KURAM VE UYGULAMADA EĞİTİM BİLİMLERİ EDUCATIONAL SCIENCES: THEORY & PRACTICE

Received: August 4, 2016
Revision received: January 9, 2017
Accepted: March 2, 2017
OnlineFirst: December 12, 2017

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www.estp.com.tr
DOI 10.12738/estp.2017.6.0429 • December 2017 • 17(6) • 2093–2142

Research Article

Investigating Student Teachers' Conceptions of Social Studies through the Multi-dimensional Structure of the Epistemological Beliefs*

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Abstract

The first aim of this study is to define student teachers' epistemological beliefs and how they conceive social studies. The second aim is to determine whether participants' conceptions of social studies differ in accordance with the epistemological beliefs they hold. Designed as a sequential explanatory mixed research, this study employs 620 student teachers in its quantitative phase, while the participants of the following qualitative phase consists of 17 students teachers. The Epistemic Belief Inventory and a semi-structured interview schedule were used as data collection instruments. The findings of the quantitative study revealed that student teachers hold highly sophisticated epistemological beliefs in the following three dimensions of the inventory: (i) Access to Knowledge and Knowledge Acquisition, (ii) Certainty of Knowledge, and (iii) Control of Knowledge, while they have average sophisticated beliefs in the Structure of Knowledge dimension. The qualitative findings reveal that participants perceived social studies as life itself and as a relaxing subject taught in middle schools. The comparison of the quantitative and qualitative findings in the last phase of the study revealed that the participants' conceptions of social studies differ based on the level of their epistemological beliefs in each dimension of the inventory.

Keywords

Social studies student teachers • Epistemological beliefs • Conceptions of social studies • Mixed method research • Explanatory sequential design

* The views expressed in this paper are those of the authors and not necessarily those of the University or the Ministry.

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Citation: Dinç, E., & Üztemur, S. (2017). Investigating student teachers' conceptions of social studies through the multi-dimensional structure of the epistemological beliefs. *Educational Sciences: Theory & Practice, 17,* 2093–2142. http://dx.doi.org/10.12738/estp.2017.6.0429

So that humans may be able to make sense of their lives, having reliable knowledge is absolutely essential. In the act of knowing, the person is the knower, also referred to as the subject, whereas that which they come across is the object known. Accordingly, the act of knowing is a process occurring between the knower and the known that results in what may be called knowledge. The known might be a phenomenon, an event or an entity in a passive position that is approached by the knower. As a conscious and intelligent entity, the knower actively seeks to know about everything other than herself and to comprehend her existence by making herself into an object to be known. Approaching the object to be known, the subject performs a mental activity through which she first arrives at concepts. Then, the concepts that she uses enable her to make inferences. Knowledge is produced in this final position (Çüçen, 2001, p. 16). One of the most discussed issues in epistemology is the differentiation between knowledge and belief. According to Kant (as cited in Uslu, 2010, p. 32), whereas knowledge requires personal approval based on individual motives as well as objective justifications, a belief, though one may include personal reasons for hold it and precise subjective approval, does need not to be justified objectively. Based on this distinction, knowledge can be described as a justified, reasonable, and true belief (Uslu, 2010, p. 32). According to this description, knowledge is a kind of belief, though not a simplistic one. In order to accept any kind of belief as knowledge, it must also be justified, reasonable, and true. This suggests that knowledge can be achieved by means of objectively proving or justifying a belief that was held to be absolutely true for the knower. According to this conception, a belief indicates a degree that is insufficient and lower than that of knowledge (Uslu, 2010, p. 33). Deryakulu (2014, p. 262) suggests that knowledge can be achieved through the proving or justification of objective phenomena able to be observed by all, while beliefs are depended on personal feelings, perceptions, appreciations, and judgements that were held to be true and accurate representations of the entity and the state of a particular person, object, or case.

Gaining prominence as a philosophical discipline in the modern ages (Külcü, 2000, p. 389), epistemology substantially handles the issues of the sources, structures, methods, capabilities, limitations, and value of knowledge (Bolay, 2004, p. 69). Epistemological beliefs on the other hand, are personal beliefs held by people about the nature of knowledge and learning (Schommer, 1994, 1998). Described as personal thoughts and beliefs toward the entity or existence of knowledge, how it is acquired, its degree of certainty, and its limitations (Brownlee, Purdie, & Boulton-Lewis, 2001, p. 248), epistemological beliefs have attracted a profound amount of psychologists' and educators' attention in recent decades (Hofer, 2001; Hofer & Pintrich, 1997). Apart from those issues that have been handled by conventional epistemology studies, epistemological belief research has been seeking to answer these questions: (i) How are epistemological beliefs conceptualized? (ii) Are epistemological beliefs related to learning? (iii) How are epistemological beliefs developed or changed over the course of time? and (iv) Which factors influence epistemological beliefs?

Perry's extensive longitudinal phenomenographic research on white male students attending Harvard University has been accepted as pioneering epistemological belief studies (Pery, 1970 as cited in Hofer & Pintrich, 1997, p. 89). He suggested a model in which the development of epistemological beliefs follows one another sequentially. According to his model, epistemological development explains whether the ways that people conceptualize knowledge differ from one another, and if so whether this/those difference(s) depend(s) on any variable (e.g.; age, maturation, educational background, etc.) (Deryakulu, 2014, p. 264). According to Perry, newcomers to university tend to believe that knowledge is simple, certain, and both produced and presented by experts/specialists whereas toward the end of their undergraduate education, most of these same individuals begin to believe that knowledge depends upon the context, that there are only a few absolute truths, that knowledge is in an inextricable form consisting of countless interrelated items, and that it is produced by individuals through personal observations and reasoning rather than by experts/specialists (Deryakulu, 2014, p. 264; Schommer, 2002, p. 104). Based on the above research findings, Perry categorizes individuals' epistemological beliefs into four development levels: dualism, multiplism, relativism, and commitment (1970, cited in Hofer & Pintrich, 1997, p. 91). Persons holding a dualist stance believe that the knowledge has an absolute characteristic (i.e., being either true or false) and that true knowledge is produced and transferred by specialists or an authority. Individuals with a multiplist belief start to comprehend that the knowledge is not wholly certain or absolute and that specialists might make mistakes without relinquishing their belief that there are some realities or facts that do not change at all. Multiplists believe specialists' views less and give importance to their own conceptions of what is true or what is false. Individuals in the relativist stance assess whether knowledge is true or false while taking into consideration the context in which it exists or occurs. In this level where absolute truths are not valid anymore, individual perceptions and interpretations come to the fore. While individuals' flexible and relativist thinking continue to be influential upon reaching the level of commitment, they additionally tend to devote themselves to a particular thought or belief at this level (Brownlee et al., 2001, p. 248; Chan & Elliott, 2000, p. 226; Deryakulu, 2014, p. 265).

Starting with Perry, epistemological belief model studies have been carried out by various researches under different names (Baxter Magolda, 1992 as cited in Hofer & Pintrich, 1997; Belenky, Clinchy, Goldberger, & Tarule, 1986; King & Kitchener, 1994 as cited in Hofer & Pintrich, 1997; Kuhn, Cheney, & Weinstock, 2000). An investigation of the single dimension models reveals that epistemological belief models in this group share, for the most part, the same path. The epistemological development path progresses from an objectivist, dualist stance where specialists or an authority is taken as the source of knowledge to a position where individuals gain multiperspectivity and start to believe that their views might be valuable. The final

stance in this path suggests that knowledge is not transferred by specialists, but rather that it is actively produced by the subject herself. Instead of an understanding of absolute and certain knowledge, this stance suggests a view of knowledge that is not stable but developing and successively renewing itself in accordance with the context in which it exist/occurs. In short, knowing something means justifying it (Deryakulu, 2014, p. 267; Hofer, 1994, p. 3; Hofer, 2001, p. 359).

Schommer (1990; 1994) criticised the above mentioned epistemological development models for the reason that they were designed to assess individuals' beliefs on knowledge and the acquisition of knowledge sequentially in a single-dimension sphere. She argued not only that such developmental models' approach to epistemological beliefs is not appropriate to comprehend the complex structure of these beliefs but also that they might impose certain constraints to multiple connections between epistemological beliefs and various aspects of learning. She therefore suggests that epistemological beliefs need to be investigated with their multi-dimensional structure. Schommer (1990; 1994) asserts a multi-dimensional model called *epistemological belief system.* Her system presupposes five epistemological dimensions. Three of these dimensions (i.e., *structure, certainty,* and *source*) are related to knowledge itself whereas the remaining two (i.e., *control* and *speed*) are linked to the acquisition of knowledge. Her multi-dimensional epistemological belief system is set out in Diagram 1. According to her system each dimension contains two categories.

In the *Structure of Knowledge* dimension for instance, those beliefs expressing that knowledge is simple and formed as a result of the assembly of various pieces fall into one category (i.e., naive) whereas those beliefs expressing that knowledge is complex, integrated, and combined are grouped in a different category (i.e., sophisticated). Those individuals who believe that knowledge is simple tend to remember what they learned as knowledge word by word, whereas those individuals with sophisticated beliefs hold that knowledge is complex, interrelated, transferable, and applicable. Therefore, their beliefs have an impact on learning processes. Those individuals who believe that knowledge is formed from isolated fragments are more likely to experience problems in understanding complicated texts. The main problem here is that individuals in this group are unable to successfully integrate their prior knowledge into new information that they encounter in a particular text (Schommer, 1998, p. 132).

In the *Certainty of Knowledge* dimension, those holding naive beliefs hold that knowledge is certain and stable wheras those hold sophisticated beliefs assert that apart from a limited amount of knowledge, what is taken as knowledge has undergone a process of continuous change and development. Those who believe that knowledge is simple and certain are more likely to give simple answers, seeking, for example, to produce only one answer to a mathematical question. Individuals holding such beliefs may only see in terms

of black and white, without any grey area in between, and tend to interpret ambiguous and unresolved texts as certain facts. Conversely, individuals holding sophisticated epistemological beliefs are more likely to present complex answers and produce multiple ways to solve a problem (Schommer, 1998; Schommer & Dunnell, 1994).

In the *Source of Knowledge* dimension, individuals holding naive epistemological beliefs think that all knowledge arises from or is both produced and transferred by specialists or another authority whereas those holding sophisticated beliefs content that knowledge is produced through extensive observation, reasoning, and judgements (Schommer-Aikins, 2004, p. 20).

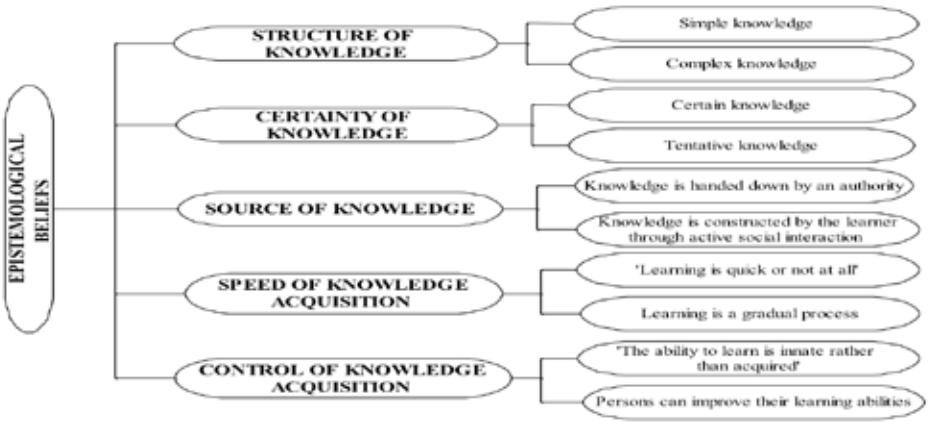


Diagram 1. The structure of Schommer's Multi-dimensional Epistemological Belief System.

People with naive epistemological beliefs hold that human beings' ability to learn is genetically fixed at birth whereas those holding sophisticated beliefs maintain that one's ability to learn is gained and improved upon through life-long experiences. One's beliefs related to the control of learning may help the individual cope with challenging tasks as well as develop positive attitudes toward learning itself. People who believe that they have fixed learning and problem solving abilities may potentially assess their mistakes as a reflection of their inabilities. If they experience a difficult situation, they may become disappointed and quit trying. According to Dweck and Leggett (1988, p. 258), students who believe that one's abilities are fixed at birth also deem themselves inept and unable to complete a challenging academic task that they encounter. On the other hand, students who believe that one's ability can be developed perceive challenging academic tasks or assignments as being designed to enhance their abilities to learn and improve themselves. When they encounter such tasks, they try to encourage themselves, by telling themselves that they have to try harder and apply different strategies. They use various working strategies and focus more on studying. Their persistence may go on for days, months, and years (Schommer, 1998, p. 134).

Those holding naive beliefs consider learning to be a process that can happen rapidly or that may never occur whereas students with sophisticated epistemological beliefs approach learning as a gradual and progressive process. Those who believe that knowledge acquisition is a quick process think that there is no need to allocate substantive amounts of time for learning. It is highly possible that beliefs about the speed of learning process influence the amount of time people spend to solve a problem. According to such individuals if one is unable to learn after her first attempt, she may consider any successive attempts to be senseless or a waste of time. On the contrary, those who believe that knowledge acquisition is a step by step and gradual process try to scrutinize the problem first and then attempt to devise a study plan based on the problem's degree of difficulty. They approach the problem strategically, which leads them to reach a meaningful learning (Schommer, 1998, p. 134).

Schommer (1994, p. 301) asserts that it is not obligatory to expect individuals' epistemological belief development to progress synchronically in accordance with a pre-given coherent order. For example, an individual may hold that knowledge is absolute and unchangeable while at the same time believing that it has an integrated, combined, and complex structure. Believing that the ability to learn comes from birth does not prevent or limit one from regarding the processes of learning as a step by step gradual progression. In order to test her five-dimensional theory, Schommer developed a likert scale consisting of 63 items. After conducting a pilot study to assess the validity and reliability of her scale, four factors or dimensions were determined to align with naive epistemological beliefs, namely: (i) simple knowledge, (ii) certain knowledge, (iii) quick learning, and (iv) one's ability being fixed from birth. She has been criticised by other researchers because her scale did not include the *Source of Knowledge* dimension (Hofer & Pintrich, 1997; Schraw, Bendixen, & Dunkle, 2002). In addition, Hofer and Pintrich (1997, p. 108–110) indicated that Schommer's model has a number of theoretical defects, stating that while the dimensions of simple knowledge and certain knowledge fit into the previous epistemological models, the belief that one's ability is set from birth is outside of the theoretical structure. Hofer and Pintrich (1997) stressed that beliefs about knowledge are not the same thing as the speed of learning. Moreover, Schommer's model has been scrutinized by several academics asking whether beliefs about learning, education, and intelligence are parts of individuals' epistemological beliefs or whether they are related to personal beliefs and theories. Beliefs on self-efficacy, for instance, are taken as an important part of a person's psychological construct of education, but are not regarded as something related to personal epistemology. Similarly, beliefs about the structure of intelligence and the speed of learning may not be components of the epistemological domain (Burr & Hofer, 2002; Hofer, 2001). The difference of opinions on the above issues has been discussed and there exists a difference of opinion in academics' viewpoints. In spite of these critics, since it leads researchers to a path different

than previous phenomenographic studies and facilitates data collection procedures, Schommer's scale has been translated into various languages and applied in different cultural spheres. All of these studies work to accelerate research on the impact of epistemological beliefs on learning and teaching (Deryakulu, 2014, p. 269).

The issues of how students' beliefs about knowledge and knowing influence the process of learning and what kind of roles these beliefs play in the processes of knowledge acquisition and information building have pulled educational psychologists' attention to this direction (Hofer, 2001, p. 354). The results of the following studies therefore indicate that epistemological beliefs not only have an impact on but are also influenced by various variables. The relevant research reveals that epistemological beliefs have an impact on students' academic beliefs (Cano, 2005; Conley, Pintrich, Vekiri, & Harrison, 2004), their active participation in learning processes (Schommer, 1994), their tendency to take academic risks (Dweck & Leggett, 1988), their skills of comprehending the reading tasks (Ryan, 1984), their approaches to learning (Aypay, 2011a; Chan & Elliott, 2004; Phan, 2008), and their study strategies (Deryakulu, 2004; Holschuh, 1998; Schommer, 1998). The relevant literature also reveales that there are significant and meaningful relationships between epistemological beliefs and critical thinking (Başbay, 2013; Hofer, 2004), epistemological beliefs and motivation (Chen & Pajares, 2010; Kızılgüneş, Tekkaya, & Sungur, 2010; Ricco, Pierce, & Medinilla, 2010), epistemological beliefs and cultural differences (Chan & Elliott, 2002; Deryakulu & Büyüköztürk, 2002), and epistemological beliefs and the field of study (Deryakulu & Büyüköztürk, 2005; Hofer, 2000; Youn, 2000).

Beliefs are transformed into reality through processes where a person perceives and evaluates various events and experiences under the influences of her culture, educational background, and own personal characteristics. Once a belief about a person, an object, or a case takes shape, it becomes an agent forming and influencing how its holder perceives or conceptualizes subsequent events, experiences, or cognitive information that he may come across, how he processes and interprets them, and how he decides on taking action (Deryakulu, 2014, p. 262–263). Perception in this context means gaining impressions about objects and events through one's senses. An organism adapts to its environment by means of perceptual processes and there could be differences between an individual's perception tied to her private life and objective facts (Yahyaoğlu, 2013, p. 36). While attitudes include thinking, feeling, and acting – namely, how an individual should see and behave toward something – perception, and then conceptualization, means to make sense of a fact, interpret it, and then create a world of experience about it (Pickens, 2009 as cited in Karbay, 2012, p. 4).

In line with its aim to enable one to obtain the knowledge, attitudes, skills, and values needed to adapt to social life and to create solutions for social problems,

social studies, endeavour to raise effective citizens (Öztürk, Keskin, & Otluoğlu, 2012, p. 2). Effective citizenship in this context refers to an individual knowing her duties and responsibilities and being sensitive about social and natural occurrences occurring in her immediate environment (Sözer, 1998, p. 19). Though social studies is directly related to life itself and seeks to find solutions for real-life problems, unfortunately many of the students find it to be a boring class as they believe not to have any relavence with their everday lives (Özkal, Güngör, & Çetingöz, 2004, p. 602). Middle school students in particular have for years held the belief that the topics they learn in social studies will not bear fruits in their future lives (Byford, 2002, p. 11). Despite the fact that there are numerous reasons for students to conceive of social studies negatively, Haladyna (1982 as cited in Alazzi & Chiodo, 2004, p. 3-4) asserts that both teachers and the learning context play crucial roles in shaping students' perceptions and attitudes toward social studies. Social studies teachers' use of teaching methods and techniques, their expertise of the field, the methods that they use while approaching their students, and the nature of the learning context directly influence how students perceive the subject and their attitudes toward it. For example, it is highly probable that a lesson reducing history to a mere transmission of past events without emphasizing historical empathy or historical discussion and without establishing connections between historical events or places and those of learners' everyday lives will fail to arouse students' interest.

Although teachers' preservice education shows similar characteristics, personal differences such as intelligence, ability, gender, interest, previous knowledge about the subject, motivation, learning styles, locus of control, epistemological beliefs, and self-efficacy beliefs cause differences in teachers' perceptions, beliefs, and comprehension. In their preservice education, not only do teachers learn about their subject area, they also gain experience using various learning methods. The courses they take constitute the substructure of student teachers' own perceptions, beliefs, knowledge, and experiences. The preparation to teach a specific subject area and gain the culture of being teacher of that subject starts during one's preservice education (Güven, 2004). From this point of view, it is important to analyze how student teachers of social studies conceive of social studies. In order to determine how student teachers of social studies conceive of their subject area, the relevant literature (Akengin, Sağlam, & Dilek, 2002; Akhan, 2015; Alazzi & Chiodo, 2004; Bal & Gök, 2011; Demirbaş & Çelikkaya, 2012; Deveci & Bayır, 2011; Dinç & Doğan, 2010; Doğanay & Sarı, 2008; Güven & Ersoy, 2007; İskender, 2007; Keçe, 2014; Kılcan & Akbaba, 2014; Kılınç, 2014; Mertol, Doğdu, & Yılar, 2013; Özbas, 2012; Özkal et al., 2004; Özmen, 2011; Topçu, 2010; Yalçınkaya, 2015; Yapıcı & Demirdelen, 2007; Yazıcı & Yazıcı, 2010; Yılmaz & Kaya, 2011) has been examined. This examination led to the definition of themes that may be regarded as the very elements forming their conception of social studies. The emerging themes have only been taken as the

constituents of student teachers' conception of social studies and do not represent middle school students' conceptions of the subject. In this context, the aims and objectives of Turkey's social studies curriculum and its content were regarded as two interconnected elements of preservice social studies teacher education that not only explain each other but are also influenced by one another. They were therefore treated as a unified single constituent. The themes are depicted in Diagram 2 below.

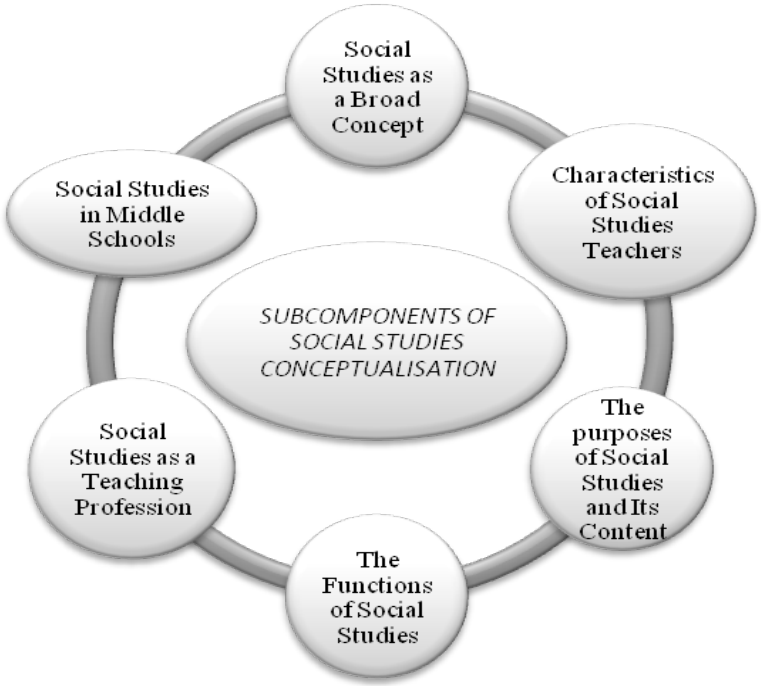


Diagram 2. The Subcomponents of the Social Studies Student Teachers' Conceptions of the Social Studies.

Teachers' conceptions and understandings of their subject area have a substantive influence on their teaching methods, their educational decisions, and their approaches to the relevant curricula (Yılmaz, 2008, p. 158). According to Chan and Elliott (2000, p. 225), teachers' epistemological beliefs play crucial roles not only in their choice of teaching methods but also in making decisions, selecting teaching materials, focusing on the content, specifying how to approach students in the classroom, and how they manage students' behaviors.

It has been stressed in the relevant literature that epistemological beliefs have an impact on individuals' perceptions, attitudes, and viewpoints. Accordingly, Schommer (1994, p. 300) points out that persons with naive epistemological beliefs blindly accept everything that their instructors tell them in history classes during their undergraduate training. However, although writers and instructors might very often state their thoughts in a persuasive manner, the content of history textbooks and what

historians recount about the past generally include their theoretical orientations and interpretations. It is highly possible that those students who believe that knowledge is simple and certain would study history through memorizing lists of past events and their dates instead of making connections between their causes and consequences and without trying to find relationships between different events or facts. Students in this category would also believe that what they know or learn about history constitutes objective representations of the past. On the other hand, those individuals who believe that knowledge is complex and interrelated may assess historical events in consideration with their multi-dimensional characteristics and inter-relatedness. Examining social studies teachers' conceptions of history, Yılmaz (2008) found that teachers with naive epistemological beliefs regard historical knowledge as objective facts. Kösemen and Şahin (2014) studied social studies teachers' views on social studies curriculum and compared those viewpoints with their epistemological beliefs. Their findings suggest that the higher the epistemological belief level held by teachers, the better their comprehension of the curriculum and its practice. Another study (Başçiftçi, Güleç, Akdoğan, & Koç, 2011) found there to be a positive correlation between student teachers' epistemological beliefs and their value preferences. In his survey study, Önen (2011) investigated the influence of student teachers' epistemological beliefs and their beliefs of education on their attitudes toward teaching as a profession, finding that there are positive relationships between the above variables. Biçer, Er, and Özel (2013) examined the relationship between social studies student teachers' epistemological beliefs and the educational philosophy they embrace. Their findings revealed that students who believe that the prerequisite of learning is the amount of effort one puts into it also tend to embrace progressivism, re-constructivism, or existentialism. On the other hand, students holding the opinion that learning depends upon ability find themselves close to essentialism.

The above research findings indicate that any advancement in the development of students' or student teachers' epistemological beliefs supports them in adopting constructivist approaches in their learning and teaching practices. As a result, they develop and practice student-centred teaching activities as well as encouraging learner autonomy. From this point of view, it is assumed that there is a direct link between social studies student teachers' epistemological beliefs and their conception of social studies. As such, the current study seeks to test the plausibility of the given assumption by means of collecting and analyzing field data. Another ground for this study is that the literature discussed above does not include any research investigating the relationships between epistemological beliefs and the conception of social studies.

Designed as a mixed sequential explanatory research, this study aims first to determine social studies student teachers' epistemological beliefs and their conceptions of social studies. It then explores how students' conceptions of social

studies differ based on the epistemological belief categories in which they are located. The causes and motives behind the potential differences amongst student teachers' conceptions and their justification of these differences are examined in the last phase. Based on these objectives, the overall research question of this study could be stated as: How do student teachers' conceptions of social studies differ in accordance with their epistemological belief categories?

Departing from the above stated research objectives and the overall research question, answers to the following research questions were sought during the research processes:

1) What kind of epistemological beliefs do social studies student teachers hold? Do their beliefs differ in comparison with each epistemological belief dimension? Do student teachers' epistemological beliefs in each dimension differ in accordance with their gender, grade level, mothers' educational background, fathers' educational background, the places where their families live, and the university they attend?

2) How do student teachers conceptualize social studies?

3) Do student teachers located in different epistemological belief categories conceptualize social studies differently?

Method

The research design, study group, data collection instruments, and data analysis procedures are discussed in this section.

Research Design

In order to illustrate the relationships between how student teachers conceive of social studies and their epistemological beliefs, the current study follows a mixed sequential explanatory design. Such a mixed method design begins with the researcher conducting a quantitative study in the first phase who then looks for particular results in the second. This second phase generally includes an in-depth explanation and justification of the quantitative findings through the collection and analysis of qualitative components (Creswell & Plano Clark, 2015, p. 89). In the first phase of the current study, student teachers' epistemological belief levels were determined and the participants were appointed to various epistemological belief categories according to their scores. Then 17 voluntary participants from different epistemological belief categories were selected for the second phase. Semi-structured interviews were held with these 17 participants in the second phase to disclose how they conceived of social studies. Within the frame of the research objective, the participants' epistemological beliefs and their social studies conceptions were

compared and contrasted to ascertain the relationships amongst them. The adapted version of the sequential explanatory design is given in Diagram 3 below.

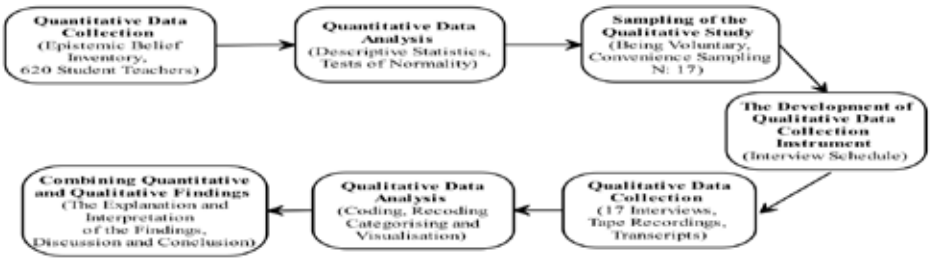


Diagram 3. Adapted version of the mixed explanatory sequential design (Adapted from Ivankova & Stick, 2007, p. 98).

Study Group

The sample of the quantitative phase of this study was chosen among student teachers attending three social studies teacher education departments attached to the education faculties of Dokuz Eylül, Dumlupınar, and Uşak universities, all universities located in Turkey, in the fall semester of the 2015-2016 academic year under the basis of random sampling techniques. The Epistemic Belief Inventory (Schraw et al., 2002) adopted into Turkish by Dinç, İnel, and Üztemur (2016) was used to collect data from the study sample. A total of 278 student teachers from Dokuz Eylül University, 196 from Dumlupınar University, and 187 from Uşak University filled in the inventory. After an initial review, those inventory forms that had only been partly completed by students were excluded, giving the above cited numbers. The demographical characteristics of the quantitative sample are presented in Table 1.

As seen in Table 1, student teachers' gender and grade levels are distributed almost evenly among the subcategories. Fathers' educational background peaks in primary and secondary education whereas most of the participants' mothers had either received no formal education or had only finished primary school. Another demographical finding shows that almost 60% of the participants' families lived in either towns or big cities at the time of the study.

During the time of quantitative data collection, the participants were asked to supply their e-mail addresses or telephone numbers if they wished to participate in the following qualitative study. Among the 24 students who provided their communication information, 17 stated that they were available and willing to participate in interviews voluntarily when they were invited to do so. Table 2 reveals the demographical information of the 17 student teachers who participated in the semi-structured interviews. In order to follow ethical guidelines, students' actual names were replaced with pseudonyms.

Table 1
Demographical Information of the Quantitative Sample

Variable	Category	*Frequency f*	*Proportion %*
University	1. Dokuz Eylül	266	42.9
	2. Dumlupınar	181	29.2
	3. Uşak	173	27.9
Grade Level	1. First Year	155	25.0
	2. Second Year	149	24.0
	3. Third Year	157	25.3
	4. Fourth Year	159	25.6
Gender	1. Female	301	48.5
	2. Male	319	51.5
Mothers' Educational Background	1. No education	125	20.2
	2. Primary	307	49.5
	3. Middle school	95	15.3
	4. Secondary	58	9.4
	5. Undergraduate and over	35	5.6
Fathers' Educational Background	1. No education	16	2.6
	2. Primary	292	47.1
	3. Middle school	128	20.6
	4. Secondary	116	18.7
	5. Undergraduate and over	68	11.0
The Place Participants' Families Live	1. Village	106	17.1
	2. Small Town	26	4.2
	3. Town	191	30.8
	4. City	118	19.0
	5. Metropolitan City	179	28.9

Table 2 shows that the distribution of participants' genders and the universities with which they were affiliated at the time of data collection are well balanced. However, most of the participants interviewed were attending their last year of undergraduate studies.

Table 2
Demographical Information about the Participants of the Qualitative Study

Nickname	University	Gender	Grade
Ahmet	D. Eylül	Male	3
Serkan	D. Eylül	Male	2
Özhan	D. Eylül	Male	3
Nur	D. Eylül	Female	4
Ozan	D. Eylül	Male	4
Ece	Dumlupınar	Female	4
Ayşe	Dumlupınar	Female	3
Bilge	Dumlupınar	Female	4
Burhan	Dumlupınar	Male	3
Erdem	Dumlupınar	Male	3
Emre	Dumlupınar	Male	4
Gül	Dumlupınar	Female	4
Merve	Uşak	Female	4
Züleyha	Uşak	Female	4
Leyla	Uşak	Female	4
Can	Uşak	Male	2
Efe	Uşak	Male	2

Data Collection Instruments

The Epistemic Belief Inventory was used as the data collection tool in the quantitative phase. A semi-structured interview schedule developed by the researchers during the course of study was utilized in the qualitative phase.

Epistemic Belief Inventory. The Epistemic Belief Inventory developed by Schraw et al. (2002) was used to measure the social studies student teachers' epistemological beliefs. Consisting of five dimensions designed and developed by Schommer (1990), the epistemological belief model was converted into a questionnaire by her and then tested. Schommer's (1990) own questionnaire did not include the *Source of Knowledge* dimension. In order to obtain a more inclusive and reliable measurement tool, Schraw et al. (2002, p. 263) improved on the Epistemic Belief Inventory, adding the Source of Knowledge dimension. Initially consisting of 28 items, their scale turned into a 15-item inventory covering of all five dimensions included in Schommer's model. Their five-item likert type scale included the following epistemological dimensions, in respective order: (i) omniscient authority, (ii) certain knowledge, (iii) quick learning, (iv) simple knowledge, and (v) innate or fixed ability. Higher points obtained from the inventory indicate undeveloped or immature epistemological beliefs.

An adopted version (Dinç et al., 2016) of the Epistemic Belief Inventory (Schraw et al., 2002) was used in this study. The exploratory factor analysis conducted on the adopted version revealed that the Turkish version of the inventory is composed of 15 items and four factors (dimensions). While three dimensions (i.e., certainty of knowledge, structure of knowledge, and the control of knowledge) in the original inventory remained the same in the Turkish version, the items in the remaining two dimensions (i.e., source of knowledge and the speed of knowledge acquisition) were merged into the same factor. The authors then conducted an affirmative factor analysis and determined cohesive scores. Since the result of this analysis indicated that the Source of Knowledge and Speed of Knowledge Acquisition dimensions combined into a single dimension, the authors named this emerging combined new dimension as *Access to Knowledge and Knowledge Acquisition* (Dinç et al., 2016). While Dinç et al. (2016) determined the reliability score of the inventory's adopted version to be .78, it was found to be .79 in the current study.

The semi-structured interview schedule. On the basis of six themes or subcomponents presented in Diagram 2, the researchers drafted a semi-structured interview schedule to reveal participants' conceptions of social studies in the qualitative phase of the study. Three academics who were specialists in the field and one language specialist were invited to review the drafted interview schedule. Several amendments were then made in accordance with their critiques and suggestions. A pilot interview was conducted with a social studies student teacher attending Uşak

University to ascertain whether the instrument as a whole and the questions included are understandable, clear, and appropriate for the participants. The pilot showed that the items were clear and understandable, that they were appropriate to the levels and experiences of the potential participants, and that an average interview may last approximately 30-35 minutes. After a few minor changes were made on the interview schedule following the pilot, the schedule's final version was obtained.

Data Analysis

In the quantitative phase of the study, frequencies (f), mean scores (*X*), proportions (%), and standard deviation scores (sd) were used to present the results of the descriptive analyses. Kolmogorov-Smirnov tests were carried out to assess the normality of scores. A non-parametric test was applied where the assumptions of normality were not meet. The answers obtained for the Epistemic Belief Inventory were graded as follows: strongly disagree 1, disagree 2, undecided/not sure 3, agree 4, and strongly agree 5. The range of scores presented in Table 3 was used in the interpretation of the findings.

Table 3
The Range of Scores and Their Meanings Used the Interpret the Findings of the Inventory

Statements	Range of Scores	Epistemological Belief Level
Strongly disagree	1.00-1.80	Highly sophisticated/ highly developed
Disagree	1.81-2.60	Sophisticated /developed
Undecided/not sure	2.61-3.40	Moderately sophisticated/moderately developed
Agree	3.41-4.20	Naive/ underdeveloped
Strongly agree	4.21-5.00	Very naive/ not developed at all

As seen in Table 3, the lower the scores obtained from the inventory, the higher the participants' epistemological belief level. In order to test whether there is any significant difference amongst male and female participants, either an independent sample t-test or a Mann Whitney U-test was conducted. Both a One-Way Anova and a Kruskal Wallis test were carried out to define whether any significant differences existed among the participants according to the institutions in which they were studying, their mothers' and father' educational backgrounds, and the place where their families live. Scheffe's test, one of the post-hoc tests, was used to assess the source of the significant differences arising from the above mentioned initial statistics.

All recordings of the interview data obtained in the process of the qualitative study were transcribed and typed using a word processor. Afterward, what the participants expressed in the interview sessions were read repeatedly and coded. Those codes sharing similar or close meanings were collected together and evaluated as if they were in the same category. The coding processes conducted by the researchers independently were then compared and contrasted to assess consensus and divergence in the opinions amongst the coders. Verbatim quotations from the participants were used in order to ensure the credibility of the findings and interpretations.

Findings

The finding obtained from the quantitative and qualitative phases of this mixed sequential explanatory research are presented below in this section, respectively.

Quantitative Phase

In accordance with the first problem statement, student teachers' scores obtained from each dimension of the Epistemic Belief Inventory and their total scores are displayed in Table 4.

Table 4
Descriptive Statistics Obtained from the Epistemic Belief Inventory

	Number of items	Maximum	Minimum	Average	$\bar{X}$	s
Dimension 1 (Access to knowledge and knowledge acquisition)	8	40	8	15.16	1.89	6.7
Dimension 2 (Certainty of knowledge)	3	15	3	7.5	2.50	2.83
Dimension 3 (Control of knowledge)	2	10	2	5.1	2.55	2.27
Dimension 4 (Structure of knowledge)	2	10	2	5.92	2.96	2.07
Total	15	75	15	33.69	2.24	9.83

As seen in Table 4, the scores obtained from the Epistemic Belief Inventory vary in accordance with the dimensions. Taking the range of scores presented in Table 3 as a basis, it could be stated that in consideration with the dimensions of Access to Knowledge and Knowledge Acquisition, Certainty of Knowledge, and Control of Knowledge, social studies student teachers' epistemological beliefs are sophisticated or developed. They hold moderately sophisticated epistemological beliefs in the Structure of Knowledge dimension. The average of the scores obtained from the entire inventory reveals that student teachers' scores cluster around the sophisticated/developed epistemic belief level. However, as this study proposes to examine the participants' conceptions of social studies in consideration with the multi-dimensional structure of their epistemological beliefs, it is preferred to analyze and interpret each dimension independently rather than discussing the inventory as a whole.

Table 5 displays the results of the One-Way Anova and Kruskal Wallis test scores carried out to determine whether the scores obtained from the inventory show any significant difference in consideration with the university that student teachers attended.

Because the data obtained for the first dimension of the inventory does not scatter normally, a Kruskal Wallis test was conducted. The findings of which reveal that the scores obtained for the Access to Knowledge and Knowledge Acquisition dimension significantly differ among the participants attending different universities $p = .001$[$x2 (sd = 2, n = 560) = 13.515, p < .05$]. In order to determine the groups among which these differences occur, a Mann Whitney U-test was carried out, which indicated

that student teachers attending Dumlupınar University held higher epistemological beliefs (X = 197.25) in consideration with access to Knowledge and Knowledge Acquisition than did their counterparts attending Dokuz Eylül (X = 242.20), and Uşak (X = 208.08) universities *(U = 192305, p < .05, U = 13745, p < .05)*.

Table 5
One Way Anova and Kruskal Wallis Test Scores on Student Teachers Epistemological Beliefs in Comparison with the Universities They Attend

	University	Mean Range	sd	x^2		Significant Difference
Dimension1	Dokuz Eylül	336.45	2	13.515		Dumlupınar- Dokuz Eylül Dumlupınar- Uşak
	Dumlupınar	273..19				
	Uşak	309.63				
Dimension 3	Source of Variance	Sum of Squares	sd	Average of Squares	F	Significant Difference
	Between Groups	81.151	2	40.576	8.039	Dumlupınar- Dokuz Eylül Dumlupınar- Uşak
	Within Groups	3114.119	617	5.047		
	Total	3195.270	619			

According to the findings, there is no significant difference amongst the students of those three universities in respect of the Certainty of Knowledge and the Structure of Knowledge dimensions. In consideration with the Control of Knowledge dimension however, a significant difference amongst the groups was found, p = .000[$F(2, 617)$= 8,039, p < .05]. A Scheffe test was conducted to define the groups amongst which this difference occurred, revealing that student teachers attending Dumlupınar University (X = 4.55) had more developed epistemological beliefs than did their counterparts attending Dokuz Eylül (X = 5.40), and Uşak (X = 5.22) universities in the Control of Knowledge dimension. Although, it has not been scrutinized widely in this study, it could be stated that the result indicating that students attending Dumlupınar University held more developed epistemological beliefs than did their counterparts in Dokuz Eylül, and Uşak universities might be due to the academic staff teaching in their department, their teaching methods, the sources and materials they use, and various other factors.

In order to determine whether the scores obtained for the second, third, and fourth dimensions of the inventory indicated any significant difference between the students attending different grades of their preservice training, a series of One-Way Anova tests was conducted, while a Kruskal Wallis test was carried out on the scores obtained for the first dimension. The results revealed there to be a significant difference amongst groups in the certainty of knowledge dimension only, $F(3, 616)$ = 5.540, p < .05. The following Scheffe test explained that students in their forth year held more sophisticated epistemological beliefs (X = 6.72) than did those in their first year (X = 7.87) on the Certainty of Knowledge dimension. This finding can be evaluated as supporting evidence to Perry's model, which asserts that university education improves epistemological beliefs.

An independent samples t-test and a Mann Whitney U-tests were carried out to test whether the participants' epistemological beliefs differed according to their gender. The results of these tests are displayed in Table 6.

As seen in Table 6, the test scores indicate that their is a gender-based difference in participants' scores on the Access to Knowledge and Knowledge Acquisition, the Certainty of Knowledge and the Control of Knowledge, $p = .000[U = 37808, p < .05]$, $p = .003[t(618) = -2.974, p < .05]$, $p = .028[t(618) = -2.206, p < .05]$. According to this finding, female participants hold stronger epistemological beliefs than do males in all three dimensions and can therefore be stated that considering epistemological beliefs, gender is a discriminative factor at least in the context of the current study.

Table 6
The Results of the T-Test and Mann Whitney U-Test Comparing the Scores Obtained from the Inventory and the Participants' Gender

Dimension 1	Gender	n	Mean Range	Mean Total	U	
	Female	301	276.61	83.259	37.808	
	Male	319	342.48	109.251		
Dimension 2	Gender	n	$\overline{X}$	S	Sd	t
	Female	301	7.15	2.70	618	-2.974
	Male	319	7.82	2.92		
Dimension 3	Gender	n	$\overline{X}$	S	Sd	t
	Female	301	4.89	2.25	618	-2.206
	Male	319	5.30	2.27		

In order to check whether the educational backgrounds of the participants' parents and the size of the place where their families live have any indirect impact on student teachers' epistemological beliefs, both a One Way Anova and Kruskal Wallis test were conducted. The results yielded no evidence indicating a significant relationship between parents' educational backgrounds and student teachers' epistemological beliefs. In the case of the place where the participants' families lived, the same result (i.e., no significant relationship) was also obtained.

Qualitative Phase

The data obtained from the 17 student teachers voluntarily participated in the qualitative phase of the study were analyzed in detail in this section.

Student teachers' conceptions of social studies as a broad concept. The analysis of the participants' conceptions of social studies yielded the codes and categories displayed in Diagram 4.

The participants' conceptions of social studies were able to be examined within the framework of three main categories and several concepts as seen in Diagram 4. The participants conceptualized social studies mostly as a school subject focusing on the topics of history, geography, and citizenship (f: 24). Many of the students within this group expressed that the concept of social studies reminds them of wars and maps, precipitating them to think of history and geography. Ayşe, one of the student teachers in this group, stated the following:

> I myself love the Ottoman history very much. The Ottomans or Ottoman history is a must-have for me. I also chose this department because of history. I selected social studies because it included history. Social studies is a unique subject. Firstly it's an interdisciplinary area. It does not just mean the presentation of content to students as in Math or Turkish. Your aim here is to enable students to develop a historical consciousness. It includes geography and you're supposed to teach them geographical elements. Additionally, you are required to teach them the concepts of citizenship, rights, liberties, and responsibilities. The fifth grade curriculum includes all these as well. Social studies is an important subject that enlightens students about their rights, responsibilities, and liberties.

The participants also conceptualized social studies as a school subject aiming to raise active citizens as part of a greater human rights and democracy education. On the one hand, some student teachers (f: 6) view the concept as an integrated subject introducing various topics selected from a range of social science disciplines. It was revealed, on the other hand, that rather than considering it merely as a school subject, a sizeable group of participants (f: 22) perceived social studies as an instrument to prepare new generations for social life. Pointing out the importance of social studies in individuals' socialization, the participants (f: 17) in this group stated that social studies contributes to students' individual and social developments by means of teaching them about real life through the examples gleaned from daily life. Some of them (f: 5) added that social studies served a role of cultural transmission through its handling of traditions and customs, its instilling of respect and love to one's own country and flag, and its highlighting the theme of peace. Looking at social studies from this perspective, Efe made the following points:

> Social studies include everything. It is wide concept covering topics ranging from history to archaeology and anthropology, from philosophy to law. It is also a multi-dimensional department here in the university. For me, social studies is life itself and everyone needs to learn something about social studies. (Efe)

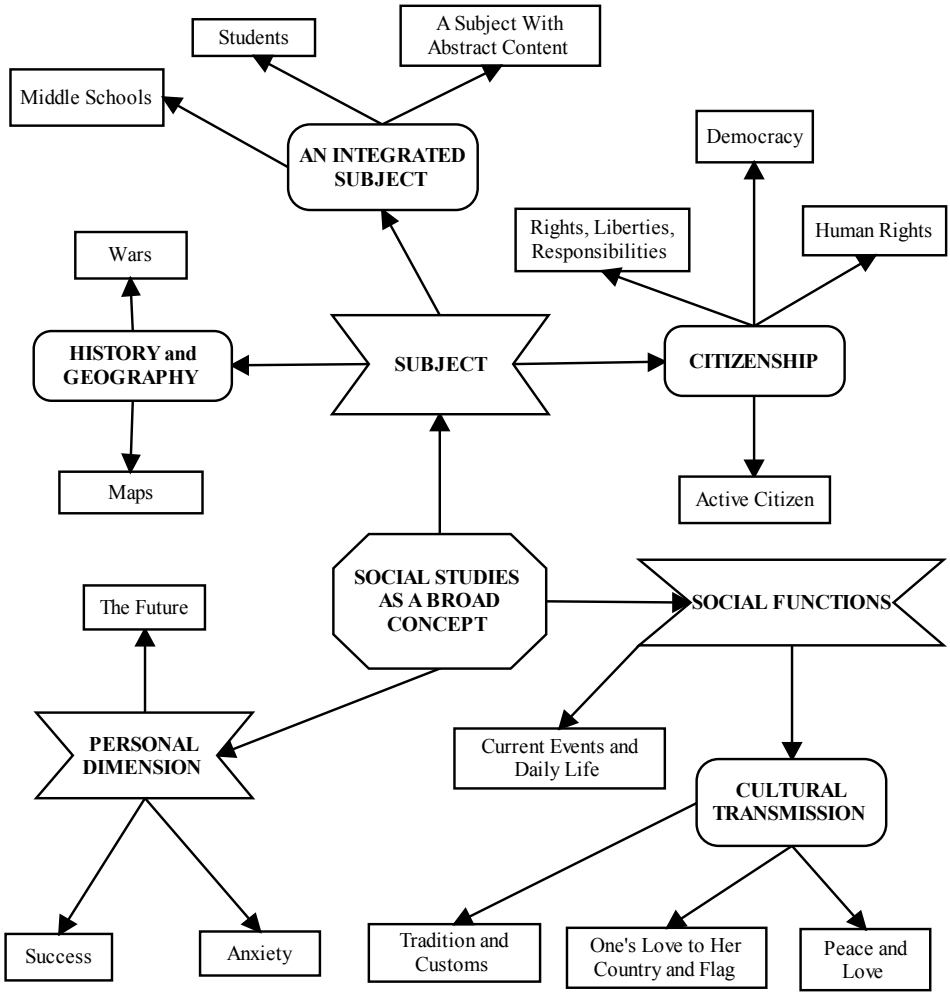


Diagram 4. Participants' conceptions of social studies as a broad and general concept.

The statements above indicate that social studies is related to all aspects of everyday social life. An overall view of the findings presented above gives the impression that the participants hold positive attitudes and viewpoints about social studies. Some of the participants (f: 3) who conceptualized social studies in this way also considered it to be an essential component of their personal and vocational development, whereas only two student teachers attributed negative meanings to social studies. Gül explained the reason behind her negative conception that social studies reminds her of the teacher selection exam (KPSS) that she must take after graduation and that disturbs and worries her. The other participant, Züleyha expressed that her negative conception arised from the integrated structure of social studies that she believes makes it very difficult for teachers to reach all students in their classes. Her views follow:

> I see social studies as a course in which history, geography, and a little bit of citizenship are blended. Though they were taught separately beforehand, they are now integrated. Some from this, some from that; I think there is nothing evident here because I don't think that we can provide a sense of history within the context of social studies. We say that one of the aims of social studies is to raise future citizens, but I don't think that we raise good citizens. Social studies includes small parts of content from various social sciences, but it is a department whose center or focus is empty. I have friends studying in this department while at the same time who don't like history. About the use of sources or materials, it's also a very problematic area. While trying to teach the subject of citizenship, many things remain abstract or meaningless for students. It's the same for history, too. We can only learn to use materials in teachi ng geography related topics. These are all what we've seen in the teaching practices we experience in schools.

The above extract illustrates that social studies as a school subject does not reach its own aims and objectives and that the integrated subject approach is not useful. The participants hold that the disciplines forming the content of social studies should be taught independently so as to attain effective results. She also emphasizes that the content and structure of social studies is not appropriate for using teaching materials and resources in lessons, which negatively influences students' interest in social studies.

Social studies in middle schools. The participants' conceptions of social studies as a middle school subject were analyzed within two main categories. One of these categories is content whose subcategories and codes are displayed in Diagram 5.

Diagram 5 reveals student teachers' thoughts on the content, namely that social studies should be composed of topics on history, geography, and citizenship. They also indicate that some of the courses like anthropology, economics, and archaeology that they have taken during their undergraduate studies would not be useful in teaching middle school social studies. Ayşe's view may be taken as an example of this perspective:

> I've seen in my teaching practice that the subject is not taken seriously. I don't know whether teachers think that children wouldn't understand its content, but social studies is taught in a very simplistic way. I think it should mainly present topics on history. After eighth grade, most kids don't remember anything about history. The Battle of Malazgirt, its date, and then the Gates of Anatolia were opened to the Turks. Kids just learn clichés like these, but they don't get a consciousness of history. Some teachers teach Ottoman history in such a way that makes kids become enemies of the Ottomans. Some children are not even aware of the fact that the Republic of Turkey succeeds the Ottomans.

The above extract indicates that social studies is consubstantiated with history by some participants. Conversely, two participants held that social studies should not only consist of history, geography, and citizenship related topics, but should instead cover all other social science disciplines. While one student teacher suggested that the social sciences forming the content of social studies should be taught as separate

subjects, another one stressed that social studies should focus on the transmission of cultural values and on one's commitment to her country. Two other participants stated that it should give importance to everyday life and current events.

The second subcategory of content comes as the structure of it. A group of student teachers (f: 8) expressed that social studies as a middle school subject presents boring content comprising of some clichés. Ece summarizes this type of viewpoints in the following:

> They rather teach kids cliché things like mountains, plains, the the fronts where Atatürk fought. All these seem very cliché and boring to me. There must be topics that could attract students' attention because kids get really bored of the subject. In the earlier grades, kids are more enthusiastic to learn, but in eighth grade, they've gotten bored or fed up with it. You know things like that.

As seen in the above extract, the findings emphasize that the limited scope allocated to current events in the curriculum content negatively influences students' motivation. The other findings obtained for this theme also disclose that student teachers think that the content of social studies is complicated, complex, and intense.

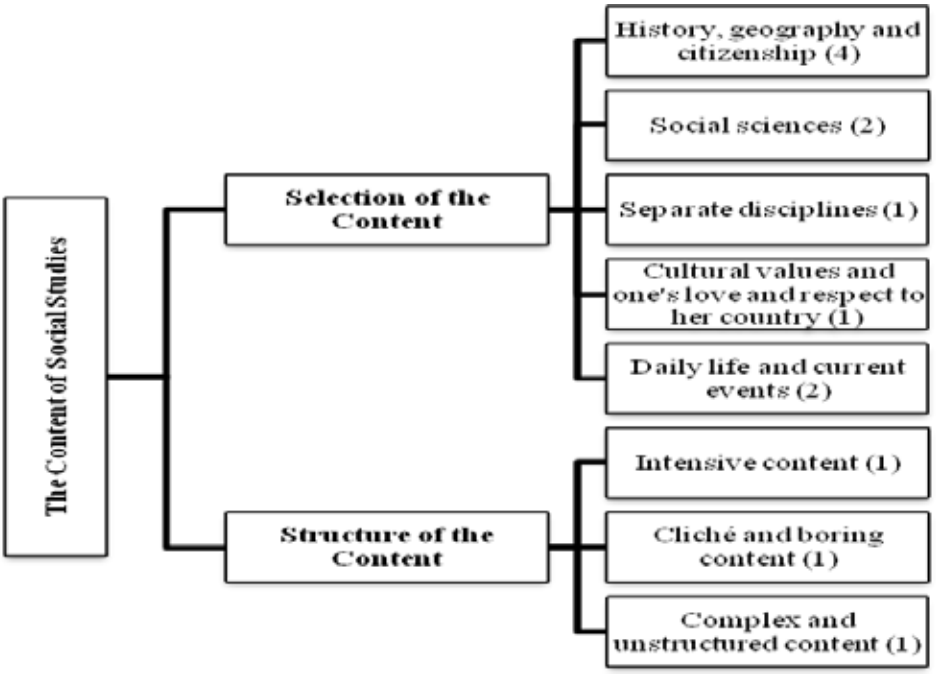


Diagram 5. Conceptions of the content of social studies in middle schools.

Another category arising from the data analysis related to participants' conceptions of social studies as a middle school subjectpertains to teaching and learning contexts and processes. The concepts emerging within this category are presented in Diagram 6.

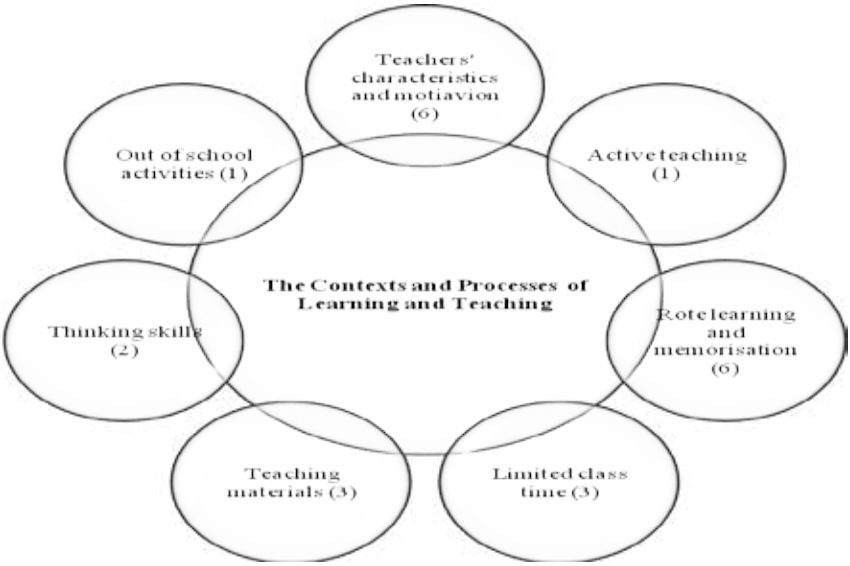


Diagram 6. Conceptions of teaching and learning processes in middle school social studies.

Some participants (f: 6) stressed that social studies teachers' personal characteristics are important factors influencing students' motivation. They strongly emphasise that the teachers they have thus far encountered do not work hard enough for their students to develop positive attitudes toward social studies and therefore motivate them to learn. Merve's statements below exemplify this opinion:

> The teacher mentoring me during my teaching practice takes it easy in her social studies lessons. Lots of chatting goes on in her classes. I think her lessons aren't really that productive. She introduces topics by giving examples from everyday life. For instance, they were talking about historical places in one class. The teacher just mentioned the names of those places and then students started to talk about those places because they had visited them beforehand. The teacher didn't give any information about those places. It's quite positive that she relates course content to everyday life, but she's not really equipped to do this either. I witnessed that the existence of students' who have visited many towns and historical places around the country make the classes productive and enjoyable. They made connections between their own real life experiences and the course content. But the information given by the teacher was rather abstract.

As Diagram 6 shows, participants' conceptions indicate that social studies lessons in Turkish schools are still taught through the memorization of facts. Efe's statements reflect this perception and underline the criticism of the current practice:

> Social studies is a part of our lives. It's a must-do for societies like ours to teach and learn social studies since history for such societies is quite important. However, the methods used in teaching social studies are more important than social studies itself. It should no longer be regarded as a subject in which you memorize some facts. Social studies must be taught in a way that covers thinking skills and interpretation.

Within the category of teaching and learning context and processes, participants' conceptions of social studies indicate the following issues: namely, that (i) students' participation in classes is limited, (ii) most teachers fail to use various teaching materials to support the contents and methods used in their classes, and (iii) the time allocated to social studies is not sufficient to enable students to have authentic and meaningful learning experiences. As seen in the above extract, the participants also suggested that thinking skills should be given importance as well as taking out-of-school learning opportunities in consideration.

The third category arising from the student teachers' conceptions in relation with social studies as a middle school subject pertains to the functions of social studies. The participants expressed that social studies not only supports students in their socialization processes but also enables them to improve their communication skills by introducing them to real life.

Social studies as a teaching profession. The available data on the participants' perceptions related to social studies as a teaching profession were analyzed and have been displayed in Diagram 7.

The participants' views on this issue were examined under three categories. The first category takes social studies as a content area. Accordingly, participants' view social studies as a field of study with a very broad and extensive scope and whose content is open to debate. They also hold an optimistic perspective indicating that social studies has the potential to renew itself. Burhan explains this viewpoint as follows:

Copulative verbs in Turkish Grammar for example, they are an obvious and clear topic.

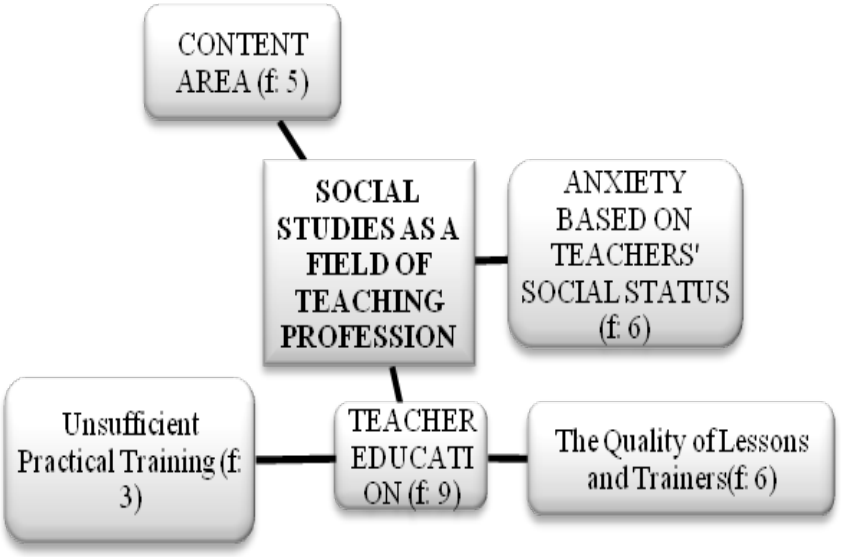


Diagram 7. Participants' conceptions of social studies as a field of teaching profession.

> In social studies however, especially in history, there are many controversial topics. The simplest one for instance, many of the events have taken place after the foundation of the Republic up to today have been widely discussed. It is even the same for previous ages, like Ottoman history. Though some state that there is solid evidence to support a given perspective of a past event, new information or evidence may come out the next morning and then everything we know might change. Social studies attracts my attention because of its particular characteristics, as it is always in search of new things or something like that.

The second category depicts participants' worries about becoming a social studies teacher in the future. It also covers the fact that their prospective profession is not a socially recognized or respected one. Some participants stressed that the potential problem of not finding a professional teaching position makes people have negative opinions about social studies as field of study in the undergraduate level. Although the participants themselves conceptualized social studies as a subject nested in real life, they also stated that their study area is not perceived by society in the same way.

The third category in this subsection is teacher education, where the participants criticized the initial teacher education given to them in their university. Fourth year students in particular complained about the limited space allocated for practical issues. They also stated that the weight given to teaching practice in schools should be broadened. Bilge elaborates on this perspective in one of her comments as follows:

> I don't think that the instructors in my department possess the necessary qualifications. Students graduate from this department without learning what they'll need in their professional life. I know some graduates of our department who are proud of getting a diploma without having read a single book. In my opinion, university education means improving yourself as much as you can. But how can I help kids if I haven't even done this. So far, we haven't gotten what we need. Our teachers didn't try to guide us in anything. If you haven't established a reading habit, no one forces you to do so, but I've heard from some friends attending different universities that their teachers ask them to find and read particular books or write an essay on what they've read. I believe that I should improve my critical thinking skills in a way like this. I've got friends in other departments who read around 40 books each semester. Our teacher should do the same. I can't even construct a sentence in front of others and this shows that this department is lacking in a lot of things.

The functions of social studies. The codes and categories in Diagram 8 represent how participants conceive of the functions of social studies.

As Diagram 8 indicates, participants' conceptions of the functions of social studies reflect the three main views of social studies suggested by Barr, Barth, and Shermis (2013). Some student teachers stated that the basic function of social studies is to transmit the principles and content of history, geography, and economics. Conceptualizing their subject area from the view of *social studies as social sciences*, participants in this category expressed that social studies enables learners to become acquainted with the place in which they live (f: 13), teaches them about their past and history (f: 8), equip

them with certain skills to draw lessons from past events or facts (f: 7), enables them to develop a historical consciousness (f: 2), teaches them about Ottoman history and Atatürk (f: 1), and gives them a sense of economics and its place in our lives (f: 1).

Another group of participants' social studies conceptions reflects the view of *social studies as citizenship transmission*. Three categories arise within this perception: (i) adapting to social life, (ii) teaching learners their rights, liberties, and responsibilities, and (iii) cultural transmission. Within the sphere of the first category, the participants stated that social studies enables learners to successfully develop their socialization processes and gain awareness of their social roles (f: 11), teach them how to become conscious citizens (f: 4), provide them with active political participation skills (f: 1), establish social solidarity amongst members of society (f: 1), and teach them social values (f: 2). The views grouped in the second category suggest that social studies enables learners to gain an awareness of their rights, liberties, and responsibilities. Participants' viewpoints in cultural transmission category hold that social studies plays several important roles in reproducing a social and national culture and in transmitting it to new generations.

Preparing children for real life and helping them develop thinking skills are two themes indicating that some of the participants conceptualize *social studies as reflective inquiry*. Those student teachers who think that the main purpose of social studies is to prepare children for real life hold that the subject teaches them real life (f: 15), equips them with necessary communication skills (f: 4), provides them with the required knowledge and skills to make inferences about the future (f: 2), and contributes to their intellectual development (f: 2). Participants' viewpoints included under thinking skills indicate their belief that social studies improves learners' critical

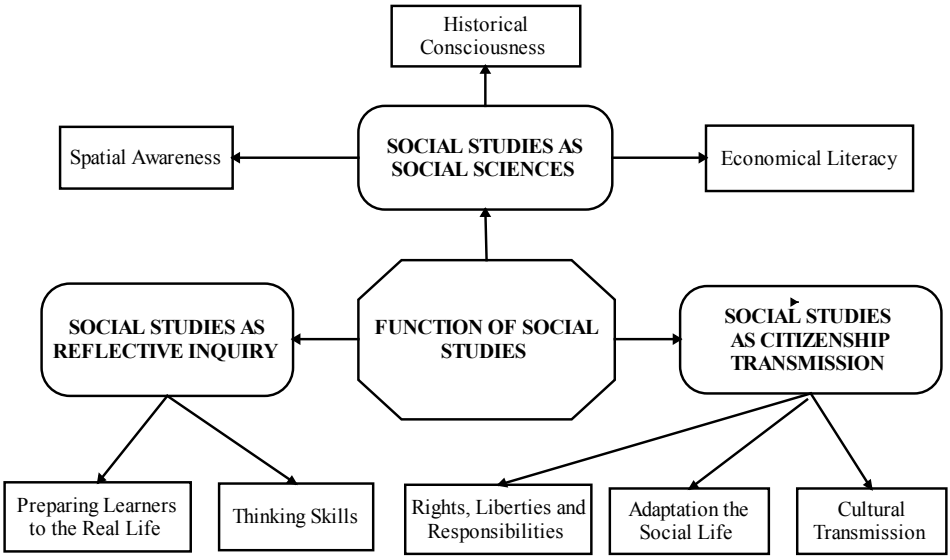


Diagram 8. Participants' conceptions of the functions of social studies.

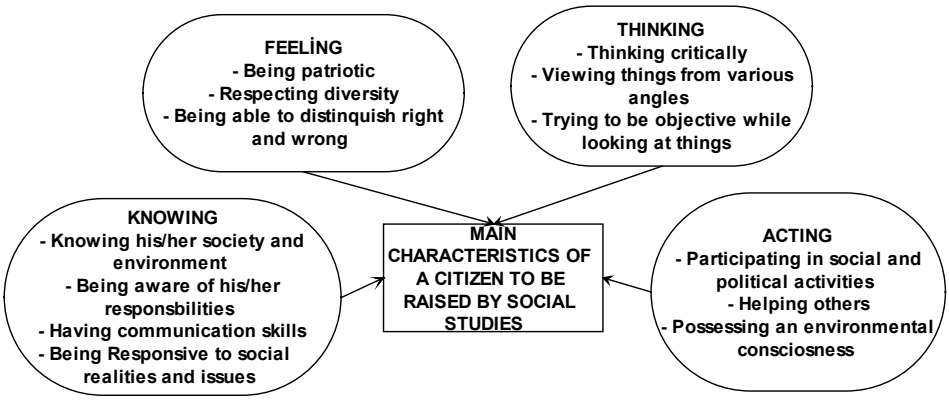


Diagram 9. Participants' conceptions of the main characteristics of a citizen.

and reflective thinking skills (f: 5), equips children to think sophistically by changing their view of the world (f: 2), improves learners' decision making and liberal thinking capacities (f: 2), and enhances their interpretation skills (f: 1).

The purpose and content of social studies. In this subsection, the available data representing participants' views on the aims and objectives of social studies and its content are analyzed and interpreted as shown in Diagram 9.

Diagram 9 reveals participants' views on social studies as a school subject and what characteristics an individual should gain from it. The findings in this subsection are composed of four main categories and reflect participants' views that social studies aims to raise good citizens. These categories indicate that a good citizen needs to be an individual who knows the society, country, and nation of which she is a part as well as feeling for her society, nation and country, thinking about social, cultural, economical and political issues related to her country, and actively participating in various social and political processes within those milieus. Drawing on this perspective, one of the participants, Efe, stated that social studies should encourage learners to develop critical thinking skills:

> Social studies should serve the function of raising good and intellectual citizens. Social studies is necessary in enabling people to distinguish right from wrong, not to be deceived by lies told them, and to better observe particular events they witness. Social studies should present the necessary knowledge and culture to do this. People should not be deceived by political or ideological discourses. If you don't possess any information about the issue you're discussing, you may easily believe what others tell you. If you possess that information, then even your father may not be able to persuade you easily.

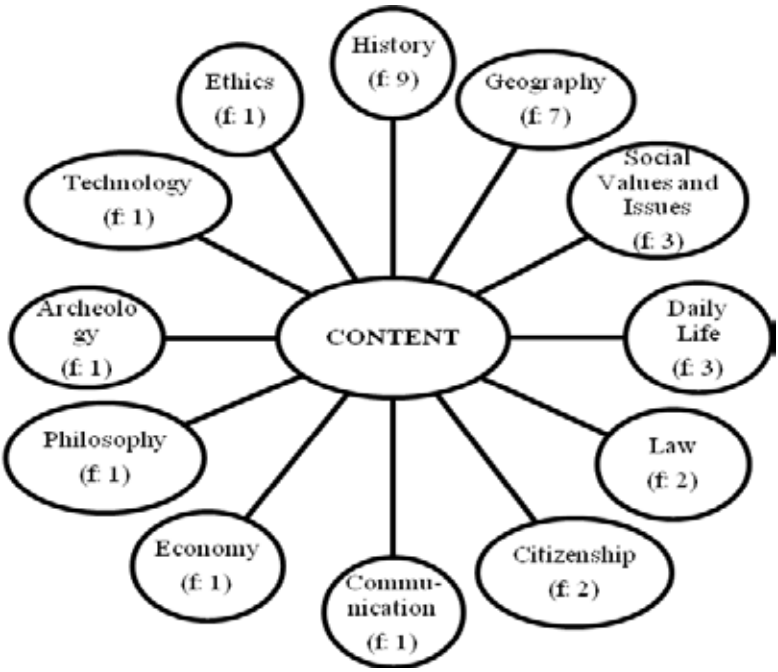


Diagram 10. Participants' conceptions of the content of social studies.

A number of participants also held that the purpose of social studies is to teach Turkey's past and history to new generations (f: 5), to teach them ethics and social values (f: 4), to raise them as better world citizens (f: 1), and to teach them the cultural accumulation of Turkish society (f: 6). Participants' conceptions of social studies content are presented in Diagram 10.

Regarding the content of social studies, most participants (f:16) mentioned topics selected from history and geography. Other social science disciplines were only rarely mentioned. Only one student teacher, Züleyha, who insistently emphasized that the place of technology and technological developments in social studies curriculum should be increased. An excerpt of her interview elaborating on this is as follows:

> Today, we think that technology is quite beneficial, but our kids don't know how to use it. Many parents think that when they buy a PC, a tablet, or a smart phone for their children or by having internet connections at home, they will increase their kids' success in school. How kids should use those technological devices and social media is an important question. And these things must be taught by social studies teachers. We need to include these issues in social studies. Media literacy should be taught in social studies as well. And even parents need to learn about these issues.

The above extract highlights the dangers arising from arbitrary use of technology and invites social studies teachers to take part in the struggle against potential technology related problems.

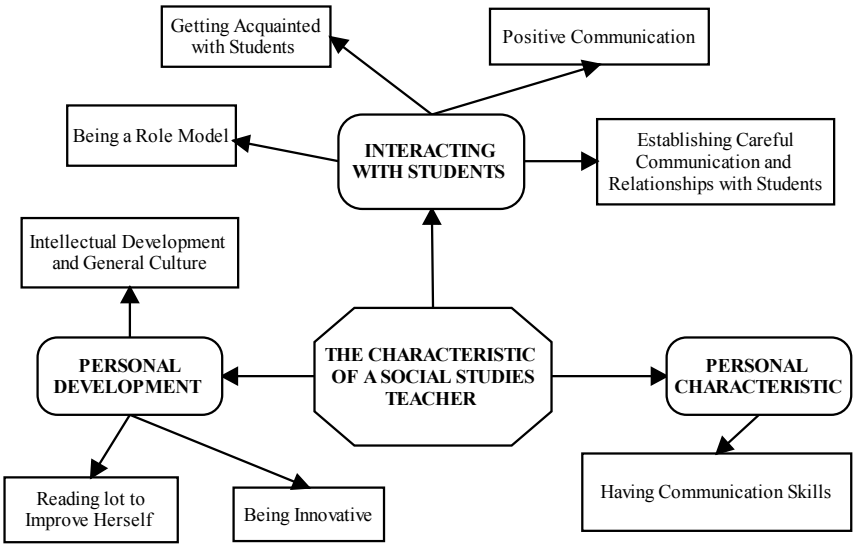


Diagram 11. Characteristics of a social studies teacher.

Characteristics of a social studies teacher. Diagram 11 reveals the main characteristics that the participants attribute to a good social studies teacher. The first theme in the diagram indicates that social studies teachers should establish a solid and steady basis for interacting with their students. In order to acheive that, teachers must keep track of their students' personal and intellectual development and be calm and tolerant. A teacher should approach her students equally and establish warm relationships with them. Özhan unfolds this perspective as follows:

> A teacher should be the one who does her job lovingly and willingly. And she should duely be recompensated for his efforts. Kids should literally come running to their teacher.

The participants expressed that a teacher should be a role model for her students and must try to change her students' world-view positively. Another finding indicates that a good social studies teacher needs to keep a safe distance between herself and her students in their mutual relationships. The participants also indicated that since a good teacher should give importance to her personal and professional development, teachers must follow current developments, read a great deal, and improve their intellectual capacity. Can's conception of intellectual development is presented below:

> A teacher should be an expert in her field of study. She must be open to learn more. She should continuously be in search of learning new things. We are in the twenty-first century, or so called the Information Age. So, a teacher must be open to development and to be in search of new knowledge and experiences. She needs to be a free intellectual loving to travel to various places and curious about different cultures. She needs to be equipped with the knowledge of her field of study and general culture so she can have impact on her students.

Since social studies includes information/knowledge from various social science disciplines or from inter-disciplinary areas, a social studies teacher needs to continuously develop herself in many areas. Hence, the participants pointed out that a good social studies teacher should always renew herself and follow the developments in her field of study. They additionally underlined the importance of communication skills and suggested that a social studies teacher should also be able to express herself eloquently in various milieus.

Relationships between Participants' Epistemological Beliefs and their Conceptions of Social Studies

This section seeks to answer the third research question: "How do participants' conceptions of social studies differ in accordance with their epistemological beliefs?" For this purpose, the interview participants were grouped into four categories (i.e., highly sophisticated, sophisticated, moderately sophisticated, and naive) according to their overall scores obtained from the Epistemic Belief Inventory. In order to ascertain whether any relationship exists between their epistemological beliefs and conceptions of social studies, their epistemological belief categories were compared and contrasted to their social studies conceptions. In this section, therefore, participants' social studies conceptions are only interpreted within the context of their epistemological belief categories. Because of this, any supporting evidence, such as interview extracts, will not be used.

Table 7
The Distribution of Participants' Average Scores Obtained from the Epistemic Belief Inventory

Nick-name	Access to knowledge and knowledge acquisition	Certainty of knowledge	Control of knowledge	Structure of knowledge	Total average	Epistemological belief level
Ahmet	2.25	3	2.5	1	2.18	Sophisticated
Serkan	1.62	4.33	4.5	2.5	3.23	Moderately sophisticated
Özhan	4.25	4.33	2.5	3.5	3.64	Naive
Nur	4	3	4.5	2.5	3.5	Naive
Ozan	1	1.66	2	3	1.91	Sophisticated
Ece	2.75	4	4.5	3	3.56	Naive
Ayşe	1	1.66	1	2.5	1.54	Highly sophisticated
Bilge	1	2	1	1.5	1.37	Highly sophisticated
Burhan	3.75	3	3	4	3.43	Naive
Erdem	3.12	2.66	3.5	3.5	3.19	Moderately sophisticated
Emre	4.12	3.5	4	3.5	3.78	Naive
Gül	2.25	3	1	2	2.06	Sophisticated
Merve	1	1	1	2	1.25	Highly sophisticated
Züleyha	1.12	3	1.5	2.5	2.03	Sophisticated
Leyla	1	2.66	1	3	1.91	Sophisticated
Can	1	2.66	3.5	2	2.29	Sophisticated
Efe	2.25	3	2.5	3.5	2.81	Moderately sophisticated

Table 8
Participants' Epistemological Belief Categories and their Conceptions of Social Studies

	SCHOOL SUBJECT			SOCIAL FUNCTION		PERSONAL DIMENSION		
	History and geography	Citizenship	An integrated subject	Cultural transmission	Current events and daily life	Future	Success	Anxiety
Highly Sophisticated	3	3	-	-	2	-	-	2
Sophisticated	3	4	4	1	3	-	1	1
Moderately Sophisticated	2	1	-	1	3	1	-	-
Naive	4	1	1	2	3	1	-	-

The interview participants' overall scores obtained from the Epistemic Belief Inventory are given in Table 7 below.

As seen in Table 7, interview participants' beliefs vary based on the dimensions of the Epistemic Belief Inventory. This result proves the multi-dimensional structure of epistemological beliefs. The range of scores obtained for each dimension of the inventory and the epistemological belief levels that they indicate were presented in Table 3 in the methods section. In the Access to Knowledge and Knowledge Acquisition dimension, nine interview participants were found to have highly sophisticated, three of them sophisticated, and two moderately sophisticated epistemological beliefs whereas only three of the student teachers were found to possess naive beliefs. In the Certainty of Knowledge dimension, three student teachers were found to have highly sophisticated, three of them sophisticated, seven moderately sophisticated, two naive, and two extremely naive epistemological beliefs. On the other hand, six participants were found to possess highly sophisticated, four of them sophisticated, one moderately sophisticated, three naive, and one extremely naive epistemological belief in the Control of Knowledge dimension. In the Structure of Knowledge dimension, two participants had highly sophisticated, two sophisticated, three moderately sophisticated, and five naive epistemological beliefs. When the overall scores obtained from the inventory are considered, three student teachers had highly sophisticated, six sophisticated, three moderately sophisticated, and five naive epistemological beliefs.

Participants' epistemological belief categories and their perceptions of social studies as a broad concept. The data on the interview participants' perceptions of social studies have been analyzed and the results compared and contrasted based on their epistemological belief categories. Table 8 displays these findings.

As Table 8 shows, almost all interview participants from different epistemological belief categories associate social studies with history, geography, and citizenship. This means that social studies reminds them of the content that composes the school subject. Additionally, the findings indicate that participants with sophisticated or highly sophisticated epistemological beliefs emphasize citizenship related issues more

than their counterparts in other categories. On the other hand, only sophisticated and naive participants indicated social studies' unique characteristics, namely its being an integrated subject. The findings point out that participants from all epistemological categories relate social studies with daily life and current events, while only a limited number of them stress the subject's role in cultural transmission. It is also an interesting finding that mostly student teachers with naive epistemological beliefs underlined this relationship. In the Personal Dimension theme, those participants with moderately sophisticated or naive epistemological beliefs established a connection between social studies and their future career. On the other hand, social studies reminds those student teachers with highly sophisticated and sophisticated beliefs of success and anxiety.

Participants' epistemological belief categories and their perceptions of social studies as a middle school subject. Table 9 and Table 10 reveal participants' perspectives on social studies as a middle school subject. Three themes arose within this subtopic: (i) selection of the content, (ii) structure of the content and the context, and (iii) learning and teaching processes.

Table 9
Participants' Epistemological Belief Categories and their Conceptions of the Content of Social Studies in Middle Schools

	SELECTION OF THE CONTENT					STRUCTURE OF THE CONTENT		
	History, geography and citizenship	Social sciences	Separate disciplines	Cultural values and patriotism	Daily life and current events	Intensive content	Cliché and boring content	Complex and unsystematic content
Highly Sophisticated	-	1	-	-	1	-	-	-
Sophisticated	-	1	1	-	1	1	-	-
Moderately Sophisticated	-	1	-	-	-	-	-	1
Naive	4	-	-	1	-	-	1	-

An examination of the data displayed in Table 9 indicates that participants with naive epistemological beliefs think that the content of middle school social studies courses should pertain dominantly to history, geography, and citizenship whereas student teachers with sophisticated beliefs stated that social studies should include other social science disciplines along with the above mentioned three. One participant holding sophisticated epistemological beliefs emphasized that all social science disciplines needed to be taught as separate subjects. One student teacher holding naive beliefs stated that social studies should include cultural values and patriotism to a greater degree. In the Structure of Content theme, three different viewpoints emerged. While a participant with naive beliefs expressed that the content of the course is full of clichés and boring topics, another one with sophisticated beliefs thought that the content was quite comprehensive. A third participant with moderately sophisticated epistemological beliefs, on the other hand, asserted that the content was very complex and unsystematical.

Table 10
Participants' Epistemological Belief Categories and their Conceptions of the Contexts and Processes of Learning and Teaching in Social Studies

	Contexts and Processes of Learning and Teaching						
	Teachers' qualities and motivation	Rote learning	Teaching materials	Limited class-time	Thinking skills	Out of school activities	Activity
Highly Sophisticated	1	2	-	1	1	-	-
Sophisticated	4	3	2	1	-	1	1
Moderately Sophisticated	-	1	1	-	1	-	-
Naive	1	-	-	1	-	-	-

Table 10 shows, according to their epistemological beliefs, which aspects of the learning and teaching that participants emphasized. Participants other than those holding naive epistemological beliefs expressed that social studies teaching should not be based on rote learning and memorization. Participants with sophisticated and highly sophisticated beliefs underlined the importance of teachers' qualities and motivation. Three participants holding sophisticated and moderately sophisticated beliefs remarked the necessity of using teaching materials, while another three participants pointed out the fact that the class time allocated for social studies in middle schools is inadequate to use materials and conducting activities in a successful manner. Student teachers with sophisticated epistemological beliefs also indicated that social studies teaching should include the development of students' thinking skills and be based on both classroom and out-of-school activities.

Participants' epistemological belief categories and their conceptions of social studies as a teaching profession. Table 11 includes the findings on the interview participants' conceptions of social studies as a teaching profession.

As seen in Table 11, participants' conceptualization of social studies as a teaching profession fall under three themes. The first theme, *Content Knowledge*, refers to the belief that a social studies teacher should possess the content knowledge foreseen in the relevant curricula. The *Initial Teacher Education* theme, on the other hand, refers to relevant viewpoints emphasizing the importance and quality of initial teacher education programs before becoming a professional teacher. The last theme refers to worries about becoming a teacher because of teachers' current social status in Turkey; worries which are held by student teachers with sophisticated and highly sophisticated epistemological beliefs in particular.

Participants' epistemological belief categories and their conceptions of social studeies' functions. Table 12 displays the findings on participants' conceptions about the functions of social studies.

Table 11
Participants' Epistemological Belief Categories and their Conceptions of Social Studies as a Teaching Profession

	SOCIAL STUDIES AS A TEACHING PROFESSION		
	Content knowledge	Initial teacher education	Anxieties about teachers' social status
Highly Sophisticated	1	2	2
Sophisticated	2	5	2
Moderately Sophisticated	1	-	1
Naive	1	2	1

Table 12
Participants' Epistemological Belief Categories and their Conceptions of the Functions of Social Studies

	CITIZENSHIP TRANSMISSION			REFLECTIVE INQIURY		SOCIAL SCIENCE		
	Cultural transmission	Adaptation into social life	Rights, liberties, and responsibilities	Preparation for life	Thinking skills	Spatial awareness	Historical consciousness	Economical literacy
Highly Sophisticated	-	3	3	3	1	2	3	-
Sophisticated	1	6	1	4	4	3	5	-
Moderately Sophisticated	-	5	1	2	-	1	4	1
Naive	1	3	1	3	5	4	5	-

The findings reveal that participants' conceptualizations of the function of social studies may be grouped under three main themes that are compatible with three main perspectives toward social studies. Participants with either sophisticated or naive epistemological beliefs emphasize that social studies functions as a means to transmit concepts of citizenship, particularly aspects related to the themes of social adaptation, rights, liberties, and responsibilities. On the other hand, only two participants, one with sophisticated and the other with naive epistemological beliefs mentioned social studies' role in transmitting culture. For the main theme of *Reflective Inquiry*, nearly all participants mentioned social studies' role in preparing students for real life. It is interesting that participants with naive epistemological beliefs emphasized social studies' place in developing students' thinking skills as much as their counterparts holding sophisticated epistemological beliefs. According to the findings, almost all participants, regardless of their epistemological belief category, hold that social studies should serve to develop learners' spatial awareness and historical consciousness, while only one participant with moderately sophisticated beliefs mentioned its role in improving students' economical literacy.

Participants' epistemological belief categories and their conceptions of social studies' purposes and content. Table 13 displays the findings on how the participants conceptualized the purposes of social studies while Table 14 shows their viewpoints about its content.

Table 13
Participants' Epistemological Belief Categories and their Conceptions of the Purposes of Social Studies

	KNOWING				FEELING			THINKING			ACTING		
	Being aware of the society and environment	Knowing about the society and country	Having communication skills	Aware of her responsibilities	Being able to distinguish right and wrong	Patriotic	Respectful to diversity	Critical	Having multiple perspectives	Objective	Having social participation skills	Being sensitive and acting about social issues	Having environmental consciousness
Highly Sophisticated	1	-	1	-	-	-	-	-	-	-	-	-	-
Sophisticated	1	1	2	1	1	-	1	-	-	-	-	1	-
Moderately Sophisticated	-	-	-	-	-	-	-	1	-	1	-	-	2
Naive	2	3	-	-	-	1	-	-	1	-	1	-	1

According to the findings displayed in Table 13, the participants' conceptions of social studies' purposes may be grouped under four main themes: (i) knowing, (ii) feeling, (iii) thinking, and (iv) acting. For the main theme of *Knowing*, participants with highly sophisticated and sophisticated epistemological beliefs stated that social studies should enable students to become aware of the social and natural environment in which they live, to learn more about their society and country, to develop communication skills, and to learn their individual and social responsibilities. As the data displayed in Table 13 shows, participants with naive beliefs share the same perspective in the first two sub-themes (i.e., Knowing and Feeling) only. The relevant data shows that for the main theme of *Feeling*, only two participants with sophisticated epistemological beliefs pointed out that social studies should improve students' abilities in distinguishing right from wrong and being respectful to others' different characteristics. On the other hand, one participant with naive beliefs indicated that the subject should develop learners' patriotic feelings. Two participants holding moderately sophisticated beliefs asserted that social studies should enable students to become critical and objective, while one participant with naive epistemological beliefs mentioned bringing learners in multiperspectivity in the main theme of *Thinking*. For the main theme of *Acting*, the findings reveal that participants with sophisticated and moderately sophisticated epistemological beliefs think that social studies should enable students to be sensitive and to take action about social and environmental issues. Additionally, two participants pointed out that the subject needed to develop learners' social participation skills and environmental consciousness.

Table 14
Participants' Epistemological Belief Categories and their Conceptions of the Content of Social Studies

	THE CONTENT OF SOCIAL STUDIES						
	History	Geography	Citizenship	Communication skills	Daily life	Social values and ethics	Other social science disciplines
Highly Sophisticated	1	1	1	-	-	-	-
Sophisticated	4	3	-	-	-	2	1
Moderately Sophisticated	1	2	1	1	-	1	6
Naive	2	1	3	-	3	1	1

The findings related to social studies' content displayed in Table 14 reveal that participants with different epistemological beliefs share the same views on course content. Many of them thought that social studies should include topics selected from history, geography, and citizenship. Interestingly, data in the Table 14 indicate that while participants with highly sophisticated beliefs only mentioned the above given topics, their counterparts with moderately sophisticated epistemological beliefs emphatically cited the necessity of including themes or issues from other social science disciplines. Participants with naive beliefs, on the other hand, mentioned the requirement of including topics related to daily life into social studies content. With the exception of those holding highly sophisticated beliefs, participants draw attention to the need to include of social values and ethics.

Participants' epistemological belief categories and their conceptions of social studies teachers' characteristics. Table 15 displays the findings on the participants' conceptions of social studies teachers and their characteristics. Three main themes emerged within this subsection: (i) interacting with students, (ii) personal development, and (iii) personal characteristics.

According to the data presented in Table 15, apart from those holding moderately sophisticated beliefs, the participants were of the belief that a good social studies teacher should establish careful and positive communication with students, learn about their students' personal characteristics and development, and be a role model for her students. Interestingly, only those participants with highly sophisticated and naive beliefs suggested that a teacher should positively communicate with her students. For the main theme of *Personal Development*, participants from all epistemological belief categories were found to share the view that teachers' intellectual development was important. A similar finding was also obtained in the case of professional development, in which three participants from varied epistemological belief categories asserted that teachers should read more to improve their practices and five participants claimed that they needed to be innovative. On the other hand, the participants with moderately sophisticated epistemological beliefs did not mention anything related to the main theme of *Personal Characteristics*.

Table 15
Participants' Epistemological Belief Categories and their Conceptions of the Characteristics of Social Studies Teachers

	INTERACTING WITH STUDENTS				PERSONAL DEVELOPMENT			PERSONAL CHARACTERISTICS
	Careful communication and relationships	Getting acquainted with students	Positive communication	Being a role model	Reading to improve one's practice	Innovative	Developing herself intellectually	Having communication skills
Highly Sophisticated	2	3	3	1	1	2	3	2
Sophisticated	3	2	-	2	1	-	3	1
Moderately Sophisticated	-	-	-	-	-	1	2	-
Naive	3	1	3	-	1	3	3	1

Discussions, Conclusions, and Suggestions

Designed as a mixed sequential explanatory research, the quantitative phase of this study endeavored to define social studies student teachers' epistemological belief levels. The participants were found to have sophisticated epistemological beliefs in the following three dimensions: (i) Access to Knowledge and Knowledge Acquisition, (ii) Certainty of Knowledge, and (iii) Control of Knowledge and to have moderately sophisticated beliefs in the Structure of Knowledge dimension. The variance in participants' epistemological belief scores in relation with the epistemological belief dimensions proves that epistemological beliefs are multi-dimensional in nature. This result supports the findings of previous research (Conley et al., 2004; Elder, 2002; Hofer, 2000; Schommer, 1990; Schraw et al., 2002) asserting the multi-dimensionality of epistemological beliefs. A study conducted by İçen, İlğan, and Göker (2013) found that student teachers had naive epistemological beliefs in the Certainty of Knowledge dimension. Similarly, another study carried out by Kösemen and Şahin (2014) concluded that social studies student teachers held underdeveloped or naive epistemological beliefs in the Certainty of Knowledge dimension. However, the findings of the current study suggest that social studies student teachers have sophisticated epistemological beliefs. The other findings indicate that while the institutions attended by participants affected their epistemological beliefs in both the Access to Knowledge and Knowledge Acquisition and the Certainty of Knowledge dimensions, this variable did not affect the Control of Knowledge or the Structure of Knowledge dimensions. As discussed earlier in this paper, the development of epistemological beliefs may be influenced by several variables, such as cognitive development, age or maturation, family, educational attainment, gender, field of study, institutional culture, and feelings of identity and belonging (Deryakulu, 2014, p. 270). Therefore, the variance of epistemological beliefs found among student teachers attending three different institutions within the same geographical region may be attributed to a number of various reasons.

It was revealed that social studies student teachers' year of study had no impact on their epistemological beliefs in the following three dimensions: (i) Access to Knowledge and Knowledge Acquisition, (ii) Structure of Knowledge, and (iii) Control of Knowledge. As discussed earlier however, fourth year student teachers were found to have more sophisticated epistemological beliefs than first year students in the Certainty of Knowledge dimension. This result coincides with the findings of Perry (1970, as cited in Hofer & Pintrich, 1997), the pioneer of epistemological belief studies. Similarly, the studies conducted by Aypay (2011b), Demir and Bal (2014), Demirli, Türel, and Özmen (2010), Erdem, Yılmaz, and Akkoyunlu (2008), and Eroğlu and Güven (2006) yielded the same result. Conversely, a number of other studies carried out on student teachers (Biçer et al., 2013; Deniz, 2014; Erol & Ercan, 2015; İçen et al., 2013; Meral & Çolak, 2009) found that one's year of study had no impact on her epistemological beliefs in the Certainty of Knowledge dimension. Although the findings of some studies disconfirm others, it has widely been accepted that variables like age, maturation, and educational attainment have a positive impact on the development of epistemological beliefs (Deryakulu, 2014; Schommer, 1998; Schraw, 2013; Youn, 2000).

Female participants were found to have more sophisticated epistemological beliefs than their male counterparts in the following three dimensions: (i) Access to Knowledge and Knowledge Acquisition, (ii) Certainty of Knowledge, and (iii) Control of Knowledge. Research carried out by Demirli et al. (2010) and Deniz (2014) also reached the conclusions that women believe that effective and fruitful learning mostly depends on learners' commitment and effort. The studies conducted by Belet and Güven (2011) and Deryakulu and Büyüköztürk (2005) further found that women possessed more developed epistemological beliefs than did men in the Control of Knowledge and the Structure of Knowledge dimensions. Another study, conducted by Eroğlu and Güven (2006), confirmed that women had more sophisticated beliefs in the Control of Knowledge dimension than did men. As Deryakulu points out (2014, p. 272), female students study more because they believe that effective learning and success depend on commitment and effort whereas male students prefer to enjoy their time in school or university, thinking that they will be successful because they already possess the required abilities. The case of female candidates obtaining better scores than their male counterparts in nationwide university entrance examinations since 2010 in Turkey (Atasoy, 2016) can be regarded as an example of this general conception. Contrary to the above mentioned research studies, Erdem et al. (2008) and Gürol, Altunbaş, and Karaaslan (2010) found that male student teachers' epistemological beliefs in the Control of Knowledge and the Structure of Knowledge dimensions were more sophisticated than those of their female counterparts. There are also a number of other studies (Biçer et al., 2013; Chan, 2003; Demur & Bal, 2014; İcen et al., 2013; Sapancı, 2012) in the relevant literature indicating that there is no significant correlation between gender and epistemological beliefs.

The findings discussed above reveal that social studies student teachers' epistemological beliefs do not differ based on their parents' educational backgrounds. This result coincides with the findings of Bakır and Adak (2014), Deniz (2014), Erdamar and Alpan (2011), Eroğlu and Güven (2006), and Şahin, Tunca, and Ulubey (2014). On the other hand, Schommer (1990) found out that undergraduates whose parents had better educational backgrounds possessed more sophisticated epistemological beliefs. Similarly, Trautwein and Ludtke (2007) reached the conclusion that students' epistemological beliefs in the Certainty of Knowledge dimension were more or less dependent on their parents' educational backgrounds. On the contrary, Ayaz (2009) found that science and technology student teachers whose mothers had only completed middle school had more sophisticated epistemological beliefs in the Certainty of Knowledge dimension than did their counterparts whose mothers were university graduates. These contradictory results suggest that socio-cultural factors like parents' educational backgrounds have an impact on individuals' epistemological beliefs to some degree. Because they are shaped or influenced by various factors, the impact of socio-cultural variables on epistemological beliefs is, in some contexts, rather limited.

As has been seen, the participants' epistemological beliefs did not significantly differ based on the place their families lived or where they had grown up. This result corresponds to the studies conducted by Erdamar and Alpan (2011) and Eroğlu and Güven (2006). In other words, the development of information technologies and the increasing possibility of accessing to knowledge from anywhere have lessened the impact of one's place of living on epistemological beliefs. In addition, considering the fact that during their undergraduate studies, many of the student teachers lived in relatively developed places and in better socio-cultural environments in which accessing knowledge and information is taken for granted, this finding could be regarded as ordinary.

The second phase of the current study attempted to reveal 17 interview participants' conceptions of social studies. The review of the relevant literature illustrated that although there exist numerous studies in Turkey aiming to examine student teachers' perceptions or conceptions of social studies, no single study attempting to realize this aim by means of interviews exists. Almost all studies in the literature had used metaphors as their data collection instruments. Thus, an interview schedule prepared by the researchers was used to explore participants' conceptions of social studies. Participants were observed to associate social studies with real life and to conceptualize it as an instrument of socialization. They emphasised the broad and exclusive features of social studies as a field of learning, teaching, and inquiry. Though student teachers conceptualized social studies as a subject introducing human life and being nested in people's real life experiences, it is still open to scrutiny as to whether middle school students in Turkey

perceive the subject in the same way. A study carried out by Fernandez, Massey, and Dornbusch (1975) in the USA indicated that secondary school students had found the subject boring, irrelated to real life situations, and useless in their future lives. They also stated that social studies was one of their least liked subjects. Alazzi and Chiodo (2004) interviewed 8th and 11th grade students in Jordan, finding that while students in both grade levels thought social studies to be an important and valuable subject, most of them did not count it as being among their favourite subjects. Many of the participants in their study conceptualized social studies as a subject aiming to develop their history, geography, and citizenship related skills. Boikhutso, Dinama, and Kgotlaetsile (2013) examined how social studies teachers perceived the role of social studies curriculum in developing secondary school students' citizenship competences in Bostwana. The results indicated that the participants thought that the social studies curriculum did not play the foreseen role of developing students' citizenship competences. Most of the participants in the current study, on the other hand, held that social studies played an important and influential role in Turkish schools in raising good citizens.

The participants also pointed out the importance of teachers when considering social studies as a middle school subject, suggesting that teachers should move away from a rote learning approach, support their practice with visual materials, and carry out activities promoting students' participation. They also stated that the curriculum content should be related to students' daily lives. The results of Byford's (2002) and Alazzi and Chiodo's (2004) studies also revealed that if students were to be expected to develop positive attitudes toward social studies, the content should be related to their real lives and that teachers should prepare appropriate venues for their students to actively participate in classes. It was also seen that while most of the participants had thought positively of social studies as a middle school subject, some of them criticized its curriculum, expressing that it introduces complex and cliché content that is both highly demanding and inappropriate to students' level of comprehension. The participants in this group further expressed that in many schools, the practice of social studies lessons is based on rote learning and memorization and therefore boring for students.

The participants asserted that as a teaching field, social studies is a broad, comprehensive, and ever-developing department that continually renews itself. Nevertheless, because of their anxiety about the possibility of not obtaining a teaching position after graduation and the social status of teachers in Turkey, the participants expressed several negative perceptions about social studies. They further pointed out that teacher education programs needed to include more practical elements, namely improved and genuine teaching practices. Due to these deficiencies, the participants did not consider themselves ready or sufficiently competent to teach, stating that their professors did not possess the necessary competencies to teach and guide them to become competent teachers. Similarly, Akhan's (2015) study concluded that

many social studies student teachers in Turkish universities found their educational training to be inadequate and insufficient, considering themselves unprepared and incompetent for a teaching career. As such, the results of the current study coincide with the findings of previous research (Akhan, 2015).

The findings of the current study reveal three conceptualizations of social studies held by participants: (i) as a means for citizenship transmission, (ii) as social sciences, and (iii) as reflective inquiry. These conceptualizations reflect the three main approaches to social studies expressed by Barr et al. (2013). The participants in the current study thought that as means to transmit concepts of citizenship, social studies enables students to learn their rights, liberties, and responsibilities, to develop an awareness of what it means to be a citizen, and to guide them in socialization processes. It was found that social studies as social sciences, participants generally thought of history and geography when asked about the subject. These findings indicate that like many others, the participants of the current study hold that social studies content should be composed mainly of topics and issues selected from history, geography, and citizenship. According to the participants, social studies improves learners' thinking skills and contributes to their intellectual development, indicating that they also consider social studies to be a reflective inquiry. Another result shows that the participants perceive social studies to be a soothing subject, helping learners to relax and relieve stress. Similarly, previous research (Alazzi & Chiodo, 2004; Byford, 2002; Fernandez et al., 1975) suggested that since both middle and high school students view social studies as an easy and soothing subject, they do not develop negative attitudes toward it.

The findings on the participants' conceptions of social studies content indicate that there is a consistency between the general objectives of the Turkish Social Studies Curriculum and their perceptions. Participants emphasized historical consciousness, national consciousness, and both social and cultural values. Many of the participants mentioned the importance of raising good citizens. According to them, a good citizen is an individual who knows the history, culture, and values of her nation and country, who is responsive to social values and issues, and who is a self-confident person. Only one participant mentioned the characteristics of an effective citizen, the ability to look at things critically, and being a world citizen. Although both current and prospective social studies curricula introduce topics and issues selected from a wide range of social science disciplines, the results show that the participating student teachers think that social studies should mainly introduce topics related to history, geography, and citizenship. This might have arisen from the insistent practices of both social studies teachers and teacher trainers.

Another result indicates that the participants conceptualize the characteristics of a good social studies teacher in varied ways with each one emphasizing a different

aspect of the profession. According to the participants, a good social studies teacher needs not only to know and track her students' cognitive and emotional developments but also to be a role model for them in changing their views of life. Haladyna (1982 as cited in Alazzi & Chiodo, 2004) stated that teachers' behaviors in the classroom are the most important factor influencing and determining students' attitudes toward social studies. The participants also pointed out that since unlike the teachers of other subjects, a social studies teacher needs to be an intellectual and knowledgeable person who has a say in many issues, they should not only read heavily to improve their professional and intellectual competencies but also follow current developments.

The quantitative and qualitative results of the current study have been presented and displayed above. In the third phase of the analysis process, we compared and contrasted 17 interview participants' epistemological belief levels and their conceptions of social studies. The analysis revealed that student teachers holding different epistemological beliefs have different conceptions of social studies. In the theme of Social Studies as a Middle School Subject, for example, only those participants with sophisticated epistemological beliefs stated that there should be authentic learning contexts in social studies classes and that teachers should try to utilize out-of-classroom environments for more meaningful learning. Only participants with naive beliefs expressed that the content introduced to middle school students in social studies lessons consisted of boring and cliché elements. In the theme of Social Studies as a General or Broad Concept, participants holding highly sophisticated and sophisticated epistemological beliefs emphasized the citizenship dimension of social studies more than the other participants. Nevertheless, it has been seen that participants in different epistemological belief categories share the same or similar conceptions on several themes or issues. For instance, almost all interview participants made connections between the concept of social studies and history, geography, citizenship, daily life, and current events.

In the theme of Social Studies as a General Concept, participants having highly sophisticated beliefs neither saw social studies as an integrated course nor perceived it as a vehicle for cultural transmission. This does not mean that they think of social studies as a single discipline subject or as not facilitating cultural transmission. Instead, they believe that the current implementation or operation of the subject in middle schools does not sufficiently fulfill these expectations. As it was not aimed to make generalisations, this study does not claim that different epistemological beliefs are the reason behind participants' different social studies conceptions. Undergraduate students' conceptions of social studies might have been influenced or shaped by various factors, such as the town or university in which they study, their lecturers and professors, their own interests, their intelligence levels, and their expectations. Therefore, this study does not attempt to establish a causal relationship between epistemological beliefs and the conceptions of social studies.

As it tries to introduce how social studies student teachers conceptualize and make sense of their prospective profession and working area, this study is expected to inform teacher educators training them. In order to examine how participants conceive of social studies, this study has employed a qualitative approach and used a semi-structured interview schedule. Future studies may attempt to utilize either quantitative, qualitative or a mixed method approaches to study the same phenomenon by employing questionnaires, observations, interviews, documents, or various combinations of them. As discussed earlier, this study was conducted solely with teachers attending three teacher education institutions in the Aegean Region of Turkey. Hence, future studies might be conducted in different regions and institutions to examine whether these variables have any impact on student teachers' conceptions.

The first part of this study attempted to assess social studies student teachers' epistemological beliefs by means of a previously developed, tested, and improved inventory. Therefore, it could be regarded as a descriptive study defining the current status of the participants' epistemological beliefs and categorizing these beliefs in accordance with previously defined levels or categories. However, since it does not take into account the factors or dynamics having impact on the development of these beliefs, prospective studies might be designed to explore the formation of individuals' epistemological beliefs in detail. The qualitative phase of the current study was implemented with only 17 participants who took part in the quantitative phase and who volunteered to be involved in the interviews. Thus, the epistemological belief categories were not represented by an equal number of the participants in the third phase of the analysis process. As a result, it could be suggested that future studies aiming to explore the relationships between any group of participants' epistemological beliefs and their conceptions of social studies or a different topic employ divergent or critical case sampling techniques in the sampling process of their qualitative studies.

References

Akengin, H., Sağlam, D., & Dilek, A. (2002). İlköğretim 4. ve 5. sınıf öğrencilerinin sosyal bilgiler dersi ile ilgili görüşleri [4th and 5th Grade students' view points on social studies]. *Marmara Üniversitesi Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi, 16*, 1–12.

Akhan, N. E. (2015). Views of social studies teacher candidates on social studies undergraduate program. *The Journal of Academic Social Science Studies, 32*, 267–289.

Alazzi, K., & Chiodo, J. J. (2004). Students' perceptions of social studies: A study of middle school and high school students in Jordan. *Internatıonal Journal of Scholarly Academıc Intellectual Diversity, 6*(1), 1–12.

Atasoy, H. (2016, February 4). *YGS'de kızlar daha başarılı* [Girls are more successful in university entrance exams]. Retrieved December 28, 2016 from http://www.hurriyet.com.tr/ygsde-kizlar-daha-basarili-40049212

Ayaz, F. (2009). *Fen bilgisi öğretmen adaylarının epistemolojik inançlarının yordanması* [Predicting science student teachers' epistemological beliefs] (Master's thesis, Ege University, İzmir, Turkey). Retrieved from https://tez.yok.gov.tr/UlusalTezMerkezi/

Aypay, A. (2011a). Öğretme ve öğrenme anlayışları ölçeği'nin Türkiye uyarlaması ve epistemolojik inançlar ile öğretme ve öğrenme anlayışları arasındaki ilişkiler [The adaptation of the teaching and learning conceptions scale into Turkish and the relationships between epistemological beliefs and the conceptions of teaching and learning]. *Kuram ve Uygulamada Eğitim Bilimleri*, *11*, 7–29.

Aypay, A. (2011b). Epistemolojik inançlar ölçeğinin Türkiye uyarlaması ve öğretmen adaylarının epistemolojik inançlarının incelenmesi [The adaptation of the epistemological beliefs scale into Turkish and an investigarion of student teachers' epistemological beliefs]. *Eskişehir Osmangazi Üniversitesi Sosyal Bilimler Dergisi*, *12*(1), 1–15.

Bal, M. S., & Gök, S. (2011). İlköğretim 5. sınıf öğrencilerinin sosyal bilgiler dersindeki cumhuriyet, saltanat ve liderlik kavramlarını algılayışları [Primary 5th grade students' perceptions of the some concepts in the social studies course: republic, reign and leadership]. *Gaziantep Üniversitesi Sosyal Bilimler Dergisi, 10*(3), 1183–1198.

Bakır, S., & Adak, F. (2015). Fen bilgisi öğretmen adaylarının epistemolojik inançları [Science student teachers' epistemological beliefs]. *Cumhuriyet International Journal of Education*, *3*(4), 24–36.

Barr, R., Barth, J. L., & Shermis, S. S. (2013). *Sosyal bilgilerin doğası* [The nature of social studies] (C. Dönmez, trans. ed.) Ankara, Turkey: Pegem Akademi.

Başbay, M. (2013). Analysing the relationship of critical thinking and metacognition with epistemological beliefs through structural equation modeling. *Education and Science*, *38*(169). 249–262.

Başçiftçi, F., Güleç, N., Akdoğan, T., & Koç, Z. (2011, April). *Öğretmen adaylarının değer tercihleri ile epistomolojik inançlarının incelenmesi* [An investigation of student teachers' values preferences and their epistemological beliefs]. Paper presented at II. International Conference on New Trends in Education and Their Implications, Antalya, Turkey.

Belenky, M. F., Clinchy, B. M., Goldberger, N. R., & Tarule, J. M. (1986). *Women's' ways of knowing: The development of self, voice and mind*. New York, NY: Basic Books.

Belet, S. D., & Güven, M. (2011). Meta-cognitive strategy usage and epistemological beliefs of primary school teacher trainees. *Educational Sciences: Theory and Practice*, 11(1), 51–57.

Biçer, B., Hafize, E. R., & Özel, A. (2013). The relationship between the epistemological beliefs and educational philosophies of the teacher candidates adopted. *Journal of Theory and Practice in Education*, *9*(3), 229–242.

Boikhutso, K., Dinama, B., & Kgotlaetsile, M. F. (2013). Secondary school teacher's perceptions of the role of social studies in fostering citizenship competencies. *Journal of Education and Training Studies*, *1*(2), 126–135.

Bolay, S. H. (2004). *Felsefeye Giriş* [Introduction to Philosophy]. Ankara, Turkey: Akçağ Yayınları.

Brownlee, J., Purdie, N., & Boulton-Lewis, G. (2001) Changing epistemological beliefs in pre-service teacher education students. *Teaching in Higher Education, 6*(2). 247–268.

Burr, J. E., & Hofer, B. K. (2002). Personal epistemology and theory of mind: Deciphering young children's beliefs about knowledge and knowing. *New Ideas in Psychology,* 20, 199–224.

Byford, J. M. (2002). *A phenomenological study of middle school and high school students' perceptions of social studies*. (Doctoral dissertation). Available from ProOuest Dissertations and Theses database. (UMI No. 3062575)

Cano, F. (2005). Epistemological beliefs and approaches to learning: Their change through secondary school and their influence on academic performance. *British Journal of Educational Psychology*, 75, 203–221.

Chan, K. (2003). Hong Kong teacher education students' epistemological beliefs and approaches to learning. *Research in Education, 69*, 36–50.

Chan, K. W., & Elliott, R.G. (2000). Exploratory study of epistemological beliefs of Hong Kong teacher education students: resolving conceptual and empirical issues. *Asia Pacific Journal of Teacher Education, 28*(3), 225–234.

Chan, K. W., & Elliott, R. G. (2002). Exploratory study of Hong Kong teacher education students' epistemological beliefs: Cultural perspectives and implications on beliefs research. *Contemporary Educational Psychology*, 27, 392–414.

Chan, K. W., & Elliott, R. G. (2004). Relational analysis of personal epistemology and conceptions about teaching and learning. *Teaching and Teacher Education,* 20*,* 817–831.

Chen, J. A., & Pajares, F. (2010). Implicit theories of ability of grade 6 science students: Relation to epistemological beliefs and academic motivation and achievement in science. *Contemporary Educational Psychology*, *35*(1), 75–87.

Conley, A. M., Pintrich, P. R., Vekiri, I., & Harrison, D. (2004). Changes in epistemological beliefs in elementary science students. *Contemporary educational psychology*, *29*(2), 186–204.

Creswell, J. W., & Plano-Clark, V. L. (2015). *Karma yöntem araştırmaları tasarımı ve yürütülmesi* [Mixed method research: Design and implementation]. (Yüksel, D., & S. B. Demur. Translation. Eds.). Translated into Turkish from the 2. Ed. Ankara, Turkey: Anı Yayıncılık.

Çulha Özbaş, B. (2012). "Sosyal bilgiler öğretmeni olarak, ben kimim?" sosyal bilgiler öğretmenlerinin mesleki kimliklerine yönelik görüşlerinin metafor analizi yoluyla incelenmesi [Who I am as a social studies teacher? A metaphorical analysis of social studies teachers' view points on their own professional identities]. *Turkish Studies*, *7*(2), 821–838.

Çüçen, A. K. (2005). *Bilgi Felsefesi* [Epistemology]. 2. Ed. Bursa, Turkey: Asa Kitabevi.

Demir, Ö., & Bal, A. P. (2014). Fen ve teknoloji ile sınıf öğretmenliği öğrencilerinin epistemolojik inanç ve öğrenme stillerinin incelenmesi [An investigation of science and technology and primary class teacher candidates' epistemological beliefs and their learning styles]. *Elektronik Eğitim Bilimleri Dergisi*, *3*(5). Retrieved from: http://www.ejedus.org/dergi/5012-30.pdf

Demirbaş, Ç. T., & Çelikkaya, T. (2012). Sosyal bilgiler öğretmen adaylarının programdaki değerlere ilişkin algısal farkındalıkları [Social studies student teachers' perceptual awareness of values being located in the social studies curriculum]. *The Journal of Academic Social Science Studies*, *5*(8), 415–427.

Demirli, C., Türel, Y. K., & Özmen, B. (2010, April). *Bilişim teknolojileri öğretmen adaylarının epistemolojik inançlarının incelenmesi* [An investigation of informatics student teachers' epistemological beliefs]. Paper presented at the Uluslararası Eğitim Teknolojileri Sempozyumu, Boğaziçi Üniversitesi, İstanbul, Turkey.

Deniz, J. (2014). Müzik öğretmen adaylarının epistemolojik inançları [Music student teachers' epistemological beliefs]. *Eğitimde Kuram ve Uygulama*, *10*(3), 667–683.

Deryakulu, D. (2004). Üniversite öğrencilerinin öğrenme ve ders çalısma stratejileri ile epistemolojik inançları arasındaki ilişki [The relationship between undergraduate students' study strategies and their epistemological beliefs]. *Kuram ve Uygulamada Eğitim Yönetimi, 38,* 230–249.

Deryakulu, D. (2014). Epistemolojik İnançlar [Epistemological beliefs]. In Y. Kuzgun & D. Deryakulu (Eds.), *Eğitimde bireysel farklılıklar* [Individual differences in education] (pp. 261–289, 3rd ed.). Ankara, Turkey: Nobel Yayınevi.

Deryakulu, D., & Büyüköztürk, Ş. (2002). Epistemolojik İnanç Ölçeği'nin geçerlik ve güvenirlik çalışması [Testing Epistemological Belief Scale's validity and reliability]. *Eğitim Araştırmaları*, *2*(8), 111–125.

Deryakulu, D., & Büyüköztürk, Ş. (2005). Epistemolojik İnanç Ölçeği'nin faktör yapısının yeniden incelenmesi: Cinsiyet ve öğrenim görülen program türüne göre epistemolojik inançların karşılaştırılması [Re-examination of Epistemological Belief Scale's dimensional structure: A comparison of epistemological beliefs in accordance with gender and the types of the study programmes]. *Eğitim Araştırmaları*, *5*(18), 57–70.

Deveci, H., & Bayır, Ö. G. (2011). Hayallerdeki sosyal bilgiler: İlköğretim üçüncü sınıf öğrencilerinin algıları [Imagined social studies: The conceptions of third year primary students]. *Uluslararası Avrasya Sosyal Bilimler Dergisi*, *2*(4), 9–28.

Dinç, E., & Doğan, Y. (2010). İlköğretim ikinci kademe sosyal bilgiler öğretim programı ve uygulanması hakkında öğretmen görüşleri [Teachers' viewpoints on the middle school social studies curriculum and its practice]. *Sosyal Bilgiler Eğitimi Araştırmaları Dergisi*, *1*(1), 17–49.

Dinç, E., İnel, Y., & Üztemur, S. (2016). Epistemik İnanç Ölçeği: Türkçeye uyarlama, geçerlik ve güvenirlik çalışması [Epistemic Belief Inventory: A study of its adaptation into Turkish and the testing of its validity and reliability]. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi, 17*(3), 767–783.

Doğanay, A., & Sarı, M. (2008). Öğretmen gözüyle yeni sosyal bilgiler programı: Adana ilinde bir araştırma [The new social studies curriculum from the eyes of teachers: A study in Adana province]. *İlköğretim Online*, *7*(2). Retrieved from http://ilkogretim-online.org.tr/vol7say2/v7s2m17.pdf

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological review*, *95*(2), 256–273.

Elder, A. D. (2002). Characterizing fifth grade students' epistemological beliefs in science. In B. Hofer & P. R. Pintrich (Eds.), *Personal epistemology: The psychology of beliefs about knowledge and knowing* (pp. 347–364). New Jersey, NJ: Lawrence Erlbaum.

Erdamar, G. K., & Alpan, G. B. (2011). Öğretmen adaylarının epistemolojik inançları [Student teachers epistemological beliefs]. *E-Journal of New World Sciences Academy*, *6*(4), 2689–2698.

Erdem, M., Yılmaz, A., & Akkoyunlu, B. (2008, May). *Öğretmen adaylarının bilgi okuryazarlık özyeterlik inançları ve epistemolojik inançları üzerine bir çalışma* [A study on student teachers' beliefs of information literacy and their epistemological beliefs]. Paper presented at Uluslararası Eğitim Teknolojileri Konferansı, Eskişehir, Turkey.

Eroğlu, S. E., & Güven, K. (2006) Üniversite öğrencilerinin epistemolojik inançlarının bazı değişkenler açısından incelenmesi [An investigation of undergraduate students' epistemological beliefs in consideration with some variables]. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 16*, 295–312.

Erol, M., & Ercan, L. (2015). Türkiye'de öğrenim gören yabancı uyruklu üniversite öğrencilerinin kişisel epistemolojileri ve benlik algılarının incelenmesi [An examination of international undergraduate students'personal epistemologies and their self perceptions]. *Eğitimde Kuram ve Uygulama*, *11*(2), 492–520.

Fernandez, C., Massey, G. C., & Dornbusch, S. M. (1975). High school students' perceptions of social studies. Stanford, CA: Stanford Center for Research and Development in Teaching. (ERIC Document Reproduction Service No. ED113241).

Gürol, A., Altunbaş, S., & Karaaslan, N. (2010). Öğretmen adaylarının öz yeterlik inançları ve epistemolojik inançları üzerine bir çalışma [A study on student teachers' self-efficacy beliefs and their epistemological beliefs]. *Journal of New World Sciences Academy*, *5*(3), 1395–1404.

Güven, İ. (2004). Sosyal bilgiler alanı öğretmen adaylarının okul uygulamalarına yönelik görüşleri üzerine nitel bir araştırma [A qualitative study on social studies student teachers' viewpoints on school practice]. *Kuram ve Uygulamada Eğitim Bilimleri*, *4*(2), 271–300.

Güven, B., & Ersoy, E. (2007). Sınıf öğretmeni adaylarının hayat bilgisi ve sosyal bilgiler öğretimi I dersine ilişkin öz yeterlik algıları ve bilişsel tutumlarının belirlenmesi [Definition of candidate primary class teachers' self-efficacy perceptions and cognitive attitudes on life sciences and social studies I courses]. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, *21*, 15–32.

Hofer, B. (1994, August). *Epistemological beliefs and first year college students: Motivation and cognition in different instructional contexts*. Paper presented at the Annual Meeting of the American Psychological Association, Los Angeles, USA.

Hofer, B. K. (2000). Dimensionality and disciplinary differences in personal epistemology. *Contemporary Educational Psychology, 25*, 378–405.

Hofer, B. (2001). Personal epistemology research: Implications for teaching and learning. *Journal of Educational Psychology Review, 13*(4), 353–383.

Hofer, B. K. (2004). Exploring the dimensions of personal epistemology in differing classroom contexts: Student interpretations during the first year of college. *Contemporary Educational Psychology*, *29*(2), 129–163.

Hofer, B., & Pintrich, P. R. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of Educational Research, 67*(1), 88–144.

Holschuh, J. L. (1998). *Epistemological beliefs in introductory biology: Addressing measurement concerns and exploring the relationships with strategy use.* (Doctoral dissertation). Available from ProOuest Dissertations and Theses database. (UMI No. 9908606)

Ivankova, N. V., & Stick, S. L. (2007). Students' persistence in a distributed doctoral program in educational leadership in higher education: A mixed methods study. *Research in Higher Education*, *48*(1), 93–135.

İskender, P. (2007). İlköğretim okullarında sosyal bilgiler öğretiminin öncelikleri ve sosyal bilgiler öğretmeni yetiştirmeye yönelik çıkarımlar [The priorities of social studies teaching in elementary schools and the inferences for training social studies teachers]. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi*, *8*(1).

İçen, M., İlğan, A., & Göker, H. (2013). Sosyal bilgiler öğretmen adaylarının epistemolojik inançlarının analizi [The analysis of social studies student teachers' epistemological beliefs]. *E-AJELI (Anatolian Journal of Educational Leadership and Instruction)*, *1*(2), 2–11.

Karbay, E. B. (2012). *Lisans düzeyindeki öğrencilerin kredi kartı deneyimine yönelik algısı: Anadolu Üniversitesi örneği üzerinde nitel bir çalışma* [Undergraduate students' conceptions of experiencing the use of credit cards: A qualitative study on Anadolu University sample] (Master's thesis. Anadolu University, Eskişehir, Turkey). Retrieved from: https://tez.yok.gov.tr/UlusalTezMerkezi/

Keçe, M. (2014). Sosyal bilgiler öğretmen adaylarının Atatürk ilkeleri ilişkin algı düzeylerinin değerlendirilmesi [An evaluation of social studies student teachers' perception levels of the principles of Atatürk]. *Türkiye Sosyal Araştırmalar Dergisi*, *181*, 103–128.

Kılcan, B., & Akbaba, B. (2014). Sosyal bilgiler öğretim programında yer alan estetik değerine ilişkin öğrenci algılarının incelenmesi [An examination of students' perceptions of the value of aesthetics in social studies curriculum]. *Eğitimde Kuram ve Uygulama*, *10*(4), 1047–1076.

Kılınç, E. (2014). Pre-service social studies teachers' understandings about the nature of the social studies. *International Electronic Journal of Elementary Education*, *6*(3), 415–426.

Kizilgunes, B., Tekkaya, C., & Sungur, S. (2009). Modeling the relations among students' epistemological beliefs, motivation, learning approach, and achievement. *The Journal of Educational Research*, *102*(4), 243–256. Retrieved from http://dx.doi.org/10.3200/JOER.102.4.243-256

Kösemen, S., & Şahin, A. (2014). Sosyal bilgiler dersi öğretim programına yönelik öğretmen görüşlerinin epistemolojik inançlar bağlamında değerlendirilmesi [An evaluation of teachers' viewpoints on social studies curriculum within the context of epistemological beliefs]. *Eğitimde Kuram ve Uygulama*, *10*(1), 279–296.

Kuhn, D., Cheney, R., & Weinstock, M. (2000). The development of epistemological understanding. *Cognitive Development, 15*, 309–328.

Külcü, Ö. (2000). Kuramsal bilginin oluşumu ve toplumsal bilgiye dönüşümünde epistemoloji bilgi hizmetleri ilişkisi [Formation of theoretical knowledge and the relationships between epistemology and information services in its transformation to social knowledge]. *Türk Kütüphaneciliği*, *14*(4), 386–411.

Meral, M., & Çolak, E. (2009). Öğretmen adaylarının bilimsel epistemolojik inançlarının incelenmesi [Investigating student teachers' scientific epistemological beliefs]. *Ondokuz Mayıs Üniversitesi Eğitim Fakültesi Dergisi, 27*(1), 129–146.

Mertol, H., Doğdu, M., & Yılar, B. (2013). Üstün zekâlı ve yetenekli öğrencilerin sosyal bilgiler dersine ilişkin metaforik algıları [Gifted and talented students' metaphorical conceptions of social studies course]. *Üstün Yetenekliler Eğitimi Araştırmaları Dergisi*, *1*(3), 176–183.

Önen, A. S. (2011). Öğretmen adaylarının eğitime yönelik inançları ile epistemolojik inançlarının mesleklerine yönelik tutumlarına etkisi [The influence of student teachers' beliefs of education and epistemological beliefs on their attitudes towards teaching profession]. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, *41*, 293–301.

Özkal, N., Güngör, A. ve Çetingöz, D. (2004). Sosyal bilgiler dersine ilişkin öğretmen görüşleri ve öğrencilerin bu derse yönelik tutumları [Teachers' viewpoints on social studies and students' attitudes towards this course]. *Kuram ve Uygulamada Eğitim Yönetimi*, *10*(4), 600–615.

Özmen, C. (2011). Sosyal bilgiler eğitiminde vatandaşlık aktarımı yaklaşımına ilişkin öğretmen görüşleri [Teachers' viewpoints on citizenhip transition approach in social studies]. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *8*(15), 435–455.

Öztürk, C., Keskin, S. C., & Otluoğlu, R. (2012*). Sosyal bilgiler öğretiminde edebi ürünler ve yazılı materyaller* [The use of literary works and written materials in social studies] (5th ed.). Ankara, Turkey: Pegema Yayınları.

Phan, H. P. (2008). Predicting change in epistemological beliefs, reflective thinking and learning styles: A longitudinal study. *British Journal of Educational Psychology*, *78*(1), 75–93.

Ricco, R., Pierce, S. S., & Medinilla, C. (2010). Epistemic beliefs and achievement motivation in early adolescence. *The Journal of Early Adolescence*, *30*(2), 305–340.

Ryan, M. P. (1984). Monitoring text comprehension: Individual differences in epistemological standards. *Journal of Educational Psychology*, *76*(2), 248–258.

Sapancı, A. (2012). Öğretmen adaylarının epistemolojik inançları ile bilişüstü düzeylerinin akademik başarısıyla ilişkisi [The relationships between student teachers' epistemological beliefs & metacognitive levels and their academiz success]. *Celal Bayar Üniversitesi Sosyal Bilimler Dergisi*, *1*(10), 311–331.

Schommer, M. (1990). Effects of beliefs about the nature of knowledge on comprehension. *Journal of Educational Psychology, 82*(3), 498–504.

Schommer, M. (1994). Synthesising epistemological belief research: Tentative understandings and provocative confusions. *Educational Psychology Review, 6*(4), 293–319.

Schommer, M. (1998). The role of adults' beliefs about knowledge in school, work, and everyday life. In M. C. Smith & T. Pourchot (Eds.), *Adult learning and development: Perspectives from educational psychology* (pp. 127–143). Mahwah, NJ: Lawrence Erlbaum Associates.

Schommer-Aikins, M. (2004). Explaining the epistemological belief system: Introducing the embedded systemic model and coordinated research approach. *Educational Psychologist*, *39*(1), 19–29.

Schommer-Aikins, M. (2002). An evolving theoretical framework for an epistemological belief system. In B. Hofer & P. R. Pintrich (Eds.), *Personal epistemology: The psychology of beliefs about knowledge and knowing* (pp. 103–119). New Jersey, NJ: Lawrence Erlbaum.

Schommer, M., & Dunnell, P. A. (1994). A comparison of epistemological beliefs between gifted and non-gifted high school students. *Roeper Review, 16*(3), 207–210.

Schraw, G. (2013). Conceptual integration and measurement of epistemological and ontological beliefs in educational research. *ISRN Education,* Article ID 327680. http://dx.doi.org/10.1155/2013/327680

Schraw, G., Bendixen, L. D., Dunkle, M. E. (2002). Development and validation of the Epistemic Belief Inventory (EBI). In B. Hofer., & P. R. Pintrich (Eds.), *Personal epistemology: The psychology of beliefs about knowledge and knowing* (pp. 261–277). New Jersey, NJ: Lawrence Erlbaum.

Sözer, E. (1998). Sosyal bilimler kapsamında sosyal bilgilerin yeri ve önemi [The place and importance of social studies within the context of social sciences]. In G. Can (Ed.), *Sosyal bilgiler öğretimi* [Teaching social studies] (pp. 1–8). Eskişehir, Turkey: Anadolu Üniversitesi Açıköğretim Fakültesi Yayınları.

Şahin-Alkın, S., Tunca, N., & Ulubey, Ö. (2014). Öğretmen adaylarının eğitim inançları ile eleştirel düşünme eğilimleri arasındaki ilişki [The relationship between student teachers' educational beliefs and their tendencies of critical thinking]. *İlköğretim Online*, *13*(4). http://dx.doi.org/10.17051/io.2014.56482

Topçu, E. (2010). *Sosyal bilgiler öğretmenleri ve ilköğretim ikinci kademe öğrencilerinin tarihsel bilgiye ilişkin algılarının incelenmesi* [An investigation of social studies teachers' and middle school students' conceptions of histocial knowledge] (Doctoral thesis, Marmara University, İstanbul, Turkey). Retrieved from https://tez.yok.gov.tr/UlusalTezMerkezi/

Trautwein, U., & Lüdtke, O. (2007). Epistemological beliefs, school achievement and college major: A large-scale longitudinal study on the impact of certainty beliefs. *Contemporary Educational Psychology, 32,* 348–366.

Uslu, F. (2010). Bilgi ve inanç kavramlarının analizi [The analysis of the concepts of knowledge and belief]. In H. Y. Başdemir (Ed.), *Epistemoloji: Temel metinler* [Epistemology: Basic texts] (pp. 15–48). Ankara, Turkey: Hititkitap Yayınevi.

Yahyaoğlu, R. (2013). *Yaşlanma ve zaman algısı* [The perception of aging and time] (Master's thesis, İstanbul Arel University, İstanbul, Turkey). Retrieved from https://tez.yok.gov.tr/UlusalTezMerkezi/

Yalçınkaya, E. (2015). Öğrencilerin çizdikleri resimlerde sosyal bilgiler kavramı [The concept of social studies in students' drawings]. *Kastamonu Eğitim Dergisi*, *23*(3), 1203–1222.

Yapıcı, M., & Demirdelen, C. (2007). İlköğretim 4. sınıf sosyal bilgiler öğretim programına ilişkin öğretmen görüşleri [Teachers' viewpoints on elementary fourth grade social studies curriculum]. *İlköğretim Online*, *6*(2), 204–212.

Yazıcı, S., & Yazıcı, F. (2010). Yurtseverlik eğitimi: Tarih ve sosyal bilgiler öğretmenlerinin algı, tutum ve eğitimsel uygulamalarına yönelik bir araştırma [Patriotism education: A study of history and social studies teachers' perceptions, attitudes and educational practices]. *Journal of International Social Research*, *3*(10), 649–660.

Yılmaz, K. (2008). Social studies teachers' conceptions of history: Calling on historiography. *The Journal of Educational Research*, *101*(3), 158–176.

Yılmaz, K., & Kaya, M. (2011). Sosyal bilgiler öğretmenlerinin tarih algısı ve tarih öğretimine pedagojik yaklaşımları [Social studies teachers' conceptions of history and their pedagogical approaches to history teaching]. *Dicle Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 3*(6), 73–95.

Youn, I. (2000). The culture specificity of epistemological beliefs about learning. *Asian Journal of Social Psychology*, *3*(1), 87–105.