

## Türkiye’de Sosyo-bilimsel Konular Üzerine Yapılmış Araştırmaların İçerik Analizi

### The Content Analysis of the Researches about Socio-scientific Issues in Turkey

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#### EXTENDED SUMMARY

Social issues with conceptual or technological ties to science have captured the national spotlight during the recent past. (Sadler, 2004). Socio-scientific Issues (SSI) is controversial social issues which relate to science. They are ill-structured, open-ended problems which have multiple solutions. Cloning, stem cells, genome projects, global warming, and alternative fuels have become common elements of the national vocabulary as well as the currency of political debates. Regardless of society’s reluctance or enthusiasm towards the advent of these issues or its preparedness to deal with them, scientific issues with social ramifications undoubtedly will continue to arise and evolve. (Kolsto, 2006; Ratcliffe & Grace, 2003; Sadler, 2004).

Socio-scientific issues contributes to the cognitive, emotional and social development on decision-making process of individuals related scientific issues related to society, Therefore, it is stated to be an indicator of the scientific literacy of the inclusion of socio-scientific issues of the training program and the decision-making process on social issues related to science literacy in science is critical (Dawson & Venville, 2009).

Examination and evaluation the results of studies on socio-scientific issues in this context, is important. For this purpose, in this study, a content analysis study was conducted by analyzing studies published in the last fourteen years of socio-scientific issues discussed in Turkey. It is believed that this study, will be guiding the future researches. Reached article on the subject of research, the working group, type of research, data collection instruments were examined in terms of variables such as data analysis. The study has sought answers to the following questions;

1. What is the trends of analyzed topics of articles?
2. How is the distribution about studies terms of the working group, type of research, data collection tools and data analysis methods?

#### METHOD

In this study, the content analysis was used. in order to examine studies conducted on the socio-scientific issues in Turkey between the years 2000-2014 Content analysis is an approach which allow a scientific and a systematic way to examine oral, written and other materials objects (Büyüköztürk vd., 2009).

#### RESULTS

At the first screening results, it was reached a total of 77 units from 32 journal articles with the specified keywords. All articles which were determined by all researchers one by one, is examined in accordance with criteria and it was decided that a total of 36 articles can be included the study

According to the year of publication of the article It is observed that a rise in recent years. It is understood that most work is done in 2012 (Table 1).

When the articles were examined, it is seen that the most extensively studied in research subject of global warming which have been studied in a total of 11 articles. In addition, there were 5 studies about nuclear energy, 2 studies about cloning, 5 studies about GMO, 5 studies about organ donation/transplantation, 7 studies about Biotechnology, 1 study about hydroelectric power station (Table 3).

According to the subject of the articles, it is seen that the most examined study is on the people’s knowledge of socio-scientific issues. In addition, there were 3 studies on the teaching of socio-scientific issues, 9 studies on individual socio-scientific awareness and 16 studies about attitudes towards socio-scientific issues (Table 2). When the studies examined it is seen that 28 quantitative studies and 8 qualitative studies were used at the studies (Table 4). According to the data collection tool, It was determined that the survey that is used mostly open-ended and Likert-type were used at 27 studies. In addition, 10 studies on achievement / concept testing, 7 studies on attitude towards socio-scientific issues, 9 studies on the interview forms were used in these studies (Table 5).

In the studies, graduate students were mostly used as a sample group of the study. Middle school students were selected at 4 studies, high school students were selected at 7 studies, Parents were selected at one study and teachers were selected as a sample group of 2 studies (Table 6). The most widely used method of data analysis in

the article is a review of quantitative data analysis. These most preferred statistics were used was descriptive statistics. Descriptive statistics were used at the 22 studies. The most preferred qualitative data analysis was content analysis.

## DISCUSSION

Socio-scientific issues improve the students' ability of discuss and problem solving. On the other hand, it is stated that students' perceptions, decision-making and solving process of socio-scientific issues is important (Sadler & Zeidler, 2004). Similarly, socio-scientific issues help to teachers who want to improve the students' critical thinking and judgment. According to Albe (2008), giving the socio-scientific issues in the process of learning increases students' motivation towards the course and to contribute to pay more attention to these issues. Nuangchalem (2010) stated that socio-scientific issues help the students to improve the skills of discussion and questioning and understanding the nature of science during the process of teaching socio-scientific issues to students. In studies which were published between the years 2000-2014 about socio-scientific issues, it was observed that there were few subjects about socio-scientific issues differently. Usually there were researches related knowledge and attitudes of socio-scientific issues.