

# An Examination of Geography Perceptions of Primary School Teacher Candidates through Draw-Write-Tell Technique

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## ABSTRACT

This study aimed to reveal the geography perceptions of primary school teacher candidates. The study group of the study that adopted a qualitative research method consisted of 160 primary school teacher candidates from all grade levels studying at a university in northern Türkiye during the 2021-2022 academic year. In the first stage of the study which was completed in three steps, students were asked to draw items that came to their minds with the word geography, clarifying their perceptions of geography. In the second stage, they were instructed to elucidate the connection between their drawings and geography term in detail through writing. In the third stage, unstructured interviews were conducted with 13 participants voluntarily selected from the study group to comprehend their motivations for choosing the drawings. Data were analyzed using the content analysis method. The drawing results demonstrated that it is possible to classify the broad geography perceptions of the students into nine different themes. In their drawings, the participants identified the most political events and phenomena with geography and reflected their perspectives in this direction. The reasons underlying the geography perceptions of the participants were divided into six different categories, including political and economic aspects. The study outcomes revealed that participants' geography perceptions took shape on the axis of modern-day political and economic issues, that geography is a critical power source at both local and global levels, and that it is a significant and determining factor for the future of living creatures.

**Keywords:** Geography perception, geography lesson, geography concept, draw-write-tell technique.

## Sınıf Öğretmeni Adaylarının Coğrafya Algılarının Çiz-Yaz-Anlat Tekniğiyle İncelenmesi

### ÖZ

Bu araştırmanın amacı, sınıf öğretmeni adaylarının coğrafya algılarını ortaya koymaktır. Nitel araştırma yönteminin benimsendiği araştırmanın çalışma grubunu 2021-2022 eğitim-öğretim yılında Türkiye'nin kuzeyinde yer alan bir üniversitede okuyan her sınıf düzeyinden 160 sınıf öğretmeni adayını oluşturmaktadır. Üç aşamada gerçekleştirilen çalışmanın birinci aşamasında coğrafya algılarını tespit edebilmek için öğrencilerden coğrafya denince akıllarına gelen şeyleri çizmeleri istenmiştir. İkinci aşamada çizimleri ile coğrafya arasındaki bağlantıyı ayrıntılı bir şekilde açıklayarak yazmaları istenmiştir. Üçüncü aşamada çalışma grubu içerisinde seçilen 13 gönüllü katılımcıyla çizimleri seçme nedenlerine yönelik yapılandırılmamış mülakatlar yapılmıştır. Verilerin analizinde içerik analizi yöntemi kullanılmıştır. Çizimlerden elde edilen sonuçlar, öğrencilerin genel coğrafya algılarının 9 farklı tema altında toplandığını göstermiştir. Katılımcılar çizimlerinde coğrafya ile en çok siyasi olay ve olguları özdeşleştirmiş ve bakış açılarını bu doğrultuda çizimlerine yansıtılmışlardır. Katılımcıların coğrafya algılarının altında yatan nedenler siyasi ve ekonomik faktörler olmak üzere 6 ayrı kategoride toplanmıştır. Araştırma sonuçları, katılımcıların coğrafya algılarının günümüz siyasal ve ekonomik faktörler ekseninde şekillendiğini, coğrafyanın yerel ve küresel boyutta önemli bir güç kaynağı olduğunu ve coğrafyanın canlıların geleceğini belirleyici ve tayin edici nitelikte olduğunu ortaya koymuştur.

**Anahtar kelimeler:** Coğrafya algısı, coğrafya dersi, coğrafya kavramı, çiz-yaz-anlat tekniği.

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## INTRODUCTION

Geography is a discipline of science that integrates the humankind and natural facts of a globalizing world (Bent, Bakx & Brok, 2014). As a science discipline, Geography originated from a social imperative encompassing a range of needs such as spatial orientation, land demarcation, area design to increase agricultural productivity, and political and military purposes. Nowadays, Geography's contributions to society are needed more than ever (Herman et al., 2020). Although Geography has been regarded as an encyclopedic discipline for long ages, it no longer corresponds to modern-day reality since geography has evolved into one of the most dynamic scientific fields characterizing, structuring, and directing the contemporary world (Arrowsmith et al., 2011). As a discipline, geography plays a critical role in meeting the changing needs of society and addressing real-world matters (Knight & Robinson, 2017). Undoubtedly, the significance of geography in ensuring a secure and healthy future cannot be overlooked (Artvinli & Kaya, 2010). In the broad spectrum of life, geography plays a vital role in enabling people to live sustainably in a world where they are interdependent (Opoku, 2019).

Since the ancient times, geography has accompanied humanity as a 'discipline', providing answers and existential alternatives, and continues to do so. People have perceived geography in various ways over time, and their perspectives have shifted in response to technical breakthroughs, scientific advancements, and the level of information gained on an evolutionary scale. Such perceptual variations have asserted themselves and continue to manifest at the social level among human communities today (Herman et al., 2020). Geography is a science field that begins with where people live and spreads throughout the globe, playing a critical role in their lives in a wide range. As a result, it has been incorporated into the educational programs of every country throughout history. With its shaping and guiding role in the lives of societies, geography holds a critical place and relevance in social sciences, which also interacts pedagogically with societal lives. Problems may be solved before they arise in the societies built by critical, enquiring, active, and participatory individuals who grow up with the versatile perspective of social sciences in general and geography in particular (Karatekin & Sönmez, 2016). Thus, in addition to people's survival, the existence of a viably ideal social life demonstrates the pedagogical value of geography.

Geography is expressed with diverse perceptions and definitions within the framework of several paradigms (Özgen, 2011). "Geography is a science that analyzes the interactions between people, places, and environments, and the link between people and the world." (National Council for Curriculum and Assessment/Department of Education and Skills, 1999: 6). In a specific definition, however, geography is a discipline that aims to clarify the character and formation process of places, the distribution of people in those regions, and the events and developments resulting from this distribution. In this context, Geography pertains to human being-environment relations in the setting of the particular areas and locations (Reinfried & Hertig, 2011). Geography science, which connects human and natural daily realities in a globalizing world (Bent, Bakx & Brok, 2014), plays a critical role in instilling patriotism (love of nation). Loving, administering and defending the place where one lives requires a qualified geographical thought and geography education. Geography education is also a collective responsibility for everyone and every segment of society (Meydan, 2013). Geography education begins with the 1st, 2nd, and 3rd grades in the primary schools, within the purview of life sciences classes. At these levels in geography, students are introduced to subjects and materials that help them comprehend the outer world and the surrounding ambiance in which they live. Geography education is incorporated in the social studies classes of primary schools at the 4th grade and secondary schools 5th, 6th, and 7th grades. These classes cover a broader range of themes and contents, allowing students to comprehend the world in physical, human, and economic dimensions, beginning with where they live (Taşoğlu, 2010). Geography, which examines human being-environment relations, should be taught in schools starting from primary school, according to the structure of geographical philosophy. Thus, students' adoption of their surroundings becomes easier, ensuring that they are to raise awareness about the events happening around them. Accordingly, geography enables people to think independently, solve issues, be versatile and creative, make predictions for the future, and apply the acquired knowledge to real-life situations. In this context, it is critical to overemphasize geography education beginning in primary school. Countless examples prove the significance of geography teaching beginning in primary school. The Tsunami disaster taking place in South Asia in 2005 is one of the most dramatic examples. A 10-year-old primary school student took advantage of the knowledge he had learned in a geography lesson about earthquakes and the formation of tsunamis. His evacuation of tens of people from the shore and saving many lives proved the significance of geography teaching (Meydan, 2013).

The term perception is used commonly and can be used synonymously with the term image worldwide. (Gans et al., 2018). The fact that geography generates conceptually robust bonds with diverse disciplines leads to various perceptions and definitions for the concept of geography. Some interpretations are based on spatial perceptions of the natural environment, while others are on social and temporal perceptions. Geography is an interdisciplinary science covering a wide range of research interests. Such encyclopedic and broad research interest causes diversity and differences in the perception and definition of the geography concept. As a result, geography perception may be defined as individuals' human-space interaction and the state of 'percipience' according to their feelings, opinions, and desires. This perception may vary based on the concepts of "-human, -space, -event, and -state". All perceptions may differ depending on individuals' cognitive and affective states (Özgen, 2011). It is critical to utilize the draw-write-tell technique in revealing such a fluctuating situation. With its emphasis on creativity, the draw-write-tell technique has long been employed in various disciplines, such as health, social care, and educational research (Angell, Alexander & Hunt, 2015). The draw-write-tell technique is based on students drawing on specific concepts, then writing their expressions, and finally articulating their thoughts about them. Drawings may be used to determine students' perceptions of notions (Pinar & Yakişan, 2016). The advantage of this technique is that thanks to its integrative analytical interpretation, it allows researchers to combine three different types of data (drawings, writings, and interviews), minimizing ambiguity and using-valuing all data equally. This technique also enables researchers to see the 'whole picture' and draw conclusions confidently from the data acquired (Angell, Alexander & Hunt, 2015).

Several studies in the literature utilized the draw-write-tell technique to measure perception, opinion, belief, and attitude in many distinct fields (Akman & Ekinci, 2021; Goha, Purwati & Permatasari, 2020; Green & Lliaban, 2020; Lunn Brownlee et al., 2017; Mutlu, & Nacaroglu, 2019; Pope et al., 2018; Üztemur & Dinç, 2018; Üztemur, 2020; Üztemur, Dinç & Ekinci, 2020). When the studies on geography perceptions are examined, it is clear that such studies attempt to expose the perception of geography by adopting various methods/techniques. Morley (2012) aimed to uncover the geography perception of the primary school teacher candidates and discovered that the participants' geography perceptions were both information-driven and theoretically oriented. In their study to assess the geography perceptions of the first-year primary school students through a metaphoric approach, Geçit and Gençer (2011) concluded that, although the geography perceptions of the teacher candidates were generally positive, they were relatively far from the contemporary geographical perspective. Catling (2014) investigated classroom teachers' acquaintance and comprehension of geography and geography teaching. As a result, she observed that geography education was discussed briefly in teachers' training at the international level; thus, the perception and comprehension of the primary school teacher candidates were below the necessary level. In their study on the geography images of classroom teachers with the interview technique, Şeyioğlu and Geçit (2010) concluded that teachers were unaware of the basic principles of geography adequately, that their geography perception was limited to physical geography subjects, and that landforms came to mind when considered the geography, and that their geography images, in general, had omissions and errors. Knight and Robinson (2017) conducted research among first-year undergraduate students in the geography department in South Africa, finding that geography played a vital role in resolving social and environmental issues and had the potential to provide skills, employment, and income. Demirbaş (2013) used the mind map approach to investigate the geography perceptions of social studies teacher candidates and discovered that the geography perceptions of teacher candidates were related to physical geography concepts. Öztürk and Alkış (2009) explored the perceptions of primary school teacher candidates towards geography with open-ended questions. They found that the teacher candidates' conceptions of geography intensely focused on physiography and anthropogeography.

The literature review indicated that Catling's typology (2004) was used in numerous studies to categorize the perception, notion, and opinion about geography and geography education. This categorization consists of five perspectives: Globalist (world characteristics; descriptive geography), Earthist (knowledge and comprehension about how the world works), Interactionist (interdependence and interaction between people and the environment), Localist (how places develop, what they look like, and why), and Environmentalist (sustainability; the impact of human activities on the environs) (Preston, 2015). Despite the recent increment in studies focusing on explaining geography understanding (Puttick, Paramore & Gee, 2018), there were limited studies and significant gaps in the field (Catling, 2014) when the study range on geography and geographical understanding of primary school teacher candidates were considered. Furthermore, no study adopted the draw-write-tell technique and supportive data to explore the perception of geography, despite numerous methods adopted in the literature to disclose the perception of geography.

Primary geography education is a critical aspect of teacher candidates' development. Experiences are essential in the professional development of teacher candidates, especially in disciplines like geography (Dolan et al., 2014). Future primary school teachers, consequently, the current primary school teacher candidates, bear primary responsibilities for effectively implementing geography teaching and raising geographical awareness among their students. The perceptions of teacher candidates towards the notion of geography will both influence their attitudes towards geography subjects in their future occupational lives and perspectives (Demirbaş, 2013). Teacher candidates are critical actors in recontextualizing geography education in the future. Hence, deliberating teacher candidates' perceptions and opinions about geography and geography education is crucial (Knecht, Spurná & Svobodová, 2020). Assessing the geography perceptions of prospective classroom teachers and their reasonings, on the other hand, may constitute insight into future students' potential perceptions and attitudes towards geography. The primary school confronts a vital educational level in forming the first geography perceptions, explaining geography issues, and establishing critical attitudes toward the environment, country, and the living world. To make all mental associations, it is necessary to explicitly reveal the perceptions of the prospective classroom teachers, the educators of the future classes, towards the phenomenon of geography. Therefore, this study aimed to analyze the geography perceptions of primary school teacher candidates created in their minds through drawings. The drawings data gathered were also supplemented by writing activities and interviews to study the geographical perceptions of the participants thoroughly and holistically. Answers to the following questions were sought within the context of the study's objectives:

### **Research Questions**

1. What are the participants' perceptions of geography?
2. What are the fundamental reasons behind the participants' perceptions of geography?

## **METHOD**

### **Research Design**

This study aimed to reveal the geography perceptions of primary school teacher candidates by adopting the basic qualitative research design. While traditional qualitative research methodology is pertinent to constructing meaning, basic qualitative research design focuses on uncovering and interpreting meanings generated by individuals. As a result, the meanings generated by individuals in the context of research questions are discovered and explored in basic qualitative research design (Merriam, 2013). Interviews reveal individual experiences and the meanings ascribed to the phenomena (Creswell, 2013). Interviews also support drawings and written expressions in this context. The current research preferred the basic qualitative research design and focused on uncovering and interpreting the geographical perceptions of the participants. Furthermore, the focus of this study is the geographical perceptions of primary school teacher candidates.

### **Study Group**

The study workgroup consisted of 160 university students selected from all grade levels by using convenience sampling, and they study primary school teaching program at a State University in Türkiye in the fall semester of the 2020-2021 academic year. The reason for choosing the convenience sampling in the current study is that the sample selection is easily accessible, suitable, and convenient for the study to be carried out (McMillan & Schumacher, 2010). In the interviewing stage, the number of participants was 13 (seven boys and six girls), and participation in the interviews was voluntary. The enrolment statuses of the students in the working group were as follows: 39 (21 girls, 18 boys) were in the first grade, 34 (18 girls, 16 boys) were in the second grade, 44 (24 girls, 20 boys) were in the third grade, and 43 (23 girls, 16 boys) were in the fourth grade.

### **Data Collection**

The draw-write-tell technique was used to collect the research data. With the assistance of the integrative analytical interpretation in this method, it is possible to combine three different types of data (drawings, writings, and interviews), avoiding ambiguity and using-valuing all data equally. This function also allows seeing the 'whole picture' and concludes confidently from the data acquired (Angell, Alexander & Hunt, 2015). As a result, the current study, which aimed to reveal the geographical perceptions of primary school teacher candidates, was designed in three stages. Participants were informed about the research goal, process, and participant confidentiality before these stages were set. In the first stage, the participants were given a blank A4 sheet of paper and instructed to draw the first things that came to mind when they thought about the geography, the most associated with geography, and the most evocative objects envisaged before their eyes when they hear the word

geography, without regard to aesthetics, in a class hour. Thus, the first stage aimed to reveal a general geography perception of participants.

In the second stage, participants were asked to detail the connections between their drawings and geography as reasoning why they associated their illustrations with geography. At this stage, participants were asked to write out their justifications on the back side of the paper they had drawn about why that concept came to mind when the geography term was mentioned. As a result, while the first stage aimed to identify the broad geography perceptions of the participants, this stage focused on acquiring a thorough explanation and the reasons underlying participants' geography perceptions. The first and second stages of the data collection process were conducted simultaneously.

The third stage focused on unstructured interviews with 13 volunteers chosen from the working group to support the data acquired in the second stage with a different data collection method. The base of the third stage was the explanation texts written by the participants in the second stage. Thus, the third stage ensured the control of the second stage data and allowed to probe in-depth the geographical perceptions of the participants. The first and second stages lasted for one class hour. However, each interview averaged 20-25 minutes long in the third stage. Participants were given the necessary information for interviews, and their approvals were received before audio-recording the interviews. Furthermore, they were reminded that they could discontinue the interview at their convenience. Ethical principles were the priority in all stages of the study.

### **Data Analysis**

The drawings made in the first stage were subjected to content analysis to reveal a general view of the geography perceptions of the primary school teacher candidates. The inductive approach was utilized to categorize the whole 160 drawings into specific groups. The data obtained in the second and third stages were subjected to content analysis and coded. Participants' statements made were regularly utilized in the coding process. Similarly constructed codes were categorized under the same groups in the next step. At the end of the abstraction process, these groupings were reviewed, and those with comparable characteristics were regrouped to establish the themes (Giorgi, 2009). Each participant was assigned a code name based on their gender and grade level. For instance, the participant with the code 1F3 refers to the third-place female student in the first grade. Student quotations from interviews were incorporated into the study to improve the research credibility. Furthermore, researchers coded on different occasions, then held meetings to discuss the codes and themes afterward to make necessary modifications to increase internal consistency.

### **Research Ethics**

All ethical procedures were completed in this study. Ethical permission of the research was approved by Bartın University Social and Human Sciences Ethics Committee. Ethics committee document number is 2021-SBB-0511.

## **FINDINGS**

The results were structured under two topics in this part of the study: Data obtained from the drawings and acquired from written expressions and interviews.

### **Drawings**

The participants were asked to make a drawing that they identified with geography to disclose a broad view of geography in the first stage of the data gathering process. Table 1 shows the categories determined by the content analysis of the drawings.

**Table 1.** Geography perceptions of the participants

Category	Drawings and frequency values	%
Political power source (39)	Wars (f:13), Conflicts (f:8), Power Balances (f:7), Geopolitics (f:4), Geographical location (f:4), Colonialism (f:3)	24,3
Geography as a lesson (27)	Trip (f:6), Observation (f:4), Research-Exploration (f:4), Map (f:3), Compass (f:2), Sphere (f:2), Discovery (f:2), Mines (f:1), Stones (f:1), Traveler (f:1), Patterns (f:1)	16,8
Geography as a living space (23)	World (f:6), Universe, (f:4), Environment (f:3), Nature (f:3), Place to live (f:3), Society (f:2), Migration (f:2)	14,3
Climate change and global warming (17)	Extinction (f:4), Disturbance of natural balance (f:3), Seasonal variations (f:3), Glacier melting (f:2), Ozone layer depletion (f:2), Temperature rise (f:2), Greenhouse gas effect (f:1)	10,6

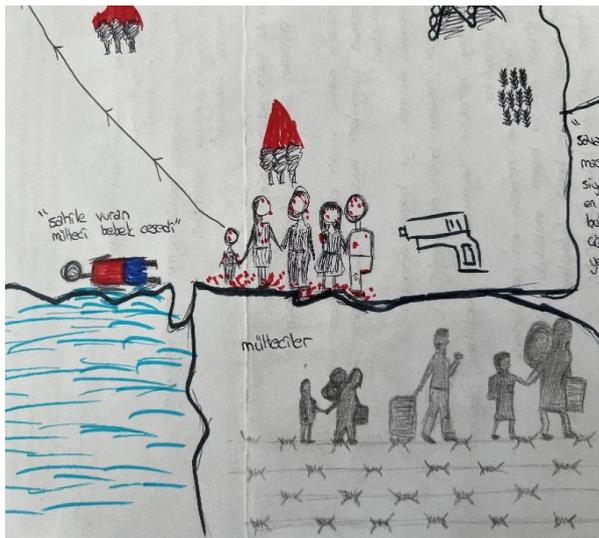
Geography as its vitality (15)	Natural Disasters (f:3), Life of living creatures (f:2), Future of economics (f:2), Weather conditions (f:2), Basic elements (f:2), Information required for life (f:2), Sustainability (f:2)	9,3
Geography as a science (12)	Physical geography: <i>Climate, vegetation, geographical formations</i> (f:6), Anthropogeography: <i>Population, settlement, tourism, industry, trade, agriculture</i> (f:4), Environmental science (f:2)	7,5
Geography from a global perspective (10)	Globalization (f:3), International organizations (f:3), International markets (f:2), Nations (f:1), Polarization (f:1)	6,2
Geography from an emotional perspective (9)	Destiny (f:3), Patriotism (f:2), History (f:2), Culture(f:2)	5,6
Geographical places (8)	Natural beauties: <i>fairy chimneys, travertines, waterfalls, canyons, plateaus, beaches</i> (f:8)	5

As demonstrated in Table 1, the participants' general perceptions of geography were divided into nine main categories. The geography perceptions of approximately a quarter of the participants were political and composed of political aspects, falling under the category of 'Political power source.' However, across all the categorizations, the most common drawing was in the form of an environment depicting war and conflict. Participants drew typical political conflict scenarios without indicating any specific conflict or struggle in these drawings. In supporting this scenario, the constant conflict state of the world and political games that take place in the form of confrontations from time to time were reflected in participants' drawings. In addition, the participant's illustrations exposed that geography is employed as a political tool; in other words, as a source of political power, and that there is a power balance in this regard. Such findings may be regarded that wars, conflicts, political strategies, and political power balances have crucial implications in shifting the world's agenda and directly impacting modern-day political and social structures. It is reasonable to argue, on the one hand, that more emphasis is put on the contents of political geography in geography education, as it encompasses more than wars, struggles, and conflicts. The fact that current international events (war, alliance, armistice), on the other hand, are broadcasted easily through the media seems to be bringing the political aspect of geography to the forefront predominantly. When the drawings in the 'Geography as a lesson' category are analyzed, the participants usually associate geography with travel, observation, and the research-exploration. As an explanation for this, it is safe to say that the travel-observation method, typically used in geography classes, is the determining factor in the research-explorations undertaken in this process. Students observe, examine, analyze, correlate, evaluate, and conclude geographical events on-site with the travel-observation method. As a result, geography perceptions of the participants seem to develop and take form in this manner.

The Earth as the living environment of every living creature, and the Universe, which involves the Earth, were depicted in the participants' drawings expressing their geography perceptions in the 'Geography as a living space' category. In addition, geographical elements, such as the immediate surrounding, nature, and living arrangements, were depicted in the participants' illustrations, defining and reflecting the boundaries of social life. Participants also brought attention to the movement of people between living places, referring to the phenomenon of migration in their drawings. The fact that living space (habitat) is an inseparable aspect of geography may be the most fundamental reason why participants associate their geography perceptions with living space. Yet, everyone needs a place to live. On a large scale, the living space is the globe or the universe for the spatially-oriented participants; however, it is the immediate surrounding or residence for some participants on a small scale. The drawings in this category eventually depicted geographical perceptions of living spaces. When the 'climate change and global warming' category was assessed, some illustrations expressed pessimism, such as the extinction of living life, disturbance of the natural balance, and imbalance and disorder in nature. However, the detailed analysis of the drawings in this category remarked that disturbance and distortion in nature (seasonal variations, glacier melting, ozone layer depletion, and temperature rise) seem to occur unnaturally by the impact of human activities. Participants emphasized the consequences and outcomes arising from the interaction and interference of human and natural processes with each other when assessing from the perspective of the human-nature relationship. These findings suggest that the participants are aware of nature conservation, environmentally conscious, sensitive to the subject, and value life. In this context, it is encouraging that there are people who have the naturalist-environmentalist vision, prioritize issues related to nature and the environment, and emphasize environmental concerns and challenges. The participants' drawings in the 'Geography as its Vitality' category portrayed geography perspectives with the themes of vitality and survival by the principle of vitality. People will survive, sustain, secure their lives economically, and invest in the future when necessary through geographical knowledge/skills that are essential in the modern-day world and are also valuable in our daily lives. In line with

this information, the participants, who adopted a pragmatist approach, brought attention to the geoinformation, concepts, and skills required for their daily lives in their drawings.

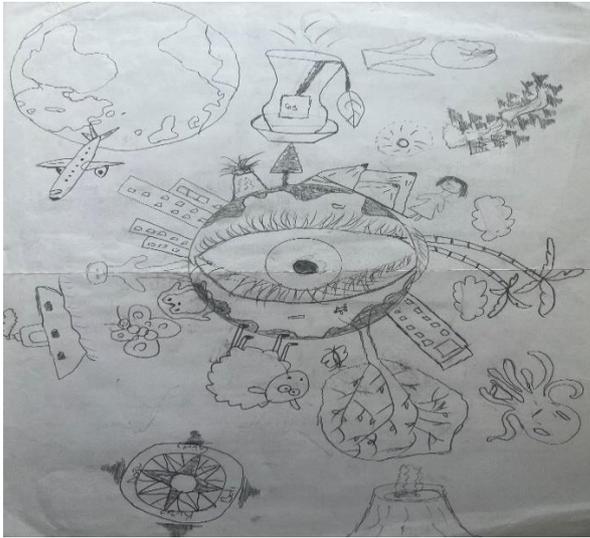
Analysis of the illustrations in the 'Geography as a science' category revealed that participants encompassed the unique and distinct geographical concepts, elements, and aspects. Participants reflected on the global issues and processes under the two topics: Physical geography and anthropogeography. As a result, participants' geography perceptions seemed to organize in this direction since physical geography matters such as climate, vegetation, landforms, and anthropogeography issues, including population and settlement, are emphasized in the geography classes and textbooks. Considering that geography education strives to teach information about human and physical systems, it is possible to argue that the participants' drawings also reflected these facts. However, the participants described geography in their drawings as environmental science and mirrored it as a discipline studying the environment. When assessing the category of 'Geography from a global perspective,' participants' illustrations identified geography from a global perspective with the aspects of globalization on an international scale. Such a standpoint might arise from the fact that globalization is a widespread and contemporary concept. However, the participants aligned their geography with the global economic systems and international organizations, integrated gradually. Analysis of the drawings in the category of 'Geography from an emotional perspective' revealed that participants consubstantiated geography in unscientific terms, for instance, destiny, and notably drew attention to economic injustice. Besides believing that geography is only destiny by ignoring the dynamics of the world, some participants in this category considered geography from a nationalist perspective, such as patriotism and domestication. While expressing their feelings, some participants also added cultural aspects to their illustrations, reflecting the geographical images in their minds. Finally, the drawings in the 'Geographical places' category indicated that they encompassed the most prominent and territorial natural beauties. The existence of this category proved that participants took notice of popular geographical locations while considering the spatial context. The followings are some images representing the particular categories:



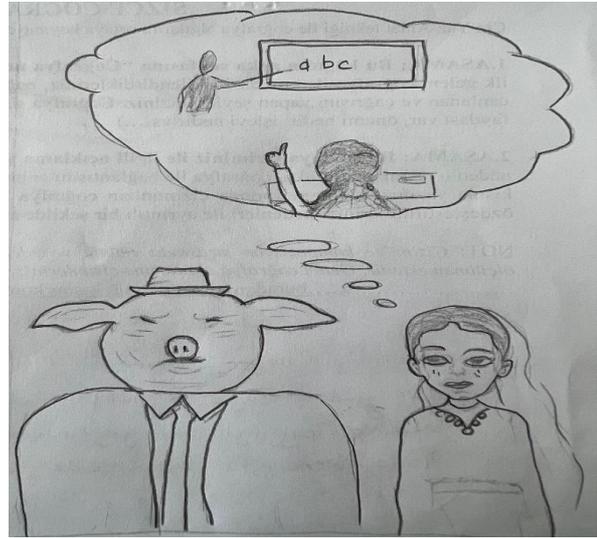
**Drawing 1.** Geography as a living space-Migration



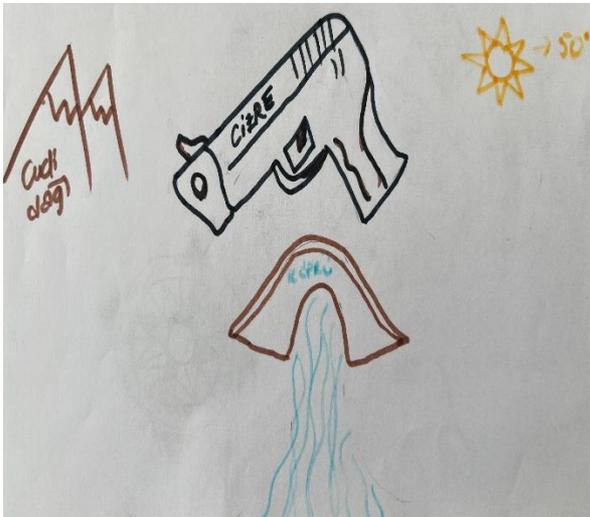
**Drawing 2.** Geography as its vitality-Natural Disasters



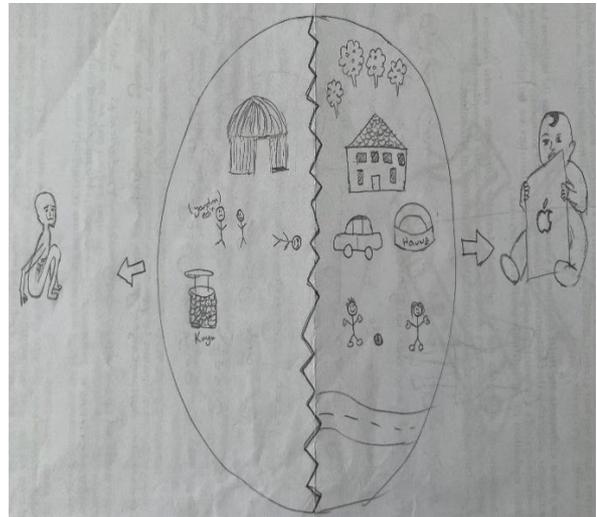
**Drawing 3.** Geography as a lesson-Observation



**Drawing 4.** Geography from an emotional perspective-Destiny



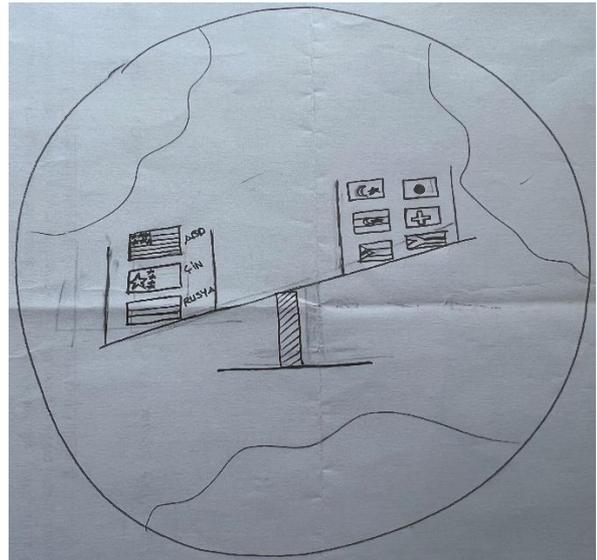
**Drawing 5.** Geography as a living space-Place to live



**Drawing 6.** Political power source-Colonialism



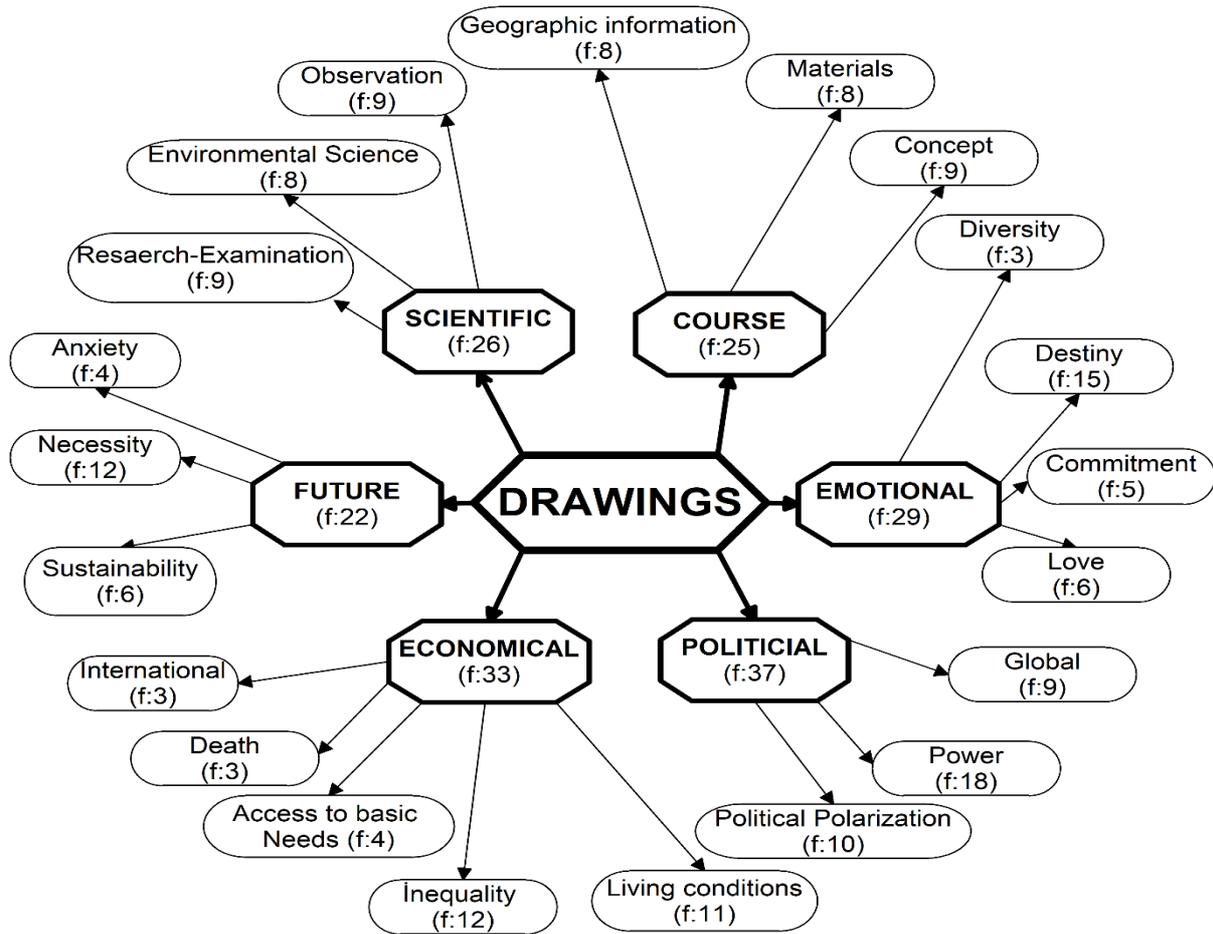
**Drawing 7.** Political power source-Power Balances



**Drawing 8.** Geography from a global perspective-Polarization

**Written Expressions and Interviews**

The relationship between participants’ drawings and geography was established in this section. As a result, analysis of written statements and interview data revealed the categories listed in Figure 1.



**Figure 1.** Relationship between Participants’ Drawings and Geography

Figure 1 depicts that the logic behind choosing participants to draw such images is classified under six main categories. Furthermore, the drawings listed in the category of ‘Economy’ are grouped under five different headings, including international, death, access to basic needs, inequity, and living conditions. In the ‘Economy’ category, Participants stated that geography impacts individuals’ economic living conditions and prospects and that financial balance and potential also shape the geography worldwide. Furthermore, participants commonly expressed the following issues: The economy determines the quality of human life, there are inequities and injustices at the international level, the global geography is under the influence of developed countries economically, and the least-developed countries have limited geographical opportunities. The opinions of participants with the codes 4M7 and 3F15 are given below as examples in this category:

*“When I say geography, I think of global injustices. Because I believe that geography is like, some people live in wealth and prospect while others seek a slice of bread to survive. For example, in such a world, while people in America are obese from overeating, others in Africa are starving to death like skin and bone. There is more. It is a state where some girls have education, but others do not, and while some kids enjoy playing in the park, others sell handkerchiefs.” (4M7).*

*“When I think of geography, the first thing that comes to my mind is economic inequity. I tried to convey this fact in my drawing. While people live in prosperity on one side of the world, children are starving on the other side. Again, while some people can buy a car by working for a short time in one region of the world, people like us struggle to buy even an old car after working for years, and thus these kinds of economic disparities come to my mind when geography is discussed. For example, while children in Africa die of starvation and diseases or die in inadequacy, I feel too sad that wealthy countries exploit them, violate their rights, and cause the deaths of*

children. In conclusion, we have become a generation that should be concerned much about the economy since we now have to think three times before purchasing a coat or a pair of shoes due to our country's economic turmoil. Therefore, the first thing that comes to my mind when I think of geography is such inequities." (3F15).

The followings were emphasized in the quotations above; geography explicitly determines human living conditions, there are inequities worldwide, and even deaths may occur by the effects and causes of geography. Assessment of the category of 'political' concluded that the subject-related drawings mainly focused on power balances, political interests and interactions, polarization between countries, and war and conflict on a global scale. Participants in this category also linked geography to political events and their consequences. They also highlighted that political events, country-based political interactions, global challenges, and future policy scenarios are well intertwined with, albeit unseparated from geography subject. The opinions of the participant coded with 2M24 on this subject are as follows:

*"There are wars in the world for centuries. War is not only fought with artilleries and rifles. In today's world, your one statement would be enough if you had an important role in the politics of a country... The history books do not write who rules the world or which countries have twisted the world in their fingers. Everyone makes their hero. It is like certain presidents we always see on the news are plotting to take over the world. There is always news like occupy there, blow up this place, kill someone... it never ends. People may be grateful for their current status when they imagine times in the Nazi administration, Saddam Hussein, or Stalin. But there is something we should not forget: History repeats itself. People differ, but tyranny does not. We are like a pawn on the chessboard. The squid game is a good example in this respect. It is a world where rich people monetize us, but they do not care about us. A world in which a worker, who has difficulty keeping his/her house with every increase in the dollar exchange rate, commits suicide. A world where people are killed in the middle of the street because they are black. It is an environment people are brutally raped and killed because of their religion and underground resources in their homeland. Yet, leaders are ruling us like playing ostrich. The industry giants also share this cruelty, which I did not include in my drawing. It is like a sector employing workers for a dollar a day for jean production in a factory on the brink of demolishing in India and does not even care about animals."* (2M24).

It is possible to interpret from the quotation above that the same political scenarios recur across geographies and that the ambitions of the global political actors always overbuild on their interests and conflicts. Furthermore, the desire for geographical expansionism by politically powerful individuals or countries has existed throughout history and continues to exist nowadays. In other words, geography has been consubstantiated with especially political relations and their consequences. The 'Future' category included the concern, demand, and sustainability headings. Participants in the 'Future' category remarked that they were concerned not just for themselves but also for future generations regarding critical issues for human life such as food, water, shelter, health, safety, etc. It is encouraging that the participants, who reflect their perceptions of geography from a pessimistic point of view, consider future generations. However, the participants brought attention to the current status of the globe, stating specifically the realities of the world ravaged by humans. The followings are the views of the 4M8 and 4F11 coded participants who identify geography as a demand and requirement for our future:

*"Geography is everything in this universe. If nothing existed in this universe, geography word would also not exist. It is like recognizing a tree from its fruits; if a tree did not have any fruit, no one would recognize what kind of tree it was. It would be a tree of nothing. Indeed, this universe is not empty; there are planets, trees, human beings, soil, water, and air, and they are all the fruit of the tree called geography. These fruits introduce geography to us. Our responsibility is to protect those fruits here. Because if those fruits are extinct, everything becomes futile. We must not harm ourselves, and above all, we must protect the geography in which we live. We must protect it. Because it is the tree called geography that sustains everything. Shortly, geography is life. Let me put it this way: geography is everything necessary for the continuation of the human generation."* (4M8).

*"I think geography is kind of a must. People lean on different thoughts to live in this geography. They make sacrifices to keep along with the geography. For these reasons, I liken geography to water, which is the most critical element for human life, that is, something giving life to human beings. The water is necessary for us to wash our hands and face in the morning, the air I breathe when I go out, the stars at night, the sky, etc. are all necessary, and they all mean geography. I attempted to demonstrate this manner in the picture I drew. I drew a bagel seller and a bagel buffet. For this bagel seller to keep up with this geography and survive, he must sell those bagels and hold on to life. Or, we can approach the issue from this perspective: Let us assume that the bagel maker has a newborn child. The fact that the newborn child needs the income from that bagel buffet to keep up with this geography to hold on to life shows that geography is a must."* (4F11).

According to their quotations above, the participants stated that geography shapes the past, present, and future. They also emphasized the significance of learning from geographical occurrences and their consequences to build a better future. They called attention to the fact that geography impacts the future by its structure. Participants in the 'Emotional' category reflected geography as destiny, compassion, acceptance, and divergence. Participants primarily associated geography and destiny together, and their reflections were highly emotional, albeit far from being scientific. Some participants, however, emphasized the love of country and nation along with national sentiments. They also mentioned cultural differences while expressing their feelings. Quotations on the subjects of destiny and compassion, which are also included in this category, are given below:

*"Geography is our destiny, and my destiny is the Cizre region with its Mount Cudi on one side, botte around it, birds hill, its historical beauties, and the river flowing with the love of Mem û Zîn. Geography is our destiny: It is a cliché, but it shapes our childhood, our future, and our whole life. What we choose and have to choose also defines our destiny. Cizre is a region where the violence took place during a period that shaped my destiny, and people broke down psychologically. It is a place where most people cannot see their beauty due to their prejudices; they are afraid and do not dare to take a step. It is my geography, my homeland, making me mature with its air and treeless terrain."* (4M27).

*"... It is possible to come across the ruins and traces of thousands of years of history in every corner of our country. Mesopotamia, which we call the cradle of civilization, is located in our country. Citizens of our country have also tried to protect this heritage from past to present. They did not let it be abused and preserved unity and solidarity. They respected all kinds of religious and political beliefs. Foreign forces tried to provoke disturbance when they realized that they could only divide us with such attempts. Sometimes they were successful, but sometimes the Turkish nation stood against and protected our country."* (3M28).

It may be inferred from the statements above that geography from an emotional standpoint, which is dominated by a subjective point of view, may occasionally represent something to be proud of; but something to be sorry for sometimes. The participants associated their personal experiences with geography. Participants in the 'Scientific' category defined geography as a discipline that studies and explores the environment, emphasizing the scientific methods and techniques employed in geography. The opinions of the participants with the codes 4F31 and 2F22 are given below as examples in this category:

*"To me, geography is the main source of many science branches that people primarily get to know themselves and improve their living standards. A person cannot achieve the desired success in any science field without understanding the planet he lives in and examining the air, soil, underground, and earth very well. For example, human beings may not know where and how to farm without learning the landforms, mountains, plains, and streams well; thus, they may fail to produce enough food, namely the basic source of life. They may also fail to do agriculture without analyzing the soil structure, plant species on the earth, and weather conditions. Or, they may not succeed in mining without knowing the element structures. Without knowing the air currents and the sunshine duration, people cannot suffice from wind and solar energy. When considering all these facts, it is critical to comprehend and explore our world very well with its earth forms, underground resources, soil, and air to develop almost all science branches and possess them to the service of people. Therefore, I believe geography is the most basic science."* (4F31).

*"In my opinion, geography is whatever we perceive when we sense it from a single center. That single center, as reflected in my drawing, is the eyes. When we open our eyes, we begin to communicate with the earth. In my opinion, geography is a discipline in which we communicate with all kinds of eyes in the world, encompassing from living to non-living..."* (2F22).

It is possible to make inferences from the quotations that geography is a discipline that study the environment through observing, researching, and using them for the sake of humanity. Geography and geographical knowledge play a critical role in the sustainability and continuity of human life. Participants underlined that societies unable to comprehend the world in which they live, ignore their surroundings, and are unable to defend and care for the environment they live in fail to achieve their objectives. However, participants remarked that any activity without observing, examining, and researching the habitat would have detrimental consequences for humans. Geography discipline is educated as a course in schools. In the 'Course' category, participants identified geography with the knowledge, concepts, and materials they acquired, used, and practiced in the courses. Since the participants in this category had previously-attained extensive geography education, they frequently referred to geography materials (globe, map, compass, etc.), concepts (latitude, longitude, landforms, etc.), and significant geographical teachings

while explaining their drawings. The followings are the opinions of the 4F3 and 4F24 coded participants to serve as examples of their viewpoints in this category:

*“...Landforms, maps, compass, regions, and countries come to my mind when geography is discussed. People also use maps, compasses, and similar devices to discover new places. Thanks to these discoveries, new inventions and works are being created. The fact that geography inspires innovations and demonstrates that geography exists in all aspects of life. As a result, the world and things taking place in the world; and works and innovations produced by these activities come to my mind when geography is discussed.” (4F3).*

*“When I think of geography, I think of the geography classes like every student. In geography classes, we learn the shape of the globe, the formation of continents, in which climates animals live, etc. That is why the world naturally came to my mind, and that is why I drew a world map in my drawing. I also drew the mountain ranges in the world, which is an indispensable part of the geography course. I drew some animals on the map according to the continents they live in, like adding a penguin to the south pole and a polar bear to the north pole. Finally, I drew a tree to show the Amazon forests, known as the lungs of our world.” (4F24).*

As deduced from the quotations, the knowledge and concepts learned and the materials used in the geography courses had a long-term impact on the participants and significantly impacted their geography perceptions. Acquiring information for such a critical science branch permanently in the course is vital for geography education.

## DISCUSSION & CONCLUSION

Geography is a broad discipline with significant implications across various professions. (Özgen, 2011). It is pointless to discuss a simple and singular geography perspective since it encompasses several academic topics, even bridging natural and social sciences. (Alkış 2009). The fact that geography has potent conceptual linkages with numerous disciplines results in the generation of various perspectives and definitions of geography. (Özgen, 2011). Consequently, disclosing the geography perception by a sole approach is unachievable. This study tested the geography perceptions among primary school teacher candidates in three stages. In the first stage, participants were asked to draw images associated with geography in their minds to determine their general perception. This approach allowed researchers to acquire more-detailed and deeper information by employing visual image elements where words were insufficient. (Üztemur, 2020). The first stage revealed categorizing the general geography perceptions of primary school teacher candidates under nine groups. A quarter of the participants perceived geography as a source of political power; in other words, a tool for politics. The geographical concept was primarily associated with wars, battles, and political unrest in the images. In a study conducted with high school students, Opoku (2019) discovered that geography was related to numerous academic fields, especially politics and political issues. In their study conducted with teacher candidates, Durmuş and Baş (2016) also determined that the participants linked geography with war metaphors. One of the teacher candidates in the study also associated geography with war metaphors, articulating his rationale for his views with the following words: *‘Geography is for fighting. All living creatures on earth and countries should wage war to survive and live up to prosperously.’* Akman and Ekinci (2021) reported that the war phenomenon was portrayed frequently in the history category; the main reason for this was that participants were influenced by the events that occurred in their immediate surroundings in their recent past. In the current study, however, the depiction of wars, conflicts, and struggles for political power in the drawings might imply that the participants were influenced by contemporary battles (Russia-Ukraine war, political events in Syria, Afghanistan, etc.). As a result, inferring that past and recent events participants experienced may have invoked war themes. The geography perceptions of the Participants were also mirrored in the drawings by the geography lesson and science area, living space, and geographical spaces. Opoku (2019) determined that geography is an academic scientific discipline, according to the teacher candidate responses. However, several classroom teacher candidates reflected geography as a living space for geography within the category of 'geography as living space and place,' according to Geçit and Gençer (2011). Some participants described geography on a broad scale from a global perspective, while others described it as a subjective view on a small scale. Özgen (2011) reported that teacher candidates indicated their geography perspectives as taking global and national dimensions into account. Catling (2004) and Morley (2012) concluded that the international perspectives of geography perception were prevalently dominant in the drawings. The participants identified geography with 'destiny' from an emotional standpoint. Contrary to the contemporary geographical methodology and rational point of view, matching and linking geography with destiny is excogitative. However, illustrations also contained critical issues for life in the form of modern-day risks such as climate change and global warming. Sahin (2015) reported that most social studies teacher candidates associated geography with the category of 'life source.' Akman and Ekinci (2021) remarked that teacher candidates'

illustrations seek to call attention to raise awareness about events such as global warming and natural disasters that have a critical impact on modern-day human life. Catling (2014) pointed out that climate change was a geographically crucially key element in comprehending the global natural environment, especially for primary school students. Furthermore, she stated that global warming, which covers issues such as the ozone layer and the greenhouse effect, is also an equally critical issue. One of the most noticeable aspects of the participants' drawings was the emphasis that people pollute and damage nature and the environment, resulting in harmful changes in the world. Similarly, Özcan and Demirel (2019) stated that environmental issues such as global warming, the greenhouse effect, acid rain, and loss of natural resources were generally human-induced in the drawings. For a sustainable future, protection, and livability of our world, Kola-Olusanya (2017) indicated that people need to acquire knowledge and awareness of contemporary environmental and sustainability issues.

In the second stage of the study, the participants detailed their clarifications about the linking between drawings and geography. They also expressed their motivations for how they identified this drawing with geography. Similarly, the third step of the research focused on acquiring the participants' perspectives about geography through interviews. Thus, the reasons underlying their perspectives, whose broad geography perspectives had been exposed in the first stage, were attempted to be disclosed in the second and third stages. The analysis results of the written statements and interviews proved that the explanations of the primary school teacher candidates on geography were classified into six distinct categories. Analysis of the results of the second and third stages revealed that the structure of the participants' geography perceptions was consistent with the first stage. Because their expressions to clarify the drawings emphasized the written remarks and interviews. In the written statements and interviews, participants endeavored to depict geography by focusing on political and economic issues and phenomena. According to Knight and Robinson (2017), financial and political matters play a significant role in undergraduate geography students' opinions of fields of geography that are relevant to the modern-day world. The purpose of geography is to prepare individuals to become citizens by making them aware of current political, environmental, social, and economic issues. Hence, it is an ordinary inference for teacher candidates to describe the facts they frequently encounter in their journey to becoming a citizen and the events that are closely related. Similarly, Fatima (2016) reported that geography would be a decisive factor in a country's future development and planning. Consequently, participants in this study regarded geography as power balances, international markets, and mutual interest on a global scale, whereas they defined and explained geography as livelihood, injustice, and inequity on a local scale. Çiftçi and Dikmenli (2019) posed teacher candidates the question of why geography is necessary, and one-third of the participants responded; 'geography is necessary to govern the country and defend the homeland.' In his research on primary school students' geography perceptions, Senyurt (2014) also found that some students' statements about geography focused on issues such as 'domestic and foreign policy/geopolitical relations and placement among countries.' The participants in this study, on the other hand, characterized geography as the love of a country nourished by national feelings, and they also included geography in their narratives as an undesirable situation (destiny). The majority of the teacher candidates who participated in the study of Çiftçi and Dikmenli (2019) stated that geography teaching is crucial for fostering patriotism and raising awareness about homeland security. According to teacher candidates, nourishing patriotism and raising awareness for homeland security can only be instilled via understanding their homeland. Furthermore, teacher candidates underlined the significance of geography in correctly assessing the events taking place in their surroundings and around the world. They further reported that geography knowledge improved their interpretations of activities and that their attitude toward nature and all other living creatures changed. For some participants, geography was a historical lesson taken from the past, while for others, it was a prominent science to shape the future of living things. Geography is also required to understand better and appropriately utilize the immediate surroundings. Nowadays, we must efficiently use geography to maintain our existence on the planet, keep up with the rapidly changing globe, and plan for the future. Geography as science evolved from several social necessities, including space orientation, field planning, area organization to maximize agricultural productivity, political and military objectives, etc. Therefore, such needs make geography a crucial science branch that leads to discovering, understanding, solving, and preventing countless fundamental matters globally.

Drawings and verbal and written expressions made about those drawings disclosed the geography perceptions of the primary school teacher candidates. Some participants identified geography with a simple map, while others associated it with fairy chimneys or migration phenomena. Sometimes geography was a starving boy, and other times it was a girl enforced into marriage. For some participants, geography indicated cultural differences, while for others, it reflected a standardized human profile in a more globalized world. For some participants, geography was a love of country and nation that was unreplaceable with anything; for others, however, it was to depart from

their homeland unwillingly. One of the most critical findings of the study was that events taking place both in the world and in Türkiye signified the geographical perceptions of the participants. While the equivalent of geography is in the forms of physical geography, human geography, and physical-human aspects mirroring these two in the majority of the studies in the literature (Akman & Ekinci, 2021; Catling, 2004; Demirbaş, 2013; Dolan et al., 2014; Gökçe & Öztürk, 2013; Opoku, 2019; Öztürk & Alkış, 2009; Senyurt, 2014; Şeyihoğlu & Geçit, 2010), political and economic issues were dominating aspects in the current study. The perspectives of individuals around the globe, including Türkiye, have been molded by political and economic developments; nevertheless, this perspective may shift in response to current events. In other words, it is safe to say that the experiences and witnessed events have significantly altered and will continue to alter the perspectives and focal points of the participants. As a result, the current study discovered that the dynamic structure of the world arena shapes the geography perceptions of the participants in the context of contemporary political and economic factors, that geography is a critical power source locally and globally, and most importantly, that geography is a significative and decisive element for the future life.

This study utilized various data to unveil the geographical perceptions of students that pursue education in primary school teaching. Conducting further studies among diverse age groups and in several fields may ease uncovering participants' perceptions, attitudes, and opinions on the topics of interest. Pictures drawn can be used to capture reliable data, especially in young age groups when data collection is challenging, and such data can be supported by writing and narrating approaches. However, the draw-write-tell technique is recommended for collecting data on current and critical issues. The data gathered should be exposed to participants' discussion, evaluation, and opinion expression, and participants should be directed to new studies by guiding the process.

#### **Statements of Publication Ethics**

Ethical permission of the research was approved by Bartın University Social and Human Sciences Ethics Committee. Ethics committee document number is 2021-SBB-0511.

#### **Researchers' Contribution Rate**

The study was conducted and reported by the corresponding author.

#### **Conflict of Interest**

The author of this article declares that there is no conflict of interest in this study.

## **REFERENCES**

- Akman, Ö., & Ekinci, H. (2021). Suriyeli ortaokul öğrencilerinin sosyal bilgiler algısının çiz-yaz-anlat tekniği ile incelenmesi. [Evaluation of Syrian Secondary School Students' Perception of Social Sciences with Draw-Write-Tell Technique]. *Vakanüvis-Uluslararası Tarih Araştırmaları Dergisi*, 6 (Prof. Dr. Süleyman Büyükkarcı Özel Sayısı), Aralık 2021, 82-115.
- Alkis, S. (2009). Turkish geography trainee teachers' perceptions of geography. *International Research in Geographical and Environmental Education*, 18(2), 120-133.
- Angell, C., Alexander, J., & Hunt, J. A. (2015). 'Draw, write and tell': A literature review and methodological development on the 'draw and write' research method. *Journal of Early Childhood Research*, 13(1), 17–28. <https://doi.org/10.1177/1476718X14538592>
- Arrowsmith, C., Bagoly-Simó, P., Finchum, A., Oda, K., & Pawson, E. (2011). Student employability and its implications for geography curricula and learning practices. *Journal of Geography in Higher Education*, 35(3), 365-377.
- Artvinli, E., & Kaya, N. (2010). 1992 uluslararası coğrafya eğitimi bildirgesi ve Türkiye'deki yansımaları. [1992 international charter on geographical education and its reflections in Turkey]. *Marmara Coğrafya Dergisi*, (22), 93-127.
- Bednarz, S., Heffron, S., & Huynh, N. (2013). A road map for 21st century geography education: Geography education research (a report from the Geography Education Research Committee of the road map for 21st century geography education project). Washington, DC: Association of American Geographers.
- Bent, G. J., Bakx, A., & Brok, P. (2014). Pupils' perceptions of geography in Dutch primary schools: Goals, outcomes, classrooms environment, and teacher knowledge and performance. *Journal of Geography*, 113(1), 20-34.

- Catling, S. (2004). An understanding of geography: The perspectives of English primary trainee teachers. *GeoJournal*, 60(2), 149–158.
- Catling, S. (2014). Pre-service primary teachers' knowledge and understanding of geography and its teaching: A review. *Review of International Geographical Education Online*, 4(3), 235-260.
- Çifçi, T., & Dikmenli, Y. (2019). Why geography learning: Candidate teachers' views for geography course. *Review of International Geographical Education Online*, 9(3), 557-576.
- Creswell, J. W. (2013). *Nitel araştırma yöntemleri: Beş yaklaşıma göre nitel araştırma ve araştırma deseni* (3. bs.) [*Qualitative research methods: Qualitative research and research design according to five approaches* (3th ed.)] (Mesut Bütün & Selçuk Beşir Demir, trans.). Siyasal Publishing.
- Demirbaş, R. (2013). Perceptions of pre-service social sciences teachers regarding the concept of geography by mind mapping technique. *Educational Research and Reviews*, 8(9), 496-505.
- Department of Education and Skills & National Council for Curriculum and Assessment [DES & NCCA]. (1999). Primary school curriculum. Dublin: The Stationery Office. <http://www.curriculumonline.ie/Primary>.
- Dolan, A. M., Waldron, F., Pike, S., & Greenwood, R. (2014). Student teachers' reflections on prior experiences of learning geography. *International Research in Geographical and Environmental Education*, 23(4), 314-330.
- Durmuş, E., & Baş, K. (2016). Sosyal bilgiler öğretmen adaylarının coğrafya kavramına ilişkin metaforik algıları [The metaphoric perception of social sciences teacher candidates' about the concept of geography]. *Firat Üniversitesi Sosyal Bilimler Dergisi*, 26(1), 75-92.
- Fatima, M. (2016). Perceptions of geography as a discipline among students of different academic levels in Pakistan. *Review of International Geographical Education Online*, 6(1), 67-85.
- Gans, P., Hemmer, I., Hemmer, M., & Miener, K. (2018). The perception of geography among the German population findings of a representative survey. *Erdkunde*, 72(1), 23-40.
- Geçit, Y., & Gençer, G. (2011). Sınıf öğretmenliği 1. sınıf öğrencilerinin coğrafya algılarının metafor yoluyla belirlenmesi (Rize üniversitesi örneği). [Determining the geographical perception of the 1st. grade students in the department of primary education through metaphor (Example of Rize University)]. *Marmara Coğrafya Dergisi*, (23), 1-19.
- Giorgi, A. (2009). *The descriptive phenomenological method in psychology: A modified Husserlian approach*. Duquesne University Press.
- Goha, M. M., Purwati, N. H., & Permatasari, T. A. E. (2020). Children pain perception using the draw, write and tell method. *The International Journal of Social Sciences World (TIJOSW)*, 2(2), 69–76.
- Gökçe, N., & Öztürk, F. (2013). İlköğretim öğrencilerinin coğrafya algıları. [Primary school students' perception about issues related to geography]. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi*, 1(25), 92-118.
- Green, C. J., & Lliaban, S. (2020). Exploring rural Alaskan children's spatial autonomy and environmental competency through a draw-write-and-tell method. *Children, Youth and Environments*, 30(1), 47-65.
- Heffron, S. G., & Downs, R. M. (2012). *Geography for Life: National Geography Standards; Geography Education Standards Project* (GENIP). National Council for Geographic Education.
- Herman, G. V., Biriş, M. S., İlieş, D. C., Caciora, T., İlieş, A., Wendt, J. A., & Sopota D. (2020). The perception of geography in school and society. *Baltic Journal of Health and Physical Activity, Special Issue (1)*:112-119.
- Karatekin, K., Sönmez, Ö., F. (2016). Sosyal bilgiler öğretiminde neden coğrafya?. Dursun Dilek (Ed.). *Sosyal Bilgiler Eğitimi* (pp. 151-175). Pegem Publishing.
- Knecht, P., Spurná, M., & Svobodová, H. (2020). Czech secondary pre-service teachers' conceptions of geography. *Journal of Geography in Higher Education*, 44(3), 458-473.
- Knight, J., & Robinson, R. (2017) What is geography? Perceptions of first year undergraduates in South Africa, *Journal of Geography in Higher Education*, 41(2), 230-245. <https://doi.org/10.1080/03098265.2017.1293625>
- Kola-Olusanya, A. (2017). Young adults' contextualization of environmental and sustainability issues: a critical issue for environmental education intervention. *Journal of Education in Black Sea Region*, 3(1), 2-17.
- Lunn Brownlee, J., Curtis, E., Spooner-Lane, R., & Feucht, F. (2017). Understanding children's epistemic beliefs in elementary education. *Education 3-13*, 45(2), 191-208.

- McMillan, J. H. & Schumacher, S. (2010). *Research in education: Evidence-based inquiry* (7th ed.). My Education Lab Series. Pearson.
- Merriam, S.B. (2013). *Nitel araştırma desen ve uygulama için bir rehber* (3<sup>rd</sup> ed.) [*Qualitative research: A guide to design and implementation* (3<sup>th</sup> ed.)] (Selahattin Turan, trans.). Nobel Akademik Publishing.
- Meydan, A. (2013). Sosyal bilgilerde coğrafyanın yeri ve önemi, Refik T. and Kadir U (Eds.). *Sosyal Bilgilerin Temelleri* (pp. 96-114). Pegem Publishing.
- Morley, E. (2012). English primary trainee teachers' perceptions of geography. *International Research in Geographical and Environmental Education*, 21, 123–137.
- Mutlu, F., & Nacaroglu, O. (2019). Examination of perceptions of gifted students about climate change and global warming. *Journal of Baltic Science Education*, 18(5), 780-792.
- Opoku, F. (2019). Perceptions of geography among Ghanaian senior high school students: A phenomenological study. *International Journal of Geography and Geography Education*, 39, 1-9.
- Özcan, H., & Demirel, R. (2019). Ortaokul öğrencilerinin çevre sorunlarına yönelik bilişsel yapılarının çizimleri aracılığıyla incelenmesi. [Exploring middle school students' cognitive structures about environmental problems through their drawings]. *Başkent University Journal of Education*, 6(1), 68-83.
- Özgen, N. (2011). Coğrafya öğretmen adaylarının coğrafya algıları: Türkiye örneği. [Geography perceptions of prospective geography teachers: example of Turkey]. *Education Sciences*, 6(4), 2569-2587.
- Öztürk, M., & Alkış, S. (2009). Sınıf öğretmeni adaylarının coğrafya ile ilgili algılamaları. [Primary-school student teachers' perceptions of geography]. *İlköğretim Online Dergisi*, 8(3), 782-797.
- Patton, M. Q. (2014). *Nitel araştırma ve değerlendirme yöntemleri*. (6. bs.) [*Qualitative research & evaluation methods* (6<sup>th</sup> ed.)] (Mesut Bütün ve Selçuk Beşir Demir, trans.). Pegem Publishing.
- Pınar, E., & Yakışan, M. (2016). İlkokul öğrencilerinin çevre kavramları ile ilgili çizimlerinin analizi [Analyze of the drawings on environmental concepts of the primary school students]. *Trakya University Journal of Education*, 8(1), 97-113.
- Pope, N., Tallon, M., Leslie, G., & Wilson, S. (2018). Using 'draw, write and tell' to understand children's health related experiences: Learning with children through research. *Nurse Researcher*, 29(2), <https://doi.org/10.7748/nr2018.e1594>
- Preston, L. (2015). Australian primary in-service teachers' perspectives of geography. *International Research in Geographical and Environmental Education*, 24(2), 167–180.
- Puttick, S., Paramore, J., & Gee, N. (2018). A critical account of what “geography” means to primary trainee teachers in England. *International Research in Geographical and Environmental Education*, 27(2), 165-178.
- Reinfried, S., & Hertig, P. (2011). *Geographical education: How human-environment-society processes work*. Encyclopedia of Life Support Systems (EOLSS).
- Sahin, S. H. (2016). Analysis of pre-service social sciences teachers' geography perceptions through metaphors: Case of Dumlupınar University. *Journal of Education and Training Studies*, 4(2), 159-168.
- Senyurt, S. (2014). Turkish primary students' perceptions of geography. *Journal of Geography*, 113(4), 160-170.
- Şeyihoğlu, A., & Geçit, Y. (2010). Sınıf öğretmenlerinin “coğrafya” imajları. [Class teachers' images about “geography”]. *International Journal Of Eurasia Social Sciences*, 1(1), 59-75.
- Spurná, M., Knecht, P., & Svobodová, H. (2021). Perspectives on geography education in the Czech national curriculum. *International Research in Geographical and Environmental Education*, 30(2), 164-180.
- Taşoğlu, M. (2010). *Coğrafya öğretiminde okul dışı etkinliklerin öğrencinin akademik başarısına etkisi*. [Activities outside school teaching geography of the student's academic effects of success]. Master's Thesis, Marmara University.
- Üztemur, S. (2020). Conception of history through drawings: pre-service social studies teachers' conceptions of history. *International Journal of Eurasian Education and Culture*, 5(8), 301-339.
- Üztemur, S., & Dinç, E. (2018). Ortaokul öğrencilerinin epistemolojik inançlarının keşfedilmesinde öğrenci merkezli bir yaklaşım: Çiz-Yaz-Anlat Tekniği [A student-centered approach to explore middle school students' epistemological beliefs: Draw-Write-Tell Technique]. *Journal of History Culture and Art Research*, 7(3), 566-592.
- Üztemur, S., Dinç, E., & Ekinçi, H. (2020). Using draw-write-tell technique to explore middle school students' conceptions of the social studies course. *Turkish Online Journal of Qualitative Inquiry*, 11(2), 280-305.