to their project (Q10)* *propose multiple answers to both to competition and the project (Q11)* No student showed -1 decrease.

Q12 to Q14: Presentation: Among 3 Vey Strong THEORIST Learner Students, 1 showed +2, and 1 student swowed +1 increase in their satisfaction at the end of the semester about *making the necessary drawings (Q12)* *learning to use different presentation programs (Q13)* *preparing presentation sheets (Q14)* 1 student showed -1 decrease in multiple questions.

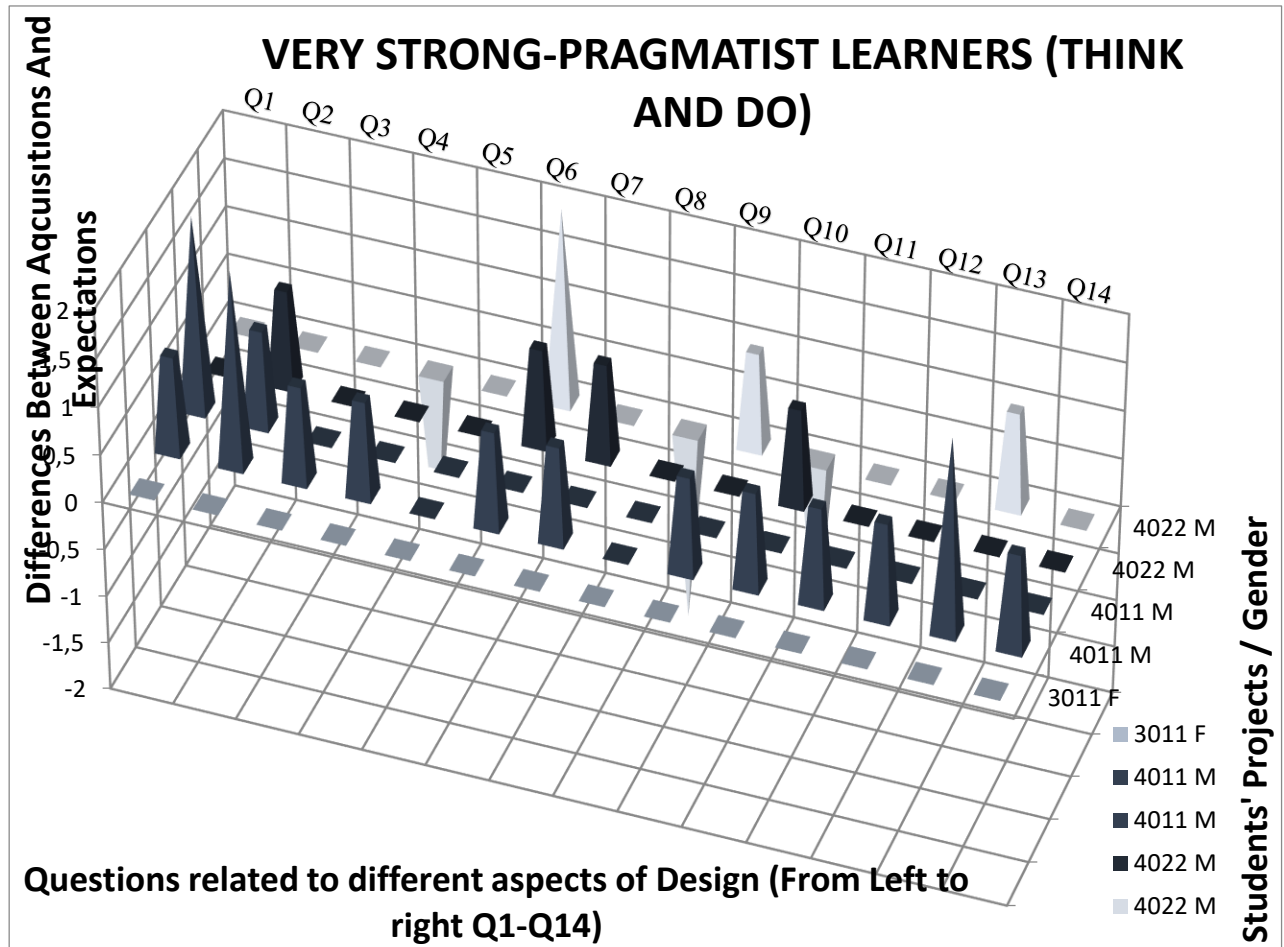


Figure 9. Five Very Strong Pragmatist Learner (Think An Do) Versus The Difference Between Their Final Acquisitions And Primary Expectations (Positive Values Reflect The Increase In Satisfaction At The End Of Semester Over Different Aspects Of Design Questioned In The Surveys)

Q1 and Q2 Manifesto: Among 5 Vey Strong PRAGMATIST Learner Students, 2 showed +2 and 3 Showed +1 increase in their satisfaction at the end of the semester about *understanding the subject and the workshop program*(Q1) and the question about *applying the manifesto to project* (Q2). No student showed decrease.

Q3 to Q5 : Research: Among 5 Vey Strong PRAGMATIST Learner Students, 1 Showed +1 increase in their satisfaction at the end of the semester about their *learning from the history / understanding possibilities of the site / and deploying the requirements of the program to the project* when compared. 1 student showed -4 decrease. Another student showed -1 decrease.

Q6 to Q8: Concept: Among 5 Vey Strong PRAGMATIST Learner Students, 2 Showed +1 increase in their satisfaction at the end of the semester about *developing a program by learning from other sciences* (Q6) about *developing an original program for the subject* (Q7) *analyzing the strengths and weaknesses of the site use it in the project*(Q8) Only 1 student showed +2 increase im (Q6) and -2 decrease in (Q8) simultaneously.

Q9 to Q11 : Design: Among 5 Vey Strong PRAGMATIST Learner Students, 3 Showed +1 increase in their satisfaction at the end of the semester about *working with different materials and tools* (Q9) *presenting their design decisions in their works and received feedback and reflected them to their project* (Q10) *propose multiple answers to both to competition and the project* (Q11) No student showed decrease.

Q12 to Q14: Presentation: Among 5 Vey Strong PRAGMATIST Learner Students, 2 showed +1 increase in their satisfaction at the end of the semester about *making the necessary drawings* (Q12) *learning to use different presentation programs* (Q13) *preparing presentation sheets* (Q13) 1 student showed -2 increase in (Q13). No student showed decrease.

4. RESULTS

At the beginning of the semester all the students were highly expectant of the atelier, the subject, and the earnings they believed they would derive from the semesters' project study. There were a high number of "5: Highest" and "4: High" expectation answers and few "2: low" of "1: lowest" answers. That might be predictable for any research that evaluates the primary expectations of a student while choosing an Atelier for a semesters' Architectural Project Lesson. (Figure 3)

The students have answered the ACQUISITIONS survey at the 15th week (Finals Submission Week) When we compare the students' EXPECTATIONS at the beginning of the semester and their ACQUISITIONS, they believe they derived after the final submission,

The final ACQUISITIONS of the students' that they believe they derived from the semester exceeded their primary EXPECTATIONS which were answered at the beginning of the semester in 11 of 14 questions. This show that either their expectations were mostly satisfied at the end of the semester, and they believe that they have shown enough improvement throughout the semester.

Students' "5 Highest" answers to the questions (Q1,Q2) related with *understanding the manifesto* of the atelier and *applying it to their work schedules* were highly increased after final submission. This shows that students got the grasp of the ateliers principles and applied it well at the end of the semester.

An important increase in "5 Highest" answers was observed in (Q10) about *presenting their design decisions in their works and received feedback and reflected them to their final projects*. This shows that the students were mostly satisfied with the feedback form the atelier and reflected them to their projects.

The only expectation was the Question 6,8 and 12. Answers to these questions showed decline in "5: Highest" and answers and an increase in "4: high" and "3: Moderate" answers. This shows student could not get enough *inspiration from other disciplines and sciences* when forming their concepts and were unsatisfied from their achievements in *solving weaknesses of their program*, and *preparing good presentations* in their final projects.

And it can be concluded that the varying types of learning of each student is clearly significantly reflected when their primary expectations and final acquisitions are comparatively evaluated. Firstly, VERY STRONG ACTIVIST and VERY STRONG REFLECTOR students' satisfaction was mostly positive and showed few dissatisfactions (Figure 6, Figure 7) Secondly, VERY STRONG THEORIST students' satisfaction was at balance. (Figure 8). Finally, VERY STRONG PRAGMATIST students were totally satisfied as they showed no decrease in any type of questions. (Figure 9).

As a Result, by applying a questionnaire to a group of atelier participants that consist of varying age and experience levels that value their opinions on their personal gains on varying aspects of architectural design at two different stages of the semester, it is possible to understand and evaluate the Atelier participant Students' ideas and opinions of their early expectations, and final acquisitions from the architectural project as an important shareholder of the Architectural education. This method is believed to be an effective method to understand and reshape the structure of the atelier in a way that the student would benefit more from. Similar research can be conducted with larger groups of students in the following terms.

CONFLICTS OF INTEREST

No conflict of interest was declared by the author.

REFERENCES

- [1] Grover, R & Wright, A (2020). National Design Studio Survey: Initial Results, Department of Architecture and Civil Engineering, University of Bath, Bath, UK 2020
- [2] Güngör, C . (2020). “Evaluation Of The Expectations, Assignments And Acquisitions Of Architectural Project Atelier Participants”. Gazi University Journal of Science Part B: Art Humanities Design and Planning, 8 (2), 607-624. Retrieved from <https://dergipark.org.tr/tr/pub/gujbs/issue/55887/754460>
- [3] Güngör, C. (2021). Evaluation Of the Expectations, And Acquisitions of Architectural Project Atelier Participants in Spring 2020 Semester Regarding Learning Styles of Individuals During a Disrupted Education Period . Gazi University Journal of Science Part B: Art Humanities Design and Planning , 9 (3) , 175-191 . Retrieved from <https://dergipark.org.tr/tr/pub/gujbs/issue/65203/977423>
- [4] Kolb, D., (1984). “Experiential Learning: Experience As The Source Of Learning And Development”.
- [5] Mumford. A. and Honey P. (1992), “Questions and Answers on Learning Styles Questionnaire”, Industrial and Commercial Training, Vol. 24 No. 7. <https://doi.org/10.1108/00197859210015426>
- [6] Smith, M. K. (2001, 2010). ‘David A. Kolb on experiential learning’, The encyclopedia of pedagogy and informaleducation. [<https://infed.org/mobi/david-a-kolb-on-experiential-learning/>. Retrieved: 19.4.2022]
- [7] Wayne Attoe & Robert Mugerauer (1991): Excellent studio teaching in architecture, Studies in Higher Education, 16:1, 41-50 <http://dx.doi.org/10.1080/03075079112331383081>
- [8] <https://www2.le.ac.uk/departments/doctoralcollege/training/eresources/teaching/theories/kolb>
- [9] <https://reviewing.co.uk/research/experiential.learning.htm>
- [10] http://fcis.oise.utoronto.ca/~daniel_schugurensky/faqs/qa8.html
- [11] <https://www.businessballs.com/self-awareness/kolbs-learning-styles/>
- [12] <https://www.emerald.com/insight/content/doi/10.1108/00197859210015426/full/html>