Current Global Issues from the Perspective of Prospective Teachers: How are they illustrated in cartoons?

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ABSTRACT

The aim of this qualitative study is to examine how mental images of prospective social studies teachers regarding current global issues are illustrated through cartoons they draw. The study adopted the phenomenological research design, and it was conducted with purposefully selected 39 prospective Social Studies teachers, who had previously taken the course 'Current Global Issues'. The data were collected through the cartoon-making activity forms prepared by the researchers, and analysed using the content analysis technique. The results showed that the cartoons that activate the critical and creative thinking processes of prospective teachers were influential on the way they expressed their ideas about an issue, and the problems were likely to be discussed from a broader perspective. The problems addressed appeared to be related to both environmental and social issues. Among the major problems, environmental issues such as environmental pollution, global warming, and drought were found to be frequently illustrated in the cartoons, in addition to a social problem pertaining to the health concerns caused by the impact of the COVID-19 pandemic. Such problems as technology addiction, wars, and violence were also observed in the cartoons as part of the social concerns.

Keywords: Cartoons, environmental issues, technology addiction, global issues education

INTRODUCTION

The very question, which is to be answered in the first place in order to be able to make sense of the problems experienced by today's world, is 'What kind of world do we live in?' (Akengin, 2018). In today's world, where we try to meet unlimited needs with limited resources, the available resources have been rapidly depleted while the overall world population has approached 8 billion. As can be expected, this rapid increase of the population brings along some problems (Meydan, 2016). Today, more than 820 million people in the world suffer from hunger (World Food Organization [FAO], 2019); 2.1 billion people over the age of 18 are struggling with overweight and 650 million people with obesity (WHO [World Health Organization], 2016). Despite the fact that 1.2 billion people in the world suffer from water or water scarcity-related problems (FAO, 2020), existing water resources continue to be consumed unconsciously. In like manner, the domination that mankind tries to impose on nature has already triggered a great climate change on a global scale (Keçe, 2016). Also, global terrorism, one of the most important problems in the world, has caused chaos and turmoil in many parts of the world (Turan & İskender, 2018) as it claims the lives of thousands of people and forced millions of people to involuntary migration. As of the end of 2019, it is known that 26 million people in the world have had to live as refugees and 4.2 million people as asylum seekers (UNHCR, [United Nations High Commissioner for Refugees], 2019). As an expected outcome, billions of people are deprived of basic education today in spite of the great efforts to increase the quality of education in the world (Akengin, 2018). On the other hand, some religious

beliefs regarding the self and others are nowadays being stuck in the dilemma of whether the differences are a wealth or a problem (İmamoğlu, 2016), but seems to be no more than that. In a similar context, despite the long-lasting efforts to eradicate it, racism has unfortunately been on the agenda again with the G. Floyd incident that happened in 2020. Beyond all these mentioned, nearly 110 million people in the world have been infected with the COVID-19 virus, and more than 2.3 million people have lost their lives from this disease (WHO, 2021).

In this regard, many environmental and social problems exist and affect people all around the world, but can be solved with a joint effort. In order to solve the national and international problems, it is necessary to first recognize the problem and then to raise awareness about them. For this, it is of great importance to build an understanding of world citizenship to be able to make collaborative decisions

(Demirkaya, 2016). In this process, it is crucial to have teachers and prospective teachers who are knowledgeable about the global issues and are aware enough aboutthem (Berman, 1990). Considering this necessity, this study has aimed to reveal the cognitive and affective acquisitions of prospective teachers who are to bring solution proposals to be created for current global issues to the educational arena.

THEORETICAL FRAMEWORK

Current Global Issues and Social Studies Education

Since the current global issues are increasing day by day, it has become critical to provide students with a global issues education (Avcı & Gümüş, 2017). It is extremely important to raise awareness in students about the importance and impacts of such problems that concern large masses of people, to inform and encourage them to be part of the solution (Yazıcı, 2013). One of the roles of education is to prepare students to make decisions upon receiving comprehensive information on current global issues (Saleh & Gandy, 2015). In this preparation process, a global issues education should be taken into consideration in order to create world citizens who are aware of the issues concerning the world, are equipped with knowledge, skills and attitudes that will contribute to people's capacity to come up with solutions to the existing problems and prevent the formation of new ones, as well as having personal and social duties and responsibilities (Demirkaya, 2016).

An effective global issues education is a process that starts in the family, becomes systematic at school and continues throughout life (Demirkaya, 2016). The systematic dimension of global issues education, which is a combination of different processes, should be provided to students in educational institutions in a comprehensive and compulsoryway, starting from the primary level (Şeyihoğlu, Sever & Özmen, 2018). Given that education will play the leading role in the solution of current global issues, it is necessary to inform students about such issues in the social studies course (Kılıçoğlu, Karakuş & Öztürk, 2012). The reason is that social studies course builds a social identity through human and human-related activities placed at its focus. On the basis of the fact that global issues can be solved with the common awareness of people who have acquired this social identity, the NCSS (National Council for the Social Studies, 1994) determined a set of national curriculum standards for social studies course and created a 'Global Connections' learning area for thesake of international awareness and cooperation on current global issues. Considering the standards set by the NCSS, the Turkish education system included the learning areas that address current global issues in both the 2005 and 2018 social studies curricula. Addressing the current global issues directly in the curriculum of the social studies course in 2018, the learning goals indicating that 'students will be able to question the

reasons for the disasters and problems in the environment in which they live. In cooperation with their friends, they will be able to develop suggestions for the solution of global issues' (MEB [Ministry of National Education], 2018), and other relevant sub-topics were included. In addition, the social studies teaching undergraduate programs have now included the course, named, 'Current Global Issues' so that prospective social studies teachers will become more equipped and aware of the issues in order to reveal the role and importance of the social studies course in examining the political, economic, ecological, and social problems (i.e. hunger, poverty, human rights, population growth, racism, terrorism, landslides, erosions, earthquakes, floods, droughts, avalanches, traffic, noise pollution, air pollution, water pollution, land pollution, urbanization, drug addiction, etc.) faced by the world, and in solving such problems (YÖK [Council of Higher Education], 2018).

In order to address the problems faced by humanity as a whole, it is necessary to raise awareness of young generations about these issues in the education process (Akengin, 2018). To this end, it is important to benefit from appropriate teaching materials as much as having teachers with such awareness. It is, therefore, inevitable to use visual materials in the social studies courses that deal with every situation concerning the society (Barut & Akbaba, 2017). Indeed, the main reason is that visual materials are easier to analyse in the mind as they keep the interest and attention of an individual alive (Örs, 2007), in addition to facilitating learning (Uzuner, Aktaş & Albayrak, 2010), and enabling students to focus on a subject and gain a different perspective (Yazıcı, 2006), which are all effective in raising awareness of individuals. Cartoons are among the visual materials that are believed to raise awareness of prospective teachers on current global issues.

What Do Cartoons Provide?

Cartoons represent an art form that presents a subject with a combination of humour, exaggeration, and symbols by using simple drawings (Dalacosta, Kamariotaki-Paparrigopoulov, Polyvos & Spyrellis, 2009), and are fed from everything and all kinds of information that exists in life (Aytekin Özkan, 2009). The reason why this art, which deals with and criticizes human weaknesses, social events, and especially political issues, fearlessly, has become popular and widespread is that it conveys all these aspects through humour (Alsaç, 2002). While the cartoons are a way of blending humour with thoughts and illustrating them through drawing (Akkaya, 2011), they actually represent something beyond the lines (Aytekin Özkan, 2009). They easily convey a phenomenon that cannot be explained with thousands of words and the message it contains to many people (Altun, 2009) and also, enable the phenomenon to be comprehended from another perspective (Black, 2003). In doing so, cartoons highlightthe

contradiction, not the negativity, in a way that aims to turn the truth into an advantage for human beings (Dokgöz, 2004). Visual's keeping the attention and attention alive for a long time (Kocakavak & Erökten, 2020), being an effective means of communication (Cobb, Confrey, DiSessa, Lehrer & Schauble, 2003) and that students can better understand a visual image (Smith, 1993), cartoons can be an efficient tool to be used in the learning and teaching processes (Aytekin Özkan, 2009; Uğurel & Moralı, 2006). Undoubtedly, most of the time, a visual says more than words and has more impact than reading a text (Bahrani & Soltani, 2011). Having a universal language, cartoons not only provide a rich learning environment (Heitzman, 1998), but also encourage students to be more mentally active (Özalp, 2006). By contributing to the resolution of many thoughts, elements and abstract concepts, they encourage people to think (Barut & Akbaba, 2017; Sidekli, Er, Yavaşer & Aydın, 2014), that is, to think critically and creatively through research and inquiries (Berk, 2001; Durualp, 2006; Fry & Allen, 1996; Özalp, 2006) According to a study by Kroehneart (1999), most of the issues mentioned in cartoons have a great contribution in breaking the prejudiced situations in most societies and in the development of lateral thinking and creativity. Not only the understanding, attitudes, performance, and creativity of the students in the classrooms in which cartoons are included (Bahrani & Soltani, 2011), but also students' motivation towards learning seem to improve through cartoons (Gamage, 2019). Cartoons enable students to discuss their ideas in an interactive environment, develop their thinking and discussion skills (Clark, 2000), their ways of learning and understanding (Van Wyk, 2011), and their cognitive capacity by reviewing their knowledge and what they have learned incorrectly (Stephenson & Warwick, 2002). Moreover, they encourage students to question, understand and make inferences about the subject, eliminating rote learning (Efe, 2005). Besides promoting thinking skills, cartoons are attention-taking (Amrizal, 2015), provide a pleasant learning environment, and increase the permanence of learning (Ersoy & Türkkan, 2010). The reason is that cartoons create a more comfortable learning environment by reducing tension and anxiety while maintaining the continuity of attention (Heitzmann, 1998). This comfortable learning environment is an essential way to ensure student motivation (Thakur, 2015) and participation (Gamage, 2019). As a matter of fact, students who are motivated and given the necessary opportunities will discover the learning paths themselves (Woolnough, 1994). Patil (1996) stated that since cartoons constitute an inexhaustible source of entertainment students enjoy working on them. What is more is that cartoons serve to improve students' social sensitivity desire to learn, and aesthetic understanding (Uslu, 2007).

Cartoons constitute the basis to a provide a setting for discussion in the classroom, support the lessons enhanced with a multi-disciplinary approach, visualize a lecture based on direct expression, and evaluate the high-level issues in an original way (Heitzman, 1998). Cartoons will serve as a good resource for the social studies course, which deals with these educational values as well as people and life in various aspects (Oruç, 2007; Özer, 2007; Uslu, 2007). Since the content of the social studies course is full of many issues and current problems that are expected to be resolved, cartoons can be regarded as the starting point to present novel ideas or discussions (Altun, 2009). In this sense, complex social and nature-related problems may be presented in cartoons in a way that students can understand, making the analysis and interpretation of those problems easier (Kleeman, 2006). Cartoons also provide a setting for individuals to understand social life and values, and discover their culture (Erişti, 2010). During the discovery process, teachers may either use an existing cartoon for analysis or create a new one on a particular subject, both of which are actually effective methods for teaching (Lynch, 2018). On the other hand, it seems that students are more likely to include their own perspectives and sensitivities in their own drawings (Tarhan & Kızılay, 2017). Obviously, students draw cartoons in line with their own views and value systems (Kleeman, 2006; Lochrie, 1992), which comes as an opportunity to defend them. Moreover, through these drawings, individuals also have the opportunity to express themselves by thinking freely and express their feelings and thoughts (Uslu, 2007).

The relevant literature includes a number of direct or indirect studies conducted on current global issues in relation to the attitudes of university students towards today's world (Avcı & Gümüş, 2017; Çengelci Köse, Azrak & Gürdoğan Bayır, 2020; Dönmez, 2017; Kılıçoğlu et al., 2012; Yazıcı, 2013), as well as global warming (Caymaz, 2020; Lin, 2016), uneven urbanization (Özkaral & Bozyiğit, 2020), land and land pollution (Gürlen & Köseoğlu, 2019), air pollution (Uyanık, 2016), environmental issues (Genç, Genç, Ergenç & Erkuz, 2016), global issues (Palaz, 2017; Palaz & Akbaba, 2018), global warming and climate change (Özkaral, 2019), water pollution (Yılmaz & Yanarateş, 2020), air, water, and land pollution (Çalışkan, Güneri & Bektaş, 2018), and social issues (İbret, Karasu Avcı & Recepoğlu, 2016). Moreover, various problems evaluated within current global issues seem to be examined under the headings of controversial issues (Çopur & Demirel, 2016; Kuş & Öztürk, 2019) and socio-scientific issues (Colucci Gray, 2014; Dawson & Carson, 2017; Dawson & Carson, 2020). Although current global issues were handled by considering different contents and methods in those studies, some other studies examined a variety of concerns through cartoons or drawings. Among those studies, Tuncel (2017) focused more on global warming education that could be conducted through cartoons, while Erdoğan and Özsevgeç (2012) discussed the greenhouse effect and global warming

issues through conceptual comics. According to a study by Aydede and Öztürk (2019), the researchers aimed to reveal the awareness regarding environmental issues through cartoons, while in another study, Tarhan and Kızılay (2017) examined how social issues are illustrated in cartoons. Investigating the environmental issues of today's world, Karakuş, Palaz, Kılcan, and Çepni (2012) discussed the impact of making use of cartoons in teaching environmental issues. Likewise, Çakır and Aydoğdu (2016) worked on the use of cartoons in teaching environmental issues in their studies. Approaching the current global issues from the perspective of prospective teachers, Karakuş and Yel (2019) aimed to explain the mental images in the minds of prospective teachers regarding global warming through drawings, while Pınar and Yakışan (2017) discussed how environmental pollution was illustrated through drawings. Some other studies worked on the illustration of environmental and social issues in cartoons (Ersoy & Türkkan, 2010), drawings related to environmental issues (Özdemir Özden & Özden, 2015), and environmental issues through comics (Orhan, 2018; Seçgin, Yalvaç & Çetin, 2010).

Reviewed as a whole, the literature appears to consist of various studies that address current global issues, and even directly draw attention to such problems through cartoons, an outcome that can be deemed positive. However, it is also noteworthy that studies have focused more on environmental issues, but less on social issues. Existing studies seem to lay stress on a specific issue and do not present a holistic view of current global issues. In fact, most of the existing studies are concentrated in the field of science education. This study has brought a different perspective in that it handled the current global issues with a holistic approach, conducted the research through a sample group that had taken the current global issues course, and collected the data through activity forms based on a purpose and theoretical framework, which all highlighted the strengths of the present study, making it different from other studies. The social studies course, which plays a critical role in the construction of environmental and social awareness, is of great importance to be able to discuss current global issues and solve problems. In this regard, social studies teachers who have fully grasped the causes and consequences of the current global issues will be likely to act as part of the solution to international problems as they train students in due course. On the basis of this idea, it is, therefore, believed that this study will make significant contributions to the field of social studies education. This study has also aimed to reveal the mental images in the minds of prospective social studies teachers about today's world through cartoons. For this purpose, answers have been sought to the following research question:

- How are the mental images in the minds of prospective social studies teachers about current global issues illustrated in the cartoons?

METHOD

Research Design

The present study adopted the phenomenological research design, and aimed to reveal the mental perceptions of prospective teachers regarding current global issues through cartoons. In phenomenological studies, there is more than one way of interpreting the same experience, the meaning of the experience for each individual is 'what constitutes the reality', and the focus is mostly on human experiences and awareness with the aim of defining and interpreting the experiences of individuals regarding a specific phenomenon (McMillan & Schumacher, 2014).

Study Group

The study group of the study was selected using one of the purposive sampling models; the criterion-sampling method. The group consisted of 39 prospective social studies teachers (25 women, 14 men) studying in the 4th grade at the Department of Social Studies Teaching at a state university in the academic year of 2020-2021. Having received the current global issues course was taken as the criterion for the prospective teachers to be involved in the study.

Data Collection

The 'Current Global Issues Course' lasted 14 weeks with prospective Social Studies teachers in the 4th grade of their department in the Fall Semester of 2020-2021 academic year, during which both environmental and social issues were addressed. Later in the course, cartoons were used in order to reveal the mental images in the minds of prospective social studies teachers pertaining to the current global issues, not just because they are instructive as a learning tool, but also because they are effective in the expression of mental processes. Additionally, writing-to-learn activities were used so that the prospective teachers could present their cartoons within a certain purpose and plan. The cartoon-making activities were prepared especially by taking into account the basic components that Hand and Prain (2002) put forward for writing-to-learn activities. Figure 1 shows the cartoon-making activity prepared by the researchers.

The participants were sent an activity sample prepared by the researchers as an e-mail, and asked to draw cartoons in accordance with the activity instructions and then to convert their drawings into a Word, PDF, JPEG, or a PNG file format and send them back via e-mail.

Data Analysis

Content analysis was used in the analysis of the data obtained through the cartoons used to reveal the mental images in the minds of prospective social studies teachers regarding the current global issues. In analysing the content, first of

Dear Teacher Candidate of Social Studies

A Social Studies teacher, Bilal, would like to make the course content much clearer and more permanent for his students while teaching them the global issues, which are covered under the learning area of 'Global Connections' in the 7th Grade Social Studies class. In search of a more attractive teaching material to use instead of the pictures in the course book, he was attracted by a cartoon that he saw in a newspaper. Having been engrossed by the cartoon, he decided to draw different cartoons reflecting the current global issues, and used them in his lessons. Seeing that his students liked them, Bilal emailed the cartoons to the writers of the social studies course books so that they would make use of them.

What would you draw if you wanted to express current global issues (that you consider the most important) through cartoons?

Instructions of Application

- Please note whom you have decided to send them to.
- Please indicate the problem that you consider the most important and explain it with relevant reasons (i.e. I believe the most important problem is………. because…..)
- Please draw a cartoon.
- Please write a description for your cartoon.
- Please use the single side of an A4-sized paper.
- You can colour with coloured pencils (so that it will be more attention-taking)

Fig. 1: Cartoon-making activity form

FINDINGS

all, the data were examined carefully, read and evaluated several times by the researchers, after which the codes were created and similar codes were collected under appropriate categories. The results are presented in tables. The statements of the prospective teachers were provided under the codes such as PT.1, PT.2, PT.3 ... PT.39. No changes or corrections were made in the statements of the prospective teachers, as shown in direct quotations.

After analysing the cartoons drawn by the prospective social studies teachers, the general view of current global issues identified by prospective teachers was specified, and then the existing problems were categorized and presented under two headings as environmental and social issues. Figure 2 illustrates the general view of the mental images in the minds
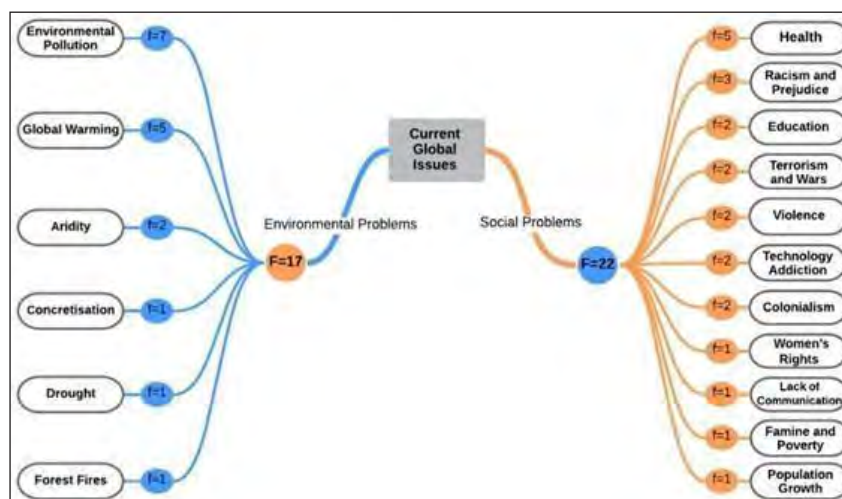

Fig. 2: Mental images regarding the current global issues

of prospective social studies teachers regarding the current global issues.

As can be seen in Figure 2, the current global issues in the minds of prospective social studies teachers were gathered under two themes as *environmental* and *social issues,* which are presented below in separate sections.

Mental Images in the Minds of Prospective Social Studies Teachers Regarding Environmental Issues

Table 1 presents the findings obtained from the mental images in the minds of prospective social studies teachers regarding current global environmental issues.

Table 1: Mental Images Regarding the Environmental Issues

Theme	Code	Participants	f
Environmental Issues	Environmental Pollution	PT.3, PT.5, PT.10, PT.11, PT.16, PT.31, PT.33	7
	Global Warming	PT.22, PT.24, PT.26, PT.30, PT.36	5
	Drought	PT.9, PT.20	2
	Water scarcity	PT.34	1
	Forest Fires	PT.25	1
	Concretization	PT.39	1
Total			17

As seen in Table 1, environmental pollution *(f = 7)* is the most common theme in the mental images in the minds of prospective social studies teachers regarding the current global environmental issues, and is followed by *global warming*

(f = 5), drought (f = 2), water scarcity (f = 1), forest fires (f = 1), and *concretization (f = 1),* respectively.

The examples of cartoons that illustrate the mental images in the minds of prospective social studies teachers regarding the current global environmental problems and the explanations of the prospective teachers regarding the cartoons are given below through direct quotes

As seen in Figure 3, the prospective teacher PT.31 stated that the most important global issue of our times is *environmental pollution* and said, 'Just like we throw away everything we do not value, we deliberately turn the world (!) we value the most into garbage', and illustrated her views in the cartoon. Another prospective teacher, PT.5 drew a cartoon illustrating environmental pollution in addition to the following explanation: "As we damage the environment, this damage will return to us. We should keep our environment clean because we cannot live anywhere else than the world." The prospective teacher PT.11, who dealt with the problem of pollution, said, 'The most important problem for me is air pollution', and further explained the reason for the illustration in her cartoon as follows: "Degradation of forests, exhaust gases, fires, factory and household wastes, the perfumes we use pollute the world and turn it into garbage." Similarly, approaching the current global issues through marine pollution, the prospective teacher, PT.33 said, 'Marine pollution harms the ecosystem. The source of this pollution is humans. Chemical, domestic, agricultural and individual wastes are the causes of marine pollution', and drew attention to the marine pollution and its causes.

As seen in Figure 4, some of the prospective teachers (PT.36 / PT.22 / PT.24) stated that the most important current global issue is global warming. For instance, PT.36 said,
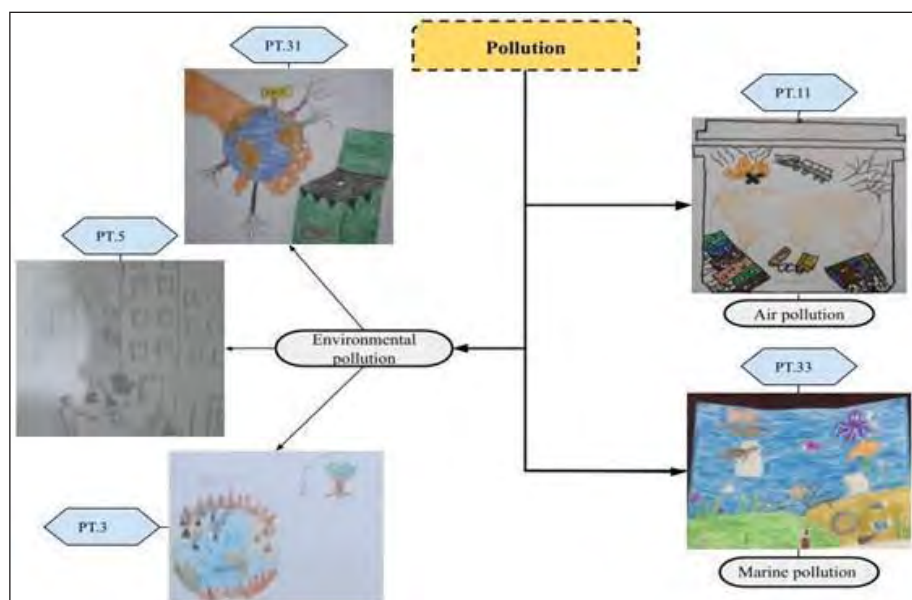

Fig. 3: Cartoons regarding pollution

" The world lost its green colour due to drought and desertification as a result of the impact of enterprises such as factories with greenhouse gas emissions." PT.22, on the other hand, said, 'Global warming has broken ground, but all societies in the world have been ignoring it. No one cares about the people who work on it'. In a similar sense, PT.24 said, 'Touched by human hands, our world has been melting away over time', and 'if it continues like this, people will lose in time many valuable things they possess'. Likewise, concerning the global warming, PT.30 explained her cartoon as follows:

'The world, which has not produced any solutions for melting glaciers due to global warming for years, is now facing climate changes, as well as a number of problems such as storms, floods, and drought'.

As can be seen in Figure 5, the prospective teacher, PT.34 mentioned what she considered the most important global issue as follows: "I think the most important problem in the world is *water scarcity*", and related to her cartoon, she added: 'We waste water in the bathroom and the kitchen. However, we ignore the people in the world who need a drop of water",
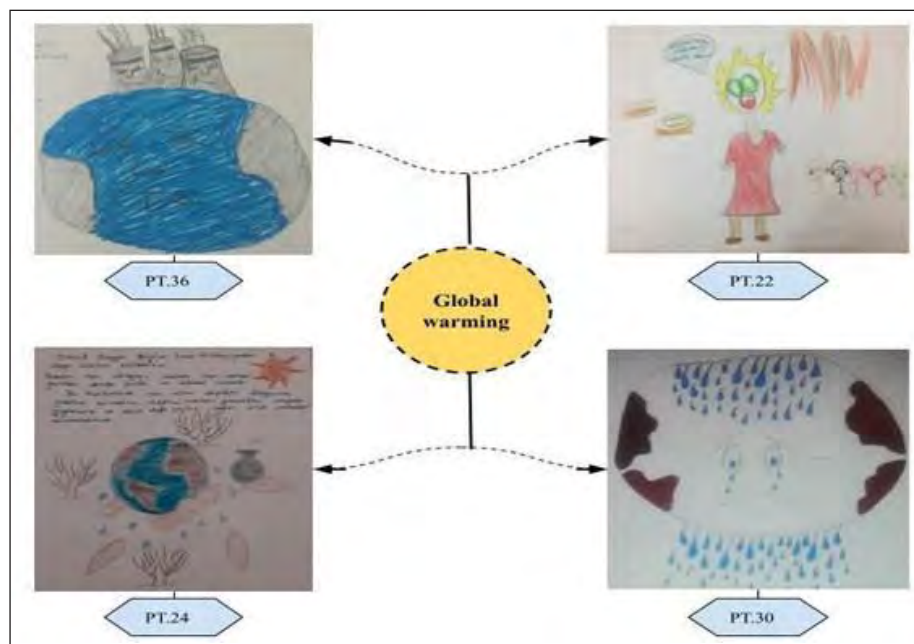

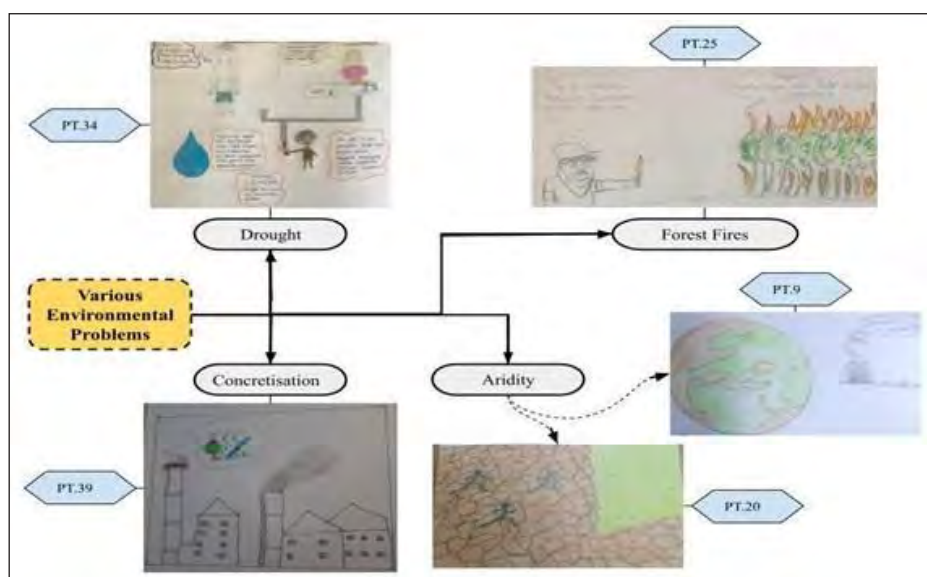Fig. 4: Cartoon examples regarding the global warming issue

Fig. 5: Cartoon examples related to a variety of environmental issues

suggesting that everyone should act responsibly in terms of efficient use of water. Assuming that *forest fires* are the most important problem of today's world, the prospective teacher, PT.25 said, "Forests are the lungs of the world; those who destroy them will leave future generations in need of fresh air", stressing the importance of forests. Another prospective teacher, PT.39 said, "I think the most important problem of today's world is concretization because the number of trees decreases with concretization, animal species become extinct, and agricultural lands get smaller", underlining the negative consequences of concretization. In her cartoon, she illustrated "a dream in which a stork that has set up her nest in the factory chimney makes a nest on a tree in a place where there is plenty of greenery", in an apparent attempt to emphasize the issue of excessive concretization. Identifying *drought* as another global issue of today's world, the prospective teacher, PT.20, said, "Along with drought, agricultural capacity declines, the ecosystem deteriorates, and people are affected psychologically", and illustrated "people who are struggling with drought and their escape to the nearly dying green areas".

Mental Images in the Minds of Prospective Social Studies Teachers Regarding Social Issues

Table 2 presents the findings obtained from the mental images in the minds of social studies teachers regarding the current global social issues.

Table 2: Mental Images Regarding the Social Issues

Theme	Code	Participants	f
Social Issues	Health	PT.1, PT.2, PT. 15, PT.18, PT.29	5
	Colonialism	PT.12, PT.21	2
	Education	PT.17, PT32	2
	Terrorism/Wars	PT.23, PT.27	2
	Violence	PT.35, PT.13	2
	Technology Addiction	PT.14, PT.28	2
	Racism	PT.37, PT.38	2
	Women's Rights	PT.19	1
	Lack of Communication	PT.8	1
	Hunger and Poverty	PT.6	1
	Prejudice	PT.1	1
	Population Growth	PT.4	1
Total			22

As seen in Table 2, *health issues* (*f*=5) are the most common concern in the mental images in the minds of prospective social studies teachers regarding the current global social problems. This concern is followed by colonialism (*f*=2), drought (*f*=2), education (*f*=2), wars / terrorism (*f*=2), violence (*f*=2), technology addiction (*f*=2), racism (*f*=2), women's rights (*f*=1), lack of communication (*f*=1), hunger and poverty (*f*=1), prejudice (*f*=1), and population growth (*f*=1), respectively.

Some examples of cartoons that demonstrate the mental images in the minds of prospective social studies teachers regarding the current global social issues, and the explanations of the prospective teachers regarding the cartoons are given below through direct quotations.

As shown in Figure 6, the prospective teacher, PT.7 emphasized the health concerns from among the current global issues, and said, "I think the most important issue is health. Because, as seen recently, pandemics pose a great danger to human life", with the intention of drawing attention to this concern in her cartoon. Addressing the same problem, the prospective teacher, PT.2 said, "To me, the most important problem is the pandemic that affects the whole world. My university has been closed since March; the whole world has been worn out financially and morally." In her cartoon, she suggested that people should be acting consciously and not endanger others by paying attention to hygiene, wearing masks, and keeping social distance. Considering the pandemic as a critical issue, the prospective teacher, PT.29, focused on the coronavirus threat in relation to the necessity of wearing masks, which are the main symbols of the pandemic. Similarly, the prospective teacher, PT.15 said, "In 2020, the whole world had to struggle with the coronavirus. This turned the lives upside down", aiming to emphasize how important health is. As shown in Figure 7, the prospective teacher, PT.21 regarded the most important issue of today's world as colonialism and illustrated it in a cartoon, saying, "I think the problem is the ongoing tradition of colonialism", and "mankind has chosen a world where either there is comfort, peace and serenity, or there are conflicts of interest under the influence of colonialism". The prospective teacher, PT.27, described wars as the most critical issue and revealed the reason in her cartoon pointing out that "thousands of children lose their homes and families in wars". The prospective teacher, PT.23, on the other hand, said, "The problem of wars and terrorism is dreadful" and tried to explain in her cartoon that "wars have caused innocent people to die, houses to be destroyed, children to become orphans or parentless".

Looking at Figure 8, it can be seen that the prospective teacher, PT.1, considered the most important problem of today's world as *prejudice*, saying, "Such positive or negative

conditioning that we all have from time to time is likely to restrict our lives; this is actually the beginning of all major problems". The prospective teacher PT.37, on the other hand, believed that the most important problem is *racism* and said, "Nobody is superior because their skin colour is different from others; everybody is equal", as emphasized in his cartoon, and further stated that "people should live under equal conditions regardless of their skin colour and where they are from." In like manner, the prospective teacher PT.38, demonstrating that the

most important problem of today's world is racism, said, "How absurd it is to exclude people through racism." The participant further elaborated on this with the following statement: "It is a great injustice to accuse or judge anyone because of their race, for characteristics such as race, language, and nation are things that people cannot choose at birth."

Figure 9 shows that the prospective teachers have an awareness of violence and women's rights as current global issues. The prospective teacher, PT.13, said, "I think the
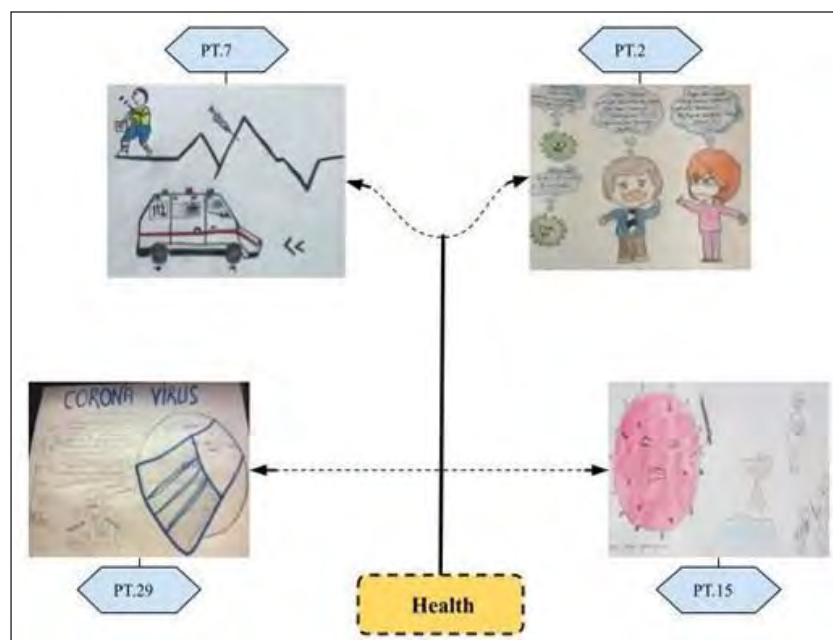

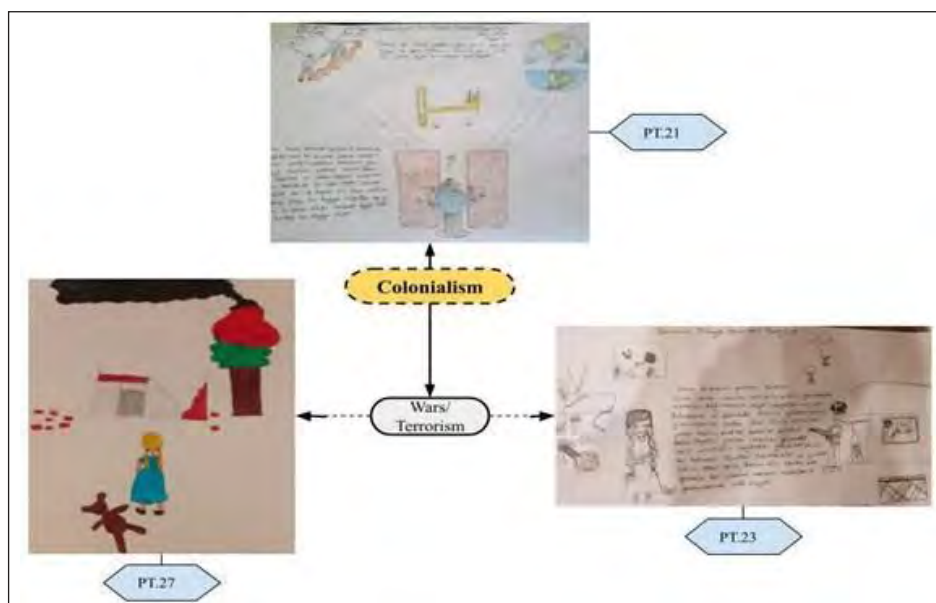**Fig. 6: Cartoon examples regarding health concerns**

Fig. 7: Cartoon examples regarding colonialism and wars

most important problem is violence against women. Because hundreds of women die every day. All we do is watch them on TV. Not only physical but also psychological violence is quite abundant. I don't want women to be victims", in an attempt to explain in her cartoon that "violence against women is both physical and psychological; this violence is everywhere: at home and outside, and people are mere spectators in such incidences." In a similar sense, the prospective teacher, PT.19, drew attention to the problem of child brides as the basis of destruction of women's rights, and illustrated it in her cartoon,

saying that "The situation of girls who are forced to marry at a young age (when they are still children) is an affront to humanity". Another prospective teacher, PT35, who focused on another aspect of the violence that exists in today's world, said, "I think the most important problem is cruelty to animals. Animals are not only living beings, but also our friends. It is our duty to protect them. However, they are, unfortunately, subjected to violence by people", an explanation which can be clearly observed as illustrated in his cartoon.
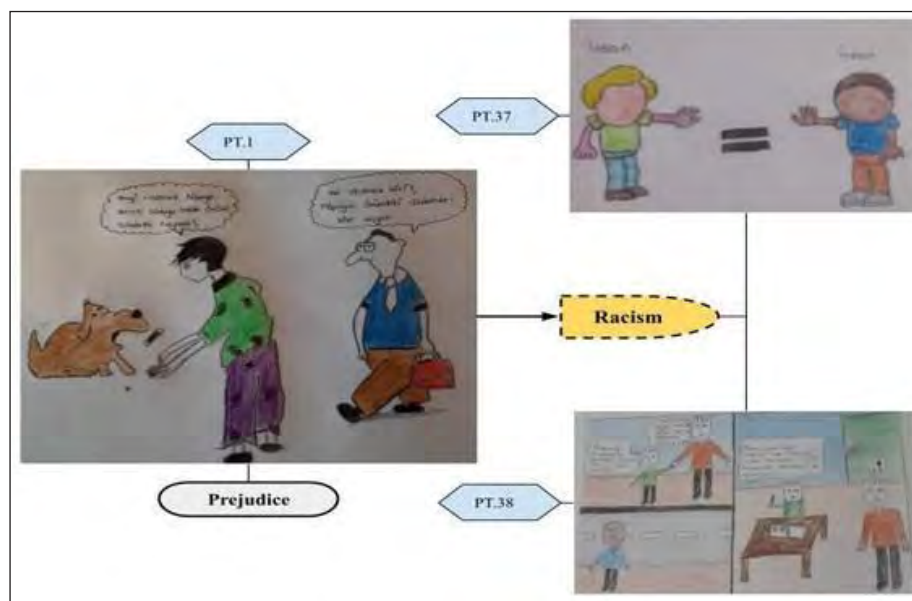

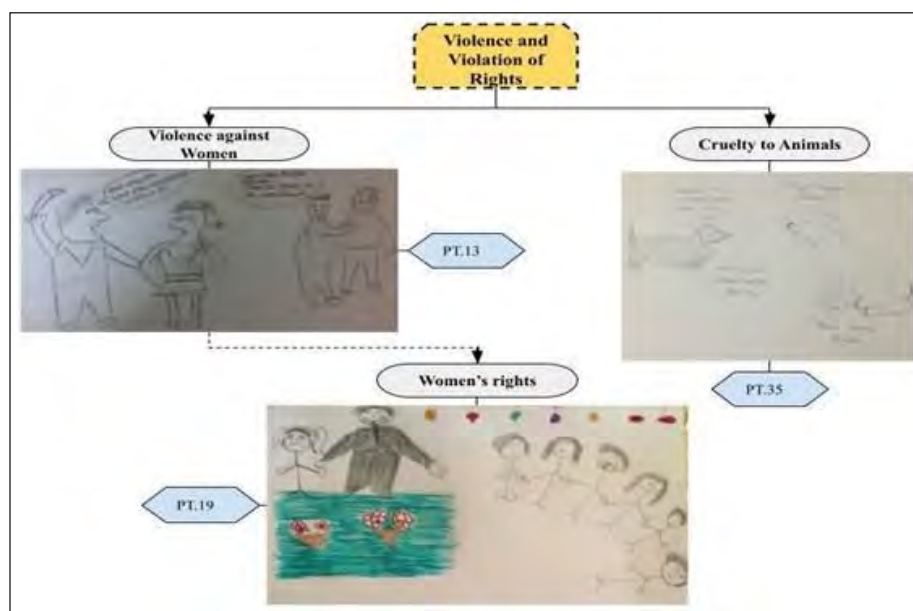**Fig. 8: Cartoon examples regarding prejudice and racism**

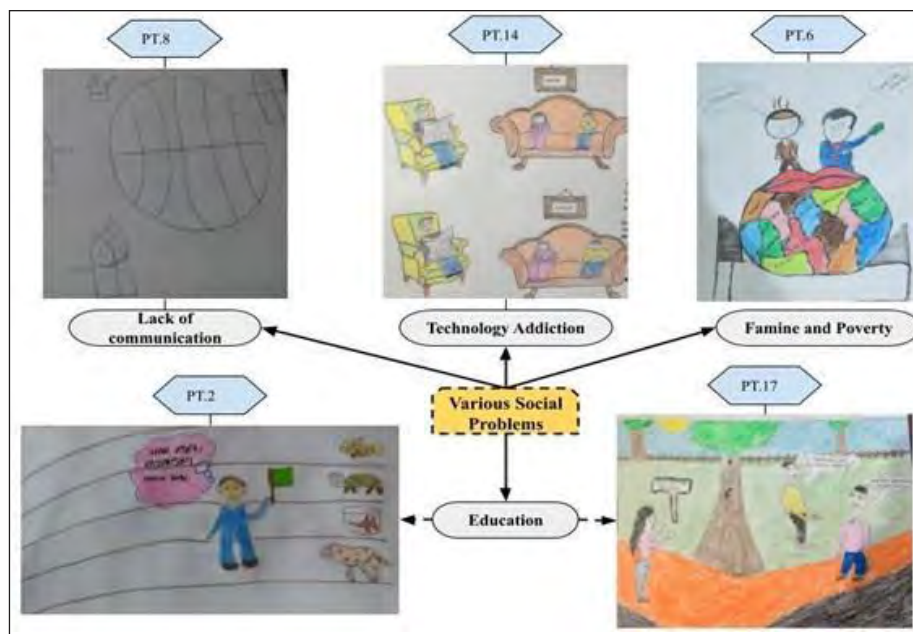**Fig. 9: Cartoon examples regarding violence and violation of rights**

Fig. 10: Cartoon examples regarding different social issues

As shown in Figure 10, many current global issues were illustrated in the cartoons of prospective teachers. The prospective teachers, PT.2 and PT.17 stated that the most important current global issue is education. PT.2 explained the reason for this by arguing that "the source of many existing problems (violence, global warming, environmental pollution) is lack of education". PT.17 said, "Education (especially foreign language education) is the basic condition to communicate with the rest of the world and solve existing problems". The prospective teacher, PT.8 said, "For me, communication is the most important problem in today's world because people have negative attitudes without understanding each other. In our world, ther e is an accusatory and exclusionary language rather than one embodying respect and love", aiming to suggest in the cartoon that "the lack of communication puts a huge distance between us, but the distance can disappear with proper communication and a liveable world is possible". The prospective teacher, PT.14 illustrated the technology addiction, which is a very important current global issue, and said, "In today's world, technology is no longer a tool for knowing, learning and facilitating life, but has become the goal of life." The participant compared the change in two different time periods with respect to technology. Focusing onchronic hunger and poverty, which are regarded among other current global issues, the prospective teacher, PT.6 said, "For me, the most important problem is hunger and poverty because, on the one hand, there are billions of people who do not even meet their basic vital needs, on the other hand, there are others who greedily want more. This is the cause of conflict and turmoil in the world", and illustrated the ideal of a fair and egalitarian world that tries to stand in balance on the scales together with the poor and insatiable human models. The participant also emphasized that the solution to the construction of such a world is only possible by providing children of pure feelings with proper education, and that social studies teachers have a great responsibility, in this sense.

DISCUSSION

The present study has examined how the mental images in the minds of prospective social studies teachers regarding current global issues were illustrated in the cartoons they had drawn. The results have revealed that environmental and social issues in today's world have a prominent place in the minds of prospective social studies teachers. The findings of this study and those of others dealing with current global issues seem to have parallel features (Avcı & Gümüş, 2017; Aydın & Sağdıç, 2013; Demirkaya, 2016; Ersoy & Türkkan, 2010; Işık Mercan & Sarı, 2019; Palaz & Akbaba, 2018; Sabancı, Faiz & Akyol, 2017; Saleh & Gandy, 2015; Şeyihoğlu et al., 2018; Tarhan & Kızılay, 2017; Yazıcı, 2013). Among those studies, Palaz and Akbaba (2018), evaluating the global issues in social studies education and the way such issues are taught, through the perspectives of secondary school students, asserted that among the global issues that stand out in students' minds are environmental issues such as global warming, environmental pollution, air pollution, and drought, as well as social issues such as terrorism, hunger, violence, and wars. Such a result clearly demonstrated the similarity between the issues in the minds of the prospective social studies teachers and those in the minds of the secondary school students who took   the

social studies course. The same similarity is also apparent in the studies conducted by Işık Mercan and Sarı (2019), who revealed the opinions of prospective social studies teachers regarding current global issues, and those by İbret et al. (2016), who focused especially on the social dimension of current global issues through the ideas of prospective social studies teachers.

Cartoons provide a setting for individuals to understand social life and values, and discover their cultures (Erişti, 2010), besides dealing with human weaknesses, social events and especially political issues fearlessly by illustrating them through humour (Alsaç, 2002), and ensure that social issues are addressed in the most effective way (Çeviker, 1997). In fact, cartoons magnify the problems that are not paid much attention and present them in a more striking way that the eye can see (Bergson, 2006). In this regard, the prospective teachers who take advantage of using cartoons seem to draw attention to the social issues such as violence, education-related problems, equality, and racism through the cartoons they draw. Similar to the current study addressing the issue of violence, another study by Tarhan and Kızılay (2017), who evaluated the problems in the society through the cartoons they had students draw, revealed that violence (on humans and animals) was illustrated together with environmental issues such as air, water, noise and visual pollution in the cartoons of the students. Based on the idea that cartoons are an expression of feelings and thoughts that have a meaningful place in the inner world of people (Keogh & Naylor, 1999), this study includes a number of cartoons illustrating the anxiety of prospective teachers about certain issues such as violence, deforestation, and hunger. Similar concerns can be seen in the study by Avcı and Gümüş (2017) examining the attitudes of prospective social studies teachers towards current global issues. This similarity shows that current global issues are not unique to our sample group, but a common concern often arises on similar issues.

As an important tool in raising the social awareness of students, cartoons (Uslu, 2007) address two different sensitivities of prospective teachers in terms of environmental and social aspects in this study. Similarly, in a study examining the attitudes of secondary school students towards current global issues, Yazıcı (2013) found that the students were more sensitive to issues such as "hunger", "violence", "gender discrimination", and "poverty". Similar issues have been especially addressed in this study as well. Using posters as visual materials to raise environmental awareness, Dinç and Üztemur (2016) pointed out a parallel result with this study by demonstrating that the most important environmental issues expressed by the students in their study were environmental pollution (waste), lack of green space, and air pollution. In another study by Al-Rabaani and Al-AAmri (2017) on the use of cartoons in raising water awareness of 4th grade students,

the reasearchers found that cartoons significantly increased awareness regarding the water-related issues. In an attempt to analyze the representation of environmental problems as a significant current global issue in students' drawings, Özdemir Özden, and Özden (2015), indicated that the environmental problems illustrated in students' drawings included global warming, water scarcity, climate change, and nuclear energy, indicating a common result with many studies.

Aiming to explain the opinions of secondary school students on environmental issues through cartoons, Seçgin et al. (2010) stated that concepts such as global warming, pollution, natural balance, insensitivity and unconsciousness came to the fore, and in fact, lack of awareness is one of the primary concerns to be tackled in solving global issues (Demirkaya, 2016). Just like many researchers, Orhan (2018) tried to determine the perceptions of secondary school students regarding environmental problems through cartoons, and emphasized the importance of cartoons in identifying problems such as deforestation, noise pollution, global warming, and overpopulation.

Cartoons encourage individuals to think critically and creatively through research and inquiry (Aytekin Özkan, 2009; Durualp, 2006; Özalp, 2006). In addition, cartoon-making directs the students to question, understand and make inferences about the subject and eliminates rote learning (Efe, 2005). Aydede and Öztürk (2019) stressed the necessity of using cartoons, stating that their use in teaching processes enables students to develop critical and questioning thinking skills, to be creative and active in learning processes. Ersoy and Türkkan (2010), who examined how primary school students tend to explain social and environmental issues through cartoons, revealed that environmental issues such as global warming and uneven urbanization, in addition to social issues such as cruelty to animals and terror are included in the drawings. Just like Aydede and Öztürk (2019), Ersoy and Türkkan (2010) emphasized the importance of using cartoons in revealing the problems, and stated that cartoons made a significant contribution to the processes of students' decision-making, creative and critical thinking on problems, and interpretation processes of a problem. Cartoons that support students to be more mentally active (Özalp, 2006) contributed to the resolution of different thoughts, elements and abstract concepts (Barut & Akbaba, 2017; Sidekli et al., 2014), making thinking visible. Revealing this visibility with mind maps through social studies and geography teachers' perceptions of current global issues, Şeyihoğlu et al. (2018) stated that problems such as wars, global warming, natural disasters, hunger and poverty stood out in the mind maps of prospective teachers. The mental images that emerged with the cartoons in that study are similar to the findings of the present study. Likewise, Koca, Yazıcı and Kulaca (2019), who aimed to determine the level of readiness of secondary

school students for unconscious consumption of natural resources and environmental issues through cartoons stated that cartoons can serve the purpose and be considered as an important teaching material that encourages students to think about environmental awareness so that it will be raised.

CONCLUSION AND SUGGESTIONS

Focusing on how current global issues are represented in the mental images in the minds of prospective social studies teachers, this study tried to identify the most worrisome issues through cartoons. The first result of the study pointed out a number of current global environmental problems such as environmental pollution, global warming, drought, water scarcity, forest fires, and concretization in the mindsof prospective social studies teachers. The second result of the study is that prospective social studies teachers have in their minds such current global social issues as health, colonialism, education, terrorism, violence, technology addiction, and racism, etc. The third result is that cartoons are very effective teaching materials in that they bring visual expressions to the fore in the detection of current global issues, encouraging students to thinkat higher levels and to express their feelings and thoughts.

- Based on the findings and results of the present study, a number of recommendations have been made for researchers and implementers, given as follows:
- This study identified how current global issues are perceived through cartoons. Further studies can be conducted to solve these identified problems. Cartoons were used as a visual material in this study. Similar studies can be conducted using different teaching materials.
- This study was conducted with prospective social studies teachers. Similar studies can be conducted with social studies teachers and students at different grade levels in the context of social studiescourse.

REFERENCES

Akengin, H. (2018). Nasıl bir dünyada yaşıyoruz?. H. Akengin ve İ. Dölek (Eds.), *Günümüz dünya sorunları* içinde. (*ss.* 1-15). Ankara: Pegem Akademi.

Akkaya, A. (2011). Teaching grammar via cartoons (Unpublished doctoral dissertation). Selçuk University, Konya.

Al-Rabaani, A. H., & Al-AAmri, I. H. (2017). The effect of using cartoons on developing omani grade 4 students' awareness of water issues and their attitudes towards using them in teaching social studies. *Journal of Social Studies Education Research*, 8(1),35-46.

Alsaç, Ü. (2002). Karikatürün değişen dili. Retrieved from https://ekitap.ktb.gov.tr/TR-81088/ustun-alsac-karikaturun-degisen-dili.html.

Altun, A. (2009). Sosyal bilgiler dersinde karikatürlerin kullanımı. R. Turan, A. M. Sünbül ve H. Akdağ (Eds.), *Sosyal bilgiler öğretiminde yeni yaklaşımlar* I içinde, (*ss.*192-211). Ankara: Pegem

Amrizal, A. (2015). Cartoon as instructional method in teaching descriptive text writing. *ADJES (Ahmad Dahlan Journal of English Studies)*, 2(2), 58-62. http://dx.doi.org/10.26555/adjes.v2i2.2990.

Avcı, G., & Gümüş, N. (2017). Examining candidate social studies teachers' attitudes towards contemporary world issues. *Current Debates in Education, 5*, 485-504.

Aydede, M. N., & Öztürk, H. İ. (2019). Çevre sorunları farkındalık düzeylerinin karikatürler kullanılarak incelenmesi. International Symposium on the Active Learning (ISAL-2019) Adana, Turkey. Proceeding Book, 189-196.

Aydın, F., & Sağdıç, M. (2013). Attitudes of the students of geography department in contemporary world issues: A case study from Turkey. *Journal of International Environmental Application and Science*, 8(3), 418-429.

Aytekin Özkan, P. (2009). *Use of caricatures in Turkish as a foreign language classes with the aim of teaching intercultural communicative compotence (*Unpublished master's thesis). İstanbul University, İstanbul.

Bahrani, T., & Soltani, R. (2011). The pedagocigal values of cartoons. *Research on Humanities and Social Sciences*, 1(4), 19-23. ISSN 2224-5766(Paper) ISSN 2225-0484(Online)

Barut, D., & Akbaba, B. (2017). The effect of using cartoon in 6 th grade social studies course on creative thinking skills. *Journal of Anatolian Cultural Research*, 1(1), 51-69.

Bergson, H. (2006). *Gülme: Komiğin anlamı üstüne deneme*. (Y. Avunç, Çev.). İstanbul: Ayrıntı Yayınları.

Berk, R. A. (2001). The active ingredients in humor: Psychophysiological benefits and risks for older adults. *Educational Gerontology*, 27(3-4), 323-339. https://doi.org/10.1080/036012701750 195021

Berman, S. (1990). Educating for social responsibility. *Educational Leadership*, 48(3), 75-80.

Black, L. (2003). Tarih öğretim ve öğreniminde yöntem sorunları. (O. Öymen, Ed.), *Tarih eğitimine eleştirel yaklaşımlar* içinde, (ss.28-33). İstanbul: Tarih Vakfı Yayınları.

Çakır, A., & Aydoğdu, B. (2016). The effect of teaching the topic of environment problems by using caricature on students' academic success and attitude towards environment. *The Western Anatolia Journal of Educational Sciences*, 7(14), 102-116.

Çalışkan, T., Güneri, E., & Bektaş, O. (2018). The relationshipbetween the misconceptions about the pollution of air, water and soil of the fifth grade secondary school students and their parents. *Journal of Social and Humanities Sciences Research (JSHSR)*, 5(30), 4265-4282.

Caymaz, B. (2020). Thematic review of some studies about the global warming in Turkey. *International Electronic Journal of Environmental Education, 10*(1), 16-31.

Çengelci Köse, T., Azrak, Y., & Gürdoğan Bayır, Ö. (2020). Examination of the relationship between prospective social studies teachers' democratic values and attitudes towards today's world problems. *Elementary Education Online, 19*(2), 477-490. doi:10.17051/ilkonline.2020.689680

Çeviker, T. (1997). *Karikatür üzerineyazılar*. İstanbul: İris Yayıncılık.

Clark, C. (2000). Innovative strategy: Concept cartoons. *Instructional and learning strategies*, 12, 34-45.

Cobb, P., Confrey, J., DiSessa, A., Lehrer, R., & Schauble, L. (2003). Design experiments in educational research. *Educational*

Researcher, 32(1), 9-13. https://doi.org/10.3102%2F00131 89X032001009.

Colucci-Gray, L. (2014). Beyond evidence: A critical appraisal of global warming as a socio-scientific issue and a reflection on the changing nature of scientific literacy in school. *Cultural Studies of Science Education*,9(3),633-647.doi:10.1007/s11422-013-9556-x

Copur, A., & Demirel, M. (2016). Turkish social studies teachers' thoughts about the teaching of controversial issues. *JSSE-Journal of Social Science Education*,80-95. doi:10.4119/UNIBI/jsse-v15-i2-1476.

Dalacosta, K., Kamariotaki-Paparrigopoulou, M., Palyvos, J. A., & Spyrellis, N. (2009). Multimedia application with animated cartoons for teaching science in elemantary education. *Computers & Education*, 52, 741-748.https://www.researchgate. net/deref /http%3A%2F%2Fdx.doi.org %2F10.1016%2Fj. compedu.2008.11.018

Dawson, V., & Carson, K. (2017). Using climate change scenarios to assess high school students' argumentation skills. *Research in Science & Technological Education, 35*(1), 1-16. doi: 10.1080/02635143.2016.1174932.

Dawson, V., & Carson, K. (2020). Introducing argumentation about climate change socioscientific issues in a disadvantaged school. *Research Science Education*, 50, 863–883. https://doi. org/10. 1007/ s11165-018-9715-x.

Demirkaya, H. (2016). Günümüz dünya sorunlarına genel bakış, F. Aydın, (Ed.), *Günümüz dünya sorunları* içinde. (*ss*. 2-14). Ankara: Pegem Akademi.

Dinç, E., Üztemur, S. S. (2016). Improving middle school students' environmental awareness and social participation skills through designing banners. *Abant Izzet Baysal University Journal of Faculty of Education,* 16, (USBES Special Issue II), 1224-1239.

Dokgöz, D. (2004). Popüler kültür nesnesi olarak karikatür ya da çizgininmetayadönüşmesi. *Bilim ve Aklın Aydınlığında Eğitim Dergisi,5*(57),285.

Dönmez, Y. (2017). The attitudes of university students towards today's world affairs. *Journal of History Culture and Art Research, 6*(6), 303-312. doi: 10.7596/taksad.v6i6.1297

Durualp, E. (2006*). The usage of caricature in teaching social studies at junior high school* (Unpublished master's thesis). Gazi University, Ankara.

Efe, H. (2005). *Karikatür ve eğitim*. İzmir: Etki yayınları.

Erdoğan, A., & Özsevgeç, L. C. (2012). The effects of conceptcartoons on eliminating students' misconceptions: greenhouse effect and global warming. *Turkish Journal of Education, 1*(2), 38-50.

Erişti, S. D. (2010). Primary school students' popüler culture perception in their pictures (the example of multicultural Fjell primary school in Norway). *Elementary Education Online, 9*(3), 884-897.

Ersoy, A. F., & Türkkan, B. (2010). Analyzing social and environmental issues elemantary school students reflect in their cartoons. *Education and Science, 35*(156), 96- 109.

FAO. (2019). The state of food security and nutrition in the world 2019. http://www.fao .org/3/ ca5249tr/ca5249tr. pdf

Fry, W. F., & Allen, M. (1996). Humour as a creative experience: The development of a hollywood humorist. A. Chapman and H. C. Foot (Eds.), *Humor and laughter: Theory, research, and*

applications (pp. 245-258). London: Transaction Publishers https://doi.org/10.4324/ 97802 037 89469.

Gamage, S. (2019). Cartoons as an authentic supplementary teaching tool in english as a second language classrooms. *Advances in Language and Literary Studies, 10,* 107-116. https:// www .researchgate. net/deref/http%3A% 2F%2Fdx.doi. org%2F10.7575%2Faiac.alls.v.10n.1p.107.

Genç, M., Genç, T., Ergenç, M., & Erkuz, N. (2016).Environmental problem perception of 6th grade students. *World Journal of Environmental Research. 6*(1),14-24.

Gürlen, E. & Köseoğlu, P. (2019). Analysis of university students' perceptions towards "soil, soil pollution" concepts with metaphors. *Bolu Abant Izzet Baysal University Journal of Faculty of Education, 19*(1), 243-256. doi:10.17240/aibu efd.2019. 19.43815-507204.

Hand, B., & Prain, V. (2002). Teachers implementing writing-to-learn strategies in junior secondary science: a case study. *Science Education, 86*(6), 737-755. doi: 10.1002/sce.10016.

Heitzmann, W. R. (1998). The power of political cartons in teaching history. Retrieved from https://files. eric. ed.gov/fulltext/ ED425108.pdf

İbret, B. Ü., Karasu Avcı, E., & Recepoğlu, S. (2016). Opinions of social studies prospective teachers on the determination of social issues. *Abant Izzet Baysal University Journal of Faculty of Education,* 16, (USBES Special Issue II), 1295-1319.

İmamoğlu, İ. H. (2016). İnançsal sorunlar. F. Aydın (Ed.), *Günümüz dünya sorunları* içinde. (*ss.*414-443). Ankara: Pegem Akademi.

Işık Mercan, S., & Sarı, H. İ. (2019). Views on todays world ıssues and todays world ıssues course of the prospective teachers of the social studies programme. *Journal of History School (JOHS), 12*(40), 171-197. doi: 10.14225/Joh1636

Karakuş, U., & Yel, Ü. (2019). The mental models of social studies teacher candidates on global warming. *International Journal of Geography and Geography Education (IGGE),* 40, 109-123.

Karakuş, U., Palaz, T., Kılcan, B., & Çepni, O. (2012). The effect of the use of cartoons on students' academic achievement in "environmental problems" issues in social sciences curriculum. *Gazi University Journal of Gazi Educational Faculty (GUJGEF), 32*(2),363-376.

Keçe, M. (2016). İklim değişikliği. F. Aydın (Ed.), *Günümüz dünya sorunları* içinde. (*ss.* 78-110). Ankara: Pegem Akademi.

Keogh, B., Naylor, S., & Wilson, C. (1999). Concept cartoons: a new perspective on physics education. *Physics Education, 33*(4), 219-224.

Kılıçoğlu, G., Karakuş, U., & Öztürk, T. (2012). Validity and reliability study of an attitude scale intended for contemporary world issues. *International Periodical for the Languages, Literature and History of Turkish or Turkic,7*(4), 2209-2224.

Kleeman, G. (2006). Using cartoons to investigate social and environmental issues. *Ethos,14*(3), 9-19.

Koca, N., Yazıcı, S., & Kulaca, İ. (2019). The determination of 6. class students' awareness of natural resources consumptıon and their readiness for envıronmental problems by caricatures. *International Primary Educational Research Journal, 3*(1), 10-22.

Kocakavak, D., & Erökten, S. (2020). Impact of science education en riched with cartoons on students' success an attitude. *Pamukkale University of Journal of Education*, 1-19. doi:10. 9779/pauefd .694569.

Kroehnert, G.. (1999). *101 Training Games. Sydney*: McGraw-Hill Company.

Kuş, Z., & Öztürk, D. (2019). Social studies teachers' opinions and practices regarding teaching controversial issues. *Australian Journal of Teacher Education, 44*(8), 15-32.

Lin, J. (2016). Chinese grade eight students' understanding about the concept of global warming. *EURASIA Journal of Mathematics, Science and Technology Education*, *13*(5), 1313-1330.

Lochrie, K. (1992). Using cartoons as an effective learning and teaching strategy. *SCRE Newsletter*, 51, 8-9.

Lynch, M. (2018). Using cartoons to spark engagement in the classroom. Retrieved from https://www .thetechedvocate.org/using-cartoons-to-spark-engagement-in-the-classroom/

McMillan, J. H., & Schumacher, S. (2014). *Research in education: Evidence-based inquiry* (7th ed.). London: Pearson.

MEB, (2018). Sosyal bilgiler dersi öğretim programı (İlkokul Ortaokul 4, 5, 6 ve 7. Sınıflar). http://mufredat. meb.gov.tr/ProgramDetay.aspx?PID=354

Meydan, A. (2016). Nüfus sorunları. F. Aydın (Ed.), *Günümüz dünya sorunları* içinde. (*ss*. 212-238). Ankara: Pegem Akademi.

NCSS (1994). National Council for social studies. Introduction. https://www. socialstudies. org/standards/ national-curriculum-standards-social-studies-introduction

Orhan, H. (2018). *Determination of the perceives of the environmental problems of the secondary school students through the cartoon* (Unpublished master's thesis). Niğde Ömer Halisdemir University, Niğde.

Örs, F.(2007).Eğitim vekarikatür.*Bilim veAklınAydınlığında Eğitim Dergisi*, *7*(84), 26-28.

Oruç, Ş. (2007). *Humor in social studies teaching* (Unpublished doctoral thesis). Gazi University Ankara.

Özalp, I. (2006). *A study on implementing the technique of caricature in science and environmental education* (Unpublished master's thesis). Celal Bayar University, Manisa.

Özdemir Özden, D., & Özden, M. (2015). Investigation of children's drawings about environmental ıssues. *Pamukkale University Journal of Education*,*37*, 1-20.

Özer, A. (2007). Karikatür ve Eğitim. *Bilim ve Aklın Aydınlığında Eğitim Dergisi*, 84, 19–25.

Özkaral, T. C. (2019). A comparative study of the issue of global warming and climate change in social studies education programs of Turkey, Canada (Ontario) and Hong Kong. *International Journal of Education Technology and Scientific Researches, 4*(8), 1-14.

Özkaral, T. Ç., & Bozyiğit, R. (2020). Metaphoric perceptions of geography and social studies teacher candidates regarding the concept of unplanned urbanization. Eurasian Journal *of Researches in Social and Economics (EJRSE), 7*(5), 389-405.

Palaz, T. (2017). *Global problems and teaching in social studies education* (Unpublished doctoral dissertation). Gazi University, Ankara.

Palaz, T., & Akbaba, B. (2018). Global problems and teaching in social studies education according to the opinions of secondary school students. *Turkish Studies Educational Sciences, 13*(27), 1213-1246. doi: 10.7827/TurkishStudies.14383

Patil, Z. N. (1996). Using cartoons in the teaching of English. *Journal of English and Foreign Languages*, 17,15-26.

Pınar, E., & Yakışan, M. (2017). Analyze of the drawings on environmental concepts of the primary school students. *Trakya University, Journal of Education Faculty* (IPTES 2016 Special Issue*), 8*(1), 97-113. doi: 10.24315/trkefd.366693

Sabancı, O., Faiz, M., & Akyol, C. (2017). Opinions of eight grade students on the global problems. *International Journal of Eurasia Social Sciences*, 8(8).

Saleh, E. S., & Gandy, S. K. (2015). Perceptions of geography students in the USA and Egypt on global issues. *Intercultural Education, 26*(5), 377-396. doi: 10.1080/14675986.2015.1092276

Seçgin, F., Yalvaç, G., & Çetin, T. (2010). İlköğretim 8. sınıf öğrencilerinin karikatürler aracılığıyla çevre sorunlarına ilişkin algıları. *International Conference on New Trends in Education and Their Implications*, *11*(13), 391-398.

Şeyihoğlu, A., Sever, R., & Özmen, F. (2018). The current world problems in the social studies and geography teacher candidates' mind maps, *Marmara Geographical Review,* 37, 1-15.

Sidekli, S., Er, H., Yavaşer, R., & Aydın, E. (2014). An alternative method in social studies education cartoon, *International Journal of Turkish Education Science*, 2, 151-163.

Smith, J. (1993). Cartoons in class. *Practical English Teaching*, 58-59.

Stephenson, P., & Warwick, P. (2002). Using concept cartoons to support progression in students' understanding of light. *Physics education*, *37*(2), 135. doi:/10.1088/0031-9120/37/2/306

Tarhan, Ö., & Kızılay, N. (2017). Problems existing in the society in middle school students' caricatures**.** *The Journal of Social Sciences*, *4*(17), 487-499.

Thakur, V. S. (2015). Using supplementary materials in the teaching of English: Pedagogic scope and applications. *English Language Teaching, 8*(12), Retrieved from 1-6. https://www. researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2F10.55 39%2Felt. v8n12p1.

Tuncel, G. (2017). An example study on global warming education with cartoons in social studies lessons. *Marmara Geographical Review,* 35, 87-94.

Turan, İ., & İskender, C. (2018). Terör. H. Akengin ve İ. Dölek (Eds.), *Günümüzdünyasorunları* içinde(ss.201-2014).Ankara: Pegem Akademi.

Uğurel, I., & Moralı, S. (2006). Cartoons and their use of in mathematics teaching, *Milli Eğitim Dergisi*, *34*(170), 1-10.

UNHCR. (2019). Golobal trends forced displacement in 2019. Retrieved from https://www.unhcr. org/ globaltrends2019/

Uslu, H. (2007). Eğitimde karikatür. *Bilim ve Aklın Aydınlığında Eğitim Dergisi*, *84*(7), 15-18.

Uyanık, G. (2016). Investigation of the teacher candidates' in different degree programs perceptions and sensitivity towards air pollution. *Kastamonu Education Journal, 24*(4),1571-1578.

Uzuner, S., Aktaş, E., & Albayrak, L. (2010).Evaluation of illustrations in Turkish textbooks for grade 5, 6, 7, and 8, *Journal of TUBAV Science*, 27, 721 – 732

Van Wyk, M. M. (2011). The use of cartoons as a teaching tool to enhance student learning in economics education, *Journal of SocialSciences*,*26*(2),117-130.https://doi.org/10.1080/09718923. 2011.1 1892888.

WHO (World Health Organization, 2021). Retrieved from https://www.who.int/emergencies/ diseases/ novel-coronavirus-2019?gclid=EAIaIQobChMIlP-8s4ag7wIV muJ3Ch3XjA6uEAAYASAAEgJnVPD_Bw

Woolnough, B. E. (1994). *Effective science teaching: Developing science and technology education*. Open University Press.

Yazıcı, K. (2006). Sosyalbilgilerdekullanılangörselaraçlar: Haritalar, küreler, resimler, tablolar ve grafikler, *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 15,651-662.

Yazıcı, Ö. (2013). Secondary school students' attitudes towards contemporary world issues. *International Periodical for the Languages, Literature and History of Turkish or Turkic, 8*(6), 807-823.

Yılmaz, A., & Yanarateş, E. (2020). Determination of metaphorical perceptions of prospective teachers on the concept of "water pollution" throughtriangulation. *KastamonuEducationJournal, 28*(3), 1500-1528. doi: 10.24106/kefdergi.722554.

YÖK, (2018). Sosyal bilgiler öğretmenliği lisans programı. Retrived from https://www.yok.gov.tr/ kurumsal/idari-birimler/egitim-ogretim-dairesi/yeni-ogretmen-yetistirme-lisans-programlari