# THE EXPERIENTIAL LEARNING CYCLE IN VISUAL DESIGN

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**Abstract**

        Experiential Learning Cycle has been applied to the Layout and Graphics Design in Computer Course provided by the Faculty of Communication and Media Studies to the students studying at the Public Relations and Advertising Department. It is hoped that by applying the Experiential Learning Cycle, the creativity and problem solving strategies of the students will be further improved. For the present study, the reactions of the students of the Layout and Graphics Design in Computer Course to adopting Experiential Learning Cycle have been explored.

**Keywords:** Experiential Learning Cycle, Uses of Computer, Computer Graphics and Layout Design, Dewey, Lewin, Kolb, Schön, Reflection

Parallel to the paradigm shifts in a variety of fields like Mathematics, and Physics. The twentieth century has observed the change in the concepts of *knowledge* and *knowing*. This idea led to a shift of emphasis from knowledge (what) to knowing (how) in education. This has been reflected in the methodologies teachers use. One of the main shifts has been from lecturing, or lock step teaching to providing situations through which the students will find opportunities to have meaningful experience related to the subject.

Experiential Learning Cycle is not new in education. Its' roots go back to Confucius (Mak 1992). In the 20th century, experiential learning was first suggested by John Dewey, the father of Progressive Education. After Dewey, it was further developed by Lewin, in the 1980's by Kolb and Donald Schön (1983, 1987) the American sociologist who strongly felt the change in the constitution of learning in different disciplines (like architecture, music, etc.).

Dewey (1933) suggests that man is an essentially active, problem-solving, socially conscious creature who continuously develops his intelligence and capacity. Reflection helps the individual to learn from his experiences. Dewey (1933:12) differentiates between the reflective thinking from other thought processes. Dewey (1933:3, 4) points out that:

> "We all think, but in various ways. Some ways of thinking are better than others. The ways that are better than others fall into the realm of reflective thinking that consists in turning a subject over in the mind and giving it serious and consecutive consideration."

Dewey's ideas are revised by Kurt Lewin (1946) who schematized Dewey's ideas in a diagram and named it as the Lewinian Learning Cycle.
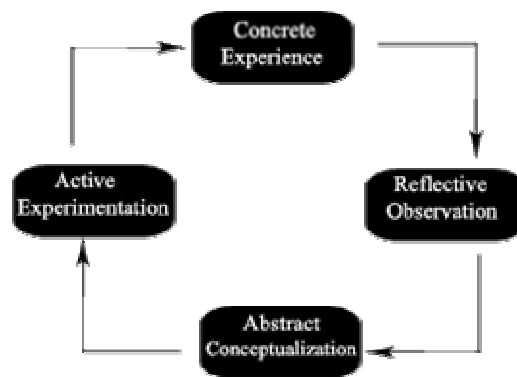


**Fig.1:** Lewinian Learning Cycle

Lewinian Learning Cycle has four components: concrete experience, reflective observation, abstract conceptualization, and active experimentation. Lewin points out that reflection should be encouraged hoping that this will help to personal meaning making. A few decades later, Lewinian Learning Cycle was revised by Kolb and renamed as Experiential Learning Cycle. Kolb (1984:20) suggests:

> "Experiential Learning Theory offers a fundamentally different view of learning process from
> that of the behavioral theories of learning based on empirical epistemology or the more implicit

theories of learning underlie traditional educational methods, methods that for the most part are based on rational, idealist epistemology".

According to Kolb, this approach is experiential due to three reasons. Firstly, it serves to tie it clearly to its intellectual origins in the work of Dewey, Lewin and Piaget. Secondly, it emphasizes the central role that experience plays in the learning process (Kolb 1984). Kolb considers experiential learning as the process which links education, work and personal development. He stresses the need for learning environments to foster opportunities for learning that enable students to work with, and build upon learning experiences. According to Kolb, experience serves as the basis for reflection and observation; conceptualization and analysis testing. Application of ideas in each cycle gives rise to another cycle.

Experiential learning theory is different from previous learning theories (behaviorism, and cognitivism) which support conscious and subjective experience. Experiential Learning Cycle, on the other hand, emphasizes acquisition and manipulation.

In the 1980's, American sociologist Donald Schön (1983, 1987) became highly influential in the Western world with his ideas on reflection which encourages experiential learning in andragogy. He differentiates two different forms of reflection: *reflection-in-action* and *reflection-on-action*. "*Reflection-in-action* suggests the reframing of unanticipated problem situations such that we come to see the experience differently. It is understood through phrases like thinking on your feet, keeping your wits about you, learning by doing … suggests not only that we can think about doing but that we can think about doing while doing it" (Schön 1983:54). Schön's *Reflection-on-action* is similar to Dewey's concept of reflection. This is thinking back over one's actions. Teachers do it after this work. After Schön, it has been observed that, particularly in adult learning, an immense literature on reflection, reflective practice and reflective practitioner emerged.

Grimmet and Ericson (1988) attempt to describe and categorize the literature in this area. They point out that there are three forms of reflection. Firstly, reflection is thoughtfulness about action. Secondly, reflection is deliberating among competing views of good teaching. Thirdly, reflection is reconstructing experience. According to Grimmet and Ericson (1988:13), Schön's works go into the third category.

> "His focus is on how practitioners generate professional knowledge in and appreciate problematic features of action settings. As such, Schön's contribution to reflection is distinctively important. He builds on and extends Dewey's foundational properties of reflection … The reflection that Schön focuses on takes place in the crucible action. And it is his marked emphasis on the action setting that sets Schön's work apart."

**The Context**
        Layout and Graphics Design in Computer Course is provided for the students attending the Department of Public Relations and Advertising at the Faculty of Communication and Media Studies, Eastern Mediterranean University, in the Turkish Republic of Northern Cyprus. The aims of the Layout and Graphics Design in Computer Course are to introduce students with design principles, such as color, typology, and photo editing for graphical advertisement design. Therefore, students are given the opportunity to improve their perception with the real case sample and recognize the difference between the aspects that make one design right and another design wrong. Students learn what ingredients make the difference between designs that are trendy, sophisticated, youthful, classic, aggressive, contemporary, or with mass market appeal. Also, students learn the usage and the role of computers in the sector and they are learn, the basics of the graphics software packages both vector based and raster based for creating their own graphical design. Since the students are required to acquire a set of skills which will be used in the future in a variety of situations, it has been thought that instead of traditional teaching (lecturing), Experiential Learning Cycle will be useful for this course. Throughout the course, two types of reflection were encouraged: in the computer laboratories, the teacher used to ask questions to contribute to *knowing-in-action*. After each four hours block both the teacher and the students reflected in writing which enhanced *knowing-on-action*.

**Data Collection Techniques**
        For the present study, data have been collected through a semi-structured questionnaire consisting of 49 questions (see Appendix 1). The questionnaire is designed according to the 5-point Likert Scale. It was piloted on another group of Layout and Graphics Design in Computer course. The questionnaire was conducted to the students after 8 weeks of teaching. The questionnaire consisted of 3 sections: the first section was about the students' perceptions of learning how to use the computers and their perceptions of their own performance in using the computers before starting the university. The second section was about the computer classes

(Computer Literacy and Computer Mediated Communications) offered in the freshman year of the university. The third section was about the Layout and Graphics Design in Computer Course in which Experiential Learning Cycle was applied.

**Analysis and Findings**

As we have mentioned earlier, data have been collected through a questionnaire which consisted of 49 questions. The whole population of the Layout and Graphics Design in Computer course who were in Group 1 was given the questionnaire. The total number of students who responded to the questionnaire is 48. At the beginning of the questionnaire the students were posed two questions in relation to their age and sex. One of the respondents belonged to the age group 17-19, 28 of the 48 respondents belonged to 20-22 age group, 14 of the students age was between 23 and 25, four students mentioned that they were 26 years old or above. One of the students did not answer the question related to age. 21 of the respondents (46%) were female and 25 of them (54%) were male. Two students did not answer the question related to sex.

After demographical issues, students were asked 7 questions in relation to the computer education in their high school years. 75% of the students mentioned that they had a computer education in their high school years. 6% was undecided, 11% mentioned that they did not have computer education in their high school years. Four students did not answer this question. This means that the majority of the students who start the university have some form of computer literacy prior to entering the university.

A great majority of the students (79%) mentioned that they were taught computers in lectures. 75% mentioned that they were taught computers in the computer laboratories which means most of the students were educated in schools where computer laboratories were present. 36 out of 48 students mentioned that in their high school education they had observed that their computer teachers could use the computers effectively. 7 students were undecided and 3 students disagreed or strongly disagreed with the effective use of the computers by the teachers. 2 students did not answer this question.

We also asked the students whether their high school teachers stood in front of the class and explained the lesson (engaged in lockstep teaching) or went near the students while explaining the subject matter. 37 of the 48 students mentioned that their teachers stood in front of the classroom while explaining. 31% of the students mentioned that they were undecided, and two students disagreed with the statement. 4 students did not answer this question. The students were also asked whether the teacher went near them in the class. 30 students agreed, a student was undecided and a student disagreed. 6 students did not answer this question. The results indicate that the high school teachers monitored while teaching.

The students were also asked whether the teacher helped them when they needed help. Most of the students (87%) mentioned that the teachers helped them upon their request for help. 5 students were undecided and 2 students disagreed with obtaining some help from the teacher when needed.

The respondents were also asked whether they learned how to use the computers at home or at an Internet café on their own. 44% responded that they strongly agreed, 27% agreed 16% undecided and 13% disagreed or strongly disagreed with learning to use the computers on their own at home. 31% strongly agreed, 27% agreed, 7% undecided, 36% disagreed or strongly disagreed with learning how to use the computers at an Internet café. The results indicate that, in addition to formal education where computer literacy instruction is provided, students mostly agreed with learning how to use computers on their own. This might mean that they learned from experience.

The students were also asked whether they learnt how to use the computers for drawing, or spreadsheets before coming to the university. 64% agreed or strongly agreed, 20% were undecided and 16% disagreed or strongly disagreed with knowing how to use the computers for drawing. 68% could use the spreadsheets, 25% were undecided and 7% disagreed with using the spreadsheets before entering the university.

As to how developed their senses of logic, design, and aesthetics, before starting the university. These questions are significant for they provide information in relation to their perceptions of how well they are ready for the Layout and Graphics Design in Computer course.

| Senses | Strongly Agree | Agree | Undecided | Disagree | Strongly Disagree |
|--------|----------------|-------|-----------|----------|-------------------|
| Logic | 14 | 19 | 8 | 5 | 0 |
| Design | 15 | 17 | 8 | 4 | 2 |
| Aesthetics | 14 | 17 | 10 | 5 | 0 |

**Table 1**. Frequencies of the students' perceptions as to how developed they feel about their senses of logic, design, and aesthetics before entering the university.

The results presented in Table 1 suggest that the respondents have some perceptions of the senses related to the lesson. They mostly agreed that their senses were developed before entering the university. About 20% of the students were undecided. Only a few disagreed.

The students were also asked questions in relation to the computer courses (Computer Literacy and Computer Mediated Communication) they were given in the freshman year. Almost all of the students (90%) agreed that, in the freshman year the teachers taught the subject matter and the laboratories separately (theory in the classroom, practice in the laboratory). They gave similar responses to being taught how to use the computers in the laboratories. They also pointed out that they could use the computers effectively. They mostly mentioned that the teachers were engaged in lockstep teaching while explaining (85%), yet helped them by going near them (73%) when they needed help. 84% pointed out that they obtained teachers help when they did not understand the subject matter.

The students were asked how they felt about their senses of logic, design, and aesthetics after taking the two freshman computer classes.

| Senses | Strongly Agree | Agree | Undecided | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| Logic | 16 | 19 | 10 | 1 | 0 |
| Design | 17 | 20 | 4 | 2 | 2 |
| Aesthetics | 17 | 19 | 7 | 3 | 0 |

**Table 2**. Frequencies of the students' perceptions as to how developed they feel about their senses of logic, design, and aesthetics at the end of the freshman year.

As indicated in Table 2, most students strongly agreed that their senses of logic, design, and aesthetics were developed after taking two freshman courses. About 25% was undecided and only a few disagreed.

Questions 30-49 were related to Layout and Graphics Design in Computer Course. In relation to the course, 80% agreed or strongly agreed that the teacher taught the subject matter (theory) and the labs (practice) together. 17% were undecided. 85% of the students mentioned that they agreed or strongly agreed being taught the computers in the laboratory, 10% were undecided and 2% disagreed. 87% of the students agreed that the teacher could use the computers effectively. 85% showed agreement to the fact that the teacher was engaged in lockstep teaching when explaining the subject matter. This is due to the fact that the teacher used her computer and projects on the board through the use of the graphic software while presenting the material. However, 81% also noted that the teacher also went near them, in other words, monitored while practicing. 97% pointed out that they obtained the teachers assistance when they needed.

70% of the students mentioned that they learnt how to use the computers at home on their own and 65% learnt to use the computers at an internet café. 80% strongly agreed or agreed that they learnt how to use the computes for graphic design. 78% strongly agreed or agreed that they learnt how to use colors for graphic design. 78% strongly agreed or agreed that they learnt how to group objects in layout. 82% mentioned that they learnt how to design objects consciously. To the above points they were undecided between 9-15%, and 15% disagreed or strongly disagreed.

| Senses | Strongly Agree | Agree | Undecided | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| Logic | 22 | 14 | 9 | 0 | 1 |
| Design | 21 | 12 | 9 | 1 | 0 |
| Aesthetics | 20 | 15 | 9 | 0 | 0 |
| Creativity | 22 | 12 | 8 | 0 | 0 |

**Table 3**. Frequencies of the students' perceptions as to how developed they feel about their senses of logic, design, aesthetics and creativity during and Layout and Graphics Design in Computer Course.

As indicated in Table 3, the majority of the students mentioned that their senses of logic, design, aesthetics, and creativity were developed. 36 students mentioned that their sense of logic was further developed, 9 were undecided and 1 strongly disagreed. 2 students did not answer this question.

33 students mention that their sense of design was further developed. 9 students were undecided and 1 student disagreed. 5 students did not reply this question. 35 students drew our attention to the fact that their sense of aesthetics was further developed. 9 students were undecided about this and 4 students did not answer.

83 % of the students taking the course decided that they realized that after the course they can show their creativity in graphic design. 12% are undecided and 5 indicate disagreement. 6 students did not answer this question. 34 students (81%) mentioned that they found having a dialogue with the teacher helpful. 19% were undecided. 6 students did not answer this question. 81% of the students showed agreement with finding written reflection after the course valuable. 19% marked undecided. 5 students did not answer this question.

| Question | Mean |
|---|---|
| 30 | 1.74 |
| 31 | 1.73 |
| 32 | 1.58 |
| 33 | 1.57 |
| 34 | 1.67 |
| 35 | 1.66 |
| 36 | 1.59 |
| 37 | 2.00 |
| 38 | 2.32 |
| 39 | 1.96 |
| 40 | 1.94 |
| 41 | 1.92 |
| 42 | 1.76 |
| 43 | 1.78 |
| 44 | 1.77 |
| 45 | 1.75 |
| 46 | 1.86 |
| 47 | 1.81 |
| 48 | 1.67 |
| 49 | 1.67 |

**Table 4.** The means of the questionnaire items related to the Layout and Graphics Design in Computer Course

The overall average of the items of the questionnaire that are directly related to the Layout and Graphics Design in Computer is presented in the table above. The results suggest that students' overall reaction is strongly agreeing or agreeing with the items asked in the survey. The only items where students are undecided were almost learning to use the computers at internet cafés.

Two-tailed T-test was applied to compare the results of the questions before and after the Layout and Graphics Design in Computer Course. In other words, after the computer courses provided in the freshman year and after 8-weeks trial of the experiential learning cycle. The results suggest that there is a significant correlation between them.

The missing values throughout the survey are between 1 and 6. This may mean that the students might not want to answer or might have forgotten to answer or might not understand the questions and skipped.

**Conclusions**
The findings of the study suggest that the students taking the Layout and Graphics Design course are positive about the Experiential Learning Cycle they have been undergoing. However, it should be mentioned that the present study is based on an eight week trial of Experiential Learning Cycle. The study will be repeated at the end of the course by when students will have the opportunity to have more hands on experience with Layout and Graphics Design in Computer.

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**Appendix 1:**

**QUESTIONNAIRE**

**Please answer all the questions.**

Age:  a) 17-19    b) 20-22          c) 23-25            d) 26 and above
Sex: a) Female    b) Male

Please indicate your agreement or disagreement with the following statements by circling the response that most nearly coincides with your own.
SA: Strongly Agree A: Agree U: Undecided D: Disagree SD: Strongly Disagree

| | SA | A | U | D | SD |
|---|---|---|---|---|---|
| **A. In High School** | | | | | |
| 1. I was taught how to use the computer for writing. | | | | | |
| 2. The teacher taught us how to use the computer in lectures. | | | | | |
| 3. The teacher taught us how to use the computer in the computer   laboratory. | | | | | |
| 4. The teacher taught us how to use the computer in the laboratory. | | | | | |
| 5. The teachers could use the computer effectively. | | | | | |
| 6. The teacher stood in front of the class and explained. | | | | | |
| 7. The teacher helped us by coming near to us. | | | | | |
| 8. The teacher helped us when we did not understand the subject matter. | | | | | |
| 9. I learnt how to use the computer at home on my own. | | | | | |
| 10. I learnt how to use the computer in an internet café. | | | | | |
| 11. I learnt how to use the computers for drawing. | | | | | |
| 12. I learnt how to use the spreadsheets. | | | | | |

| **B.  Before coming to the university** | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 13. My sense of logic was developed. | | | | | |
| 14. My sense of design was developed. | | | | | |
| 15. My sense of aesthetics was developed. | | | | | |

| **In Computer Courses in the freshman year of the university** | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 16. The teacher teaches the subject matter and the labs separately. | | | | | |
| 17. The teacher taught us how to use the computer in the computer   laboratory. | | | | | |
| 18. The teacher taught us how to use the computer in the laboratory. | | | | | |
| 19. The teachers could use the computer effectively. | | | | | |
| 20. The teacher stood in front of the class and explained. | | | | | |
| 21. The teacher helped us by coming near to us. | | | | | |
| 22. The teacher helped us when we did not understand the subject matter. | | | | | |
| 23. I learnt how to use the computer at home on my own. | | | | | |
| 24. I learnt how to use the computer in an internet café. | | | | | |
| 25. I learnt how to use the computers for drawing. | | | | | |
| 26. I learnt how to use the spreadsheets. | | | | | |
| 27. My sense of logic was developed. | | | | | |
| 28. My sense of design was developed. | | | | | |
| 29. My sense of aesthetics was developed. | | | | | |

| **In Layout and Graphics Design in Computer Course** | | | | | |
|---|---|---|---|---|---|
| 30. The teacher teaches the subject matter and the labs together. | | | | | |
| 31. The teacher taught us how to use the computer in the computer   laboratory. | | | | | |
| 32. The teacher taught us how to use the computer in the laboratory. | | | | | |
| 33. The teacher can use computer effectively. | | | | | |
| 34. The teacher stood in front of the class and explained. | | | | | |
| 35. The teacher helped us by coming near to us. | | | | | |
| 36. The teacher helped us when we did not understand the subject matter. | | | | | |
| 37. I learnt how to use the computer at home on my own. | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 38. I learnt how to use the computer in an internet café. | | | | | |
| 39. I learnt how to use the computers for graphic design. | | | | | |
| 40. I learnt how to use color for graphic design. | | | | | |
| 41. I learnt how to group object in layout. | | | | | |
| 42. I learnt how to design object consciously. | | | | | |
| 43. After the course, my sense of logic further developed. | | | | | |
| 44. After the course, my sense of design further developed. | | | | | |
| 45. After the course, my sense of aesthetics further developed. | | | | | |
| 46. After the course, I realize my creativity. | | | | | |
| 47. After the course, I realize that I can show my creativity with in the graphic design. | | | | | |
| 48. I find having a dialogue with the teacher very helpful. | | | | | |
| 49. I find writing/reflecting afterwards very helpful. | | | | | |