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DEVELOPING STUDENTS' CRITICAL THINKING SKILLS THROUGH COLLABORATIVE LEARNING: A PEDAGOGICAL APPROACH

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ABSTRACT

Critical thinking and collaboration are increasingly viewed as important learning outcomes in contemporary education. Students are expected not only to remember information but also to analyse evidence, compare perspectives, solve problems and justify decisions. Collaborative learning can provide a classroom environment in which these processes occur through discussion, explanation, questioning and joint problem-solving. This paper examines the pedagogical relationship between collaborative learning and critical thinking through a focused review of relevant educational literature. It considers conceptualisations of critical thinking, mechanisms through which collaboration may support higher-order thinking, practical classroom strategies, teacher scaffolding, assessment and implications for English as a Foreign Language (EFL) education. Evidence from a 2023 meta-analysis of 36 empirical studies indicates a positive overall effect of collaborative problem-solving on critical thinking, while also showing that instructional design, group size, duration and scaffolding can influence outcomes. The paper argues that collaboration should not be reduced to placing learners in groups. Productive collaboration requires purposeful tasks, individual accountability, structured interaction and reflection. The paper concludes with implications for classroom practice and a possible research agenda for EFL education in Uzbekistan.

Keywords:

Critical thinking; collaborative learning; higher-order thinking; problem-solving; peer interaction; EFL education; pedagogy

Education systems are increasingly expected to prepare learners for situations in which knowledge must be applied rather than simply reproduced. In school, university and professional contexts, people encounter incomplete information, competing explanations and problems that may have more than one possible solution. These conditions make the ability to analyse information, evaluate evidence, communicate reasoning and make justified decisions especially important. Critical thinking is therefore widely discussed as a central component of contemporary education.

Critical thinking, however, is not a single classroom activity. It involves a set of related cognitive and metacognitive processes. Facione (1990) identifies interpretation, analysis, evaluation, inference, explanation and self-regulation as important elements of critical thinking. In practical classroom terms, students need opportunities to ask questions, identify assumptions, compare alternatives, use evidence and reflect on the quality of their own reasoning. At the same time, learning is increasingly understood as an active and social process. Collaborative learning gives students opportunities to interact with peers, exchange ideas.

Pedagogy construct understanding together. When students encounter a different interpretation from their own, they may have to explain why they hold a particular position or reconsider an initial assumption. Thus, collaboration can provide a social context for cognitive development.

The relationship between collaborative learning and critical thinking has received empirical attention. Xu, Wang, and Wang (2023), in a meta-analysis of 36 empirical studies, reported a

significant positive overall effect of collaborative problem-solving on students' critical thinking. Their analysis also showed that factors such as intervention duration, group size, teaching type and learning scaffolds can moderate outcomes. These findings suggest that the design of collaborative learning is as important as the decision to use group work.

The present paper aims to examine this relationship from a pedagogical perspective. It focuses on five questions: What does critical thinking involve? How can collaboration create opportunities for critical thinking? Which classroom strategies are especially useful? What role does teacher scaffolding play? And what implications does this relationship have for EFL classrooms and future research?

Conceptualising Critical Thinking Critical thinking has been defined in different ways across educational research. Despite differences in terminology, many definitions emphasise purposeful judgement, evidence-based reasoning and reflective thinking. Facione (1990) describes critical thinking as a process involving interpretation, analysis, evaluation, inference, explanation and self-regulation. This definition is useful for pedagogy because each process can be connected with observable classroom behaviours.

Analysis, for example, can be seen when learners identify the main parts of a problem and examine relationships between them. Evaluation occurs when students judge the credibility, relevance or strength of information. Inference involves drawing a conclusion from available evidence. Explanation requires learners to communicate the reasoning behind a conclusion, while self-regulation involves monitoring and revising one's own thinking. Critical thinking is closely connected with higher-order thinking. Anderson and Krathwohl's (2001) revision of Bloom's taxonomy places analysing, evaluating and creating above remembering and understanding. This does not mean that basic knowledge is unimportant. Rather, factual knowledge provides material that learners can analyse and use. Effective pedagogy should therefore connect foundational knowledge with opportunities to apply, evaluate and create.

For classroom practice, critical thinking can be made visible through questions and tasks. Questions such as "What is the evidence?", "What is another possible explanation?", "Which solution has the strongest support?" and "What could be changed?" require learners to go beyond recall. Importantly, students should have sufficient knowledge and language support to participate meaningfully in such activities. 3. Collaborative Learning and Its Pedagogical Basis Collaborative learning refers to learning arrangements in which students work together toward shared academic goals. It is related to cooperative learning, although the terms are not always used.

Pedagogy in exactly the same way. Johnson, Johnson, and Smith (2014) emphasise positive interdependence, individual accountability, promotive interaction, social skills and group processing as important conditions for effective cooperative learning. This distinction is important because simply placing students in groups does not guarantee collaboration. A group may divide a worksheet into separate parts and complete it independently. In such a situation, learners have limited opportunities to explain or challenge one another's reasoning. By contrast, a genuinely collaborative task requires students to depend on interaction to reach a common outcome.

The social nature of collaborative learning can also expose learners to cognitive diversity. Students may have different interpretations, experiences and strategies. When these perspectives are made explicit, learners have an opportunity to compare them. Discussion can therefore become a mechanism through which students make their thinking visible and revise it when necessary.

Collaborative learning is particularly relevant to student-centred pedagogy because the teacher is not the only source of knowledge. The teacher designs the learning conditions, while

students contribute ideas, questions and explanations. This does not reduce the importance of the teacher; rather, it changes the teacher's role toward facilitation, scaffolding and monitoring.

How Collaboration Can Develop Critical Thinking There are several mechanisms through which collaborative learning may support critical thinking. The first is explanation. When learners explain an idea to peers, they must organise their reasoning and make relationships clear. This can reveal gaps in understanding that may remain unnoticed during silent individual work. The second mechanism is exposure to alternative perspectives. A student may initially believe that one solution is obvious, but a peer may propose another interpretation. The need to compare these interpretations creates an opportunity for analysis and evaluation. The goal is not to make students disagree for its own sake, but to encourage them to justify conclusions with reasons and evidence. The third mechanism is joint decision-making. In many collaborative tasks, the group needs to reach a common conclusion. Students therefore have to consider the strengths and weaknesses of different proposals. A well-designed task can require them to justify why a particular solution was selected. The fourth mechanism is reflection. After collaboration, learners can review how the group reached its decision and whether the evidence was sufficient. Reflection connects social interaction with metacognition. Students can identify which information influenced them, whether their views changed and what they would do differently next time. The empirical literature supports this general relationship. Xu et al. (2023) analysed 36 empirical studies and found a significant overall effect of collaborative problem-solving on critical thinking. Importantly, their findings also showed variation across intervention conditions.

Pedagogy supports a cautious interpretation: collaboration can support critical thinking, but its effectiveness depends on how the learning experience is designed. Pedagogical Strategies Collaborative problem-solving is one of the clearest ways to connect collaboration with critical thinking. The teacher presents a meaningful problem and asks groups to identify the problem, generate possible solutions, compare alternatives and justify a final decision. The task should be open enough to require reasoning but structured enough that students understand what successful performance means. Structured group discussion can also promote critical thinking. Rather than asking students to "discuss the topic" without guidance, the teacher can provide prompts such as "Give one reason," "Ask for evidence," "Offer an alternative," or "Explain why you disagree." Roles can rotate so that students practise different interactional functions. Peer feedback is another useful strategy. Students can evaluate a peer's work using criteria such as clarity, relevance, evidence and reasoning. A simple checklist helps prevent feedback from becoming a general statement such as "good" or "bad." The act of evaluating another learner's work can also encourage students to apply criteria to their own work. Think–Pair–Share offers a simple structure for combining individual and collaborative thinking. Learners first consider a question independently, then compare their response with a partner, and finally contribute to whole-class discussion. The individual thinking stage reduces the risk that the fastest speaker will determine the group's answer immediately. Reflection should be integrated into collaborative activities. Short questions such as "Which idea influenced your decision?", "Did your opinion change?", and "What evidence was most useful?" can turn an activity into an opportunity for metacognitive development.

Teacher Scaffolding and Classroom Management Teacher support is central to effective collaborative learning. Students do not automatically know how to question respectfully, justify a claim or negotiate a decision. Teachers can model these behaviours and provide language or cognitive scaffolds. Scaffolding may include sentence starters, graphic organisers, examples, checklists, rubrics and guiding questions. In an EFL classroom, linguistic scaffolding is particularly important. Students may understand an idea but lack the language needed to explain it. Expressions such as "I agree because…", "I would like to add…", "The evidence suggests…", and "Another possibility is…" can support participation without reducing cognitive demand.

Group size also matters. Xu et al. (2023) found that group size was among the moderators associated with differences in the effects of collaborative problem-solving. From a practical perspective, smaller groups may make it easier for each learner to contribute. However, Pedagogy Teachers should also monitor participation. Stronger or more confident learners may dominate while quieter students contribute little. Assigning roles, requiring individual notes and including individual reflection can improve accountability. The purpose of structure is not to control every interaction but to make productive interaction more likely.

Assessment of Critical Thinking in Collaborative Tasks Assessment should reflect the thinking skills that the teacher wants students to develop. If assessment rewards only the final group product, individual reasoning may remain invisible. A balanced approach can include a group outcome, individual contribution and reflection. Rubrics can assess dimensions such as identifying the problem, use of evidence, analysis of alternatives, quality of reasoning, communication and reflection. Students can receive the rubric before the task so that expectations are clear. This also supports self-assessment and peer assessment. It is important to distinguish assessment from unsupported claims about improvement. In a classroom intervention, teachers should collect evidence through appropriate pre- and post-task measures, observation, student work or validated instruments where suitable. Without such evidence, it is more accurate to say that an activity is designed to promote critical thinking rather than claim that it has produced a measured increase. Implications for EFL Education The relationship between collaboration and critical thinking is especially relevant to English as a Foreign Language education. Language learning already involves communication, interpretation and negotiation of meaning. Collaborative tasks can therefore integrate language objectives with thinking objectives. For example, students can work in groups to design an ideal school. They identify essential facilities, compare different suggestions, discuss priorities and present a final plan. The language objective may involve vocabulary and functional expressions, while the thinking objectives include comparison, evaluation and decision-making. Other possibilities include ranking activities, information-gap problem-solving, mini-debates, project-based tasks and peer review.

The key principle is that language should be used to accomplish a meaningful cognitive task. This approach can make speaking and writing more purposeful while also giving learners opportunities to practise reasoning. For Uzbekistan, this area offers a relevant research direction because English language education increasingly requires communicative and learner-centred practices. A future empirical study could investigate a structured collaborative-learning intervention with clearly defined critical thinking outcomes and an appropriate comparison condition. The literature suggests a meaningful connection between collaboration and critical thinking, but the relationship should not be simplified. Collaborative learning is a pedagogical condition, not a guaranteed outcome. Students may collaborate socially without engaging in deep cognitive processing. Therefore, the quality of the task and interaction matters. The meta-analysis by Xu et al. (2023) is useful because it demonstrates both an overall positive effect and variation across conditions. Their results indicate that teaching type, intervention duration, group size and learning scaffolds can influence outcomes. This supports the idea that future classroom research should describe the intervention carefully rather than treating “group work” as one uniform method. For teachers, the implication is practical: collaborative activities should have a clear cognitive purpose. Students should need one another’s ideas to complete the task, and they should be asked to explain, evaluate and reflect. For researchers, the implication is methodological: studies should identify which dimension of critical thinking is being examined and how it is measured. There is also a need to consider context. A strategy that works in a university seminar may need adaptation for a primary EFL classroom. Learners’ age, language proficiency, cultural expectations, class size and teacher preparation can all influence

implementation. Therefore, local empirical research remains important. 10. Conclusion Critical thinking is a central component of contemporary pedagogy because learners need to interpret information, evaluate evidence, solve problems and make justified decisions. Collaborative learning can provide a productive context for these processes by encouraging students to explain ideas, consider alternative perspectives, negotiate solutions and reflect on decisions. The evidence reviewed in this paper indicates that collaborative problem-solving can have a positive relationship with critical thinking, while also showing that outcomes depend on implementation conditions. Effective collaboration therefore requires more than group placement. It requires meaningful tasks, structured interaction, individual accountability, teacher scaffolding and reflection. For EFL education, collaborative learning offers an opportunity to combine communication with higher-order thinking. Future research in Uzbekistan could move from general discussion toward empirical investigation of specific collaborative strategies, defined learner groups, measurable critical-thinking dimensions and clearly described intervention periods. Such research could contribute to both local pedagogical practice and the wider literature on learner-centred education.

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