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Use of the Argumentation-Based Learning-Teaching Approach in the Development of Self-Expression Skills

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ABSTRACT	ARTICLE INFO
Argumentation-based teaching is one of the contemporary teaching approaches. This approach is versatile in terms of making the claim, stating the reasons, eliminating the ambiguities, generating thoughts in the mind through questions and having the purpose of convincing. Considering the relationship between language and thought, it is thought that the use of argumentation-based teaching in language practice studies will be effective. As a matter of fact, the prerequisite for producing arguments is the effective use of basic language skills. This study shows the usability of argumentation-based teaching in Turkish lessons. This study shows the usability of argumentation-based teaching in Turkish lessons. In the study, information about the argumentation-based learning-teaching approach is given; The activities that can be carried out in order to gain, develop and effectively use narration skills are emphasized. Finally, some suggestions for the effective use of this teaching model in Turkish lessons are given.	

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Argümantasyon Temelli Öğrenme-Öğretme Yaklaşımının Anlatma Becerilerinin Gelişiminde Kullanımı

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ÖZET	MAKALE BİLGİSİ
Argümantasyon temelli öğretim, çağdaş öğretim yaklaşımlarından biridir. Bu yaklaşım, iddianın ortaya atılması, gerekçelerin belirtilmesi, belirsizliklerin ortadan kaldırılması, sorular aracılığıyla zihinde düşüncelerin üretilmesi ve inandırma amacının olması bakımından çok yönlüdür. Dil ve düşünce ilişkisi göz önünde bulundurulduğunda dil pratiğine dönük çalışmalarda argümantasyon temelli öğretim yaklaşımıyla hareket etmenin işlevsel olacağı düşünülmektedir. Nitekim argüman üretmenin ön koşulu, temel dil becerilerinin etkin kullanmaktır. Bu çalışma, argümantasyon temelli öğretimin Türkçe derslerinde kullanılabilirliğini göstermektedir. Çalışmada argümantasyon temelli öğrenme-öğretme yaklaşımı hakkında bilgiler verilmiş; anlatma becerilerinin kazandırılması, geliştirilmesi ve etkili bir şekilde kullanımının sağlanması için gerçekleştirilebilecek etkinlikler üzerinde durulmuştur. Son olarak, argümantasyon temelli öğretim modelinin Türkçe derslerinde anlatma becerilerinin etkili kullanımına ilişkin birtakım önerilere yer verilmiştir.	*Alınma Tarihi*:12.09.2022 *Çevrimiçi yayınlanma tarihi:* 05.04.2023
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Introduction

The digital age has enriched people's experiences and facilitated access to information. Thanks to technology and communication tools, individuals can access any information they want at any time. For example, in a research limited to a single word, it is possible to encounter a large amount of information within seconds. While this situation makes access to information easier, it also makes it difficult to distinguish the most reliable and accurate information from the increased volume of information. In the 21st century, individuals are expected to be able to reach the most reliable and useful information for themselves from the heap of information and to use it functionally. The fact is that the development of a country depends on individuals who can make decisions, think critically, determine their own criteria, and have high reasoning skills (Sevgi & Şahin, 2017, p. 157).

Educating individuals who can adapt to the era of increasing, changing, and spreading knowledge is achieved through education. The change of the era has brought new approaches and methods in education. One of the best ways to use knowledge beyond memorization and achieve cognitive stages is through the argumentation method (Uc & Benzer, 2021, p. 80). Argumentation-based instruction is an approach where "ideas are expressed about a subject put forward, discussions are made about possible outcomes, and ideas are supported by evidence and an attempt is made to convince the other side" (Meral & Akbaş, 2021, p. 25-26). According to Torun (2017), argumentation, which he considers an intellectual skill, is important in terms of creating a cognitive and social collaboration in effective learning, developing metacognitive skills, and becoming more involved in social issues. Heitmann et al. (2014) also suggest that argumentation is a significant aspect of daily life and professional activities, as it promotes community involvement. Therefore, the importance of argumentation has increased in various fields such as science, mathematics, philosophy, politics, economics, and language education.

National and international studies have focused on argumentation-based learning-teaching methods in various fields such as science (Aydın & Kaptan, 2014; Günel et al., 2012; Kaya & Kılıç, 2008; Kuhn, 1996; Osborne et al., 2004; Sampson & Clark, 2008; Walker & Sampson, 2013; Zohar & Nemet, 2002), mathematics (Dinçer, 2011; Küçük-Demir, 2014; Doruk et al., 2018), and social sciences (Torun, 2015; Torun & Şahin, 2016; Oğuz & Demir, 2016a; Oğuz & Demir, 2016b). According to the results of studies, this teaching and learning method enhances students' academic achievements and develops their decision-making and critical thinking skills. The fact that argumentation is present in various fields may lead to the understanding of this skill as a key competence. Especially in mother tongue education, the development of argumentation skills is important. While most school subjects require argumentation skills, the field of native language education aims to develop argumentation skills and linguistic abilities (Heitmann et al., 2014). In environments where argumentation-based teaching is used, basic language skills are an important complement. However, no studies have been found in the literature regarding the use of argumentation-based teaching for the development of language skills.

This study aims to demonstrate the use of argumentation-based teaching method in developing speaking and writing skills. In this context, information about the method has been provided. In addition, activities that can be carried out within the framework of the method have been included. At the end of the study, some suggestions have been made for the effective use of argumentation-based teaching in Turkish language classes.

Methodology

This study is a design, development, and modeling study that demonstrates the usability of argumentation-based teaching method in Turkish language classes.

Argumentation-Based Learning-Teaching Approach

Argumentation, which is defined as a one-sided concept used to express the power of a claim and to persuade the opposing side (Kuhn, 1993), is based on Aristotle's art of rhetoric (Billig, 1989). Aristotle is the precursor of the argumentation method and he established the general framework of the argumentation approach centuries ago, which forms the basis of the teaching approach studied. This method, originally named "Science Writing Heuristic," has been referred to by different names in the literature. It was first translated into Turkish as "Learning Science by Doing and Writing" (YYBÖ) (Günel, Kabataş-Memiş & Büyükkasap, 2010). In some studies, it has been named as Scientific Discourse (Şahin & Hacıoğlu, 2010; Küçük & Aycan, 2014), Argumentative Discourse (Kaya & Kılıç, 2008), and Argumentation-Based Science Learning (Günel, Kıngır & Geban, 2012). Driver et al. (2000) argue that argumentation is a logical process and an academic discipline that exhibits certain principles to reach conclusions based on evidence. Written argumentation, on the other hand, is a type of argumentation where the arguments, evidence, and justifications are presented in written form. It requires strong writing skills, as well as the ability to structure and organize arguments effectively (Bereiter & Scardamalia, 2014). Online argumentation, also known as computer-supported argumentation, takes place in digital environments and requires a combination of both verbal and written argumentation skills (Veletsianos & Kimmons, 2016). In all types of argumentation, the goal is to persuade or convince others by presenting and supporting a claim or position. Written argumentation is the process of presenting a claim based on evidence and explaining ideas through written text to refute opposing views (Karışan, 2011, p. 81). The type of argumentation that relies on interactions between students and teachers in an online environment is called online argumentation (Çelik et al., 2017).

A Model in Argumentation-Based Instruction: Toulmin's Argumentation Model

Various models have been proposed for argumentation-based teaching and learning methods (Giere, 1991; Kelly & Takao, 2002; Sandoval, 2003; Zohar & Nemet, 2002). Nussbaum (2011, p. 85) states that models serve two purposes. The first purpose of models is analytical, which helps researchers break down arguments into components and examine how these components are related to each other. In other words, models support revealing the structure of arguments. İkinci amaç normatiftir. Başka bir deyişle, modeller, belirli argümanların veya argüman bileşenlerinin gücünü ve kalitesini değerlendirmek için kullanılır. Argümantasyon modellerinin çıkış noktası Toulmin'in modelidir. Sınırlılıklarına rağmen bu model yaygın olarak kullanılmış ve birçok araştırmaya konu olmuştur (Karışan, 2011; Özkara, 2011). Toulmin's argument model is the most valid argument model today in terms of its applicability to educational research, and its suitability for development. In his book, "The Uses of Argument" Toulmin (1958), attempted to answer the question "How does argumentation occur in everyday life?" He focused on retroactive reasoning and examined the arguments created by people in natural settings, and presented a model that was different from traditional logic (Toulmin, 1958; Kaya & Kılıç, 2008; Puvirajah, 2007; as cited in Fettahlıoğlu, 2020, pp. 149-150). Many studies have aimed to use Toulmin's model as an educational and methodological tool to teach argumentative writing in both native and foreign

language contexts (Bacha, 2010; Lunsford, 2002; Wingate, 2012). According to Kaya and Kılıç (2008), the Toulmin model is structured as consisting of basic and auxiliary elements. The basic elements are data, claim, and rationale; and the auxiliary elements are qualifier, rebuttal, and support. Yılmaz-Özcan (2019, p. 20) has described the elements of Toulmin's (2003) argument model and their scope as follows:

Claim: It is the thesis put forward about the topic under discussion.

Data: It is the information used to reach the claims put forward. In other words, data is the evidence used for the claims made.

Rationale: It is the logical approach that provides the coherence between the claim and the data.

Support: It is the element that complements the warrant in terms of its accuracy.

Rebuttal: It is the element that shows the situations where the arguments made will be invalid.

Qualifier: They are the situations where the arguments presented will lose their validity.

Torun (2017, p. 154) provides concrete examples of how Toulmin's (2003) relevant components can be used in everyday life:

Claim: Harry is a British citizen.

Data: Harry was born in Bermuda.

Rationale: Because someone born in Bermuda is usually a British citizen.

Support: Bermuda is one of the least migrated places to the UK.

Rebuttal: Most likely.

Qualifier: However, if Harry's family is foreign or he is a naturalized American citizen, this rule would not apply.

Evaluating Arguments Produced in Argumentation-Based Instruction Process

The specific aim of argumentation method is to ensure that learners produce high-quality arguments in the lesson where the method is used (Torun, 2017, p. 164). Evaluating arguments through a rubric is suitable for determining the quality of student arguments (Torun, 2017, p. 165). Many researchers have utilized Toulmin's model to introduce argument elements and analyze students' verbal and written expressions (Yıldırır, 2013, p. 29). In this context, Erduran et al. (2004) developed an 'Analytic Assessment Scale', which was then presented by Torun (2017, p. 164). The argumentation evaluation scale is presented in Table 1.

Table 1. Argumentation Evaluation Scale*

Argumentation Level	Argumentation Content/Component

Level 1	It can be a simple claim or a simple claim and counterclaim.
Level 2	A simple claim may be accompanied by another claim, data, reasons, or backing, but without rebuttal.
Level 3	Claims and counterclaims include data, justification, backers, and weak rebuttals.
Level 4	There should be a clear rebuttal with the series of claims, data, justification, backers.
Level 5	There should be more than one net rebuttal at this level along with all the components found at other levels.

*(Erduran et al., 2004; cited in Torun, 2017, p. 164).

Findings

The Place of Argumentation-Based Learning-Teaching Approach in Turkish Education

Argumentation is an individual and social activity through thinking, writing, or speaking in a group in social environments; and it has a quality control function in the scientific community (Öztürk, 2013, p.11). The argumentation approach is suitable for combining science, thinking, and discussion effectively in schools (Driver et al., 2000; Kuhn, 1993). This approach enables individuals to express their thoughts, participate actively in classes, and serves significantly for learning purposes. In argumentation, speaking, reading, and writing skills are effectively used (Günel et al., 2012). Students learn how to express an argument through language classes and are encouraged to think about the functions and usefulness of argumentation (Heitmann, 2014).

Written and spoken language are an integral part of science and scientific literacy, and they help students communicate their scientific understanding to others (Yore et al., 2003). The language used in the process of argumentation is crucial for understanding and persuasiveness of thoughts. Using the argumentation method in classroom practices and allocating time for argumentation content in discussions contribute to students' scientific writing and speaking skills (McNeill & Krajcik, 2009). The argumentation process has the power to provide students with different perspectives and improve their communication skills (Che & She, 2012; cited in Torun, 2017, p.157). The sustainability of communication and interaction established during this process is in line with the goals and outcomes of the Turkish language lesson. Indeed, the Turkish Language Teaching Program (2019) emphasizes the importance of individuals producing knowledge, actively using knowledge, providing solutions to problems, thinking critically, being enterprising, determined, and having high communication skills. Turkish, as a language that encompasses both culture and science, has the richness to incorporate argumentation-based learning and teaching

methods. Turkish classes can provide opportunities for students to generate arguments in written, verbal, or online form by exploring current and interesting issues.

Using and Developing Generative Language Skills in Argumentation-Based Learning-Teaching Approach

Argumentation-based teaching can be a potentially effective approach to looking at situations and events from different perspectives and developing communication skills. With the argumentation approach, students explain their thoughts, engage with others' ideas, and support their own ideas while refuting inappropriate ones (King, 1997). The ideas formed during argumentation are organized for a written or verbal presentation (Uc & Benzer, 2021, p. 81). Students express their thoughts about a topic or situation in written or verbal form. According to Schmoker and Graff (2011), argumentation method is important for the development of students' reading, writing, and speaking skills. This teaching model improves individuals' verbal and written communication skills as well as understanding science (Sampson & Gleim, 2009). The inability to express verbal arguments in written form or to convey written arguments verbally in a high-quality discussion environment can create problems for students. Using the process of argumentation can be an important step in solving a problem (Torun, 2017, p. 158). In a study conducted by Uc and Benzer (2021) that utilized argumentation-based practices, students formed verbal claims, substantiated them with evidence, and successfully refuted counterclaims. However, they have encountered difficulties in expressing their verbal claims in written form. The reason for this problem may be attributed to the fact that the argumentation-based teaching method is not used in Turkish lessons. Because the acquisition and development of basic language skills in a way that supports each other is realized through Turkish lessons. In order to prevent the problems that may arise from the argumentation method in the teaching environment, some conditions are needed. İspir and Yıldız (2021, p. 250) explain some of these conditions as follows:

- Argumentation activities should be prepared by considering students' verbal and written expression skills.
- Before the argumentation application, the students should be prepared to come to the lesson by using activities that will support and present their own arguments or by giving students questions about the subject.
- Teachers should create a discussion plan before the lesson, taking into account all the stages of the discussion.

The use of argumentation-based teaching can be an important step for the acquisition and development of speaking and writing skills in Turkish lessons.

Writing Skills in Argumentation-Based Learning-Teaching Process

"Students need opportunities to present what they know, to use scientific knowledge and language to explain ideas" (National Research Council, 1996, p. 14). Argumentation provides the opportunity for this, as it is both an individual activity done through thinking and writing, and a social action that is negotiated. As a matter of fact, writing skill is the ability of individuals with the power of thought to express their ideas, opinions and feelings, as well as their experiments, observations and experiences, in accordance with the principles of language by planning them according to the relevance of the determined topic (Göçer, 2010, p. 179). Writing, which is the scientific process that accompanies learning (Uc & Benzer, 2021, pp. 82-83), includes thought production,

analysis and awareness beyond a transference. Organizing writing activities according to the argumentation-based teaching method can contribute to scientific writing skills. Written arguments help students think about what they know and structure these thoughts in a way that convinces the other party (Prain, 2006). Evidence is used for the views that are to be accepted during the argumentation process. This is a way of persuading. Persuasion, on the other hand, activates the other person by showing reasons and evidence (Hall & Birkerts, 1991). "Persuasion requires language skills and the art of rhetoric as well as evidence" (Kaptan, 2016, p. 17). The persuasiveness of the written arguments allows the opposing claims to be refuted. Accordingly, persuasive texts can be created in the argumentation method. In these texts, the ideas put forward around a subject are explained with their justifications (Kurudayıoğlu & Yılmaz, 2014b, 21). The results of studies in the field of persuasive writing confirm that the argumentation-based teaching model is appropriate (Connor, 1990; Knudson, 1992).

In the Turkish Language Curriculum (2019), there is no acquisition directly related to the writing skill with the argumentation method, but some acquisitions that will be indirectly associated can be mentioned. These attainments are presented in Table 2.

Table 2. Attainment Chart of Writing Skills Related to Argumentation-Based Instruction*

Grade Level	Number of Attainment	Skill Area	Attainment
7th Grade	T. 7. 4. 2.	Writing	Writes informative text. *It is ensured that the students determine what they will write in the introduction, development and conclusion sections, create a draft of the text, use the ways of developing thinking, and present evidence to support their views from written and multimedia sources.*
8th Grade	T. 8. 4. 2	Writing	Writes informative text. *It is ensured that the students create a draft of a text around a topic and main idea they have determined, in the introduction, development and conclusion sections, in the development section, they express their opinions by using the ways of developing their thoughts, present evidence to support their opinions, and conclude their opinions in the conclusion section.*

*(Ministry of National Education, 2019, pp. 45-50).

In the argumentation-based teaching process, persuasive texts can be produced in different text types such as posters, brochures, news and advertisement texts. These texts

aim to make changes on the views of the target audience in terms of their content. Uc and Benzer (2021) also support the idea of preparing different writing activities based on various types of literary texts such as poetry and letters instead of experimental reports and scientific stories in argumentation activities. Considering that argumentation-based learning-teaching method can be used in Turkish lessons, a writing activity in accordance with Toulmin's argumentation model was planned and presented.

Lesson: Turkish

Grade Level: 8th Grade

Theme: Individual and Society

Learning Area: Writing

Writing Strategy: Persuasive Writing

Activity Process: It is aimed that the activity is suitable for the characteristics of the argumentation-based learning-teaching method. In this context, persuasive writing strategy was used. The steps of the writing activity were designed by considering Toulmin's argumentation model.
Step 1: Identifying the topic or situation
The teacher shares with the students a speech by a 15-year-old climate activist named Greta Thunberg. After listening/watching, he/she asks students to create a climate policy. (https://www.youtube.com/watch?v=mKU9ByfRFRY&ab_channel=Art%C4%B1Ger%C3%A7ek)
Step 2: Making a claim on the subject
Ask the student, "What kind of climate policy would you present to the world?" the question is asked. The student creates a text in accordance with the steps of the process-oriented writing model. Then the student shares the text in the classroom environment.
Step 3: Backing the claim with data
The teacher asks the student the following questions:
 "What do you think will change with this climate policy?", "Do you have data on the applicability of your policy?" The student supports their claims by answering these questions.
Step 4: Providing justification for the claim
The student answers the question: "Why should this climate policy be implemented?" So the student justifies her/his claim.
Step 5: Making a counterclaim
At this stage, the student looks for ways to persuade his/her friends who do not think like his/her. In this context, "What do you do to persuade the other side?" the question is answered.
Step 6: Generating a justification to refute the counterclaim
The student is expected to persuade the other party. In this context, ask the student, "What is the reason for your counter-claims?" expected to answer the question.
Step 7: Reaching the conclusion
Student "As a result, what would you like to say about the subject?" answers the question and summarizes climate policy.

Speaking Skill in Argumentation-Based Learning-Teaching Process

The argumentation process is interactive and dynamic (Öztürk, 2013). The person has the opportunity to explain himself/herself while making her claim (Kalemkuş et al., 2019, p. 2463). One of the ways to produce arguments is the production of verbal arguments. By speaking, powerful messages can be delivered to the target audience. Persuasion is an important element in the production of verbal arguments. Persuasion is also a part of speaking strategies in Turkish education. Persuasion affects people's beliefs, ideas, behaviors, wishes, desires and motivations with images, words, different methods, techniques and strategies (Kurudayıoğlu & Yılmaz, 2014a, p. 82). An attainment that is thought to be related to the argumentation method in the Turkish Language Curriculum (2019) is presented in Table 3.

Table 3. Attainment Chart of Speaking Skills Related to Argumentation-Based Instruction*

Grade Level	Number of Attainment	Skill Area	Attainment
	T. 8. 2. 3.	Speaking	Implements speaking strategies.
8th Grade			*It is ensured that methods and techniques such as creative, guided, empathy, discussion, persuasion and critical speaking are used.*

*(Ministry of National Education, 2019, pp. 47).

In the argumentation-based learning-teaching process, various group activities such as role-playing and pair talk can be done. In addition, verbal argument production can be carried out by making use of online activities through social media. Considering that argumentation-based learning-teaching method can be used in Turkish lessons, a speaking activity in accordance with Toulmin's argumentation model was planned and presented.

Lesson: Turkish

Grade Level: 8th Grade

Theme: Citizenship

Learning Area: Speaking

Speech Strategy: Persuasive Speech

Activity Process: It is aimed that the activity is suitable for the characteristics of the argumentation-based learning-teaching method. In this context, persuasive speaking strategy was used. The steps of the speaking activity were designed by considering Toulmin's argumentation model.
Step 1: Identifying the topic or situation
The aim of the activity is for the student to give an interesting, encouraging and persuasive speech for any product. For this purpose, the teacher asks the student to think that a product has a brand. The student designs what the brand will tell about the product he/she

owns. For this, he/she creates a slogan for the product, prepares a logo, chooses music and takes notes.

Step 2: Making a claim on the subject

The student explains the features of the product. Uses sentences that encourage the purchase of the product.

Step 3: Backing the claim with data

To strengthen the claims, the student talks about the results of the product being purchased by the customer. He/she shares documents showing customer satisfaction. The student says the slogan of the product and benefits from music and visuals.

Step 4: Providing justification for the claim

The student explains in detail why the product should be purchased. Thus, "Why should we buy this product?" answers the question.

Step 5: Making a counterclaim

After the product promotion is over, the target audience criticizes the product and asks questions about the product. The student gives feedback to criticisms and questions.

Step 6: Generating a justification to refute the counterclaim

The student takes into account the criticisms from the target audience. In this context, it tries to persuade the target audience to make a purchase. The reasons offered to persuade are stronger than the initial reasons.

Step 7: Reaching the conclusion

The student ends the presentation by repeating the slogan of the product.

Result and Discussion

Argumentation-based teaching is a learning-teaching method that mutually expresses ideas about a subject or situation and is based on persuading the other person or people. In the argumentation method, which is considered important in terms of gaining and developing intellectual skills, it is aimed to persuade the other person by producing verbal, written or online arguments. Therefore, basic language skills are used effectively throughout the process. Therefore, it can be said that argumentation fed by communication power is closely related to language skills. As a result of the literature review made according to the purpose and scope of the study, it was determined that most of the researches on argumentation-based teaching were collected in the field of science (Aydın & Kaptan, 2014; Günel et al., 2012; Kaya & Kılıç, 2008; Kuhn, 1996; Osborne et al., 2004; Sampson & Clark, 2008; Walker & Sampson, 2013; Zohar & Nemet, 2002). In these studies, sections in which argument development was associated with basic language skills were encountered (Zohar & Nemet, 2002; Chen, 2011; Demir, 2013; Kuhn & Moore, 2015; Karışan, 2011; Uc & Benzer, 2021). For example, in the study conducted by Kuhn and Moore (2015), it was noticed that the verbal and written arguments of the experimental group, in which the argumentation method was applied, were more qualified than the control group. Uc and Benzer (2021) examined the effect of argumentation method, which is continued with writing activities in secondary school 7th grade science lesson, on students' creative writing and concept learning. At the end of the study, it was observed that the creative writing abilities of the experimental group differed significantly compared to the control group. In another study, Uc (2019) made positive improvements in the creative writing skills of the experimental group with writing-supported argumentation practices. In addition, in the interview after the application, the experimental group confirmed the results obtained by expressing that their creative writing skills and argument writing skills improved by producing original articles. On the other hand, Chen (2011)

examined the learning situations and the development of speaking and writing skills of 5th grade students in the research process carried out with argumentation-based applications. As a result of the study; students gained a culture of discussion, and it was determined that they used speaking and writing effectively both as a learning tool and to reach a consensus on a subject with their peers.

According to the research results found in the literature, argumentation-based teaching has an important role in the development of verbal and written expression skills. Speaking and writing activities suitable for this method can be designed in Turkish lessons. By applying the designed activities in the classroom environment, the development of related basic language skills is supported.

Recommendations

- Turkish teachers can make the argumentation method efficient by choosing interesting topics suitable for the student's level.
- Online argumentation type can be used in learning environments outside of school.
- The arguments produced by the students based on the advertisement texts can be shared with the brands to create an opportunity for school-environment interaction.
- Acquisitions for persuasive speaking and persuasive writing can be included in the Turkish Language Curriculum, and the activities in the textbook can be prepared accordingly. In addition, students' ability to produce written and verbal arguments can be evaluated with a rubric.
- The persuasion strategies used by the students in the argumentation process can be examined.
- The way students ask questions can be analyzed in the argumentation process.

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