The 3rd International Geography Symposium - GEOMED2013

Social scientist perception of undergraduate geography students

Çağrı Öztürk Demirbaş[a]*, Mücahit Coşkun[b]

[a] Social Studies Department, Faculty of Education, Ahi Evran University, Kirsehir, 40100, Turkey.
[b] Geography Department, Faculty of Letters, Karabük University, Karabük, 78050, Turkey

Abstract

The aim of this study is to reveal social scientist perception of undergraduate geography students. In the research scanning model was used. The study group consisted of 65 students studying geography. Semi-constructed interview form was used as data collection tool. Findings of the study show that geography students mostly have positive perceptions regarding mental social scientist images and perceive a social scientist as physically elegant, long-haired, tall, well-kept, smiling and spectacled. Besides, findings reveal that for geography student sex of the social scientist is not important and that her/his age cannot be said numerically. For them social scientists are immortal. The participants perceive social scientists as a person doing research, joining social solidarity events, scientific meetings in comfortable and neat places where social interaction can occur. Also they perceive a social scientist as a person with library, books, maps, and natural environment objects around. They think the most important social scientists in Turkey are Sırrı Erinç and Ziya Gökalp and Plato and Socrates are in the world. If they were social scientists, they would solve social and personal communication problems, environment problems, cultural resolution, domestic violence and children.

Keywords: Geography; geography education; social scientist perception.

1. Introduction

Social Sciences can be defined as truth created by human, the process of proving this truth and all the data obtained at the end of this process (Donmez, 2003: 31). Social sciences are the science aiming to examine human

* Corresponding author. Tel.:+0 505 915 63 20 ; fax: +0 386 123 45 13
E-mail address: cozturk@ahievran.edu.tr

beings and society and the relationships of human being-human being, human being-society and human being-object systematically and producing regular scientific data for this aim (Can, 2007). Social sciences, which find solutions for social problems, are known to be the 'problem-solving science' (Bilgili, 2008:2). It relies on the earthly effort of producing empirically verified data about truth systematically (Gülbenkian Commission, 2005).

A social scientist is the person who studies in the field of social sciences. In the literature studies related to the images of science and scientist in the last 50 years can be found (Song, 1993; Song and Kim, 1999; Kaya, Dogan and Ocal, 2008; Unver, 2010; Korkmaz and Kavak, 2010). These studies aim to encourage more students to be scientists by educating with the gathered images. One of the foremost requirements to understand science and the nature of scientific information is to understand the people who created this information correctly (Kaya, Dogan and Ocal, 2008).

However, when studies are examined, scientist images and study fields of the students are seen to be science. Social sciences are almost obscure in the scientist image. For this reason, the lack of studies regarding social sciences and social scientists was determined in the literature and this perception was tried to be revealed in terms of geography, which is a social science as well.

2. Method

The research is a qualitative study and scanning model was used. Scanning model is a widely used method to identify individuals' beliefs, attitudes, values, habits and perceptions regarding various topics (McMillan and Schumacher, 2006). The study group consisted of 65 geography students (31 females and 34 males) from different grades of Ahi Evran University. After the literature review (Chambers, 1983; Finson et al., 1995; Song and Kim, 1999; Gonsoulin, 2001; Togrol Yontar, 2000; Korkmaz, 2005; Korkmaz and Kavak, 2010, Nuhoglu and Afacan, 2011; Aggul Yalcin, 2012), a semi-structured interview form was created as data collection tool. The interview form consisted of 14 open-ended questions and one expression requiring drawing. Content analysis was used for data analysis. Content analysis is defined as a systematic and iterable technique in which some words of a text are summarized with smaller content categories based on some coding (Buyukozturk et.al. 2008). Fit percentage was found for each question at the end of two different field experts and it was found that findings overlapped for all questions in total (r=0, 86).

3. Findings and Discussions

3.1. Mental social scientist images

Geography students perceive a social scientist as creative, smart, observant, social, and curious person with problem solving skill and multiple points of view and developed verbal intelligence. This perception constitutes 45.2 % of all views. When mental image elements were examined, it was found that only 2.3% gave negative statements whereas 97.8% stated positively.

3.2. Physical social scientist images

The participants perceived the physical characteristics of a social scientist as elegant, tall, long-haired, well-kept, smiling and spectacled. This perception constitutes 54.6% of the physical image elements of the participants.

50.8% of the participants stated that sex of the social scientist is not important whereas 26.1% stated male and 20% stated that a social scientist should be unsexed and 3% stated female. In other studies on scientist image (Song ve Kim, 1999; Kaya, Dogan and Ocal, 2008; Turkmen, 2008; Korkmaz and Kavak, 2010; Nuhoglu and Afacan, 2011; Aggul Yalcin, 2012; Cermik, 2013) it was revealed that most of the participants perceived scientist as male.

24.6% of the students who participated in the research stated ageless or immortal regarding age of the social scientist. When the other categories related to age and age range were examined it was revealed that participants perceived the social scientist 30 and above mostly. Participants stated that a social scientist does research, participates in social solidarity activities, scientific meetings and observation activities. These activities constituted 51.5 % of all activities.

Table 1. Participants' mental images of social scientists

Elements of mental image	Gender		Total		Elements of mental image	Gender		Total	
	F	M	f	%		F	M	f	%
Creator	8	5	13	7,3	Reformer	3	1	4	2,3
Clever	5	7	12	6,8	Capable of self-expression	2	2	4	2,3
Problem solving	3	8	11	6,2	Positive	-	3	3	1,7
Observer	5	6	11	6,2	Respect for diversity	2	1	3	1,7
Sociable	4	5	9	5,1	Subjective	1	2	3	1,7
Advanced verbal intelligence	6	3	9	5,1	Receptive	1	2	3	1,7
The multiple perspectives	6	2	8	4,5	Orator	2	1	3	1,7
Curious	2	5	7	3,9	Advanced visual intelligence	2	1	3	1,7
Broadminded	3	3	6	3,4	Dreamer	2	1	3	1,7
Objective	2	4	6	3,4	Objective	-	2	2	1,1
Care about others	2	4	6	3,4	High emotional intelligence	2	-	2	1,1
Sensitive	1	5	6	3,4	Spatial think	2	-	2	1,1
Rogatory	-	6	6	3,4	Shy	1	1	2	1,1
Research	3	2	5	2,8	Peacemaker	1	-	1	0,6
Strong communication skills	2	3	5	2,8	Cranky	1	-	1	0,6
Empathetic	4	1	5	2,8	Digital outsmart low	1	-	1	0,6
Tolerant	5	-	5	2,8	Brain owner	1	-	1	0,6
Peaceful	4	1	5	2,8	Very minded	-	1	1	0,6
	Total					89	88	177	100

Table 2: The physical characteristics of social scientist according to participant

Elements of physical image	Gender		Total		Elements of physical image	Gender		Total	
	F	M	f	%		F	M	f	%
Stylish	9	10	19	10,9	Simpatico	3	-	3	1,7
Long-haired	11	7	18	10,3	Moderately overweight	2	1	3	1,7
Tall	11	5	16	9,2	Briefcase	1	2	3	1,7
Well-kept	11	4	15	8,6	Handsome	1	2	3	1,7
Cheerful	9	5	14	8,0	Neglected	-	2	2	1,1
Spectacled	9	3	13	7,5	White haired	-	2	2	1,1
Middle-sized	6	4	10	5,7	Bald	2	-	2	1,1
Look junk	3	5	8	4,6	Shapely	-	2	2	1,1
Tie	2	5	7	4,0	Modern cool	1	-	1	0,6
Overweight	4	2	6	3,4	Mature	1	-	1	0,6
Suit	1	5	6	3,4	Hat	1	-	1	0,6
Unhindered	3	2	5	2,9	Sportswear	1	-	1	0,6
Weak	4	1	5	2,9	Earring	-	1	1	0,6
Goatee	-	4	4	2,3	Camera	1	-	1	0,6
Attention	2	1	3	1,7	Total	99	75	174	100

3.3. Sex, age and activities of the social scientist

Table 3: The sex of social scientist according to participant

Category	Gender		Total	
	F	M	f	%
Does Not Count	17	16	33	50.8
Male	9	8	17	26.1
Absent	3	10	13	20
Female	2	-	2	3.1
Total	31	34	65	100

3.4. Study field and hours of the social scientist

Participants stated that study field of social scientists cannot only be enclosed spaces but a comfortable, neat natural environment where individual-society interaction can occur easily.

Table 4: Participants' images study field of social scientists

Study field	Gender		Total	
	F	M	f	%
With space limited (each location)	10	10	20	23,3
Comfortable, spacious and tidy environment	11	8	19	22,1
Habitat	10	8	18	20,1
Individual and society	5	6	11	12,8
Classroom and laboratory	3	3	6	7,0
Earth	1	2	3	3,5
Scientific institutions and research centers	3	-	3	3,5
Social life	1	1	2	2,3
A flashy office	1	1	2	2,3
Nudity	-	1	1	1,2
Centers of social problems	1	-	1	1,2
Total	46	40	86	100

This opinion was stated by 79.1 % of the participants. When this is compared to other studies related to scientist image, study location of the social scientist differs. In the literature (Finson et.al, 1995; Korkmaz, 2004; Buldu, 2006; Turkmen, 2008; Korkmaz and Kavak, 2010; Aggul Yalcin, 2012) study location of the social scientist was found to be laboratories mostly. As for the hours of study, 30.8% of the participants stated that there was no certain hour of study.

3.5. Objects used by a social scientist and the source of social scientist image

Human being is the first mostly used object by scientists followed by library, books, maps and natural environment. Geography students stated that other people and the society, teachers, department they study, books and the internet were the source of creating a social scientist image.

Table 5. According to the participants objects used by social scientists

Objects	Gender		Total		Objects	Gender		Total	
	F	M	f	%		F	M	f	%
Human	4	13	17	11,9	Camping equipment	-	4	4	2,8
Library-Books	5	5	10	7,0	Internet	4	-	4	2,8
Map	4	5	9	6,3	Magazine	2	1	3	2,1
Natural habitat	5	4	9	6,3	social media	2	1	3	2,1
Cinecamera	3	3	6	4,2	Laboratory	2	1	3	2,1
Computer	5	1	6	4,2	Ruler	1	2	3	2,1
Society	3	3	6	4,2	Atlas	1	1	2	1,4
Pencil	2	4	6	4,2	Compass	2	-	2	1,4
Everything's worked	2	4	6	4,2	Bag	2	-	2	1,4
Surveys	4	1	5	3,5	Writing materials	2	3	2	1,4
Camera	5	-	5	3,5	Advisers	2	-	2	1,4
Speech language / rhetoric	2	3	5	3,5	Gestures and facial expressions	1	1	2	1,4
Mass media	4	1	5	3,5	Stone	1	1	2	1,4
Paper	2	3	5	3,5	Recorder	1	1	2	1,4
Technological equipment	3	1	4	2,8	Total	76	67	143	100

* f = 1 expressions were not included in the table.

3.6. The most appropriate discipline for social scientist image

26.2% of the participants stated that every objective discipline might fit the image of social scientist whereas 20% of them stated that sociology and 13.8% of them stated that geography fitted this image.

Table 6: The most appropriate discipline for social scientist image

Discipline	Gender		Total	
	F	M	f	%
Objective science	11	6	17	26.2
Sociology	5	8	13	20
Geography	3	6	9	13.8
Every science problem solving	3	4	7	10.8
Psychology	3	2	5	7.7
Education	1	2	3	4.6
Philosophy	1	2	3	4.6
History	2	-	2	3.1
Archaeology	1	1	2	3.1
Demographics	-	2	2	3.1
Politics	1	1	2	3.1
Humanities disciplines	1	-	1	1.5
Total	31	34	65	100

3.7. The most significant social scientist in Turkey and in the world

24.62% of the participants did not name any scientist. The most stated names are Plato and Socrates. Participants named Piri Reis as the most widely known scientist with geographical work. 26.1 % of the participants answered the question 'Who is the most important social scientist in Turkey?' 'I don't know'. Sırrı Erinç was ranked as the second whereas Ziya Gökalp was ranked as the third most important social scientist by the participants.

Table 7: According to participants, the most important social scientists in the world *

Social Scientists	Gender		Total		Social Scientists	Gender		Total	
	F	M	f	%		F	M	f	%
Empty	4	5	9	13,8	Sigmund Freud	1	2	3	4.6
I don't know	3	4	7	10,8	A. Humboldt	-	3	3	4.6
Plato	4	2	6	9,2	Own	3	-	3	4,6
Socrates	3	3	6	9,2	Yunus Emre	2	-	2	3,1
Piri Reis	2	3	5	7,8	Descartes	2	-	2	3,1
Aristotle's	1	3	4	6,2	Karl Marx	1	1	2	3,1
Mevlana	3	-	3	4.6	Ferdinand Magellan	-	2	2	3,1
Albert Einstein	2	1	3	4.6	Strabon	-	2	2	3,1
August Comte	-	3	3	4,6	**Total**	**31**	**34**	**65**	**100**

* f = 1 expressions were not included in the table.

3.8. Is a social scientist happy?

More than half of the participants (64.6%) stated that a social scientist was happy. When the reason for this was asked, the participants mostly stated that a social scientist works together with the society and is at peace with herself and thus a person finding solutions for the problems of an individual or a society would be happy. 21.5 % of the participants said that being happy or unhappy was a relative concept and dependent on conditions.

Table 8: According to the participants happiness state of social scientists

Happiness	Gender		Total	
	F	M	f	%
Happy	20	22	42	64,6
Happy-Unhappy	6	8	14	21,5
Unhappy	5	4	9	13,9
Total	31	34	65	100

3.9. The desire to be a social scientist

It was revealed that 78.5 % of the participants wanted to be a social scientist while 21.5% did not want to. 30.8% of the participants stated that they wanted to work in the geography discipline as they studied it. 23.1% of the participants stated that they wanted to solve social and individual communication problems and 18.5% of them stated that they wanted to solve environment problems. Also 12.3% of them wanted to solve social and cultural disintegration problems and 10.8% of them wanted to offer solutions for domestic violence and children.

Table 9: Social scientist wishes to the participants

| | Gender | | Total | | | Gender | | Total | |
	F	M	f	%		F	M	f	%
Geography	9	11	20	30,8	Social study teacher	1	1	2	3,2
No	6	8	14	21,5	Climatology	-	1	1	1,5
Yes	5	5	10	15,4	Geology	1	-	1	1,5
Sociology	4	5	9	13,8	Turkish	1	-	1	1,5
Human geography	2	1	3	4,6	Self-improvement	1	-	1	1,5
Physical geography	-	2	2	3,2	Politics	1	-	1	1,5
	Total					31	34	65	100

4. Results

In order to comprehend the nature of science and the value of scientific information, it is necessary to have positive attitudes and perceptions towards science and scientists. The division of social science from science has continued since the 19th century. Most people bewared of making a direct definition of social science (Duverger, 2002). The family and the environment we grow up and the education we receive shape our perceptions and attitudes. Sometimes this may be positive but sometimes we may acquire negative perceptions and attitudes. The teachers are responsible for creating a true social sciences image as well as course books, social media, television and candidate social scientists of the future. Starting from this point of view, social scientist images of geography students were tried to be identified because this would affect their future attitudes and behaviors as well as providing social scientist perception for other people.

Geography students perceive a social scientist as creative, smart, observant, social, and curious person with problem solving skill and multiple points of view and developed verbal intelligence. The participants also perceived the physical characteristics of a social scientist as elegant, tall, long-haired, well-kept, smiling and spectacled. They also stated that a social scientist's sex is not important and is ageless-immortal. Participants stated that study field of social scientists cannot only be enclosed spaces but a comfortable, neat natural environment where individual-society interaction can occur easily. Also they specified a social scientist as a person doing research, joining social solidarity events, scientific meetings and observation activities. The participants ranked human being as the number one object used by social scientists followed by library, books, maps and natural environment.

The participants remarked that other people and the society, teachers, the departments they study, books and the internet are the sources of their social scientist image. The participants stated that each objective discipline would meet the image of social scientist and did not name the most important social scientist in the world. The most repeated names were Plato and Socrates. 26.1% of the participants answered the question 'Who is the most important social scientist in Turkey?' 'I don't know'. Sirri Erinc was ranked as the second whereas Ziya Gokalp was ranked as the third most important social scientist by the participants. The participants also remarked that social scientists do not have certain working hours. 64.6% of the participants stated that social scientists are happy. 78.5% of the participants wanted to be a social scientist whereas 21.5% did not want to. The participants wanted to solve problems related to individual and social communication problems, environment, cultural disintegration and domestic violence and children respectively.

Undoubtedly, one of the ways to understand social sciences is to understand the experts correctly. The perceptions of both future social scientists and teachers are crucial in creating a correct image in the minds of people. Thus, this kind of studies is important in revealing deficiencies. This research is a quantitative study carried on a group of geography department students. Although it cannot be generalized to all geography students, it may still give us some clues. It is suggested that similar studies be conducted on different study groups by supporting with different research designs and create a correct and positive perception of social scientist.

References

Aggul Yalcin, F. (2012). Investigation of Prospective Teachers' Image of Scientist with Respect to Some Variables. Elementary Education Online, 11(3), 611-628, 2012. İlkogretim Online, 11(3), 611-628, 2012. [Online]: http://ilkogretim-online.org.tr.

Bilgili, A.S. (2008). Gecmisten Gunumuze Sosyal Bilimler ve Sosyal Bilgiler. (Editor: Ali Sinan Bilgili). Sosyal Bilgilerin Temelleri. Pegem Akademi Yayınları: Ankara.

Buldu, M. (2006). Young Children's Perceptions Of Scientists: A Preliminary Study. Educational Research. 48(1), 121-132

Buyukozturk, S.; Kılıc Cakmak, E.; Akgun, O.E.; Karadeniz, S.; Demirel, F. (2008). Bilimsel Arastırma Yontemleri. Ankara: Pegem Akademi Yayınları.

Can, S. (2007). Turkiye'de Sosyal Bilimler Uzerine Dusunmek, Aklın ve Bilim Aydınlıgında Egitim. http://yayim.meb.gov.tr/dergiler/sayi75/sayi75/sevim%20can.doc (Erisim: Agustos, 2007).

Cermik, H. (2013). Ogretmen Adaylarının Zihinlerinde Canlanan Resimdeki Bilim İnsanı. Pamukkale Universitesi Egitim Fakultesi Dergisi, Sayı 33 (Ocak 2013/I), ss. 139-153.

Chambers, D.W. (1983). Stereotypic Images of the Scientist: The Draw A Scientist Test. Science Education, 67 (2), 255-265.

Donmez, C. (2003). Sosyal Bilimler ve Sosyal Bilgiler (Editor: Cemalettin SAHİN) Konu Alanı Ders Kitabı İnceleme Kılavuzu Sosyal Bilgiler. Gündüz Egitim ve Yayıncılık: Ankara.

Duverger, M. (2002). Medodoloji Acısından Sosyal Bilimlere Giris. (Türkcesi: Unsal Oskay). Bilgi Yayınevi: Istanbul, 6. Basım.

Finson, K.D.; Beaver, J.B.; Crammond, R.L. (1995). Development of a field-test checklist for the draw a scientist test. School Science and Mathematics, 95(4), 195-205.

Gonsoulin, W.B. (2001). How Do Middle School Students Depict Science And Scientist. Mississippi State University, Curriculum and Instruction, Doctoral Thesis, UMI Number: 3005589.

Gulbenkian Komisyonu. (2005). Sosyal Bilimleri Acın / Sosyal Bilimlerin Yeniden Yapılanması Uzerine Rapor. Metis Yayıncılık Ltd. Istanbul (Cev: Sirin Tekeli, Orijinal Ad: Open the Social Science).Internet1. (2013). http://www.thefreedictionary.com/Social+scientists. (Erisim: Mart, 2013).

Kaya, O.N.; Dogan, A.; Ocal, E. (2008). Turkish elementary school students' images of scientists. Eurasian Journal of Educational Research, 32, 83-100.

Korkmaz, H. (2004). The Images of the Scientist through the Eyes of the Turkish Children. Panhandle Science & Mathematics Conference, Canyon, Texas, USA.

Korkmaz, H. (2005). Proje Tabanlı Ögrenme Yaklasımı Ilkögretim Ogrencilerinin Bilim ve Bilim Insanlarına Yönelik Imajlarını Degistirir mi? I. Ulusal Fen ve Teknoloji Egitiminde Cagdas Yaklasımlar Sempozyumu: Proje Tabanlı Ogrenme. Selcuk Universitesi & Yasemin Karakaya Vakfı, Vakıflar Genel Müdürlügü, 18. Kasım 2005, Ankara.

Korkmaz, H.; Kavak, G. (2010). Primary School Students' Images of Science and Scientists. Elementary Education Online, 9(3), 1055-1079, 2010. İlköğretim Online, 9(3), 1055-1079, 2010. [Online]: http://ilkogretim-online.org.tr

McMillan, J.H.; Schumacher, S. (2006). Research in education: Evidence-Based Inquiry. New York. Pearson Education, Inc.

Nuhoglu, H.; Afacan, O. (2011). Ilkögretim Ogrencilerinin Bilim Insanına Yönelik Düşüncelerinin Degerlendirilmesi. Ahi Evran Üniversitesi Egitim Fakültesi Dergisi, Cilt 12, Sayı 3, Agustos 2011, Sayfa 279-298

Song, J. (1993) Teachers' images of scientists and their respected scientists. Journal of the Korean Association for Research in Science Education (JKARSE), 13, 48–55.

Song, J; Kim, K.S. (1999). How Korean Students See Scientists: The Image of The Scientist. International Journal Of Science Education, 21(9), 957–977.

Togrol, A. Y. (2000). Ogrencilerin Bilim Insanı ile Ilgili Imgeleri. Egitim ve Bilim, 25(118), 49- 57.

Turkmen, H. (2008). Turkish Primary Students' Perceptions about Scientist and What Factors Affecting the Image of the Scientists. Eurasia Journal of Mathematics, Science & Technology Education, 4(1), 55-61.

Unver, A.O. (2010). Perceptions of Scientists: A Comparative Study of Fifth Graders and Fourth Year Student Teachers. Necatibey Faculty of Education Electronic Journal of Science and Mathematics Education Vol. 4, Issue 1, June 2010, pp. 11-28.