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Analytical Thinking Opportunities and Students' Experiences through Active Learning: A Qualitative Case Study in a Middle School EFL Classroom

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Abstract

This qualitative single-case study examined, based on students' accounts, how active learning activities integrated into the eighth-grade English as a Foreign Language (EFL) curriculum provided opportunities for analytical thinking and how students experienced these activities. The study was conducted in a public middle school in Türkiye over a six-week period. Curriculum-aligned activities included simulated telephone conversations, dialogue construction, prediction tasks, and collaborative discussions, guided by four active learning dimensions: collaborative learning, active engagement, reflective discussion, and student-centered expression. Data were collected through reflective journals from 25 students and semi-structured interviews with 12 volunteers. Thematic analysis combined a deductive approach to analytical thinking processes with an inductive approach to students' experiences. Findings indicated opportunities for strategic thinking and problem-solving through adapting explanations, inference-making through contextual and visual clues, and comparison through evaluating alternative expressions and dialogues. Students reported benefits from contextual support, peer interaction, and simulated activities, alongside difficulties interpreting unfamiliar language, uncertainty about their responses, limited individual thinking time, and constraints on self-expression. By examining analytical thinking opportunities alongside students' cognitive and affective experiences, the study illustrates how existing EFL curriculum activities can provide opportunities for analytical engagement while highlighting the importance of instructional support and conditions for participation. This offers a context-sensitive understanding of both the opportunities and limitations of integrating analytical thinking opportunities into regular EFL curriculum.

1. Introduction

In today's education, the development of higher order thinking skills has become an important educational goal since students are increasingly expected to interpret information, solve difficult issues, and make informed decisions. This expectation is particularly related to analytical thinking, which involves critical examination of problems, drawing inferences from the available information and making reasoned judgments (Bhijakkanarin & Kenaphoom, 2024; Cottrell, 2005). Analytical thinking as a distinct classroom instruction focus has been less studied in educational research, especially at the primary and middle school levels, whereas critical and creative thinking as higher-order thinking skills have been well-studied (Li, 2022). The importance of developing analytical thinking is reflected in the continuing concerns about students' reasoning and problem-solving abilities. International assessments such as PISA, TIMSS and PIRLS have focused attention on the difficulties students face in terms of interpreting information, applying knowledge and reasoning in various tasks (Kanyılmaz & Özata Yücel, 2020). Such concerns suggest that opportunities to engage

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in analytical thinking should not be limited to those subjects traditionally associated with problem solving. They can also be integrated in everyday classroom activities across the curriculum.

The teaching of English as a Foreign Language (EFL) provides a useful context in which to explore such possibilities. Learning a language involves more than acquiring vocabulary and grammatical structures. Students also need to infer meaning from context, compare expressions, think of alternative responses, and make decisions in communication. These processes are associated with analytical thinking but can be underplayed when classroom instruction concentrates predominantly on reproducing language forms (Abrami et al., 2015). A possible solution to this problem is offered by active learning, which encourages students to participate in collaborative problem solving, inquiry-based tasks and reflective discussion (Bonwell & Eison, 1991). Through these activities, students can engage with language while explaining their choices, examining different possibilities, and reflecting on how they reach conclusions. Despite the potential connection between active learning and analytical thinking, less attention has been given to how these processes are experienced by middle school students during regular EFL lessons. In particular, there is a need for classroom-based research that examines not only the opportunities active learning activities provide for analytical engagement but also the difficulties students encounter while participating in them. Addressing both aspects may help explain how such activities function within the everyday conditions of language teaching. Against this background, the present study examines a six-week implementation of active learning activities in an eighth-grade EFL classroom in Türkiye through a qualitative single-case study. It focuses on opportunities for strategic thinking and problem-solving, inference-making, and comparison, alongside students' cognitive and affective experiences of the activities. By examining these processes within a regular classroom setting, the study seeks to provide a context-sensitive understanding of how analytical thinking can be incorporated into middle school language instruction. Prior studies have explored the connection between active learning and higher-order thinking skills; however, there is limited understanding of how certain analytical thinking processes are incorporated into curriculum-aligned tasks in middle school EFL settings. Moreover, limited attention has been directed toward students' cognitive and emotional experiences regarding these chances, especially the factors that either promote or hinder their engagement.

2. Conceptual Framework

2.1. Analytical Thinking Skills

In our daily lives, it is increasingly important to be able to understand complex information, consider different viewpoints and make informed decisions. Hence, analytical thinking is not only relevant to academic learning but also to the challenges faced by individuals outside of school (Li, 2022). The Future of Jobs Report by the World Economic Forum also highlights its importance, identifying analytical thinking as a key skill for the changing world of work, alongside creative thinking and other cognitive abilities (Di Battista et al., 2023). Although these expectations are often discussed in relation to employment, the foundations of analytical thinking need to be established much earlier in education.

Analytical thinking is generally considered a higher order thinking skill. It is the process of breaking down information or problems into smaller parts, studying the relationships between the parts and thinking about the importance of the parts in a larger context (Bloom, 1956; Marzano, 2001). Definitions in the literature highlight several related processes, including identifying the components of a whole (Elder & Paul, 2007; Marzano, 1993), recognizing relationships among elements (Anderson & Krathwohl, 2001), comparing and contrasting information (Marzano & Kendall, 2006; Sternberg, 2006), drawing conclusions (Elder & Paul, 2007; Marzano & Kendall, 2006), and selecting appropriate approaches to problem-solving (Anderson & Krathwohl, 2001; Marzano & Kendall, 2006). These processes are more than just chopping information into bits. Analytical thinking involves individuals recognizing relevant details, asking questions, organizing information, considering possible explanations, and drawing conclusions supported by evidence (Hollett & Cassalia, 2023). Analytical thinkers can tell the difference between facts and opinions, evaluate the

strengths and weaknesses of information, and use logic to solve problems (Amer, 2005; Suyatman et al., 2021). They may also draw on these processes to explain events, question interpretations, and develop coherent arguments (Sternberg, 2006).

In educational settings, analytical thinking can be encouraged through activities that require students to examine information rather than simply recall it. Classroom discussions, authentic problem-solving tasks, and reflective activities can provide opportunities for students to consider alternatives, explain their reasoning, and evaluate different responses (Khaitov, 2024). The teacher's role is important in selecting tasks that encourage questioning and allow students to examine relationships among ideas. When learning environments provide such opportunities, students can engage more actively in analyzing, connecting, and evaluating information (Güneş, 2012). While analytical thinking is important throughout education, it is in the primary and middle school years that the cognitive processes that support it are primarily introduced and consolidated. Piaget's theory of cognitive development provides a framework for understanding how children in the concrete operational stage (usually aged seven to eleven) develop their capacity to perform logical operations such as classification, sequencing and understanding relationships (Piaget, 1952). Students may also become better able to consider hypothetical situations and alternative explanations as they move into adolescence, although these abilities vary across individuals and contexts. Providing age-appropriate opportunities for reasoning, comparison, and problem-solving can therefore be valuable during the middle school years.

In the present study, analytical thinking is examined through three interconnected processes: strategic thinking and problem-solving, inference-making, and comparison. These processes were determined because they reflect both the conceptual features of analytical thinking discussed in the literature and the reasoning opportunities embedded in the EFL activities examined in this study. Strategic thinking and problem-solving involve considering possible responses and selecting suitable approaches to communicative situations. Inference-making refers to interpreting information and drawing conclusions from contextual clues, while comparison involves examining similarities, differences, and the appropriateness of language use across situations. These processes provide the conceptual basis for examining students' analytical engagement during the six-week implementation.

2.2. Active Learning

Active learning is a student-centered approach that involves learners in the construction of knowledge, rather than passively receiving information. It is about involving students in meaningful tasks that involve thinking, interaction, decision making and reflection on learning. Auerbach and Schussler (2017) describe active learning as a process where students must work actively with ideas and communicate their understanding. According to Bonwell and Eison (1991), active learning is about activities that prompt students to think about what they are doing. Active learning is an umbrella term for a variety of practices that can be organized in a number of ways depending on the instructional context. In the current study, based on a review of the relevant literature, the researchers identified four interrelated pedagogical dimensions of active learning: collaborative learning, active engagement, reflective discussion, and student-centered expression. These dimensions guided the development of the lesson plans and the design of classroom activities aligned with the relevant dimensions.

Collaborative learning is where students work together to explore ideas, solve problems and reach a shared understanding. Interaction provides learners with the opportunity to express their reasoning, to consider different opinions, and to negotiate meaning with others. This process is in line with Vygotsky's (1978) sociocultural perspective which stresses the significance of social interaction and support in learning. Collaborative activities can allow students to work with their peers, share ideas and develop their understanding through discussion (Johnson & Johnson, 2009). Such activities can also be used to develop communication and interpersonal skills (Froyd, 2008; Saunders & Wong, 2020). Collaborative learning has also been associated with students' critical thinking and their ability to apply concepts in meaningful situations (Amrullah et al., 2020). However, the benefits of collaboration depend partly on how activities are organized and whether students have opportunities to contribute.

Active engagement refers to students' involvement in learning activities that require more than listening or reproducing information. Problem-solving tasks, discussions, and interactive exercises can encourage learners to examine ideas, make choices, and apply what they know (Bonwell & Eison, 1991). Engagement may involve behavioral participation, cognitive effort, and emotional responses to learning. Chi and Wylie (2014) emphasize that the quality of students' cognitive engagement matters, particularly when activities require learners to generate explanations or interact constructively with others. Research has associated active learning with student engagement, conceptual understanding, and academic achievement (Beimel et al., 2024; Freeman et al., 2014). Additional studies have highlighted the potential of inquiry, problem solving, and interactive activities to support higher-order cognitive processes (Konopka et al., 2015; Lund & Stains, 2015). However, such outcomes may vary according to the tasks, learners, and instructional settings.

Reflective discussion allows students to explore their reasoning, question assumptions, and listen to different interpretations. Instead of focusing just on whether an answer is correct, reflective discussion prompts learners to explain how they arrived at an answer, and to revise their ideas based on feedback. Such exchanges can help develop metacognitive awareness and help students connect their learning with different circumstances (Mercer & Howe, 2012). Practices such as guided questioning, peer discussion, and think-pair-share can be used to create opportunities for reflection and shared reasoning (Mercer & Howe, 2012). This emphasis on reflection is also consistent with Dewey's (1938) view of experience and reflection as important elements of learning.

Student-centered expression is about students' chances to express their ideas, ask questions and show understanding in different ways. Students can communicate their thinking through verbal explanations, written responses, presentations, or other classroom activities. Opportunities to express can increase willingness of learners to take more responsibility for their participation and to make their reasoning visible to others. This view is in line with constructivist theories of learning and research emphasizing the value of learner autonomy and self-regulation (Schunk & Zimmerman, 2011; Vygotsky, 1978). In this study, student-centered expression is particularly relevant to activities in which learners developed dialogues, explained their choices, and responded to unfamiliar communicative situations.

In EFL classrooms, active learning offers opportunities to connect language use with reasoning and meaningful interaction. Activities such as role-playing, collaborative dialogue writing, contextual inference tasks, and comparing expressions across communicative situations can encourage students to use target language while considering possible meanings and responses. From this perspective, active learning is relevant not only to students' participation in language activities but also to the opportunities those activities may provide for analytical thinking. This provides a basis for examining the relationship between active learning and analytical thinking in the middle school EFL classroom investigated in this study.

2.3. Analytical Thinking Skills and Active Learning

The connection between active learning and analytical thinking can be understood through the ways students engage with learning tasks. When learners explain their ideas, consider different responses, or discuss possible solutions with peers, they have opportunities to analyze information, consider relationships, and evaluate how conclusions are reached. Rose and Dalton (2009) emphasize the value of providing different ways for students to demonstrate understanding, while Manalo and Sheppard (2016) draw attention to the role of learning environments that encourage participation and the use of varied thinking strategies. Such practices are relevant to language classrooms, where students often need to interpret meaning, select appropriate expressions, and respond to unfamiliar communicative situations.

Collaboration and reflection are also important in connecting active learning with analytical thinking. When students work with their peers, they are exposed to alternative interpretations and have opportunities to explain their reasoning and reconsider their initial responses. Similarly, reflective activities help learners to examine the strategies they used and the reasons behind their choices. These

processes have been linked to metacognitive engagement and higher-order thinking in previous research (Guo et al., 2024; Meyer et al., 2014). Likewise, Wang and Seepho (2017) emphasize the role of questions, argument building, and meaningful learning tasks in supporting students' thinking processes. However, opportunities for analytical engagement depend not only on the presence of active learning activities but also on how students participate in them and the support they receive.

Such connections can be observed in the middle school EFL classrooms in tasks that involve inferring the meaning of unfamiliar expressions, comparing alternative ways of communicating, and developing responses to everyday situations. Collaborative learning can provide opportunities for conversations about alternatives, and reflective discussion enables students to articulate and reconsider their decisions. Active engagement and student-centered expression can also support these processes by providing learners with opportunities to test ideas and communicate their reasoning. In this way, the four pedagogical dimensions of active learning discussed in the previous section can be linked to the three analytical thinking processes examined in this study: strategic thinking and problem-solving, inference-making, and comparison. Although existing research suggests a relationship between active learning and higher-order thinking, further classroom-based research is needed to understand how students engage in specific analytical processes during language learning. Examining these processes alongside students' experiences may also help identify the conditions that support or limit their participation. The active learning dimensions guided the design of instructional activities, while the three analytical thinking processes provided a framework for examining students' reported reasoning experiences. The study explored how opportunities for analytical thinking skills emerged within the activities instead establishing predefined one-to-one relationships between these dimensions and processes.

2.4. Significance and Purpose of the Study

Middle school education is an important setting for embedding analytical thinking in learning process. At this level, learning tasks become increasingly complex, requiring students to interpret information, consider alternatives, and explain their reasoning. The importance of the inclusion of thinking skills in the teaching in classrooms is also reflected in the national and international educational priorities (Ministry of National Education, 2019; OECD, 2016). The challenge remains, however, to put these priorities into practice in the classroom. Previous studies have criticized the instructional materials and teachers' preparation to support the development of analytical thinking (Erdoğan, 2024; Güçlü, 2024; Kuru & Şimşek, 2022). Active learning literature has largely focused on its general benefits, including its potential to support higher-order thinking, while providing less insight into how students engage in specific analytical processes during classroom activities. This distinction is especially relevant in middle school EFL education, where students must attend to both language use and the reasoning involved in interpreting and responding to communicative situations. Examining active learning in this context may help clarify how instructional practices create opportunities for analytical thinking and what conditions support or limit students' participation.

The present study therefore aims to examine how active learning activities integrated into a middle school EFL curriculum provide opportunities for students to engage in analytical thinking and how students experience these activities. Using a qualitative single-case study design, the research focuses on a six-week implementation in an eighth-grade classroom in Türkiye. It considers four pedagogical dimensions of active learning—collaborative learning, active engagement, reflective discussion, and student-centered expression—in relation to three analytical thinking processes: strategic thinking and problem-solving, inference-making, and comparison. In addition to examining these opportunities, the study explores students' cognitive and affective experiences, including the challenges and facilitating conditions they identify during implementation based on students' accounts. By examining these aspects together, the study seeks to offer practical insights into integrating analytical thinking opportunities into regular EFL instruction.

The study addresses the following research questions:

RQ1. How do students describe opportunities to engage in analytical thinking processes, particularly strategic thinking and problem-solving, inference-making, and comparison during active learning activities?

RQ2. How do students experience active learning activities cognitively and affectively, and what challenges and facilitating conditions do they identify during implementation?

3. Method

3.1. Research Design

This study employed a qualitative single-case study design to examine how active learning activities integrated into a middle school English as a Foreign Language (EFL) curriculum provided opportunities for analytical thinking and how students experienced these activities. A case study approach was appropriate because the study sought to understand instructional practices and students' experiences within a specific classroom context rather than to measure the effects of an intervention. The case was bounded by one eighth-grade EFL classroom in a public middle school in Türkiye, the six-week implementation period during the fall semester of the 2024-2025 academic year.

3.2. Case Context and Instructional Activities

The study was conducted within the national eighth-grade EFL curriculum implemented in public middle schools in Türkiye. Rather than developing a separate instructional program, the researchers integrated active learning activities into the existing curriculum while retaining its prescribed learning outcomes and communicative functions. The implementation focused on the curriculum theme *On the Phone*, which was scheduled for instruction during the study period. This theme included everyday communicative situations, including interpreting telephone conversations, choosing appropriate expressions, responding to requests, and constructing dialogues. Such activities were relevant to the analytical thinking processes examined in the study because they required students to consider contextual information, compare possible responses, and make decisions about language use.

The activities were collaboratively planned by the two researchers in accordance with the curriculum objectives and four interrelated dimensions of active learning: collaborative learning, active engagement, reflective discussion, and student-centered expression. These dimensions guided the selection and organization of classroom activities rather than functioning as separate instructional methods. The six-week instructional sequence was implemented during regular English lessons. Students participated in individual and collaborative activities, depending on the nature of the tasks, and were encouraged to explain their choices, consider alternative responses, and reflect on their thinking. Table 1 summarizes the instructional activities and their associated active learning dimensions.

Table 1

Overview of the Six-Week Instructional Implementation

Week	Instructional Focus and Activities	Active Learning Dimensions
1	Vocabulary matching, word clouds, and brainstorming about telephone communication	Active engagement; student-centered expression
2	Listening to telephone dialogues, predicting responses, and role-playing	Active engagement; collaborative learning
3	Constructing telephone dialogues and performing role-plays	Collaborative learning; student-centered expression
4	Decision Dice and improvisation involving spontaneous communicative situations	Active engagement; student-centered expression
5	Collaborative reading activities and text puzzles	Collaborative learning; reflective discussion
6	Dialogue writing, peer review, and Dialogue Olympics	Collaborative learning; reflective discussion; student-centered expression

As Table 1 shows, the activities incorporated different dimensions of active learning while providing opportunities for students to engage in analytical thinking within everyday language learning tasks. These activities formed the instructional context in which students' experiences and perceived thinking processes were examined.

3.3. Participants

The participants were 25 eighth-grade students (12 girls and 13 boys), aged 13-14, attending a public middle school in central Türkiye during the 2024-2025 academic year. Convenience sampling was used because the study involved an existing classroom group taught by the English teacher participating in the study. Written parental consent was obtained before data collection, and participation was voluntary. The study was conducted in accordance with ethical principles, and confidentiality was maintained throughout the research process.

3.4. Data Collection

Two qualitative data collection tools were used in the study: student reflective journals and semi-structured interviews. These tools provided complementary perspectives on students' experiences of active learning activities and their engagement with analytical thinking processes during the six-week implementation.

Student Reflective Journals. Students were asked to complete reflective journals at the end of each lesson. The journals encouraged them to describe their participation in classroom activities, reflect on the reasoning processes they used, and identify aspects of the activities they found helpful or challenging. They also provided opportunities for students to express their thoughts and feelings about collaborative tasks, classroom discussions, and other learning experiences. To protect confidentiality while allowing entries to be followed across lessons, students used self-selected pseudonyms consistently throughout the implementation. The journals were submitted to the classroom teacher after each lesson.

Semi-Structured Interviews. Semi-structured interviews were conducted to explore students' experiences of active learning in greater depth. The interview questions addressed students' participation in classroom activities, interactions with peers, opportunities to explain and reconsider their ideas, and perceptions of how the activities encouraged reasoning and decision-making. The interviews also explored students' cognitive and affective experiences, including difficulties they encountered and conditions that facilitated their participation. The interview form was developed by the researchers following a review of the relevant literature. An initial draft was submitted to four field experts for feedback on the relevance, clarity, and appropriateness of the questions. The form was subsequently piloted with three eighth-grade students from the same school who were not participants in the study. Based on the pilot feedback, clarifying statements were added to improve the comprehensibility of the questions. Using the final interview form, semi-structured interviews were conducted with 12 students who volunteered from among the 25 participants. The interviews were conducted after the completion of the six-week implementation to allow students to reflect on their experiences across the instructional activities. All interviews were audio-recorded and transcribed verbatim for analysis.

Together, the reflective journals and interviews provided self-reported accounts of students' engagement, perceived reasoning processes, and experiences of the instructional activities. The journals captured reflections during the implementation, while the interviews allowed students to elaborate on their experiences and identify challenges and facilitating conditions. These data formed the basis for the qualitative analysis.

Two researchers were involved in the study. The second researcher was the students' regular English language teacher and implemented the instructional activities during scheduled lessons. The first researcher collaborated with the teacher to plan the activities and develop the data collection instruments. Having the students' regular teacher implement the activities may have helped students feel more comfortable and secure in the familiar classroom environment.

3.5. Data Analysis

Data from students' reflective journals and semi-structured interviews were analyzed using thematic analysis, informed by Braun and Clarke (2006). For RQ1, we applied a deductive approach and used the predefined themes namely strategic thinking and problem-solving, inference-making, and comparison-provided. We also applied an inductive approach for RQ2. The analysis began with repeated reading of the journal entries and interview transcripts to become familiar with the data. We coded meaningful segments related to students' reasoning, interactions, participation, and reflections on the activities. The initial codes were compared and organized into broader patterns, which were reviewed against the coded extracts and the overall dataset and refined to develop themes that addressed the research questions. For example, students' accounts of adapting explanations were coded as *"addressing communication difficulties"* and "*considering alternative responses"* categorized under the predefined theme "*strategic thinking and problem-solving*" for RQ1. Moreover, for RQ2, students' accounts of pleasure and fulfilment were coded as "*emotional reactions*". These codes were grouped under the inductively developed theme of *"affective experiences and challenges in engagement"*.

Both researchers participated in the analysis and discussed coding decisions and emerging interpretations. Differences in interpretation were examined through discussion, with attention to the context and meaning of students' statements. These discussions were used to refine interpretations rather than to establish statistical coding agreement. Relevant extracts from reflective journals and interviews were used to illustrate the themes and explicitly support the researchers' interpretations.

4. Findings

The findings are presented in two main sections corresponding to the research questions.

4.1. Students' Reported Opportunities for Analytical Thinking in Active Learning Activities

Students' accounts revealed opportunities to engage in analytical thinking during active learning activities. The findings are presented in relation to three analytical thinking processes: strategic thinking and problem-solving, inference-making, and comparison.

4.1.1. Strategic Thinking and Problem-Solving

Students' accounts indicated that active learning activities provided opportunities for them to *consider alternative responses and address communication difficulties.* Strategic thinking and problem-solving were particularly apparent in descriptions of modifying explanations, and responding to communicative situations presented through role-playing activities. One recurring pattern concerned students' attempts to overcome difficulties in communicating with peers. Student 7 explained, "If the other person doesn't know the word, I try to explain it in a different way." Similarly, Student 1 wrote in a reflective journal, "When my friend didn't understand, I tried to explain it using another example, and that helped me learn the word better." These accounts illustrate students' recognition of communication difficulties and their attempts to find alternative ways of conveying meaning. Rather than relying exclusively on an initial explanation, students described adjusting their responses according to the needs of their peers during active learning activities. For instance, simulated telephone conversations provided another context for strategic thinking by presenting students with communicative situations in which they were expected to select appropriate responses. In the reflective journal, Student 5 wrote, "Our teacher gave us different problem situations and we made phone calls based on them. It was fun to talk like a secretary." Student 4 similarly explained, "We wrote the dialogue and then acted it out in class." Although these accounts primarily describe participation in role-playing activities rather than specific problem-solving processs, they illustrate how students engaged with simulated situations designed to encourage communicative decision-making.

Overall, the accounts suggest that opportunities for strategic thinking and problem-solving were most clearly reflected in their descriptions of adapting explanations when communication difficulties arose.

Role-playing activities offered an additional context for communicative decision-making, although the accounts provided limited detail about the reasoning involved.

4.1.2. Inference-Making

Inference-making was reflected in students' descriptions of *using contextual information to interpret unfamiliar vocabulary, anticipating the continuation of dialogues, and constructing meaning from incomplete information.* Students described listening, reading, and prediction activities in which they were encouraged to consider contextual clues when interpreting unfamiliar language. Student 3 explained, "I learned to guess the words I don't know while listening to phone calls." Student 9 similarly stated, "I try to guess what the words mean instead of quickly translating them." These accounts indicate that students recognized guessing as an approach to understanding unfamiliar vocabulary, although they provided limited detail about the specific contextual clues used. Other students described how particular instructional supports contributed to their attempts to make inferences. Student 2 stated, "It was very helpful to try to figure out the words I didn't know in the texts from the context instead of asking them directly. I felt more successful, especially in the activities where we were first shown pictures and then had to guess the words". Student 5 also described an activity in which the teacher presented a dialogue with missing words and students attempted to "predict how the conversation would continue". These accounts suggest that contextual and visual information provided clues for interpreting language. Reflective journals offered further insight into students' approaches to inference-making. Student 9 wrote, "When I guess the word, I'm very happy if I'm right, but if I'm wrong, we try to figure out why." Student 2 explained, "When I do fill-in-the-blank activities, I try to understand the whole text first." These reflections suggest that some students approached inference tasks by considering the broader context and, when their initial interpretations were unsuccessful, reconsidering their reasoning. This statement, unlike accounts only describing the guessing of unknown words, also illuminates the student's reported strategy of reasoning by pointing to the use of the broader textual context in interpreting missing information. Classroom discussion also featured in students' descriptions of inference-making. Student 3 reported, "Our teacher gave us sentences with words we didn't know and we guessed what they meant and talked about them in class." This account illustrates how individual interpretations could become the subject of collective discussion, creating opportunities to compare possible meanings and reconsider initial guesses.

Taken together, the findings suggest that prediction tasks, contextual vocabulary activities, and collaborative discussions provided opportunities for students to interpret incomplete information and draw inferences. Students' accounts also indicate that these opportunities were supported by contextual clues, visual materials, and discussion of alternative interpretations.

4.1.3. Comparison

Comparison was evident in students' accounts of *examining alternative expressions, evaluating dialogues, and considering how language choices varied across communicative situations*. Students described comparing their own responses with examples, discussing the suitability of different expressions, and considering differences between familiar and unfamiliar forms of communication. Student 1 explained, "Looking at the dialogues and seeing which phrases were better helped me understand how language is used." Similarly, Student 3 stated, "I wrote my own phone conversation first, and then I compared it to the example." These accounts show students' involvement in comparison by examining alternative expressions and linking their own conversations to models provided. Student 3's statement does not outline the standards by which comparisons are made, whereas Student 1's explanation calls attention to the relative appropriateness of terms. Students also referred to comparisons between language use in different cultural contexts. Student 5 explained, "Our teacher showed us how people in different cultures make phone calls." This activity introduced an additional basis for comparison by encouraging students to consider how communicative conventions might differ across contexts. Collaborative comparison was particularly evident in Student 8's account: "Our instructor provided us with two distinct dialogues, and we discussed as a group which one was more suitable for which circumstance." This example illustrates the way

comparison was embedded in peer-discussion, asking students to judge the suitability of alternative responses rather than simply to identify the differences between texts. This account also refers to situational appropriateness, which suggests an evaluative dimension of comparison, although it does not specify the criteria students used to judge the suitability of each dialogue.

Across these accounts, comparison involved more than identifying similarities and differences. Students described evaluating the suitability of expressions, relating their own work to models, and considering alternative perspectives during discussion. These experiences suggest that dialogue construction, peer interaction, and contextualized language tasks provided opportunities to engage in comparative reasoning.

4.2. Students' Cognitive and Affective Experiences of Active Learning

In addition to the opportunities for analytical thinking identified in the previous section, students reported varied experiences of participating in active learning activities. Their accounts revealed both perceived benefits and difficulties, particularly in relation to cognitive support and affective experiences and challenges in engagement.

4.2.1. Perceived Cognitive Support

Several students described contextual clues, visual materials, and opportunities to discuss interpretations as helpful when working with unfamiliar language. For example, Student 2 associated the use of pictures with feeling more successful in vocabulary-guessing activities. Similarly, students' reflections on completing dialogues and interpreting texts suggested that examining the surrounding context helped them approach unfamiliar expressions. However, students also reported uncertainty when their interpretations were incorrect. Student 7 stated, "I realized that I sometimes got it wrong when I tried to guess what would happen based on the context." Student 9 explained, "I know most of the words in the sentence, but sometimes I guess one word wrong and the whole meaning changes." These statements indicate that contextual guessing could be cognitively demanding, particularly when students lacked sufficient information to evaluate their interpretations. Student 6 similarly reported, "When I try to guess the words I don't know in the text, I sometimes mix them up with other words." Taken together, these accounts suggest that students sometimes experienced difficulties in interpreting unfamiliar language and determining the accuracy of their guesses.

4.2.2. Affective Experiences and Challenges in Engagement

Students' accounts revealed different *emotional reactions* to active learning activities. Certain students articulated feelings of *pleasure* and *fulfilmen*t, especially during engagement in simulations or the effective execution of inference assignments. Student 5, for instance, characterised the role of a secretary in simulated phone dialogues as pleasurable. A different student's reflective notebook linked affective vocabulary inference with joy, indicating that accomplishing difficult tasks may evoke good emotions. Other students articulated *reluctance* and *ambiguity*. Student 8 articulated, "I tried to find different answers, but sometimes I used the wrong word." The same student's statement also revealed hesitance to communicate due to apprehension regarding errors. These experiences indicate that activities necessitating impromptu reactions or exploration of novel phrases may be accompanied by apprehension regarding precision. Some students also expressed *dissatisfaction* with repetitive tasks. Student 4 stated, "Sometimes I felt like I wasn't learning anything new because the activities were so similar." This comment suggests that perceived repetition could reduce students' sense of novelty and engagement. Alongside these emotional reactions, students also described how collaborative activities influenced their opportunities to participate and express their ideas. Learners defined peer dialogues as chances to explore different views and gain insights from their peers' input. For instance, Student 8's narration of contrasting debates within a group demonstrated how cooperative assignments could reveal diverse reactions and viewpoints. Nonetheless, engagement was not uniformly pleasant for every student. Student 10 articulated, "Sometimes when I guess, my friends answer faster and I fall behind." The pupil expressed, " I wish I had more time to think for myself." This account indicates that the speed of group activities may restrict chances for pupils requiring extra time to develop their responses. A similar concern emerged in comparison activities. Student 10

remarked, "I occasionally heed my friends' words, yet I remain silent." This response suggests that mere participation in a collaborative endeavour did not inherently imply that a student was capable or inclined to engage actively. Learners articulated their preferences on the methods of conveying their thoughts. Student 6 articulated, "It would have been preferable to engage in discussion rather than merely documenting our comparisons." This assertion implies that dependence on a singular form of communication may pose challenges for certain learners, notwithstanding their desire to convey information.

In summary, such accounts suggest that students experienced positive and negative emotions, during active learning activities, alongside differences in their opportunities to engage. Engagements that fostered contact and self-expression can be pleasurable and beneficial, although apprehensions over errors, the tempo of group dynamics, and restricted avenues for personal expression could also affect students' engagement.

5. Discussion and Conclusion

5.1. Discussion

This study explored how active learning activities integrated into a regular eighth-grade EFL curriculum provided opportunities for analytical thinking and how students experienced these activities cognitively and affectively. The findings suggest that contextualized language tasks, collaborative interactions, and opportunities for reflection created situations in which students could engage in strategic thinking and problem-solving, inference-making, and comparison. At the same time, students' accounts also suggested that their engagement with these opportunities was related to cognitive support and affective experiences and challenges in engagement. Rather than demonstrating measurable improvements in analytical thinking skills, the study provides a context-sensitive account of how students perceived and experienced analytical engagement within everyday classroom instruction.

Regarding the first research question, students' accounts indicated that strategic thinking and problem-solving were associated with communicative tasks that required them to consider alternative responses and adapt their explanations. In particular, students described reformulating explanations when classmates experienced difficulties and constructing responses to situations presented through simulated telephone conversations. These experiences are consistent with the emphasis placed on meaningful participation and problem-oriented activity in active learning approaches (Bonwell & Eison, 1991). They also relate to Dewey's (1938) view of learning as an experiential process in which learners engage with situations requiring judgment and reflection. In the present study, the significance of these activities lay not in demonstrating improved problem-solving performance but in providing opportunities for students to make communicative decisions and reconsider their initial approaches.

Inference-making was reflected primarily through students' descriptions of interpreting unfamiliar expressions, predicting dialogue content, and using contextual information to construct meaning. The students reported that contextual and visual clues were useful resources. Other avenues for inference-making were incomplete dialogs and classroom discussions. This finding could be considered in conjunction with Chi and Wylie's (2014) description of cognitive engagement, emphasizing the significance of learners' constructive and interactive participation in learning activities. Reflections from students suggest that inference tasks encouraged them to move beyond direct translation and to consider contextual relationships. However, their accounts also revealed uncertainty about the accuracy of their interpretations, indicating that opportunities for inference-making need to be accompanied by feedback and appropriate instructional support.

Comparison was reflected in activities that encouraged students to evaluate alternative expressions, examine dialogue models, and discuss the appropriateness of responses in different communicative contexts. Students described comparing their own dialogues with examples and considering alternative interpretations during group discussions. These findings suggest that comparison can be incorporated into EFL instruction through tasks that require learners to justify language choices rather

than merely identify formal differences. Collaborative discussion was particularly relevant because it created opportunities to reconsider alternative perspectives and created opportunities to reconsider their initial judgments. This interpretation is broadly consistent with research emphasizing the potential contribution of collaborative and reflective learning activities to higher-order thinking (Guo et al., 2024; Yu et al., 2024).

Taken together, the findings related to the first research question suggest that the three analytical thinking processes were supported by overlapping instructional opportunities rather than isolated teaching techniques. These activities could provide opportunities for more than one form of analytical reasoning, although students' accounts did not always provide sufficient detail to establish which processes they engaged in. For example, responding to an unfamiliar communicative situation could involve interpreting contextual clues, comparing possible expressions, and selecting an appropriate response. This overlap illustrates how the pedagogical dimensions of active learning-collaborative learning, active engagement, reflective discussion, and student-centered expression-can be incorporated into regular language instruction to create opportunities for analytical engagement. Nevertheless, the evidence supports an interpretation of these activities as opportunities for reasoning, not a conclusion that any particular dimension independently produced improvement in analytical thinking skills.

The second research question concerned students' cognitive and affective experiences of active learning. The findings indicated that students valued contextual clues, visual materials, opportunities to discuss interpretations, and simulated communicative tasks. Their positive accounts of role-playing and successful inference tasks suggest that enjoyment and satisfaction were associated with their experiences of engagement. This observation is compatible with Rotgans and Schmidt's (2011) discussion of situational interest in learning contexts, although the present study did not measure situational interest or establish its relationship with achievement. The findings instead show how students described the activities they found meaningful or enjoyable.

Importantly, students' experiences were not uniformly positive. Some reported difficulty interpreting unfamiliar language, uncertainty about their answers, and reluctance to speak because of fear of making mistakes. Others indicated that classmates sometimes responded too quickly, leaving insufficient time for individual thinking, or that written comparison tasks restricted how they could express their ideas. These accounts challenge the assumption that engagement in active learning activities necessarily results in meaningful cognitive engagement for every learner. Being placed in a collaborative task does not guarantee that students have sufficient time, confidence, or opportunity to contribute. The findings therefore highlight the importance of examining the conditions under which active learning takes place, rather than focusing exclusively on the instructional techniques employed.

A further finding concerned students' differing responses to task variety and modes of expression. While simulated communicative situations were perceived as enjoyable and relevant, some students considered repetitive activities less engaging. Others preferred opportunities to communicate their ideas orally rather than exclusively in writing. These experiences suggest that the design of active learning activities should take account of variation in students' linguistic confidence, preferred forms of participation, and need for individual processing time. Such considerations are particularly relevant in EFL classrooms, where the cognitive demands of reasoning tasks may coincide with the linguistic demands of expressing ideas in an additional language.

Overall, the study contributes to the literature by examining analytical thinking opportunities and students' experiences together within a bounded classroom context. Its contribution is not the demonstration of an instructional effect but the identification of ways in which analytical engagement was embedded in ordinary curriculum activities, alongside the challenges that shaped students' participation. This perspective extends discussions of active learning beyond whether particular methods are effective to consider how learners experience the reasoning opportunities those methods provide.

5.2. Conclusion

The study examined a six-week implementation of active learning activities within the *On the Phone* theme of the eighth-grade EFL curriculum. Students' reflective journals and interviews indicated that classroom tasks involving dialogue construction, role-playing, contextual prediction, and collaborative discussion provided opportunities to engage in strategic thinking and problem-solving, inference-making, and comparison. The findings also highlighted the importance of considering students' experiences alongside the reasoning opportunities offered by instructional activities. Students described benefits associated with contextual support, meaningful communication, and peer interaction, but they also reported uncertainty, fear of mistakes, limited individual thinking time, and difficulties expressing their ideas. These experiences suggest that the educational value of active learning depends not only on the activities selected but also on how participation, feedback, and opportunities for reflection are organized. Therefore, the study offers a context-specific illustration of how active learning principles can be integrated into current EFL curriculum activities without the need for a separate instructional program. It also underscores the need to distinguish between providing opportunities for analytical thinking and demonstrating development in analytical thinking skills.

5.3. Limitations and Implications for Practice and Future Research

Several limitations should be considered when interpreting the findings. First, the study involved a single eighth-grade classroom with 25 students in one public middle school in Türkiye. The findings are therefore situated within a particular instructional, curricular, and institutional context and should not be assumed to represent students' experiences in other settings. As the semi-structured interviews were conducted with 12 volunteers from the 25 participating students, the interview data may reflect the experiences of students who were more willing to share their perspectives.

Second, the implementation lasted six weeks and focused on a single EFL curriculum theme. This bounded period provided an opportunity to examine students' experiences during a specific instructional sequence but did not allow conclusions about the sustainability of their engagement or the longer-term development of analytical thinking skills.

Third, the findings were based on students' reflective journals and semi-structured interviews. Although these sources offered insight into students' perceptions and reported reasoning processes, they did not provide direct or independent measures of analytical thinking performance. Accordingly, the study cannot establish whether students' analytical thinking skills improved or whether the observed opportunities would lead to measurable learning gains.

Finally, the classroom teacher was also a researcher and was responsible for implementing the activities and collecting students' reflective journals. This dual role may have influenced how students described their experiences, particularly when commenting on difficulties or aspects of the lessons they did not enjoy. Although pseudonyms were used in the journals, this procedure alone cannot eliminate the possibility of socially desirable responses. The teacher's involvement in both instruction and research may also have influenced the interpretation of students' accounts, despite the researchers' collaborative discussions during analysis.

The findings have several implications for instructional practice. Instead of seeing analytical thinking as a separate instructional objective, teachers could consider integrating opportunities for making strategic choices, contextual inference, and comparison into existing curriculum tasks. In EFL classrooms, simulated conversations, dialogue analysis, prediction tasks, and collaborative discussions may offer accessible contexts for such opportunities. However, the findings also suggest that active learning requires attention to the conditions of participation. Providing individual thinking time before group discussion, using contextual and visual supports, offering constructive feedback, and allowing different forms of expression may help address difficulties reported by students. Task variety and opportunities to participate without excessive fear of making mistakes also warrant consideration. These implications should be understood as pedagogical considerations informed by students' accounts rather than practices whose effectiveness was directly tested in this study.

Future research could consider similar pedagogical approaches in other classrooms, grade levels, curriculum themes, and subject areas to investigate how contextual variables influence students' experience of analytical engagement. Longitudinal qualitative studies could explore the development of students' reasoning practices and perceptions over longer time periods. Studies that include classroom interaction data, student work samples, or performance-based assessments could also provide a more direct investigation of analytic thinking processes and their potential development. Comparative or mixed-methods designs may further clarify the relationships among instructional opportunities, participation conditions, and learning outcomes.

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