THE INFLUENCE OF CREATION OF SELF-REGULATION ENVIRONMENT FOR EDUCATING VISUAL ARTS TEACHER ON ACADEMIC SUCCESS

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ABSTRACT

This study aimed at examining the impact of learning environments based on self regulation on teacher candidates academic skill in visual arts education,focuses on the elements found in workshops being analyzed in terms of self-regulation.Aim of the study is to provide a new viewpoint intended making up learning environment developing self-regulation skills in visual arts education.

In the study quasi-experimental design has been used subject to the aim. In the research, in accordance with qualitative research method,following the application process semi-structured interviews have also been conducted with attendants making up experimental group. The research has been carried out in the context of field information in the Department of Fine Art Education of Kazım Karabekir Education Faculty. Working group has been composed of prospective teachers taking these courses in the research.

Based on the data at the end of the research, it can be said that the teaching propped up self-regulation used in experimental group is more efficient than the traditional teaching in the control group.

Key Words: self-regulation, art education, visual arts education, creation, visual arts teacher

1. Introduction

There are some factors influencing education process which can be generally defined as educating people in accordance with specific goals. The interests, needs, level of their improvement and their being ready, their abilities and attitudes are among these factors. These mentioned factors can change from one individual to another. So education environments should be arranged according to these individual differences between students. But it seems impossible to provide education according to students' differences in a system in which students are only categorized by taking into consideration of their ages. Senemoğlu (2001) states that the fact that students in the same age group are collected in the same class and are educated in accordance with a common education program since the beginning of school life, provides a resemblance of students to each other in terms of main features. The main goal of education should be to enable students to express their own features and improve these features rather than educate individuals resembling to each other for society. Individual should set goals, evaluate himself by analyzing and go through giving reinforcers by himself in education process. The concept which provides all these things and has been searched intensively for over twenty years in education field is self regulation.

Self-regulation is an active, constructive process whereby learners set goals for their learning plan actions and monitor, regulate and control their cognition, motivation and behavior. (Pintrich,2000) According to Zimmerman and Schunk (1989) self-regulation refers to students' self generated thoughts, feelings and actions which are systematically oriented toward attainment of their goals In other words, self-regulation is a process whereby learner takes responsibility of his learning and applies this. According to Bandura, this may be defined as an active, constructive process whereby persons set goals for their work and then attempt to monitor, regulate and control their cognitions, emotions, motivation and action, guided and constrained by their goals and contextual features of the work environment.

Learners using self regulation skill effectively make decisions about what to learn, how to use their time, which strategies to use in this process, how to focus by themselves as well as they are aware of what they know, in which they believe, how they feel for specific performance while dealing with their studies. They develop ideas about their productivity and efficiency when they enter into engagement and they check their knowledge and beliefs about their efficiency. Such experiences also affect students' similar engagements in future. (Zimmerman,1989)

An efficient self-regulation is very important in the development of self confidence and skills of students and providing awareness of what they learn. According to Carver and Scheler (2005), most learners need teachers' feedbacks about their own academic processes. If students gain the skill to evaluate each other and himself with the help of teacher as well as teachers' evaluations, it will help them be more successful. It should be considered that especially candidate teachers can only gain features which are required to be an ideal teacher such as critical view and evaluation of development while evaluating themselves and a friend's performance in self – regulated education environment. Therefore, it is very important to focus on studies based on self regulation especially in educating teachers.

It is clear that mathematical fields are in the foreground when literature related to self-regulation is analyzed. In a research carried out by Leung and Chan (1998), it has been determined that candidate teachers working in the fields of mathematics and science fields has higher grades than those working in language, business and technology, social sciences and cultural fields in terms of self-regulation strategies and motivational beliefs such as inherent goal orientation, repetition, explanation, organization and critical thinking. In another research carried out by Malpass,O'Neil, Harold and Hocevar (1999), it has argued that there is a strong relation between self-organization, goal orientation, self-sufficiency and their success in Mathematics for successful students in mathematics.

Paterson(1996) has searched the differences of academic success and self-regulation strategies between students who take classes in self-regulated learning environment and those who take classes in conventional learning environment. Results have shown that experimental groups who take classes in self-regulated learning environment have higher level of success than control group. Besides, it has been observed that experimental group has used more learning strategies based on self-regulation than control group in their studies.

Andrew and Vialle have studied the relation between self-sufficiency perception, self-regulation strategies and academic success. In the research, difference of self-sufficiency perception and learning strategies based on self-regulation between students with higher and lower success. As a result of findings obtained from the research, it has been clear that there is a relation between self-sufficiency perception and learning strategies based on self-regulation of students with higher and lower academic success.

1.2. Self- Regulation in Visual Arts Education

As above- mentioned researches have underlined, evaluation and development of the practices based on self-regulation which enables students to perceive and control their own learning become important. However, when literature is analyzed, it can be said that visual arts is one of the fields in which there are a few researches in the field of self-regulation practices. In fact, this lesson has a special importance when we take into account of the fact that it provides the understanding of the world we live in, the development of creative and critical thinking and it is in a close relation with mental activities. Students in primary school are very open to productivity and creativity through their structures vulnerable to innovations, changes and emotional developments. Therefore, visual arts lesson confronts us as a very efficient component which enables students to feel and improve themselves as a participator, interrogator, creative power by expressing themselves, knowing the environment and habitat in which they live and comprehending his existence and value. The goal of visual arts is to learn the learning itself by teaching basis of various ways of perception and thinking rather than educate artists.

Visual arts complementing other fields in education has specific features to develop perception accumulation and imagination in the course of learning process. The most suitable way of making learners gain terminal behaviors in education is to prepare program by considering the interest, need and expectations of them in every stage and letting teachers be flexible in education. Learning process is thought to provide development of self-confidence and skills of students provided that it is arranged to enable students to participate actively and teachers to give guidance. In short, learning process should be supported with self- regulation approaches.

In this program, it has been expressed that individuals who are creative, enterprising, problem solver, information constructor and converter in this information era are needed and in this context, a new "student centered "education model is accomplished with the definition of "constructivism" in especially most developed and developing countries. In this program in which the "student centered "education model is thought to be more suitable for the requirements of era and modern-day, the needs, interests and expectations of students are the basis principles for the programs to be prepared in accordance with constructivism model by expressing that the most important element is the student himself. (MEB, 2009a)

All processes from planning of lesson, implementation to evaluation in visual art education have been discussed with students by this research carried out by considering these features. One of the main goals is to obtain new methods which will contribute to visual arts education. This method is expected to provide an actual approach to visual arts education.

1.3. Goal

The main goal of this research is to research whether there is a difference of academic success grades of visual arts candidate teachers studying in education faculties between the learning-teaching process based on self-regulation and the learning-teaching process prepared with the conventional teaching method.

2. METHOD

In this part, the method of research, the research subjects, the measuring instruments, the source and kind of data and the techniques employed have been discussed.

2.1. The Model of Research

Experimental model has been used in this research. Experimental models are research models in which data to be observed is produced under direct control of researcher with the aim of determination cause and effect relation. (Karasar, 1991:87) "Pretest- Posttest Control Group Design of this model has been chosen. Participants are measured with dependent variable before and after experimental processes. PPCGD is a related design. Because same people are measured on dependent variable two times. (Büyüköztürk, 2007:19). However, this design is unrelated because measurement of experimental and control groups consisting of different subjects are compared. Consequently, Pretest- Posttest Control Group Design is a complicated design. (Howitten, Cited by Büyüköztürk, 2007:19).

2.2. Study Group

Universe and sampling has not been appointed as experimental design has been chosen in research. This experimental study has been applied in third grades of Painting-Work piece Training Department of Atatürk University Kazım Karabekir Education Faculty.

The most critical stage of PPCGD is the election of subjects as differences of experimental and control groups after experiment may arise from the differences before experiment. The way to reduce original differences of subjects in each group to minimum level is appointment of subjects with appropriate methods. Two basic methods used for separation of subjects into groups are matching and impartial appointment. Impartial appointment determines which one of the elected groups is experimental or control group.

Impartial appointment: subjects are appointed to control or experimental group impartially in this method. In case there are lots of subjects, it has higher possibility to create two equal groups by impartial appointment. This process has two advantages. First, it doesn't require a theory related to relevant variables. Second, it prevents personal partiality in appointment of subjects. (Büyüköztürk, 2007:24)

Group matching method has been used to separate the class of 44 students into two groups in this research. Groups have been balanced in terms of gender and averages of special aptitude test success grade. Later; one of these groups has been appointed to experimental and the other to control group by impartial appointment.

Chart 1.
Distribution of Experimental and Control Group According to Gender

Groups	N	Percentage (%)	Females		Males	
			n	f	n	f
Experiment	22	50	10	45.5	12	54.5
Control	22	50	9	40.9	13	59.1
Total	44	50	19	43.2	25	56.8

As it is clear in Chart 1, number of total students are 44 in experimental and control group. Female students are 19 with % 43.2 out of total students and male students are 25 with % 56.8 out of total groups. In experimental group, there are 10 female students with % 45.5 percentages and 10 male students % 54.5 percentage. In control group, there are 9 female students with % 40.9 percentages and 13 male students % 59.1 percentage.

2.3. Distribution of Special Aptitude Test Grades

Relevant data about distribution of special aptitude test grades of both classes taught in learning environment based on self-regulation and classes taught by conventional teaching method has been submitted in Chart 2.

Chart 2.
The Average of Special Aptitude Test Grades

Groups	N	X	Std	t
Experiment	22	4,15	.31	0,73
Control	22	4,33	.41	

The Average of Special Aptitude Test Grades of experimental group is 4,15 and the one of control group is 4,33. Whether there is an important difference among the average of special aptitude test grades of each group is examined by "t" test, observed 0,73 "t" value 42 degree of freedom has not been considered as significant in significance level. The average of special aptitude test grades of students in experimental and control group is equal to each other.

2.4. Pretest Grades of Experimental and Control Groups

Averages of pretest grades of experimental group taught based on self-regulation and control group taught based on conventional education have been represented in Chart 3.

Chart 3.
Pretest Grades Average of Experimental and Control Groups

Groups	Number of Questions	N	X	Std	t
Experiment	30	22	17,52	3,93	
Control	30	22	17,12	3,82	.13

As it is seen in Chart 3, pretest grades average of experimental group is 17,52 and pretest grades average of control group is 17,12. Whether there is an important difference among the pretest grades average is examined by "t" test. Observed .13 "t" value 42 degree of freedom which is the difference between pretest grades average of experimental and control groups has not been considered as significant in significance level. In this case, it can be said that there is no significant difference of pretest grades consisting of 22 questions between experimental groups taught with a method based on self-regulation and control groups taught with conventional education method.

2.5. Process

Daily lesson plans have been prepared to have students gain behaviors and goals in units by taking experts' opinion in accordance with self-regulated education. Pintrich's model has been based as model related to learning based self-regulation. Pintrich discusses his model based on self-regulation as combination of motivational structures. (Pintrich, 2000). This model prepared by Pintrich comprises of four stages. These are pre idea, monitoring, control and reflection. Stages include cognitive, motivational, behavioral and contextual structures which are self-regulation activities themselves.

Before application, education environment based on self-regulation to be used in study has been prepared, academic success test has been applied on experimental and control group as a pretest. Half structured interviews are made in order to determine students' profiles.
Following stages are gone through for this purpose:

1. Application has been second stage after pretests. First lesson prepared in accordance with self-regulation environment has been on March 01, 2011.
2. Researcher has been given information about handling lesson and self-regulation in the first week of the lesson period of fourteen weeks. Students have been required to contribute to the syllabus to be handled during one term together. They have been required to decide different performances which they want to do in lessons and consider the learning based on self-regulation as well.
3. Concepts to be given to students for each unit and behaviors in the level of explanation of relevant principles as regards these concepts have been determined.
4. Sections about attracting attention, motivation, revision, passing to lesson have been prepared while daily lesson plans have been arranged.
5. Tools and materials (slide sets, movies and sample events) have been presented in main part.
6. Students have been helped to find information by giving tips, feedbacks and corrections.
7. Different teaching-learning strategies, methods, techniques and tactics have been used together in education environment.(mixed method)
8. Students have been provided to establish a relation with other professional teaching knowledge in case it is necessary.
9. Evaluations about formalization and education have been made at the end of each unit.
10. Evaluation of himself, peer evaluation and evaluation by groups have been applied to student during lesson evaluation at the end of units. So, holistical rubrics have been used for visual arts lessons prepared by researcher by scanning sources and getting expert's opinion. (Borden, 2008, Huffman, 1998, McCollister, 2002, Ministry of Education Visual Arts and Sports High School Program, 2009).
11. Students have been required to prepare portfolio for application studies taught in lessons during units and for project assignments. The goal of having them prepare portfolio is to enable students to learn taking responsibility of his own learning process. Portfolio provides development of cognitive skill of learner by evaluate himself through self- evaluation and self-reflection. Studies to be placed in portfolio, placing sequence of these studies, written schedule stating portfolio evaluation measures have been attached to covers of files.
12. Each performance of students has given a number in the course of evaluation of application exams made in midterm and final. Students making the performance have been required to write information such as his name, surname, student number and class behind the performance and on left side. Performances have been analyzed as slides by being transferred into digital medium with students in classroom. Students have been required to give points to holistic rubric samples distributed to them beforehand. Peer evaluation has been carried out by adding points obtained from class and dividing them into number of students.

2.6. Data Collection Tools

Academic success tests and interview forms have been used as data collection tools in the study.

2.7. Analysis of Data and Statistical Techniques

Averages of academic success grades and standard deviation have been calculated and results have been used in analysis. Average, standard deviation and "t" test have been used for analysis of data. Significance level has been accepted as .05 in the research. Analysis of data has been carried out by using SPSS statistical program. Covariance analysis has been used as experimental and control groups have been balanced in terms of intended variables.

2.7.1.Academic Success Test

An academic success test involving topics taught in specific teaching methods-I in undergraduate program of educating painting teacher in compliance with definition stated in lesson content of Higher Institution Board of Turkey has been developed to be used in the study. Experts have been consulted for opinions during the process of providing content validity of success test and test questions have been aimed to be separated into three different groups in the levels of knowledge, comprehension and application. An academic success consisting of 5 true-false and 20 multiple choice questions namely 25 total questions has been used to collect data.

Higher Institution Board's definition related to the lesson has been taken as a basis to determine the scope of painting lesson and its goals. The goal of test is to determine academic success levels of students during a term. In such a test, critical behaviors which are main signs of learning levels in line with goals expected to be developed during that term will be examined. (Özcelik, 1981:40). Therefore, questions which will evaluate realization level of these have been preferred by establishing critical behaviors performing goals on the basis of units.

Examining critical behaviors has a very important place in providing content validity of test. (Özcelik, 1981:47). Experts have been consulted for opinions by preparing three questions for each critical behavior. After experts have determined content validity, a draft test form of 35 questions has been prepared and following procedures have been fulfilled:

1- The draft test form has been applied to students who has taken this lesson and passed it and now are in 4^{th} grade and students who have never taken this class and now are in their 3^{rd} grade.
2- A test comprising of 25 questions has been prepared by putting the questions which are over item difficulty .50 and discrimination index .40 in test. Items whose discrimination index is .40 or more are items having a higher discriminative power.
3- This test has been brought to intended level by applying it on other 2^{nd} and 1^{st} classes. Kuder-Richardson formula has been used for difficult level of each item in themselves, that is for prediction of a test in which rate of students answering correctly to each item. This formula is based on a premise that each item measures same variable namely, thing which test measures is homogenous. (Tekin 1996). Predicted reliability value of test (KR-20) has been found as 0.92
4- Prepared test has been given to experimental and control group before and after application.

2.7.2. Half Structured Interview Forms

Half structured interview forms are one of the data collection tools used in research. Half structured interview forms have been given to participants from control group at the end of application process in line with qualitative research method in the research. Interviews are divided into three categories in accordance with the rules of qualitative research design. These are "structured", half-structured" and "unstructured". While interviewer has freedom of action and interview plan has been applied to interviewer directly in structured interviews, interviewer has freedom of action and judgment and he is provided to get to bottom of individual opinions and judgments. Interviews are usually made as half structured between these two poles. (Karasar, 2002).

Expectations of students related to lessons prepared in accordance with self-regulation have been examined in pre-interview. Their opinions about self-regulation environment have been analyzed in the post interviews. Three experts have been consulted for questions' structure used in half structured interview forms. Half structured interview forms have been finalized after proposals and corrections.

One-on-one interview has been carried out with each participant. A total of 25 participants have expressed their wishes to participate in interviews and have approved that they let their voice be recorded. Later, questions in interview form have been asked to participants alternately, they have been given enough time to answer these questions. Explanations have been made where necessary, while participant are answering questions. Participants have been called by their names during interview but nicknames have been used during analysis and reporting process. Interviews have been in the office of researcher in Painting-Work piece Training Branch of Fine Arts Education Department of Atatürk University. Following questions have been directed to participants in interviews.

1- What does self-regulation mean for you?
2- Have you ever experienced an application related to self-regulation in lessons?
3- Do you want your applied lessons to be prepared in accordance with self-regulation? Why?
4- Do you believe that formation of environment based on self-regulation will be beneficial to visual arts education? Why?
5- Do you think how applications should be arranged in a self-regulation?
6- Do you think the environment based on self-regulation will contribute to your learning process?
7- Do you believe that it will increase your motivation in case your applied lessons are taught in accordance with self-regulation? Why?

3. FINDINGS

In this part, data collected by measurement instruments have been analyzed by using statistical techniques and finding have been explained by tabularizing them.

3.1. Average of Pretest and Posttest Grades of Experimental Groups

Data about pretest and posttest test grades of experimental group to whom systematical education has applied has been presented in Chart 4.

Chart 4
Average of Pretest and Posttest Grades of Experimental Groups

Group Experiment	Number of Questions	N	X	Std	t
Pretest	30	22	17,52	3,93	
Posttest	30	22	41,03	4,75	18,12

While pretest grades average of painting lesson during one term of experimental group is 17,52, posttest grades average is 41,03 when Chart 4 is analyzed. “t” test has been made in order to determine whether there is a difference between pretest and posttest grade averages. Difference between pretest and posttest grade averages of experimental group to whom systematical education has been applied has been found as significant with .05 significance level and 42 degree of freedom by observed 18,121 “t” value. It can be said that education based on self-regulation used in experimental group increases grades and academic success.

3.2. Average of Pretest and Posttest Grades of Control Groups

Data about pretest and posttest test grades of control group to whom conventional education has applied has been presented in Chart 5.

Chart 5

Average of Pretest and Posttest Grades of Control Groups

Group control	Number of Questions	N	X	Std	t
Pretest	30	22	17,52	3,82	9,15
Posttest	30	22	25,11	4,13	

While pretest grades average of painting lesson during one term of control group is 17,12, posttest grades average is 25,11 when Chart 5 is analyzed. "t" test has been made in order to determine whether there is a difference between pretest and posttest grade averages. Difference between pretest and posttest grade averages of experimental group to whom conventional education has been applied has been found as significant withe significance level and 42 degree of freedom through obtained 18,121 "t" value. It can be said that education based on conventional system used in control group increases grades and it can be argued that conventional education is effective in itself.

3.3. Posttest Average of Experimental and Control Groups

Data about posttest average of experimental group taught with self-regulation and control groups control group taught with conventional education has been presented in Chart 6.

Chart 6

Posttest Average of Experimental and Control Groups

Groups	Number of Questions	N	X	Std	t
Experimental (self-regulated education)	30	22	41,03	4,75	7,01
Control (conventional education)	30	22	25,11	4,13	

It is clear in Chart 6 that while posttest average of special teaching methods-I during one term of experimental group is 41,03,the control group's one is 25,11. "t" test has been made in order to determine whether there is a difference between the posttest average of experimental and control groups. Difference of posttest grade averages between experimental group taught by self-regulation and control group taught with conventional education has been found as significant with .05 significance level and 42 degree of freedom by observed 18,121 "t" value. It can be said that education based on self-regulation used in experimental group is more effective than education based on conventional system used in control group. This result shows parallelism with the results of research in which Paterson (1996) has examined the efficiency of environment based on self-regulation. It has been determined that students in experimental group are more successful than those in control group and they use self-regulation strategies more. Similarly, Azevedo and Cromley has carried out a research on university students in 2004 to test the efficiency of learning environment developing self-regulation skills and have come to the conclusion that learning environment developing self-regulation skills provides a more significant change in students' mental models. Arsal has also come to the conclusion that students in experimental group have more academic success than those in control group in the research titled " influence of self-regulation education on students' success in mathematics and their behaviors primary school"

Finding obtained can be interpreted as follows:

In the lessons taught to experimental group, the fact that chosen methods according to quality of topics, students' readiness and level of motivation, techniques and tactics have been used all together flexibly and the tips, feedbacks, corrections and reinforces have been given within a program during lesson may have made academic success more significant and meaningful.

Learning environment based on self-regulation has led learners to select goals for learners and focus on different topics. Also, it has provided them to choose strategical approaches to achieve their goals, to adapt them and to create new approaches. Self-regulation has provided learners to be constructor participants by enabling them to participate in learning process actively.

One of the reasons why experimental group is different from control group in significant level is that experimental group has been able to monitor, control and arrange their own behaviors, motivations and cognitions potentially as well as some features around them in this environment.

They are also aware of how to evaluate themselves, performances of their fellows and groups, how to revise and organize their performances as well as how to access and use resources, how to choose what kind of plan they should arrange.
The reason why academic success is significant in favor of experimental group may have arisen from the fact that they have had cooperation with each other in learning environment during research. Student has displayed a decisive characteristic to go on performance and active role as a result of this attitude.

Decrease in interest has been observed in control group taught with conventional education as a result of teaching lesson in a monotonous way with a teacher-centered instruction. Besides, no reinforcers and stimuli have been used in lessons. Learners have not been involved in any of processes ranging from lesson content to evaluation.

3.4. Findings and Comments of Students Related to Self- Regulation

Half structured interviews have been made with students involved in experimental group with the subgoal of determination students' opinions for self-regulated learning environments.

Printed interview records have been examined and 3 interview themes have been determined in line with experts' opinions. Interview themes have been settled as contribution of self regulated environment to learning, the most popular dimensions in self- regulated environment (critical thinking, active role taking in lessons, group performance, and evaluation) and contribution of self regulated environment to self-sufficiency of teachers.

Students' opinions about contribution of self regulated environment to learning have been presented in Chart 7.

Chart 7
Students' Opinions about Contribution of Self Regulated Environment to Learning

Opinion	n	f	%
Belief in contribution of self regulated environment to learning	22	19	86
Disbelief in contribution of self regulated environment to learning	22	3	14

When Chart 7 is analyzed, it can be understood that 22 students (%86) out of 19 participating in learning environment based on self regulation have expressed their belief in contribution of Self-regulated environment to learning. This result has been considered as important as it is dependent

from data in which comparative scale points and contribution to self-regulated learning are compared and it is students' own opinions about self-regulation.

Students who believe in contribution of Self- regulated environment to learning have studied on different topics by choosing their goals. They have chosen strategic approaches, adapted and even created new strategic approaches to achieve their goals. S.E has said that our being involved in each stage of lesson has helped us to learn lesson in fact. S.A has expressed that learning lesson practically has helped us to be active and this has been productive for learning.

Students who have become active and constructive participants through self-regulation during learning process have been able to construct meanings, goals and strategies by benefiting from information their minds as well as information from exterior environment. Students may have thought that self-regulated learning environment contributes to learning as a result of all these applications easing learning.

Students' opinions about the most popular dimensions in self-regulated environment have been submitted in Chart 8.

Chart 8
Students' opinions about the most popular dimensions in self-regulated environment

Opinion	n	f	%
Critical thinking	22	3	13,6
Active role taking in lesson	22	5	22,8
Evaluation	22	11	50
Group performance	22	3	13,6

When students' opinions about the most popular dimensions in self-regulated environment in Chart 8, 3 students (13,6) have expressed that they like critical thinking, 5 students of them (22,8) have expressed that they like active role taking and 3 students (13,6) have expressed that they like group performance. Students' active participation as distinct from conventional methods, their knowing what they are doing (content),how they are doing this (strategy) and in which process they are doing this (sequence) may lead the students to like applications related to evaluation most. In terms of this process, G.Ş has stated that this is the first time that we have made self evaluations during lessons and this is a good experience to evaluate ourselves.

Heo (2000) has argued that self-regulation gives opportunity to students to evaluate themselves and friends; therefore it has a positive effect on development of meta cognition skill. Development of meta cognition levels enables learners to gain, store and express information given during learning process more effectively. Consequently, development of mete cognition skill provided by self-regulated environment may lead more self confidence in candidate teachers. This situation should be come into prominence in evaluation dimension. This explains why candidate teachers like evaluation dimension most.

We are all aware that evaluation in art education is a problematic issue all around the world. (Al-Amri, 2011). This case is true of all branches. Nazlıçiçek and Akarsu have expressed that branch teacher don't prefer evaluation because they don't know alternative evaluation tools in evaluation in the research titled "physics, chemistry and mathematics teachers' approaches related to evaluation tools and instruments and their applications". But, they should acquire this knowledge in their undergraduate program.

National Art Educationist Association (NAEA), one of the associations directing art education gives advices to associations educating teachers in direction of giving responsibilities to implement appropriate evaluation techniques during the education of candidate art educationist.(NAEA, 2009b). This association setting standards for art educationist also gives advices in direction of visual arts educationist's using more than one method in evaluation of student's performances. (NAEA, 2009a). Self-regulated learning environment can be utilized to deal with difficulties encountered in evaluation. It shouldn't be ignored that self-regulation provides a learning environment providing required knowledge and skills to be gained related to evaluation during education of candidate teachers. Students' opinions about whether self-regulated environment contributes to self-sufficiency of teachers have been presented in Chart 9.

Chart 9
Students' opinions about whether self-regulated environment contributes to self-sufficiency of teachers

Opinion	N	f	%
There is a contribution of self-regulated environment to self-sufficiency of teachers.	22	19	86.4
There is not a contribution of self-regulated environment to self-sufficiency of teachers	22	3	13,6

In Chart 9, it is conferred that 3 students (13, 6) think that there is not a contribution of self-regulated environment to self-sufficiency of teachers and 19 (86,4) students think that there is a contribution of self-regulated environment to self-sufficiency of teachers. Students have expressed that they feel like themselves like teachers when students' interview records have been analyzed. For example; C.Y has said that our being involved in every stage of lesson have helped us to learn the lesson in fact. Also, things we learned in lesson will be useful for us when we are teachers. It can be said that self-regulated learning environments help learners to be efficient learners more.

4. DISCUSSION

We can say that formation of learning environment developing self-regulation in visual arts education skills is a beneficial applicant in two ways in the light of data obtained in research. First, students with high self-regulation skill can use learning strategies and knowledge in this environment effectively. Secondly, students with lower self-regulation skills when compared to others can learn how to arrange their learning in this environment.

Another feature to be considered while preparing self-regulated environments for candidate art educationist is to provide multi-directional and various presentation of knowledge. Students with high self-regulation skill organize their learning process by using different knowledge and learning strategies. Multi-directional presentations of knowledge help students to interpret knowledge, to place it in mental models and to organize mental models. Various presentation of knowledge by providing multi-directional demonstration can only be possible with various resources, tools and instruments. Resources to be used in self-regulated environment have an important role in construction of knowledge and solution of problems encountered. These resources can be various such as textbooks, catalogues and internet. In these environments, it is necessary to motivate students to manage their own learning processes through individual learning. Teacher should be a guide member of teaching process by leaving the role of teaching lesson by himself. Students should be provided to take individual responsibility to help them to acquire skill of managing their own learning processes.

Students should be provided to do some activities such as setting individual goals, planning, evaluating learning process and product, reviewing the learning process, choosing knowledge and learning strategies, adapting obtained information to new situations. Students should be provided to

realize learning process and they should be encouraged to make self-evaluations in creation of self-regulated environments. Through this way, students with developed self-regulation skill can reflect cognitive and emotional characteristics to learning process. Student can organize learning process by evaluating whether resultant learning is sufficient for successful performance.

The most important responsibility is the teacher's one in preparing this environment. The most important contribution of teacher to development of self-regulation is to motivate students to participate in flexible and applicable cognitive activities (duty analysis, choosing and using strategies). According to Randi (2004), there is strong relationship between teachers' self-regulation skills and students' skills to develop self-regulation skills.

5. RESULTS AND SUGGESTIONS

While posttest grades average of painting lesson during one term of experimental group based on self-regulation is 41,03, posttest grades average of control group is 25,11. "t" test has been made in order to determine whether there is a difference between posttest grade averages of experimental and control groups. Difference of posttest grades average between experimental group with self-regulation and control group with conventional education has been applied has been found as significant with .05 significance level and 42 degree of freedom through observed 7,01 "t" value and it can be said that education based on self-regulation used is more efficient than conventional education in control group.

Students in experimental group have expressed the following articles in face to face interviews and in the end of process:

- They like the situation in which learning and teaching cases prepared in accordance with self-regulation education model exist in lessons,
- They are content with the freeness of the opportunity of participating in learning process actively, their contribution to process ranging from the way the lesson is handled, application to evaluation,
- They learn how to do researches,
- It is logical to choose their performances' topics and it is more efficient to study on their areas of interests,
- Fulfilling their responsibilities increases their self-confidence,
- They evaluate their learning by themselves,
- Group working increases the quality of their performances,
- They create a good product by cooperating with each other.

They have also expressed that they want their lessons to be taught in this way as it increases their beliefs in self-sufficiency by contributing to their teaching skills. It can be said that self-regulation approach is more efficient that conventional education approach based on this results.

The influence of learning environments based on self-regulation on academic success of Visual arts teacher has been discussed in this research. Development of self-regulation can be possible with the creation of environment in which students can construct their own "learning events". This cannot be achieved in a conventional workshop/class. The most efficient approach marking on 20th century is constructivism which means individual acquires knowledge during processes of learning and teaching and perceives its meaning by processing in his mind.

Studies have been carried out to transform education programs including conventional education applied in modern schools into constructivism approach. This case has increased the students'

responsibilities in learning process. Helping students to develop self-regulation skills is necessary to fulfill these responsibilities. Therefore, it is thought that candidate teachers, who will guide students of primary school when personality characteristics are acquired, should be given trainings about self-regulation skills.

Studies about self-regulation have been carried out for over twenty years in the world. This issue has just been discussed in Visual arts education. So, researches are needed in terms of creation of learning environments based on self-regulation and development of self-regulation skills.

Data obtained at the end of this research can be given as in-service training. Besides, instructors educating visual arts teachers and candidate teachers should be trained about choosing and using strategy method and techniques based on self-regulation.

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