

*Full Length Research Paper*

# **An investigation of prospective teachers' views on concept teaching: A case of History**

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**Numerous studies have been carried out to provide active and permanent learning in History teaching. However, the importance of concept teaching which is essential for active learning literally has been ignored. An effective History teaching can only be measured by teaching the concepts involved in the program in an effective way. An effective History teaching is not possible without learning definitions of concepts included in the program. The purpose of the study is to examine the views of prospective History teachers on the importance of concept teaching in History teaching. Regarding the importance of concept teaching, prospective teachers were chosen as a research sample with the aim of measuring the awareness of prospective teachers about History concepts. Prospective History teachers who continue their education at the Department of History of Hatay Mustafa Kemal University participated in the study. The survey design was utilized in the study. Questionnaires have been utilized as the data collection tool in the research. Based on the findings, suggestions on the importance of concept teaching were made.**

**Key words:** History education, History lesson, prospective History teachers, concept teaching.

## **INTRODUCTION**

The reality of concept teaching can be understood more easily by determining the place of teaching and learning in education and the place of conceptual teaching in education. Despite the many definitions of education, the most commonly used definition is the process of deliberate terminal changes in behavior of an individual through his/her own experience (Büyükkaragöz, 1998). Regarding this definition, education can be defined as the process of self-realization. Learning is a relatively permanent change in behavior, which occurs as a result of certain levels of interaction with the individual's

environment. Başar (2001) also defines it as the preliminary efforts to achieve the behavior that will be formed as a result of learning. Based on this definition, concept learning is to create information in the mind by separating the stimuli into certain categories (Köksal, 2006).

In the work of Ülgen (2001), it is stated that concept learning is a key factor for other learners and concepts are basically built through people and their experiences in the integrity of emotion, thought, and movement. These concepts built by humans are a kind of information form

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that helps individuals understand the world and integrate with it, provide communication between people, and to develop principles. Education is the most about the concepts.

### Concept teaching in History courses

Concept refers to abstract and general design of an object in the mind (Turkish Language Institution Commission, 1998). Concept can also be described as the name given to the entity, thought, and event groups with similar characteristics (Köksal, 2006). As in other social and scientific sciences, concepts can be examined in three main groups in History science: perceived concept, descriptive concept, and theoretical concept (Turan, 2002).

Social sciences are concerned with people, their lives, and the interaction between them, it helps us to better understand ourselves and other individuals, and History has a very important place within the social sciences as such a field that deals with the political, social, economic, and cultural relations of people (Doğanay, 2003; Erden, 1996; Demirel, 2000). Social sciences have a very important function in terms of providing balance between the needs of the individuals living in society and the expectations of the society, and providing the necessary knowledge, skills, and attitudes to individuals. Concepts need to be clearly explained in performing that function (Safran, 1993). History is a scientific discipline that conducted scientific research based on searching, examining, collecting data, analyzing and evaluating this data, and deducing conclusions by its nature; therefore, concept teaching has an important place in History (Turan, 2002).

Concept teaching should be planned in such a way that concepts will be formed in the mind of a child and it will be carried out with the right steps and methods and with the understanding that the student will be active, helping students to form the correct mental models that can be used throughout life (Ayas, 1995). It is frequently expressed that teachers should design and implement teaching taking into account the conditions appropriate to students' individual characteristics. From the point of view of teaching to concept learning, it can be seen that the teaching method of concept learning alone does not make any sense. In this vein, Ülgen (2001) underlines the essentiality for teachers to prepare learning environment as regards the conditions appropriate to the individual characteristics of the student. Therefore, the knowledge structure occurs as the result of the interaction between the environmental conditions and the cognitive structure of the student. Thus, it can be indicated that concept teaching should be implemented through a student-centered approach. In the light of the fact that individual intelligence can be assessed within the cognitive

structure, the importance of constructing the concepts can be emphasized. It is stated that there are two basic methods of concept teaching in the literature (Ayas et al., 1997; Seiger-Ehrenberg, 1985; Coştu et al., 2003). The first method is the traditional method; in that, the teacher asks students to find examples covering and not covering the concept while providing the descriptive and distinguishing qualities of the concept to the students in order to ensure the understanding of the word that expresses the concept, the verbal definition of the concept, and the definition of the concept. This method is also known as the deductive approach. The findings of the studies about concepts show that the majority of the teachers use the traditional method in concept teaching but they use it incompletely and incorrectly (Coştu et al., 2003). The application of this method in History teaching causes the student to memorize the topic without conceptualizing it and to forget it in a short time.

As for the application of the second method (inductive), the teacher enables students to make generalizations from examples related to concepts. In this method, the student is asked to identify the descriptive and distinguishing qualities by examining examples covering and not covering the concept. The second method shows similarity with the constructivist learning theory which is one of the modern learning theories as regards structure and functions (Coştu et al., 2003).

This method gives students a chance to learn concepts in a permanent and an effective way. In addition, the student's concepts, considered as a misconception and inconsistent with scientific knowledge, negatively affect their observations. The concepts of the objects and events in the students' minds may differ from the scientifically accepted concepts. This is called misconception. Misconceptions are alternative concept definitions that students build to scientifically accepted concepts (Tekkaya et al., 2000). Hence, it is believed that new knowledge must be associated with students' previous knowledge; thus concepts should be taught through eliminating misconceptions. The theory claims that learning becomes more effective by proving that the current knowledge of the students is not at the wrong or satisfactory level. It is also stated that the use of the experience gained by the student is an effective application in concept teaching as regards to demonstrating the lack of existing knowledge to them and providing meaningful learning (Coştu et al., 2003). One of the most effective methods in preventing concept misconceptions in concept teaching is the use of concept maps (Ausubel, 2000). Concept maps facilitate understanding of the basic concepts included in the History program through explaining those concepts and their relationships visually (Çolak, 2011; Simmons et al., 1988). Many studies underline the importance of concept teaching techniques in order to eliminate the misconceptions (Bakken et al., 1997; Novak, 1990;

Willerman and Mac Harg, 1991).

According to the view of Novak and Gowin (1984) view of teaching and learning, in other words knowledge creation, is carried out personally. If the process of information creation is random and word-to-word, then "memorization learning" occurs and it can be said that the acquisition and transfer of new knowledge is related to the creation and transmission of concepts (Köksal, 2006). The memorization learning is one of the most fundamental problems of concept teaching. For many years, many teachers have accepted that traditional methods are the most effective ways to eliminate the misunderstandings of concept teaching. However, these methods were insufficient to make the conceptual change in students and they lead student to memorization; in addition, it does not prevent students from consulting to misconceptions in such topics that require definition, explanation, and prediction (Güneş et al., 2010).

In order for concepts to be taught in an effective way, following a particular order also facilitates teaching and facilitates permanent concept learning. Today, the currently developed system in all education disciplines is to make generalization from effective examples (Turan, 2002). The way of concept teaching is as follows: (a) Preparing students for concept teaching and determine the necessary materials; (b) Defining the concept.

The method increases student's success in concept teaching and tendency to rote learning may be prevented.

## METHODOLOGY

### Problem statement

The problem statement is as follows:

Do the views differ in regards to such demographic variables as gender, class level, graduated school, residence, educational status of mother, and educational status of father?

### Purpose of the study

The concept is a general structure that is the basis for any work area. In any field, concept learning can be defined as the classification of stimuli and their structuring in mind. For this reason, in order for knowledge of History to be structured in the mind, History concepts should first be constructed in the minds. As a discipline in which abstract information is conveyed, it is thought that students who have a learning disability in History do not learn mainly the concepts of History and fail in this area. Hence, it is not possible to learn the subject if the basic concepts related to History teaching are not properly constructed in mind. The study was needed to determine the level of awareness of prospective teachers about the importance of concept teaching in History teaching. For this reason, the study aims to examine the views of prospective History teachers on the importance of concept teaching in History teaching as regards to such demographic variables as gender, class level, graduated school, residence, educational status of mothers, and education status of fathers.

### Participants

Since studies in literature have generally examined teachers' views, the study aims to examine the views of prospective teachers. Considering the importance of concept teaching in History teaching, it was tried to be determined whether prospective teachers could learn historical concepts enough to teach. Therefore, all prospective teachers who continue their education at the Department of History of Mustafa Kemal University (n=339) participated in the study.

### Research design

The study aims to determine the views of prospective teachers who continue their education at the Department of History of Mustafa Kemal University on concept teaching in History teaching as regards to such demographic variables as gender, class level, graduated school, residence, educational status of mothers, and education status of fathers. In order to determine the effect of environment and economic situation on education, it is necessary to examine such variables to determine the effects the economic and educational status of parents, the demographic structure of the place where they live and the influence of the environment on students as well as the extent of the effects of the gender factor on students. In this vein, the questionnaire "Prospective History Teachers' Views on Concept Teaching" which was developed by the researcher was implemented.

Validity and reliability of the questionnaire "Prospective History Teachers' Views on Concept Teaching" which was implemented in the research were recalculated by the researcher for this study and the Cronbach Alpha internal reliability coefficient of the questionnaire was 0.97. The answers of participants to questionnaire based on the demographic variables were calculated through F test, t-test and ANOVA test utilizing the SPSS 20 statistical package program. The questionnaire consists of 20 items in the form of five Likert types: (1) Strongly Disagree, (2) Disagree, (3) Undecided, (4) Agree, and (5) Strongly Disagree. The general evaluation of the questionnaire implemented in the research is as follows (Dönger et al., 2016, 2017): OR: Option Range; HV: Highest Value; LV: Lowest Value; NO: Number of Options; 1.00 - 1.80: Strongly Disagree; 1.81 - 2.60: Disagree; 2.61 - 3.40: Undecided; 3.41 - 4.20: Agree; 4.21 - 5.00: Strongly Disagree.

Survey design was utilized in this study. Survey design can be expressed as a research approach aiming to describe and explain situations which have been happening or happened at past (Karasar, 2000). The mixed method involves collecting quantitative and qualitative data on the baseline events in a study or series of studies, and analyzing and interpreting the collected data (Leech and Onwuegbuzie, 2007).

### Data collection and analysis

The questionnaire "Prospective History Teachers' Views on Concept Teaching" which was developed by the researcher as a data collection tool in the research. It consists of 20 items and the data obtained at the study were analyzed using Statistical Package for Social Sciences (SPSS) program. Since the 20-item Likert type statements are in the form of five Likert types, the data obtained from participant's views were input into SPSS 22.0 package program through scoring 5 points for "Strongly Agree", 4 points or "Agree", 3 points for "Undecided", 2 points for "Disagree", and 1 point for "Strongly Disagree" regarding participation to questionnaire, and the data were analyzed using the program.

Frequency (f) and percentage (%) were calculated. The arithmetic mean (x) and the standard deviation were used in the evaluation

**Table 1.** T-test analysis results of the prospective teachers' answers to the questionnaire "prospective History teachers' views on concept teaching" in regards to 'gender' variable.

Gender	N	$\bar{x}$	Ss	Sd	t	p
Female	178	78.357	14.001	337	1.749	0.081
Male	161	75.385	17.271	-	-	-

p>0.05

**Table 2.** ANOVA-test analysis results of the prospective teachers' answers to the questionnaire "prospective History teachers' views on concept teaching" as regards to 'class level' variable.

Class level	N	$\bar{x}$	Ss	Coeff. variance	Sum of squares	Sd	Quad. mean	F	p	Significant difference
1. Grade	91	77.55	14.10	Withing	259.00	3	86.33	0.349	0.790	
2. Grade	95	77.55	15.82	Betw.	82912.05	335	247.50	-	-	-
3. Grade	75	77.08	14.62	Total	83171.05	338	-	-	-	-
4. Grade	78	75.39	18.27	-	-	-	-	-	-	-
Total	339	76.95	15.69	-	-	-	-	-	-	-

p>0.05.

of the views of prospective teachers on concept teaching. The arithmetic mean ( $\bar{x}$ ) and the standard deviation were used in the determination of views of prospective teachers on concept teaching. In addition, One-Way ANOVA test was conducted to examine the views of the teacher candidates as regards to different variables (age and gender).

**Data analysis**

Statistical analyses were done using SPSS 22 program. One-Way ANOVA for the independent samples and independent variables t test were conducted among the participants' views on concept teaching in History education and independent variables. Descriptive statistics were also used to determine the views of prospective teachers on concepts teaching in History teaching.

**FINDINGS AND DISCUSSION**

Table 1 shows the views of undergraduate students participating in the research on concept teaching and based on the results of t test, it was determined that there were no statistically significant differences (p> 0.05) between female and male students as regards to the demographic variable of gender. Therefore, it can be stated that views of female and male students on concept teaching did not show statistically significant differences, that is, female and male students share approximately same views on concept teaching.

Table 2 shows that based on the results of ANOVA test, the views of undergraduate students participating in the research and studying at different grade levels on concept teaching did not show statistically significant

difference as regards to the variable of *class level*. Thus, it can be said that undergraduate students studying at different levels share approximately same views on concept teaching.

Based on the results of ANOVA test, Table 3 shows that the views of undergraduate students participating in the research and graduating from different high schools on concept teaching did not show statistically significant differences as regards to the variable of graduated school. Thus, it can be said that undergraduate students graduated from different high schools share approximately same views on concept teaching.

Regarding the results of ANOVA test, Table 4 shows that the views of undergraduate students participating in the research and residing in different settlements on concept teaching did not show statistically significant difference as regards to the variable of residence. Thus, it can be said that undergraduate students residing in different settlements share approximately same views on concept teaching.

As regards to the data in Table 5, the results of ANOVA test shows that the views of undergraduate students who participated in the research and whose mothers graduated from different levels of school on concept teaching did not show statistically significant differences as regards to the variable of educational status of mothers. Thus, it can be said undergraduate students whose mothers graduated from different levels of school share approximately same views on concept teaching.

As regards to the data shown in Table 6, the results of ANOVA test show that the views of undergraduate

**Table 3.** ANOVA-test Analysis Results of the Prospective Teachers' Answers to the Questionnaire "Prospective History Teachers' Views on Concept Teaching" in Regards to 'Graduated School' Variable.

Graduate school	N	$\bar{x}$	Ss	Coeff. variance	Sum of squares	Sd	Quad. mean	F	p	Significant difference
Ana. H.	117	76.01	16.89	Withing	1252.61	3	417.54	1.707	0.165	
Voc. H.	10	67.90	15.55	Betw.	81918.43	335	244.53	-	-	-
Sci. H.	52	79.33	13.88	Total	83171.04	338	-	-	-	-
Others	160	77.43	15.22	-	-	-	-	-	-	-
Total	339	76.95	15.69	-	-	-	-	-	-	-

p>0.05.

**Table 4.** ANOVA-test analysis results of the prospective teachers' answers to the questionnaire "prospective History teachers' views on concept teaching" as regards to 'residence' variable.

Residence	N	$\bar{X}$	Ss	Coeff. variance	Sum of squares	Sd	Quad. mean	F	p	Significance difference
Village	75	80.73	14.40	Withing	1880.48	3	626.83	2.583	0.053	
Town	13	72.08	17.36	Betw.	81290.57	335	242.66	-	-	-
District	114	77.27	13.31	Total	83171.05	338	-	-	-	-
Province	137	75.07	17.64	-	-	-	-	-	-	-
Total	339	76.95	15.69	-	-	-	-	-	-	-

p>0.05.

**Table 5.** ANOVA-test analysis results of the prospective teachers' answers to the questionnaire "prospective History teachers' views on concept teaching" as regards to 'educational status of mothers' variable.

Edu. status of mother	N	$\bar{x}$	Ss	Coeff. variance	Sum of squares	Sd	Quad. mean	F	p	Significance difference
Primary S	251	77.06	15.84	Withing	893.64	4	223.41	0.907	0.460	
Middle S.	40	78.95	13.74	Betw.	82277.41	334	246.34	-	-	-
High S.	36	73.06	18.01	Total	83171.05	338	-	-	-	-
University	2	86.00	4.24	-	-	-	-	-	-	-
Others	10	78.40	9.68	-	-	-	-	-	-	-
Total	339	76.95	15.69	-	-	-	-	-	-	-

p>0.05.

students who participated in the research and whose fathers graduated from different levels of school on concept teaching did not show statistically significant difference as regards to the variable of educational status of father. Thus, it can be said that undergraduate students whose fathers graduated from different levels of school share approximately same views on concept teaching.

## CONCLUSION AND SUGGESTIONS

Based on the research data, it was determined that there

is no difference between the views of female and male students on concept teaching and the students' views are equal or close to each other. These results showed that all female or male students who participated in this research have reached the necessary level of awareness about the importance of concept teaching. In their study of concept maps, Yilmaz and Çolak (2012) obtained similar results by examining the effect of the gender factor on concept teaching. The study also emphasizes the inadequacy of studies on concept teaching. Educators may suggest that the concept teaching should be dealt with in different dimensions because of the majority of abstract concepts in fields such as History or

**Table 6.** ANOVA-test analysis results of the prospective teachers' answers to the questionnaire "prospective History teachers' views on concept teaching" as regards to 'educational status of fathers' variable.

Edu. status of father	N	$\bar{X}$	Ss	Coeff. variance	Sum of squares	Sd	Quad. mean	F	p	Significance difference
Primary S	189	76.85	15.43	Withing	1245.10	4	311.02	1.268	0.282	
Middle S.	59	75.51	14.46	Betw.	81826.95	334	245.29	-	-	-
High S.	59	80.41	16.05	Total	83172.05	338	-	-	-	-
University	13	75.85	18.16	-	-	-	-	-	-	-
Others	19	72.37	18.51	-	-	-	-	-	-	-
Total	339	86.95	15.69	-	-	-	-	-	-	-

$p > 0.05$ .

### Social Studies.

Based on the findings, it is revealed that undergraduate students studying at different class levels have the same or similar views on the concept teaching. According to this result, it is inferred that concept teaching is crucial at every level of education. Concept teaching is especially important in eliminating misconceptions. In their study, Ceyhun and Karagölge (2004) point out the necessity of applying effective new teaching methods in courses in order to eliminate misconceptions and that the textbooks which have an important place in teaching environment should be developed in such a way that it prevents building misconceptions and eliminates misconceptions that have been taught (Köksal, 2006).

As regards to the data obtained from the study, it is seen that the views of the undergraduate students who participated in the research and graduated from the different secondary schools do not show statistically significant differences depending on the variable of the graduated school, residence, educational status of mother and father. It can be concluded that students have either advanced knowledge of concept teaching or they have not reached the necessary level of awareness about the topic with which they do not become familiar. The results of many researches reveal that the concept teaching has not yet been fully implemented in our country and should be improved and applied using effective teaching with different methods and techniques. It is suggested that educators should develop activities in which students take active participation. For example, in his study, Yükselir (2006) found out that giving the definition of concepts and explaining them with an example do not effectively teach concepts and lead students to memorize the concepts. In addition, he suggested that various activities should be developed with the aim of avoiding students from memorization. In the study that examines the effect of concept teaching on the academic achievement levels of students in the 6th grade social studies classroom through brainstorming techniques, it was found out that the student-centered Brainstorming Technique in which students' thoughts are

seen to be valuable and active participation of students are allowed promote students to develop positive attitudes and make contribution to students' academic achievements (Kısa, 2007).

The result of a research by Akengin and Süer (2010) revealed that teachers arrive at a consensus about the importance of the concepts but they are inadequate in practice. Insufficient time and the number of objectives are put forward as rationale for the inadequate practice. Along with encountering similar problems in most studies, it is suggested that the problem of concept teaching which is essential topic in education should be determined and effective solutions should be proposed.

### CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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