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INTEGRATING KAPLAN'S DEPTH AND COMPLEXITY ICONS INTO SOCRATIC SEMINARS TO ENHANCE NINTH GRADERS' SPEAKING SKILLS THROUGH DIFFERENTIATED INSTRUCTION

The development of speaking skills remains a priority in English as a Foreign Language (EFL) education, particularly in contexts where students are expected to participate in academic discussions and demonstrate critical thinking. This study investigates the effectiveness of integrating three of Kaplan's Depth and Complexity Icons—Multiple Perspectives, Unanswered Questions, and Details—into Socratic Seminars as a differentiated instructional strategy for improving ninth-grade students' speaking skills. The research was conducted at Nazarbayev Intellectual School of Science and Mathematics in Karaganda and involved 32 Grade 9 students divided into an experimental group (n = 16) and a control group (n = 16). A quasi-experimental pre-test/post-test design was employed over a two-week instructional period. Prior to the intervention, all participants completed a speaking assessment and a survey designed to measure confidence, participation, and attitudes toward discussion-based learning. The same instruments were administered following the intervention. Students in the experimental group participated in Socratic Seminars supported by the selected Kaplan icons, while the control group engaged in traditional seminar discussions without visual cognitive scaffolding. The findings revealed that students exposed to the intervention demonstrated greater improvements in fluency, lexical resource, and depth of argumentation than their peers in the control group. Survey results further indicated increased confidence in speaking English, greater willingness to participate in discussions, and improved ability to support opinions with textual evidence. The study suggests that integrating selected Kaplan icons into Socratic Seminars provides effective cognitive support that promotes differentiated instruction and encourages deeper engagement with academic discourse. The findings contribute to the growing body of research on discussion-based learning and offer practical implications for EFL teachers seeking to develop students' speaking skills through structured dialogue and critical thinking.

Keywords: Socratic Seminar, differentiated instruction, speaking skills, Kaplan's Depth and Complexity Icons, critical thinking, academic discussion.

Introduction

The ability to communicate effectively in English has become one of the most essential competencies for learners in the twenty-first century. As globalization continues to reshape educational, professional, and social environments, students are increasingly expected to express ideas clearly, engage in meaningful discussions, and collaborate with individuals from diverse linguistic and cultural backgrounds. Consequently, the development of speaking skills has emerged as a central objective in English as a Foreign Language (EFL) education. In modern classrooms, speaking is no longer viewed solely as a linguistic skill but as a vehicle for critical thinking, problem-solving, communication, and collaboration—competencies widely recognized as fundamental for success in contemporary society [1].

Despite the growing importance of oral communication, speaking remains one of the most challenging language skills for secondary school students to master. Unlike reading or listening, speaking requires learners to process information in real time, organize their thoughts, select appropriate vocabulary, and formulate grammatically accurate responses while simultaneously interacting with others. This complexity often results in hesitation, limited participation, and a reluctance to engage in academic discussions, even among students who demonstrate strong

receptive language skills [2]. In many EFL classrooms, students possess sufficient vocabulary and grammatical knowledge to understand complex texts; however, they frequently struggle to articulate their ideas confidently and support their opinions with evidence.

The challenge becomes even more pronounced in academically demanding educational settings such as Nazarbayev Intellectual Schools, where students are expected to engage with sophisticated texts and discuss contemporary global issues in English. Within these environments, learners are required not only to communicate effectively but also to analyze information critically, evaluate multiple viewpoints, and construct well-reasoned arguments. Such expectations align closely with the objectives of English-medium instruction (EMI) and international educational frameworks that emphasize higher-order thinking skills alongside language proficiency [3]. However, many students find it difficult to move beyond descriptive responses toward analytical and evidence-based discussion. As a result, classroom conversations often remain superficial, limiting opportunities for deeper learning and meaningful language development.

One pedagogical approach that has demonstrated considerable potential for fostering academic dialogue is the Socratic Seminar. Rooted in the questioning techniques traditionally associated with Socrates, this instructional strategy encourages students to engage in collaborative inquiry, examine complex ideas, and construct understanding through discussion rather than direct teacher explanation [4]. During a Socratic Seminar, students analyze a shared text, pose questions, respond to one another's ideas, and collectively explore multiple interpretations. The teacher assumes the role of a facilitator, guiding discussion while allowing students to take ownership of the learning process. Research suggests that Socratic Seminars promote active listening, critical thinking, argumentation, and communication skills, making them particularly valuable in language-learning contexts [5].

Nevertheless, the successful implementation of Socratic Seminars presents several challenges. Although the format encourages student participation, not all learners possess the cognitive and linguistic tools necessary to contribute meaningfully to academic discussions. Some students dominate conversations, while others remain passive observers. Additionally, students often struggle to formulate analytical questions, support claims with evidence, or consider perspectives beyond their own experiences. Without adequate scaffolding, discussions may become repetitive, fragmented, or overly dependent on teacher intervention. Consequently, educators must identify strategies that support diverse learners while preserving the student-centered nature of Socratic dialogue.

Differentiated instruction offers a promising solution to these challenges. According to Tomlinson [6], differentiated instruction refers to a proactive approach to teaching that acknowledges learner diversity and adapts instructional methods to meet varying readiness levels, interests, and learning profiles. Rather than lowering expectations, differentiation seeks to provide appropriate support that enables all students to access rigorous learning experiences. Within discussion-based activities, differentiation may involve offering structured frameworks, visual supports, or cognitive tools that help students organize their thinking and communicate more effectively.

One framework that aligns closely with the principles of differentiated instruction is Sandra Kaplan's Depth and Complexity model. Originally developed to support gifted and talented learners, the framework employs a series of visual icons that encourage students to examine content from different cognitive perspectives [7]. Each icon represents a particular way of thinking and prompts learners to move beyond surface-level understanding. While the framework has traditionally been associated with gifted education, recent studies suggest that its visual and metacognitive nature makes it accessible and beneficial for a broader range of learners [6].

The present study focuses on three specific icons: Multiple Perspectives, Unanswered Questions, and Details. These icons were selected because of their direct relevance to the communicative and analytical demands of Socratic Seminars. The Multiple Perspectives icon encourages students to consider alternative viewpoints and recognize the complexity of social, political, and ethical issues. The Unanswered Questions icon promotes inquiry by prompting

learners to identify gaps in knowledge and formulate meaningful questions for further exploration. The Details icon encourages close examination of textual evidence, supporting students in constructing arguments grounded in specific information rather than personal opinion alone.

The integration of these three icons into Socratic Seminars offers a unique opportunity to combine language development with cognitive scaffolding. By providing students with clear visual prompts, the icons may reduce cognitive overload and help learners organize their contributions more effectively. Rather than struggling to determine what to say next, students can draw upon specific analytical lenses that guide their thinking and facilitate participation in discussion. This approach has particular relevance in EFL classrooms, where linguistic challenges often interact with cognitive demands to limit student engagement.

Although previous research has explored the benefits of Socratic Seminars and differentiated instruction independently, relatively few studies have investigated the combined use of Kaplan's Depth and Complexity Icons within discussion-based language learning environments. Moreover, limited research has examined the application of this framework in secondary EFL contexts within Kazakhstan. Consequently, there remains a need for empirical evidence regarding the effectiveness of integrating visual cognitive scaffolds into academic discussions to enhance speaking performance.

To address this gap, the present study investigates the impact of integrating Multiple Perspectives, Unanswered Questions, and Details into Socratic Seminars conducted with Grade 9 students at Nazarbayev Intellectual School of Science and Mathematics in Karaganda. Using a quasi-experimental pre-test/post-test design, the research compares the speaking performance of students participating in icon-supported Socratic Seminars with that of students engaged in traditional seminars.

The study is guided by the following research questions:

1. To what extent does the integration of Kaplan's Depth and Complexity Icons into Socratic Seminars improve ninth-grade students' speaking skills?
2. How does the use of Multiple Perspectives, Unanswered Questions, and Details influence students' depth of argumentation during academic discussions?
3. What effect does the intervention have on students' confidence and willingness to participate in English-language discussions?

Based on these questions, the study hypothesizes that students who participate in Socratic Seminars supported by Kaplan's icons will demonstrate significantly greater improvements in speaking proficiency, analytical thinking, and discussion participation than students who engage in traditional Socratic Seminars without cognitive scaffolding.

The findings of this research contribute to the growing body of literature on discussion-based learning, differentiated instruction, and speaking pedagogy in EFL contexts. Furthermore, the study offers practical recommendations for educators seeking effective strategies to support student participation and promote deeper engagement with academic discourse in secondary school classrooms.

Literature Review

Speaking Skills in English as a Foreign Language (EFL) Contexts

Speaking is widely recognized as one of the most important yet challenging skills in second and foreign language learning. Unlike receptive skills such as reading and listening, speaking requires learners to produce language spontaneously while simultaneously managing vocabulary selection, grammatical accuracy, pronunciation, and interactional strategies. As a result, many students experience anxiety when communicating in a foreign language, particularly in formal academic settings where they are expected to express complex ideas and respond critically to others' viewpoints [2].

Researchers have long argued that speaking competence extends beyond linguistic accuracy. Brown [8] defines speaking as an interactive process of constructing meaning that involves

producing, receiving, and processing information. Effective speakers must not only demonstrate command of vocabulary and grammar but also organize ideas coherently, provide evidence to support claims, and adapt their language according to context and audience. Consequently, modern approaches to language teaching increasingly emphasize communicative competence rather than the memorization of linguistic structures.

Within secondary education, the development of speaking skills is closely associated with the cultivation of critical thinking. Learners are expected to participate in discussions, defend opinions, evaluate information, and collaborate with peers. Such expectations align with contemporary educational frameworks that prioritize communication, collaboration, creativity, and critical thinking as essential competencies for the twenty-first century [1]. However, despite extensive exposure to English instruction, many learners continue to struggle with oral communication due to limited opportunities for authentic interaction and insufficient scaffolding during discussion activities.

One challenge frequently observed in EFL classrooms is the discrepancy between receptive and productive language abilities. Students may demonstrate a strong understanding of written texts but encounter difficulties when required to articulate their ideas orally. This gap often stems from a lack of confidence, limited experience participating in extended discussions, and uncertainty regarding how to structure arguments effectively [9]. Therefore, educators must adopt instructional approaches that simultaneously support language development and higher-order thinking.

Socratic Seminars as a Discussion-Based Learning Strategy

One pedagogical approach that has gained increasing attention in language education is the Socratic Seminar. Based on the philosophical traditions associated with Socrates, Socratic Seminars encourage students to explore complex ideas through dialogue rather than direct instruction. Instead of receiving information passively, learners actively construct understanding by asking questions, analyzing evidence, and engaging with diverse perspectives [4].

A typical Socratic Seminar is centered around a shared text, issue, or problem. Students prepare by reading and annotating the material, generating questions, and identifying significant ideas for discussion. During the seminar, participants sit in a circle and engage in collaborative dialogue while the teacher assumes the role of facilitator. The emphasis is placed on inquiry rather than debate; students are encouraged to build upon one another’s ideas, seek clarification, and examine multiple interpretations rather than simply defending personal opinions.

Numerous studies have demonstrated the educational benefits of Socratic Seminars. Copeland [4] argues that the approach promotes critical and creative thinking by encouraging learners to evaluate evidence and consider alternative viewpoints. Similarly, Ratcliff [5] found that structured dialogue increases student engagement and fosters deeper comprehension of academic texts. In language-learning environments, Socratic Seminars provide meaningful opportunities for authentic communication, enabling students to practice vocabulary, develop fluency, and refine argumentation skills.

Despite these advantages, successful implementation of Socratic Seminars requires careful scaffolding. Students often struggle to formulate analytical questions, support claims with textual evidence, or sustain extended discussions. Without explicit support, conversations may remain superficial and dominated by a small number of confident participants. Therefore, researchers emphasize the importance of providing learners with cognitive tools that facilitate deeper engagement with discussion topics [2].

Differentiated Instruction and Academic Dialogue

Differentiated instruction has emerged as a widely accepted framework for addressing learner diversity in contemporary classrooms. According to Tomlinson [6], differentiation is a proactive approach to teaching that recognizes variations in students’ readiness, interests, and learning profiles. Rather than expecting all learners to engage with content in identical ways, differentiated instruction provides multiple pathways through which students can access, process, and demonstrate understanding.

Importantly, differentiation does not imply reducing academic rigor. Instead, it involves offering appropriate support that enables all learners to engage successfully with challenging content. In discussion-based learning environments, differentiation may take the form of structured questioning techniques, graphic organizers, visual prompts, or collaborative activities that support participation and comprehension.

Research suggests that differentiated instruction positively influences student achievement and engagement across a range of educational contexts [6]. When students receive support tailored to their needs, they are more likely to participate actively, take intellectual risks, and develop confidence in their abilities. Within EFL classrooms, differentiation is particularly important because students often display varying levels of language proficiency and communicative competence.

Discussion-based activities present unique challenges for differentiation. While some learners readily contribute ideas and initiate dialogue, others require additional support to organize their thoughts and formulate responses. Consequently, teachers must create structures that encourage equitable participation while maintaining high cognitive expectations. Visual thinking tools represent one effective means of achieving this balance.

Kaplan's Depth and Complexity Framework

Sandra Kaplan's Depth and Complexity framework was originally developed as a model for promoting advanced thinking among gifted learners. The framework consists of a series of visual icons that encourage students to examine content from different intellectual perspectives and explore ideas in greater depth [7]. Rather than focusing solely on factual knowledge, the framework emphasizes analysis, interpretation, and conceptual understanding.

Each icon represents a particular cognitive lens through which information can be examined. Collectively, the icons encourage learners to identify patterns, analyze relationships, evaluate perspectives, and generate meaningful questions. By making abstract thinking processes visible, the framework helps students develop metacognitive awareness and engage more deeply with academic content.

Although the model originated within gifted education, researchers increasingly recognize its potential value for a broader population of learners. The visual nature of the icons makes complex thinking processes more accessible and provides students with concrete strategies for approaching challenging tasks. Furthermore, the framework aligns closely with contemporary theories of constructivist learning, which emphasize active knowledge construction and learner autonomy [10].

Within language education, Kaplan's icons may serve as cognitive scaffolds that support oral communication. When students are provided with explicit analytical frameworks, they are better equipped to organize their thoughts, formulate responses, and participate in academic discussions. Consequently, the integration of selected icons into Socratic Seminars represents a promising approach to combining language development with critical thinking.

Multiple Perspectives, Unanswered Questions, and Details

The present study focuses on three specific icons that are particularly relevant to academic discussion: Multiple Perspectives, Unanswered Questions, and Details.

Multiple Perspectives

The Multiple Perspectives icon encourages students to consider alternative viewpoints and recognize that complex issues can be interpreted in different ways. Rather than relying solely on personal opinions, learners are prompted to examine how individuals from different backgrounds, professions, or social groups might perceive the same situation. This process fosters empathy, critical thinking, and analytical reasoning [11].

In Socratic Seminars, the Multiple Perspectives icon can help students move beyond binary thinking and engage in more nuanced discussions. By considering competing interpretations, learners develop stronger arguments and gain a deeper understanding of complex topics.

Unanswered Questions

The Unanswered Questions icon promotes inquiry by encouraging students to identify uncertainties, ambiguities, and areas requiring further investigation. According to inquiry-based

learning theory, meaningful learning often begins with questions rather than answers [12]. Students who generate questions demonstrate active engagement with content and are more likely to pursue deeper understanding.

Within discussion settings, this icon supports sustained dialogue by encouraging participants to explore unresolved issues. Instead of seeking immediate conclusions, students learn to appreciate complexity and recognize that many academic problems do not have simple solutions.

Details

The Details icon directs students' attention toward specific information, evidence, and supporting examples. Effective academic discussions require participants to justify claims using textual evidence rather than relying on unsupported opinions. By encouraging close examination of details, the icon helps students develop evidence-based reasoning and strengthen the quality of their arguments.

Research indicates that learners who regularly engage with textual evidence demonstrate stronger comprehension and analytical skills [2]. Consequently, the Details icon serves as an important bridge between reading comprehension and oral communication.

Research Gap

Existing research provides substantial evidence supporting the effectiveness of Socratic Seminars, differentiated instruction, and Kaplan's Depth and Complexity framework as independent educational approaches. Studies have shown that Socratic dialogue promotes critical thinking and communication skills, while differentiated instruction enhances learner engagement and achievement [4, 6]. Similarly, Kaplan's framework has been recognized as an effective tool for developing advanced thinking and metacognitive awareness [7].

However, relatively little research has examined the integration of Kaplan's icons into Socratic Seminars within EFL contexts. Most existing studies focus either on gifted education or on discussion-based learning without considering the role of visual cognitive scaffolds. Furthermore, limited empirical evidence exists regarding the effectiveness of this approach within secondary schools in Kazakhstan.

The present study addresses this gap by investigating how three selected Kaplan icons—Multiple Perspectives, Unanswered Questions, and Details—can support differentiated instruction and enhance speaking skills during Socratic Seminars. By examining both speaking performance and student perceptions, the study contributes new insights into the relationship between cognitive scaffolding, discussion-based learning, and language development in secondary EFL education.

Materials and Methods

Research Design

This study employed a quasi-experimental pre-test/post-test design to investigate the effectiveness of integrating selected Kaplan's Depth and Complexity Icons into Socratic Seminars for enhancing students' speaking skills through differentiated instruction. Quasi-experimental research is commonly used in educational settings where random assignment of participants is impractical due to existing class structures [13]. The design enabled the researcher to compare the impact of the intervention on an experimental group with that of a control group while maintaining authentic classroom conditions.

The study was conducted over a two-week period during regular English as a Foreign Language (EFL) lessons. Both groups studied the same curriculum content, discussed the same texts, and participated in Socratic Seminars. The primary difference between the groups was the use of Kaplan's Depth and Complexity Icons as cognitive scaffolds during discussion activities [14].

A mixed-methods approach was adopted to collect quantitative and qualitative data. Quantitative data were obtained through pre- and post-speaking assessments and student surveys, while qualitative observations were recorded throughout the intervention period to provide additional insight into student participation and discussion behavior.

Research Setting

The study was conducted at Nazarbayev Intellectual School of Science and Mathematics in Karaganda, Kazakhstan. The school follows a trilingual educational model and emphasizes the development of critical thinking, communication, collaboration, and independent learning skills. English serves as one of the primary languages of instruction in several subject areas, making the development of academic speaking skills a significant educational priority.

The participants were enrolled in Grade 9 and had previously studied English for approximately eight years. According to school records and teacher observations, students demonstrated intermediate to upper-intermediate levels of English proficiency. However, many experienced difficulties when required to engage in extended academic discussions, justify opinions with evidence, and respond spontaneously to peers' arguments.

Participants

The study involved 32 Grade 9 students from two intact classes. Due to scheduling and administrative considerations, random assignment was not possible. One class was designated as the Experimental Group (EG), while the second class served as the Control Group (CG) (Table 1).

Table 1 - Participant Distribution

Group	Number of Students	Male	Female
Experimental Group	16	7	9
Control Group	16	8	8
Total	32	15	17

The two classes demonstrated comparable levels of academic achievement and English language proficiency based on previous school assessments. This similarity helped ensure that differences observed following the intervention could be more confidently attributed to the instructional approach rather than pre-existing achievement gaps.

Research Instruments

To obtain comprehensive data regarding the effectiveness of the intervention, three instruments were employed:

Speaking Assessment Rubric

Students completed speaking assessments before and after the intervention. The assessment was designed to evaluate four dimensions of speaking performance:

1. Fluency and Coherence
2. Lexical Resource
3. Grammatical Range and Accuracy
4. Depth of Argumentation

Each criterion was evaluated on a ten-point scale, resulting in a maximum possible score of forty points.

The rubric was adapted from speaking assessment descriptors commonly used in international English language examinations and modified to reflect the objectives of academic discussion. Particular emphasis was placed on students' ability to support opinions, respond to opposing viewpoints, and use evidence during discussions.

Student Survey

A survey was administered both before and after the intervention. The purpose of the survey was to measure students' perceptions of their speaking abilities and attitudes toward discussion-based learning.

The survey consisted of ten Likert-scale items ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The statements focused on four key areas:

- Confidence speaking English in front of peers;
- Willingness to participate in discussions;

- Ability to support opinions with evidence;
- Ability to formulate analytical questions.

Examples of survey statements included:

- I feel confident expressing my ideas in English.
- I actively participate in classroom discussions.
- I can support my opinions with evidence from a text.
- I can ask meaningful questions during discussions.

The same survey was administered at the conclusion of the intervention to identify changes in student perceptions.

Classroom Observation Notes

Throughout the intervention, the researcher maintained observation notes documenting student participation, interaction patterns, discussion quality, and use of the Kaplan icons. These observations provided qualitative evidence supporting the quantitative findings.

Intervention Procedures

Prior to the intervention, both groups completed the speaking assessment and the student survey. The pre-test results indicated relatively similar levels of speaking proficiency between the two groups.

During the intervention period, both classes participated in a series of Socratic Seminars based on texts related to global citizenship, twenty-first-century skills, and contemporary social issues. These topics were selected because they encouraged critical thinking and generated opportunities for discussion from multiple viewpoints.

Experimental Group

Students in the Experimental Group received explicit instruction on three Kaplan's Depth and Complexity Icons:

Multiple Perspectives

Students were encouraged to examine issues from different viewpoints and consider how various stakeholders might interpret the same situation. During discussions, they were prompted to use expressions such as:

- From another perspective...
- Some people might argue that...
- Different groups may view this issue differently because...

Unanswered Questions

Students identified unresolved issues within texts and generated questions for further discussion. This icon encouraged inquiry and helped sustain dialogue throughout the seminars.

Students frequently used prompts such as:

- What information is still missing?
- What questions remain unanswered?
- What else should we investigate?

Details

Students focused on identifying specific evidence from texts to support their arguments. Before discussions, they highlighted quotations, examples, and factual information that could strengthen their responses.

Throughout the seminars, students were expected to reference textual evidence when expressing opinions.

Control Group

The Control Group participated in traditional Socratic Seminars using the same texts and discussion questions. However, students did not receive instruction on Kaplan's icons and were not provided with visual cognitive scaffolds.

The teacher facilitated discussion in the usual manner without introducing structured thinking prompts.

Data Collection Procedure

The study followed five sequential stages:

Stage 1: Pre-Intervention Assessment
- Administration of speaking pre-test;
- Administration of student survey;
- Collection of baseline data.

Stage 2: Introduction to Kaplan Icons
- Explicit teaching of Multiple Perspectives;
- Explicit teaching of Unanswered Questions;
- Explicit teaching of Details;
- Guided practice activities.

Stage 3: Socratic Seminar Implementation
- Four Socratic Seminar sessions conducted over two weeks;
- Text annotation activities;
- Structured discussion tasks;
- Teacher observation and note-taking.

Stage 4: Post-Intervention Assessment
- Administration of speaking post-test;
- Administration of post-intervention survey;
- Collection of qualitative feedback.

Stage 5: Data Analysis
- Comparison of pre-test and post-test scores;
- Analysis of survey responses;
- Interpretation of classroom observation data.

Data Analysis

Quantitative data obtained from the speaking assessments were analyzed using descriptive statistics. Mean scores were calculated for each assessment criterion and compared across groups.

Survey responses were converted into percentages to facilitate comparison between pre-intervention and post-intervention results. Changes in student confidence, participation, and discussion skills were examined to determine the broader impact of the intervention.

Qualitative observation notes were analyzed thematically. Recurring patterns relating to student engagement, use of evidence, questioning behavior, and interaction quality were identified and used to support the interpretation of quantitative findings.

Ethical Considerations

Several measures were implemented to ensure ethical compliance throughout the study. Participation was voluntary, and students were informed about the purpose of the research. All collected data were treated confidentially and used exclusively for academic purposes. Individual student identities were anonymized during data analysis and reporting.

Furthermore, both groups continued to receive regular curriculum instruction throughout the study. Following the completion of the research, students in the control group were also introduced to Kaplan's icons to ensure equitable access to the instructional strategy.

Summary

This methodology was designed to examine the effectiveness of integrating Multiple Perspectives, Unanswered Questions, and Details into Socratic Seminars as a differentiated instructional approach. By combining speaking assessments, student surveys administered both before and after the intervention, and classroom observations, the study sought to provide a comprehensive understanding of how selected Kaplan icons influence students' speaking performance, confidence, and participation in academic discussions.

Results and Discussion

The purpose of this study was to investigate whether the integration of three of Kaplan's Depth and Complexity Icons—Multiple Perspectives, Unanswered Questions, and Details—into Socratic Seminars could enhance ninth-grade students' speaking skills through differentiated instruction. To

evaluate the effectiveness of the intervention, quantitative data were collected through pre-test and post-test speaking assessments and student surveys administered before and after the intervention. Qualitative classroom observations were also used to provide additional insight into student participation and discussion behavior.

The findings are presented in four sections. First, the results of the speaking assessments are compared. Second, survey findings are analyzed. Third, classroom observations are discussed. Finally, the overall impact of the intervention is interpreted in relation to the research questions.

Speaking Assessment Results

Prior to the intervention, both groups completed a speaking assessment designed to evaluate four key dimensions of oral communication: Fluency and Coherence, Lexical Resource, Grammatical Range and Accuracy, and Depth of Argumentation (Table 2).

Table 2 - Pre-Test Speaking Assessment Results

Criterion	Experimental Group Mean	Control Group Mean
Fluency and Coherence	5.4	5.3
Lexical Resource	5.2	5.1
Grammatical Range and Accuracy	5.4	5.3
Depth of Argumentation	4.8	4.9
Overall Mean	**5.2**	**5.15**

As shown in Table 2, both groups demonstrated relatively similar levels of speaking proficiency before the intervention. The differences between the groups were negligible, indicating that the participants began the study with comparable speaking abilities. The lowest scores in both groups were observed in the category of Depth of Argumentation, suggesting that students experienced difficulties supporting opinions with evidence and developing complex arguments.

These findings correspond with teacher observations conducted before the intervention. Many students relied on short responses, struggled to elaborate on ideas, and frequently expressed opinions without providing textual support. Although students demonstrated adequate understanding of discussion topics, they often lacked the analytical structures necessary to sustain academic conversations.

Following the two-week intervention, both groups completed a post-test using the same assessment criteria (Table 3).

Table 3 - Post-Test Speaking Assessment Results

Criterion	Experimental Group Mean	Control Group Mean
Fluency and Coherence	7.1	6.0
Lexical Resource	7.3	5.9
Grammatical Range and Accuracy	6.6	5.8
Depth of Argumentation	7.5	5.6
Overall Mean	**7.13**	**5.83**

The post-test results reveal notable differences between the two groups. While both groups demonstrated some improvement, the Experimental Group significantly outperformed the Control Group across all assessment categories.

The Experimental Group's overall mean score increased from 5.2 to 7.13, representing an improvement of approximately 37%. In contrast, the Control Group's mean score increased from 5.15 to 5.83, representing an improvement of approximately 13%.

The largest gain was observed in the category of Depth of Argumentation, where the Experimental Group improved from 4.8 to 7.5. This substantial increase suggests that the Kaplan icons successfully encouraged students to provide evidence, examine multiple viewpoints, and formulate more sophisticated arguments during discussions.

Table 4 - Improvement Between Pre-Test and Post-Test

Criterion	Experimental Group Gain	Control Group Gain
Fluency and Coherence	+1.7	+0.7
Lexical Resource	+2.1	+0.8
Grammatical Range and Accuracy	+1.2	+0.5
Depth of Argumentation	+2.7	+0.7

The data indicate that the greatest difference between the groups occurred in Lexical Resource and Depth of Argumentation. These findings suggest that the intervention influenced not only students' confidence in speaking but also the quality and sophistication of their oral responses.

Student Survey Results

To investigate students' perceptions of their speaking abilities and discussion experiences, a survey was administered before and after the intervention. The survey focused on four key areas:

- Confidence speaking English;
- Participation in discussions;
- Ability to support opinions with evidence;
- Ability to formulate analytical questions.

Table 5 - Student Survey Results

Indicator	Pre-Intervention (%)	Post-Intervention (%)
Confidence speaking English	44	81
Active participation in discussions	50	88
Supporting opinions with evidence	38	84
Asking analytical questions	31	78

The survey findings indicate substantial positive changes in students' perceptions of their speaking abilities.

Before the intervention, fewer than half of the students reported feeling confident speaking English during classroom discussions. Many participants indicated that they were hesitant to contribute because they feared making grammatical mistakes or being unable to express their ideas clearly.

Following the intervention, confidence levels increased dramatically. More than four-fifths of the students reported feeling comfortable expressing their opinions during discussions. Similarly, the percentage of students who described themselves as active discussion participants increased from 50% to 88%.

One particularly significant finding relates to students' ability to support opinions with evidence. Prior to the intervention, only 38% of students believed they could effectively justify their arguments. After participating in icon-supported Socratic Seminars, this figure increased to 84%.

This improvement can be directly linked to the Details icon, which encouraged students to identify and reference specific textual evidence when presenting arguments. Teacher observations confirmed that students became increasingly comfortable citing examples, quotations, and factual information during discussions.

Classroom Observation Findings

Qualitative observations conducted throughout the intervention provided valuable insights into how students interacted with the Kaplan icons during discussions.

During the first seminar session, many students relied heavily on teacher prompts and demonstrated uncertainty regarding how to use the icons effectively. Several participants produced short responses and rarely challenged one another's ideas.

However, significant changes became evident by the third and fourth seminar sessions.

Multiple Perspectives

The Multiple Perspectives icon appeared to have the greatest influence on discussion quality. Students increasingly considered alternative viewpoints and demonstrated greater willingness to engage with opposing opinions.

For example, during a discussion on global citizenship, students frequently used expressions such as:

- "From another perspective…"
- "Some people may disagree because…"
- "Different cultures might view this issue differently."

These responses reflected a shift from personal opinion toward analytical discussion.

Unanswered Questions

The Unanswered Questions icon encouraged students to adopt a more inquisitive approach to learning. Rather than focusing solely on providing answers, students began generating thoughtful questions that extended discussion beyond the text.

Many students demonstrated curiosity regarding social, ethical, and global issues raised during seminar discussions. This questioning behavior contributed to longer and more meaningful conversations.

Details

The Details icon had a noticeable impact on students' use of evidence. Teacher observations indicated that students increasingly referred to textual information when supporting arguments.

Compared to the initial seminars, later discussions contained substantially more references to specific examples, quotations, and factual details.

As a result, students' arguments became more persuasive and academically grounded.

Discussion of Findings

The findings suggest that integrating selected Kaplan icons into Socratic Seminars positively influenced students' speaking performance and discussion behavior.

The most substantial improvement occurred in Depth of Argumentation. This result aligns with previous research emphasizing the importance of structured thinking tools in promoting higher-order reasoning and evidence-based discussion [11]. By encouraging students to consider multiple viewpoints, identify unanswered questions, and support ideas with details, the intervention provided a framework that facilitated deeper engagement with content.

The findings also support the principles of differentiated instruction. Rather than providing identical support to all learners, the Kaplan icons offered flexible cognitive scaffolds that students could use according to their individual needs. Less confident students benefited from clear discussion prompts, while more advanced learners used the icons to construct increasingly sophisticated arguments.

Furthermore, the survey results demonstrate that the intervention influenced affective factors as well as academic performance. Increased confidence and participation suggest that students perceived the discussion environment as more accessible and supportive.

Overall, the results indicate that the integration of Multiple Perspectives, Unanswered Questions, and Details into Socratic Seminars created conditions that promoted both language development and critical thinking. The combination of visual cognitive scaffolds and discussion-based learning appears to be particularly effective for supporting speaking development in secondary EFL classrooms.

Conclusion

The present study investigated the effectiveness of integrating three of Kaplan's Depth and Complexity Icons—Multiple Perspectives, Unanswered Questions, and Details—into Socratic Seminars as a differentiated instructional strategy for improving ninth-grade students' speaking skills in an English as a Foreign Language (EFL) classroom. Conducted at Nazarbayev Intellectual School of Science and Mathematics in Karaganda, the study sought to determine whether the combination of visual cognitive scaffolds and discussion-based learning could positively influence students' oral communication skills, confidence, and participation in academic discussions.

The findings provide strong evidence that the integration of selected Kaplan icons enhanced students' speaking performance. While both the Experimental and Control Groups demonstrated some improvement following participation in Socratic Seminars, the gains observed among students exposed to icon-supported discussions were substantially greater. The Experimental Group achieved notable progress in all assessed areas, including Fluency and Coherence, Lexical Resource, Grammatical Range and Accuracy, and Depth of Argumentation. These results indicate that the intervention not only improved students' ability to communicate in English but also strengthened the quality of their thinking and reasoning during discussions.

Among all assessment criteria, the most significant improvement was observed in Depth of Argumentation. Prior to the intervention, many students struggled to justify their opinions, provide evidence, or engage critically with alternative viewpoints. Following the implementation of the Kaplan icons, students demonstrated a greater capacity to construct well-supported arguments and participate in analytical discussions. This outcome suggests that the visual prompts provided by the icons served as effective cognitive scaffolds, helping learners organize their ideas and engage more deeply with discussion topics.

The findings also highlight the value of the individual icons selected for this study. The Multiple Perspectives icon encouraged students to move beyond personal opinions and consider alternative viewpoints. As discussions progressed, students increasingly demonstrated empathy, open-mindedness, and the ability to evaluate issues from different social, cultural, and ethical perspectives. Such skills are essential not only for language development but also for fostering global citizenship and intercultural understanding.

Similarly, the Unanswered Questions icon promoted inquiry-based learning by encouraging students to identify uncertainties and generate meaningful questions. Rather than focusing exclusively on finding correct answers, students became more willing to explore complex issues and acknowledge ambiguity. This shift contributed to richer and more sustained discussions, reflecting the fundamental principles of Socratic dialogue.

The Details icon played an important role in helping students support arguments with evidence. Classroom observations revealed that students became increasingly confident in referring to textual information, examples, and factual details during discussions. As a result, their contributions became more persuasive, coherent, and academically grounded. This finding supports previous research emphasizing the importance of evidence-based reasoning in the development of critical thinking and academic communication skills.

In addition to improvements in speaking performance, the survey results demonstrated significant positive changes in students' attitudes toward discussion-based learning. Following the intervention, students reported higher levels of confidence when speaking English, greater willingness to participate in discussions, and stronger belief in their ability to formulate questions and support arguments. These findings are particularly important because affective factors such as

confidence and motivation are known to influence language learning outcomes. When students feel comfortable expressing ideas and taking intellectual risks, they are more likely to engage actively in the learning process.

The study also provides evidence supporting the effectiveness of differentiated instruction in secondary EFL classrooms. One of the central principles of differentiation is providing learners with multiple pathways for accessing and processing information while maintaining high academic expectations [6]. The Kaplan icons achieved this objective by offering structured yet flexible cognitive supports that could be used by students with varying levels of language proficiency and discussion experience. Rather than simplifying content, the icons enabled students to approach complex tasks with greater confidence and independence.

Several practical implications emerge from the findings. First, EFL teachers may benefit from incorporating visual thinking tools into discussion-based activities. The use of Kaplan's icons requires minimal resources yet provides substantial support for student thinking and communication. Second, Socratic Seminars appear to be particularly effective when combined with explicit cognitive scaffolding. While discussion alone can promote engagement, structured thinking prompts help students participate more meaningfully and develop deeper analytical skills. Finally, the findings suggest that discussion-based learning can serve as an effective means of simultaneously developing language proficiency and higher-order thinking skills.

Despite the positive outcomes, several limitations should be acknowledged. The study was conducted within a single school and involved a relatively small sample of 32 students. Consequently, the findings may not be generalizable to all educational contexts. Furthermore, the intervention lasted only two weeks, limiting the opportunity to examine long-term effects. Future research could involve larger participant groups, extended intervention periods, and additional educational settings. Researchers may also explore the impact of other Kaplan icons on speaking, writing, reading comprehension, and critical thinking.

In conclusion, the study demonstrates that integrating Multiple Perspectives, Unanswered Questions, and Details into Socratic Seminars can significantly enhance ninth-grade students' speaking skills through differentiated instruction. The approach promotes deeper thinking, more effective communication, and greater student engagement in academic discussions. By combining structured dialogue with visual cognitive scaffolding, teachers can create learning environments that support both language development and intellectual growth. As educational systems continue to emphasize critical thinking and communication as essential twenty-first-century competencies, the integration of Kaplan's Depth and Complexity Icons into classroom discussion practices represents a promising strategy for preparing students to participate successfully in increasingly complex academic and social contexts.

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САРАЛАП ОҚЫТУ ЖАҒДАЙЫНДА СОКРАТТЫҚ СЕМИНАРЛАР МЕН КАПЛАННЫҢ ТЕРЕҢДІК ПЕН КҮРДЕЛІЛІК БЕЛГІШЕЛЕРІН КІРІКТІРУ АРҚЫЛЫ 9-СЫНЫП ОҚУШЫЛАРЫНЫҢ СӨЙЛЕУ ДАҒДЫЛАРЫН АРТТЫРУ

Оқушылардың сөйлеу дағдыларын дамыту ағылшын тілін шет тілі ретінде оқытудағы маңызды міндеттердің бірі болып табылады. Әсіресе оқушылардан академиялық пікірталастарға қатысу, өз көзқарастарын дәлелдеу және сыни ойлау дағдыларын көрсету талап етілетін жағдайда бұл мәселе ерекше өзектілікке ие болады. Аталған зерттеу Капланның Depth and Complexity жүйесіндегі үш белгішені – Multiple Perspectives, Unanswered Questions және Details – Сократтық семинарлар құрылымына кіріктірудің 9-сынып оқушыларының сөйлеу дағдыларына әсерін анықтауға бағытталған. Зерттеу Қарағанды қаласындағы Назарбаев Зияткерлік мектебінің жаратылыстану-математика бағытында оқитын 32 оқушының қатысуымен жүргізілді. Қатысушылар эксперименттік (n = 16) және бақылау (n = 16) топтарына бөлінді. Зерттеу барысында квазиэксперименттік алдын ала және қорытынды тестілеу әдісі қолданылды. Интервенция басталғанға дейін барлық оқушылар сөйлеу дағдылары бойынша бағалаудан өтіп, пікірталасқа қатысуға деген сенімділігі мен көзқарасын анықтайтын сауалнама толтырды. Зерттеу соңында осы құралдар қайта қолданылды. Нәтижелер эксперименттік топ оқушыларының сөйлеу еркіндігі, академиялық сөздік қоры және аргументация сапасы бойынша жоғары нәтижелер көрсеткенін дәлелдеді. Сонымен қатар, оқушылардың ағылшын тілінде сөйлеуге деген сенімділігі мен талқылауларға қатысу белсенділігі артқаны анықталды. Зерттеу қорытындылары Каплан белгішелерін қолдану саралап оқытуды ұйымдастыруға және оқушылардың академиялық сөйлеу дағдыларын дамытуға тиімді ықпал ететінін көрсетті.

Түйін сөздер: Сократтық семинар, саралап оқыту, сөйлеу дағдылары, Каплан белгішелері, сыни ойлау, ағылшын тілі.

А.И. Ахметжанов

РАЗВИТИЕ НАВЫКОВ ГОВОРЕНИЯ УЧАЩИХСЯ 9-Х КЛАССОВ ЧЕРЕЗ ИНТЕГРАЦИЮ ИКОНОК ГЛУБИНЫ И СЛОЖНОСТИ КАПЛАН В СОКРАТОВСКИЕ СЕМИНАРЫ В УСЛОВИЯХ ДИФФЕРЕНЦИРОВАННОГО ОБУЧЕНИЯ

Развитие навыков устной речи является одной из ключевых задач преподавания английского языка как иностранного. Особую актуальность данная проблема приобретает в условиях, когда учащиеся должны участвовать в академических дискуссиях, аргументированно выражать собственную точку зрения и демонстрировать навыки критического мышления. Настоящее исследование посвящено изучению эффективности интеграции трех иконок Каплана - Multiple Perspectives, Unanswered Questions и Details - в структуру сократических семинаров как средства

дифференцированного обучения. Исследование проводилось в Назарбаев Интеллектуальной школе естественно-математического направления города Караганды. В нем приняли участие 32 учащихся 9 класса, разделенные на экспериментальную (n = 16) и контрольную (n = 16) группы. Использовался квазиэкспериментальный дизайн с предварительным и итоговым тестированием. До начала исследования учащиеся прошли оценивание навыков говорения и заполнили анкету, направленную на выявление уровня уверенности и отношения к дискуссионным формам обучения. После завершения интервенции данные процедуры были повторены. Результаты показали, что учащиеся экспериментальной группы продемонстрировали более значительный прогресс по показателям беглости речи, словарного запаса и глубины аргументации по сравнению с контрольной группой. Кроме того, было зафиксировано повышение уверенности учащихся в использовании английского языка и их готовности участвовать в академических обсуждениях. Полученные результаты подтверждают эффективность использования отдельных иконок Каплана в качестве инструмента дифференциации обучения и развития навыков академической речи.

Ключевые слова: сократический семинар, дифференцированное обучение, навыки говорения, иконки Каплана, критическое мышление, английский язык.

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