Teaching Critical Thinking in Civic Education: A Qualitative Study of Novice Teachers' Experiences and Challenges

Zhongyi Lu[1], Hasnah Binti Mohamed[2]

[1]University Technology Malaysia, Faculty of Educational Sciences and Technology

[2]Shaanxi Institute of Technology

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ABSTRACT

This study aims to explore novice teachers' abilities, strategies, and challenges in implementing critical thinking instruction within civic education. Using a qualitative research approach, the study combined the Watson-Glaser Critical Thinking Appraisal (WGCTA) and focus group interviews to investigate eight novice teachers from vocational colleges in China who teach civic education courses. The findings indicate that novice teachers demonstrate a moderate level of critical thinking ability but possess a relatively high awareness of related teaching strategies. However, they face several practical challenges, including students' lack of independent thinking skills, limited background knowledge, and significant learning differences. The study proposes recommendations such as optimizing instructional processes, integrating information technology, and enhancing pre-service training to improve novice teachers' capacity to cultivate students' critical thinking in civic education. The findings offer empirical support for the promotion of critical thinking and the practice of civic education.

Keywords: novice teachers; civic education curriculum; critical thinking instruction; qualitative research; teaching practice

INTRODUCTION

Citizenship education is a form of education that aims to prepare individuals to become responsible citizens who actively participate in social affairs and understand their rights and responsibilities (Kymlicka, 1999). In today's diverse and fast-changing society, with the rapid growth of information types and volume, effective citizenship education helps individuals understand their roles in political, legal, social, and cultural contexts, while also promoting social harmony and democratic values (Tuhuteru, 2023).

In recent years, more young people in China are becoming willing to engage in public discussions. Many express their views on social topics such as environmental protection, the rule of law, and democracy. This highlights the growing importance of critical thinking. At the societal level, critical thinking helps prevent division, protects democratic values, and supports rational innovation. At the individual level, it enables people to make wise decisions, detect misinformation, and maintain independent thinking in a complex world (Fu, 2021).

Recognizing this, the Chinese Ministry of Education has identified critical thinking as one of the key competencies students need to develop. Citizenship education, in turn, is seen as an important subject for fostering students' thinking skills and moral judgment (Lin et al., 2023). In this context, teachers' critical thinking plays a central role in shaping students' civic literacy. Teachers must be able to analyze social issues critically in order to guide students beyond surface-level understanding and encourage rational dialogue and

value reflection. This helps students develop their ability to participate in public decision-making (Amani & Ala, 2024).

However, there are significant challenges. Studies in China show that many teachers lack systematic training in critical thinking. In pre-service teacher education, relevant courses are often fragmented, leaving future teachers unprepared to teach critical thinking on complex social issues (Christodoulou & Papanikolaou, 2023). In-service teachers also face time pressure and performance assessments, which make it difficult to focus on critical thinking instruction. As a result, classrooms often rely on knowledge transmission, rather than encouraging students' civic engagement. Despite this, limited research has focused on teachers' critical thinking and how it is developed or applied.

Furthermore, the Ministry of Education in China defines the first three years of teaching as the novice teacher stage, during which the focus is on developing basic teaching skills and professional adaptation. Although many studies have discussed the goals and strategies for teaching critical thinking in citizenship education, little attention has been given to how novice teachers understand and implement critical thinking in real classroom settings. Since novice teachers are still forming their teaching beliefs and practices, studying how they apply critical thinking instruction in citizenship education can help reveal how educational ideals are translated into practice. This research also provides a valuable foundation for improving teacher training and curriculum reform.

Based on this, the present study adopts a questionnaire and qualitative interviews to first examine how novice teachers understand and apply critical thinking skills and dispositions. It then explores how these teachers use strategies related to critical thinking in their teaching of citizenship education. Specifically, the study has three main objectives:

1. To understand the extent to which novice teachers in Chinese vocational colleges have mastered knowledge and skills related to critical thinking, as well as their attitudes toward it.
2. To explore how these novice teachers apply critical thinking strategies in the context of citizenship education.
3. To propose practical recommendations for improving novice teachers' ability to foster students' critical thinking through citizenship education.

LITERATURE REVIEW

Critical thinking is widely recognized as one of the most important core competencies in the 21st century. Ennis (1993) defines it as "reasonable and reflective thinking focused on deciding what to believe or do," while Paul and Elder (2007) emphasize that critical thinking is the process of analyzing, evaluating, and improving one's own thinking. Critical thinking generally includes three main dimensions: cognitive skills (such as reasoning, analysis, and judgment), thinking dispositions (such as open-mindedness, skepticism, and logical thinking), and affective attitudes (such as respect for different views and the courage to question). In the field of education, critical thinking is seen not only as a skill but also as a thinking habit and a civic responsibility (Tuhuteru, 2023).

Citizenship education aims to help students understand the basic structures of the state and society, develop a sense of responsibility and public spirit, and gain the ability to participate in civic life (Kymlicka, 1999). Its core content includes rights and responsibilities, laws and rules, civic participation, social diversity, and value judgment. Because these topics often involve controversy, openness, and value conflict, citizenship education naturally provides a foundation for teaching critical thinking (Lindström, 2024). Effective citizenship education should not only guide students to explore social issues but also help them develop rational judgment and clarify their own values.

In democratic societies, critical thinking is considered essential for responsible citizenship. Facione (1990)

argues that citizens must be able to assess information, question authority, and make decisions based on evidence—skills that lie at the heart of critical thinking. In the context of citizenship education, critical thinking can help students identify and analyze different perspectives on public issues, avoid irrational or emotional judgments, and enhance their information literacy and moral reasoning. Therefore, citizenship education is not merely a process of knowledge transmission—it is also a training ground where students build opinions, develop positions, and learn to take responsibility.

Previous research has identified several effective strategies for promoting critical thinking in citizenship education, such as Problem-based learning, Role-play and position debates, Multitext analysis, Value clarification and moral reasoning (Galindo, n.d.). These strategies share several common features: they emphasize active student participation, dialogue and discussion, evidence-based reasoning, and reflective thinking.

Although many empirical studies have confirmed the positive outcomes of critical thinking instruction in citizenship education, there are still notable challenges. Researchers have found that many teachers lack systematic training in critical thinking instruction, and students often vary widely in their ability to express ideas or engage in deep thinking (O'Reilly et al., 2022). As a result, scholars have called for critical thinking instruction to be institutionalized in teacher education and professional development programs.

In summary, critical thinking and citizenship education are naturally aligned, as both aim to cultivate students' abilities for rational judgment and active civic participation. While existing research has proposed a variety of strategies and theoretical frameworks for integrating critical thinking into citizenship education, there remains a significant gap in understanding how such instruction is implemented in actual classroom settings—particularly by novice teachers. As a key group in the teaching workforce, novice teachers play an essential role in shaping future civic education practices. However, they have been largely overlooked in current studies. This study therefore focuses specifically on novice teachers, aiming to explore how they understand, apply, and adapt critical thinking strategies in the context of citizenship education.

RESEARCH METHODOLOGY

This study adopts a qualitative research approach to explore novice teachers' understanding, instructional strategies, challenges, and support needs related to implementing critical thinking in citizenship education. The focus is on in-depth exploration of individual experiences and group interactions rather than statistical generalization.

Research Procedure:

The research was conducted in two sequential phases:

Critical Thinking Skills Assessment

All participants completed the Watson-Glaser Critical Thinking Appraisal (WGCTA) Form A. This served as the initial stage of data collection and helped to establish a baseline understanding of the participants' critical thinking abilities.

Focus Group Interviews

Following the assessment, two rounds of focus group interviews were conducted. Each session was designed to elicit reflective dialogue and collaborative thinking among participants. The interviews were conducted face-to-face and audio-recorded for transcription and analysis.

Research Instruments:

Watson-Glaser Critical Thinking Appraisal (WGCTA) Form A:

A standardized instrument that evaluates critical thinking across five dimensions: inference, recognition of assumptions, deduction, interpretation, and evaluation of arguments. This tool was selected due to its strong reliability and the availability of validated Chinese versions suitable for use in educational settings.

Focus Group Interview Guide:

A semi-structured guide developed around three thematic domains: (1) Understanding of critical thinking; (2) Teaching strategies used to promote critical thinking; (3) Challenges and barriers encountered in implementation.

Each focus group session included three components: (1) Personal Sharing: Participants described relevant learning or teaching experiences. (2) Strategy Discussion: Participants reflected on practical methods and shared success stories and challenges. (3) Collaborative Task: Participants worked together to design a lesson around a real or hypothetical civic issue to promote critical thinking.

Participants:

The study involved eight novice teachers from vocational colleges in China. Participants were selected through purposive sampling based on the following criteria:

1. Less than three years of teaching experience, consistent with the Ministry of Education's definition of novice teachers in China;
2. Currently teaching courses related to citizenship education;
3. Willing to voluntarily participate in focus group discussions and share their professional experiences in a collaborative setting.

According to the sampling criteria, this study selected eight novice teachers from vocational colleges in China. The participants came from a variety of academic backgrounds, including sociology, law, and political science. To ensure diversity and representativeness, the selection process took into account gender balance, disciplinary distribution, school location (urban vs. rural), and educational qualifications. The eight participants were randomly divided into two focus groups for the interviews. To maintain confidentiality, each participant was assigned a code during the discussion sessions.

TABLE I Participant Information

Participant ID	Gender	Discipline	School Type	Education Level
A	Female	Political Science	Urban	Master's
B	Male	Sociology	Rural	Bachelor's
C	Female	Law	Urban	Master's
D	Male	Political Science	Urban	Bachelor's
E	Female	Sociology	Urban	Master's
F	Female	Sociology	Rural	Master's
G	Male	Political Science	Rural	Bachelor's
H	Female	Law	Urban	Master's

DATA ANALYSIS:

The focus group interview data were analyzed using thematic analysis, which allows for systematic

identification, organization, and interpretation of recurring patterns in qualitative data. Thematic coding focused on uncovering both individual insights and shared themes across the participant group.

Throughout the analysis, attention was paid to areas of agreement, divergence, and group dynamics. Member checking was conducted to enhance credibility, allowing participants to verify and validate the accuracy of transcriptions and preliminary interpretations. Reflexive journaling was also employed to monitor the researcher's biases and maintain analytic transparency.

RESULTS

The focus group data were analyzed using thematic analysis, which involved reading the transcripts multiple times, coding key phrases, and grouping them into patterns that reflected shared experiences and beliefs among participants. The researcher identified four overarching themes: understanding of critical thinking, instructional strategies, challenges in implementation, and lesson design.

Theme 1: Novice Teachers' Mastery of Critical Thinking Knowledge

This study assessed eight novice teachers using the Watson-Glaser Critical Thinking Appraisal (WGCTA) Form A. The test has a total score of 80 points, with scores above 60 considered excellent and scores below 40 considered poor.

In the self-assessment, five participants rated themselves as having a poor level of critical thinking, while the remaining three considered their skills to be at an intermediate level. None rated themselves as excellent. In subsequent focus group interviews, several participants further described their critical thinking skills as "lacking systematic knowledge," "unclear thinking patterns," or "having difficulty analyzing reasoning processes."

Following the self-assessment, participants completed the WGCTA Form A to evaluate their actual critical thinking skills. The test results showed that six participants scored at the intermediate level, while two participants scored above 60, reaching the excellent level. None scored below 40.

A comparison between self-assessment and actual test results revealed that some participants underestimated their abilities (see TABLE II). For instance, participants E and G both reported limited critical thinking skills in their self-assessment, but their actual scores were 65 and 67 respectively — categorized as excellent. On the other hand, participants B and F rated themselves as intermediate, but their test scores were close to the 40-point threshold, suggesting that their skill mastery still needs improvement.

TABLE II Comparison of Novice Teachers' Self-Assessed and Actual Critical Thinking Levels (WGCTA Results)

Participant	Self-Assessment Level	WGCTA Test Score (out of 80)	Test Result Level	Comparison Between Self-Assessment and Actual Performance
A	Poor	58	Moderate	Underestimated
B	Moderate	42	Moderate	Consistent
C	Poor	55	Moderate	Underestimated
D	Poor	50	Moderate	Underestimated
E	Poor	65	Excellent	Significantly underestimated
F	Moderate	44	Moderate	Consistent
G	Poor	67	Excellent	Significantly underestimated
H	Moderate	59	Moderate	Consistent

In addition, the researchers further explored participants' understanding of critical thinking concepts during interviews. All participants were asked about basic concepts of critical thinking and the six elements of argumentation (claim, data, warrant, backing, qualifier, and rebuttal). While most participants could not list all the technical terms, they were able to mention related key concepts and meanings:

Participant A, although self-rated as having "Poor," was able to describe the logical process of "using evidence to support a claim."

Participant C, who gave a self-assessment score of 55 in the knowledge category, identified keywords such as "stance," "argument," and "conclusion."

Participant H stated that they had "encountered critical thinking in teaching methodology courses," but could not recall the exact terminology or academic definitions.

After the researchers provided model answers, all participants acknowledged that they had previously learned the relevant knowledge. However, due to the lack of a unified definition of critical thinking in academic discourse, some expressed confusion or conceptual ambiguity. One participant noted, "Eastern and Western approaches use different terms, but the essence is quite similar."

In summary, although novice teachers' self-perceptions of their critical thinking knowledge and skills vary, the combined results from tests and interviews suggest that most participants possess a foundational level of critical thinking ability.

Theme 2: Strategies Used by Novice Teachers When Teaching Civic Education

A. Teaching Models

Based on the eight participants' past experiences in teaching civic education and their instructional designs for topics such as "Citizens' Rights and Responsibilities," it was found that the teaching models they employed were largely similar (see FIGURE I).

A typical civic education lesson generally follows four stages:

1. Motivation Arousal: Teachers begin by stimulating students' interest, often through questions, social news, or short video clips. For instance, Participant A shared that he likes to begin with real-life cases to "trigger students' emotions and attention," helping them realize that "this issue is closely related to our daily lives."

2. Knowledge Instruction: Teachers provide foundational knowledge related to the topic. Participant B mentioned that when teaching about citizens' basic rights, she would ask students to read relevant sections of the Constitution and create mind maps to summarize the rights and duties granted to citizens.

3. Classroom Activities: Students apply what they have learned through activities such as group discussions, case analysis, and role-playing. Participant D emphasized that "if students cannot distinguish between 'rights' and 'duties' clearly, discussions can easily go off track." All participants agreed that critical thinking cannot occur in a vacuum—students must first possess sufficient background knowledge in order to engage in reasoning, judgment, and analogy.

4. Lesson Summary: The teacher wraps up the lesson by reviewing key points and encouraging student reflection. Participant F shared that he often asks students to write one sentence about "the most important thing I learned today" to promote internalization of knowledge.

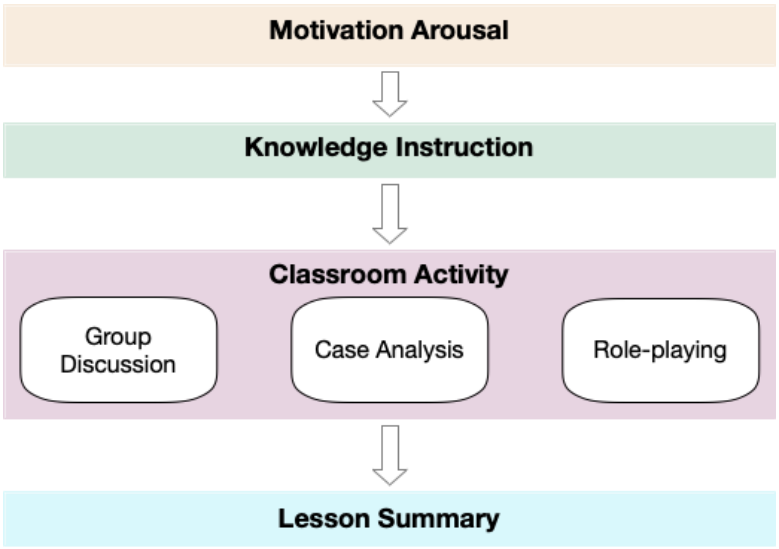

Figure I

These consistent structures across different teaching styles reflect novice teachers' recognition of the need for a systematic instructional process, particularly the belief that content knowledge is a prerequisite for critical thinking. As Participant C stated, "Without foundational knowledge, students' ideas are like water without a source."

B. Teaching Strategies

In this context, teaching strategies refer to the methods used by teachers to promote students' critical thinking. Interviews revealed that the most commonly used strategy among novice teachers was group discussion.

Teachers typically select a relevant issue, divide students into small groups for discussion, and then have group representatives share their views with the class. Participant E shared that she once facilitated a discussion on the topic "Should online speech be regulated?" Through collaborative learning, students were encouraged to listen to diverse perspectives and cultivate a critical attitude. "Sometimes students argue within their groups," she noted, "but I see that as a good thing—it shows they are beginning to think."

In addition to group discussions, some participants also used news stories to initiate critical dialogue. Participant G, for example, used a news article about a minor causing a traffic accident on an e-bike and asked students to debate whether minors should be held accountable. After the discussion, students had to write their stance and justification. He emphasized, "Writing is harder than speaking, but it forces them to organize their thoughts."

Other teaching strategies included role-playing and dilemma scenarios. Participant H described a lesson she designed on the tension between privacy and public safety. Students took on roles such as government officials, citizens, and media representatives to debate the issue of whether users' location data should be disclosed to prevent the spread of an epidemic. "At first, students thought this was a moral question," she said, "but later they realized it also involves legal issues and value conflicts."

Participant D added that when using dilemma-based scenarios, he deliberately chose issues that were ambiguous and open-ended: "Only when students realize that there's no clear right or wrong will they start analyzing and comparing the consequences of different decisions."

In summary, although novice teachers are still early in their professional journeys, they have demonstrated flexibility in adopting a variety of teaching strategies to meet their objectives. Notably, they value interactive, real-world activities that prompt students to think from multiple angles, gradually developing their critical

thinking habits and skills.

Theme 3: Challenges Faced by Novice Teachers in Teaching Civic Education Topics

A. Students' Tendency to Seek "Standard Answers"

All eight interviewed teachers pointed out a common challenge: students are conditioned to seek "standard answers." Even when teachers pose open-ended questions aimed at encouraging independent thinking and ask students to write down their personal views, students still tend to search for the "correct" response. This mindset is deeply rooted in their past educational experiences.

Two participants shared representative examples:

Participant C said, "I ask thought-provoking questions in class, but after class, students still come to me and ask, 'What's the standard answer?'"

Participant F recalled, "The first time I tried a classroom discussion, I modeled how to analyze an issue. But the next day, the students' assignments looked almost identical to what I had said. Since then, I've avoided expressing my personal stance during lessons."

Participant A offered a more in-depth explanation: "Students are used to a spoon-fed education system, where every question has a standard answer. That's how they've been trained."

This tendency weakens students' motivation to engage in open-ended critical thinking and creates resistance to inquiry-based learning.

B. Lack of Background Knowledge Among Students

Critical thinking relies on access to accurate and comprehensive information. However, many teachers noted that students often lack life experience and sufficient background knowledge on civic topics. This makes it difficult for them to engage in well-rounded discussions or develop deeper insights.

Participant B shared: "Students usually rely on the materials I provide in class. But no single handout can cover every angle. As a result, their arguments are often one-sided, and they struggle to explain why they hold a certain view."

Participant H added, "Sometimes students want to say something, but because they don't understand the topic well, their comments remain superficial."

Due to the limited hours allocated to civic education and the demands of other subjects, teachers find it hard to supply students with enough contextual knowledge for meaningful discussion.

C. Difficulty Guiding Students to Make Personal Judgments

Even when teachers provide balanced and sufficient information on both sides of an issue, many students still struggle to take a stance or explain their reasoning.

Participant G described a classroom activity built around the issue of whether school security camera footage should be made publicly available for the sake of transparency and safety. Although the pros and cons were thoroughly presented and discussed in class, when students were asked to choose a side, most replied, "Both sides make sense; I can't decide."

"That's just one example. Students are afraid of choosing the wrong side, so they end up not choosing at all." (Participant G)

Participant E observed similar behavior: "They can repeat the arguments from both sides, but when it comes to taking a personal position and justifying it, they freeze."

This shows that students lack practice in making value judgments and that novice teachers often struggle to guide them through such decision-making processes.

D. Significant Learning Gaps Among Students

Critical thinking involves multiple cognitive skills—language reasoning, argument analysis, decision-making, and problem-solving. These skills vary widely among students, making it difficult for teachers to engage all learners effectively.

Participant D noted: "Some students can clearly express their views and reasoning. But others, especially those with weaker communication skills, say almost nothing during group discussions."

Participant H said she tried grouping strong and weak students together to encourage peer learning, but the results were mixed: "I hoped stronger students would help the weaker ones. But in reality, the strong ones talk a lot, and the weaker ones just nod without contributing."

These learning gaps make it hard for teachers to challenge more advanced students while also supporting those who are less prepared.

E. Lack of Tools and Experience to Assess Critical Thinking

Finally, many novice teachers expressed uncertainty about how to evaluate students' critical thinking. They are unsure of what constitutes a successful critical thinking lesson and how to determine whether students have improved.

Participant B admitted: "Honestly, I'm not sure if my lessons are helping students improve their thinking. I don't have a clear way to assess their progress."

Participant F added, "I can see if they speak up or write something, but I don't know whether that really means their thinking skills have improved."

This lack of assessment tools and training leaves many novice teachers teaching "in the dark," with no reliable way to reflect on or refine their instructional practices.

DISCUSSION

Although most of the interviewed novice teachers demonstrated a moderate level of critical thinking ability, they showed a sound understanding of various instructional strategies proposed by scholars to enhance students' critical thinking skills and were able to apply them in civic education classes. However, they encountered numerous challenges during classroom implementation. The following section offers concrete teaching recommendations tailored to the difficulties raised by the participants, aiming to assist novice teachers in effectively promoting critical thinking through civic education.

A. Introducing the Meaning and Importance of Critical Thinking in the Initial Stage of Instruction

Based on the participants' experiences, students often believe that every question has a standard answer and tend to lack independent thinking skills. Therefore, before engaging students in critical thinking activities, teachers should explicitly explain the attitudes expected during such activities: being open-minded, respecting differing viewpoints, and feeling encouraged to express personal stances. Once students develop a basic understanding of the meaning and importance of critical thinking, they are more likely to be motivated and able to internalize its

principles during classroom instruction.

B. Implementing Pre- and Post-Tests

To assess whether students' critical thinking abilities or dispositions have improved, teachers may consider implementing pre- and post-tests, as suggested by Ennis (1962). A pre-test can be conducted at the beginning of a unit to determine students' baseline levels, followed by a post-test to evaluate changes in performance. Teachers may design their own assessment tools or adopt existing standardized instruments, such as the California Critical Thinking Disposition Inventory (CCTDI), California Critical Thinking Skills Test (CCTST), or Watson-Glaser Critical Thinking Appraisal (WGCTA). These tools are suitable for vocational college students and come with scoring rubrics. Test durations range from a few minutes to several hours, allowing flexible application based on instructional time and goals.

C. Applying Diverse Teaching Strategies to Guide Students in Personal Decision-Making

In everyday life and discussions of current events, individuals are often required to make decisions and take positions. Teachers should emphasize to students that there is no inherently "correct" position, but each view must be supported by adequate and credible reasoning. To support this, teachers can use diverse strategies such as the "Nine-Dot Diamond" model to help students clarify their values and understand the consequences and risks associated with different choices (Jiang et al., 2023). Through value clarification activities, students can ultimately make informed decisions that align with their personal beliefs and be able to articulate the rationale behind their choices.

D. Enhancing Learning Through Information Technology

Participants noted that limited life experience and class time often hinder students from acquiring the background knowledge needed for effective critical thinking. In today's information-rich era, learning is no longer confined to the classroom. The education community now advocates for student autonomy and lifelong learning, where the effective use of information technology is a key competency. Many institutions require students to prepare by researching materials or previewing content online before engaging in classroom discussions. Some also implement "flipped classroom" models, where teachers pre-record lectures or curate relevant videos for students to watch in advance. This approach helps students build foundational knowledge beforehand and allows classroom time to focus on high-order thinking tasks, including critical thinking.

E. Addressing Diverse Learning Needs

One of the most prominent difficulties reported by novice teachers was dealing with students' varied learning abilities. Critical thinking involves multiple skills, and a single civic education activity cannot fully develop them all. To address these differences, teachers can adopt heterogeneous groupings for discussions, allowing stronger students to assist weaker ones and thereby expand their respective zones of proximal development (Beronilla & Natividad, 2025).

In fact, addressing learning differences is a common challenge in everyday teaching. These differences stem from complex factors, including individual internal characteristics (such as cognitive ability) and external conditions (such as socio-economic background), and cannot be resolved by one or two simple strategies (Thornhill-Miller et al., 2023). Teachers must acknowledge the objective existence of such differences, prepare thoroughly for each lesson, adopt differentiated instruction based on students' feedback, and make ongoing adjustments through formative assessment. Only then can students of varying abilities achieve meaningful learning outcomes.

F. Integrating Critical Thinking as a Required Component of the Curriculum

Many participants reported that in their own educational experiences, little attention was paid to how to teach or

cultivate students' critical thinking. Given that civic education and other general education courses aim to develop students' transferable skills, critical thinking should be treated as a key objective. It is recommended that higher education institutions integrate critical thinking into the core curriculum and include hands-on teaching practicums. If novice teachers can acquire these skills during their preservice training, they will be better prepared to embed critical thinking into their teaching practice, which will have long-term benefits for their students.

CONCLUSION

Although most novice teachers exhibited moderate levels of critical thinking, interview findings showed that they had a strong grasp of various teaching strategies proposed by scholars and were capable of applying them in civic education to enhance students' critical thinking. Nevertheless, numerous challenges were encountered during implementation.

This study responded to these instructional difficulties by proposing an improved civic education framework. This includes the integration of pre- and post-assessments, the incorporation of information technology to enrich instructional formats, and practical teaching recommendations to guide students in making personal decisions. These efforts aim to support novice teachers in fostering students' critical thinking more effectively through civic education.

This study has certain limitations. The first is the relatively small sample size, which includes only eight novice teachers from vocational colleges. Although the participants were diverse in terms of gender, academic background, and school type, the findings are not broadly generalizable and may not fully reflect the wider population of novice teachers. In addition, the study focuses solely on the teachers' perspectives, without incorporating student feedback or classroom observation data. As a result, the teaching strategies and outcomes described are based primarily on the teachers' self-reports, which may carry subjective bias or overly idealized reflections. Future research could address these limitations by expanding the sample size and geographic scope to improve the representativeness of the data, and by integrating student perspectives and classroom observation to more comprehensively assess the actual implementation and impact of critical thinking instruction.

In today's diverse and information-rich society, effective civic education can help students make sense of the world around them, develop personal judgment, engage in civic and cultural participation, and carry out economic activities—skills that are beneficial for lifelong learning. In particular, civic education should equip students with the ability to discern truth from misinformation and make well-reasoned decisions. When facing choices, only by applying critical thinking—objectively evaluating different perspectives, conducting multidimensional analysis, and clarifying personal values—can students arrive at fair and rational conclusions.

Cultivating critical thinking is a vital mission of education. If novice teachers actively work to enhance their own critical thinking and teaching strategies, they will be better equipped to help students meet the demands of a rapidly changing era.

REFERENCES

1. Amani, H., & Ala, K. (2024). The Importance of Controversial-Topics Debates in Developing EFLStudents Critical Thinking [Working Paper]. https://dspace.univ-guelma.dz/jspui/handle/123456789/16761
2. Beronilla, J. M., & Natividad, L. (2025). HETEROGENOUS OVER HOMOGENOUS GROUPING IN THE CLASSROOM: AN ARGUMENT FOR INCLUSIVE EDUCATION (SSRN Scholarly Paper No. 5085926). Social Science Research Network. https://doi.org/10.2139/ssrn.5085926

3. Christodoulou, P., & Papanikolaou, A. (2023). Examining Pre-Service Teachers' Critical Thinking Competences within the Framework of Education for Sustainable Development: A Qualitative Analysis. Education Sciences, 13(12), Article 12. https://doi.org/10.3390/educsci13121187
4. Fu, J. (2021). Angry youth or realistic idealist? The formation of subjectivity in online political participation of young adults in urban China—Jun Fu, 2021. https://journals.sagepub.com/doi/abs/10.1177/1440783320925143
5. Galindo, M. (n.d.). Exploring the Connection Between Game-Based Learning, Social and Emotional Learning, and Critical Thinking through Tabletop Role-Playing Games.
6. Jiang, L., Yang, C., Pi, Z., Li, Y., Liu, S., & Yi, X. (2023). Individuals with High Metacognitive Ability Are Better at Divergent and Convergent Thinking. Journal of Intelligence, 11(8), Article 8. https://doi.org/10.3390/jintelligence11080162
7. Kymlicka, W. (1999). EDUCATION FOR CITIZENSHIP. In Education in Morality. Routledge.
8. Lin, X.-F., Wang, Z., Zhou, W., Luo, G., Hwang, G.-J., Zhou, Y., Wang, J., Hu, Q., Li, W., & Liang, Z.-M. (2023). Technological support to foster students' artificial intelligence ethics: An augmented reality-based contextualized dilemma discussion approach. Computers & Education, 201, 104813. https://doi.org/10.1016/j.compedu.2023.104813
9. Lindström, N. (2024). Controversial issues in social study subjects: Conveying values and facilitating critical thinking. Ethics and Education, 19(4), 593–611. https://doi.org/10.1080/17449642.2024.2418764
10. O'Reilly, C., Devitt, A., & Hayes, N. (2022). Critical thinking in the preschool classroom—A systematic literature review. Thinking Skills and Creativity, 46, 101110. https://doi.org/10.1016/j.tsc.2022.101110
11. Thornhill-Miller, B., Camarda, A., Mercier, M., Burkhardt, J.-M., Morisseau, T., Bourgeois-Bougrine, S., Vinchon, F., El Hayek, S., Augereau-Landais, M., Mourey, F., Feybesse, C., Sundquist, D., & Lubart, T. (2023). Creativity, Critical Thinking, Communication, and Collaboration: Assessment, Certification, and Promotion of 21st Century Skills for the Future of Work and Education. Journal of Intelligence, 11(3), Article 3. https://doi.org/10.3390/jintelligence11030054
12. Tuhuteru, L. (2023). The Role Of Citizenship Education In Efforts To Instill Democratic Values. International Journal Of Humanities Education and Social Sciences, 2(4). https://doi.org/10.55227/ijhess.v2i4.361

Appendix-I: Focus Group Interview Guide

Research Topic: Novice Teachers' Understanding, Practice, and Challenges in Implementing Critical Thinking in Citizenship Education

Section 1: Background and Professional Experience

1. Could you briefly introduce your teaching background (e.g., years of experience, subjects taught, student group)?
2. Have you received any training or instruction on teaching critical thinking during your preservice preparation or early years of teaching? If so, what did it involve?

Section 2: Understanding of Critical Thinking

3. In your own words, how do you define critical thinking?
4. Why do you think critical thinking is important in citizenship education?
5. Do you believe critical thinking can be cultivated through classroom teaching? Why or why not?

Section 3: Instructional Strategies and Classroom Practice

6. Have you ever intentionally designed classroom activities to develop students' critical thinking in citizenship education?

- If yes, could you describe one example, including the objective and how the activity was conducted?
- What teaching strategies did you use (e.g., group discussion, dilemma scenarios, role-play, news analysis)?

7. How did students respond to these activities? Were they able to express personal opinions, justify their positions, or engage with others' views?

Section 4: Challenges in Implementation

8. What difficulties have you encountered when trying to foster critical thinking in the classroom?
    - For example: students seeking standard answers, lacking background knowledge, being reluctant to speak, unequal participation, etc.
9. How have you addressed these challenges? What worked well, and what didn't?

Section 5: Instructional Planning Scenario (Collaborative Task)

Task Description: You will now discuss a real-world social issue and collaboratively plan how to teach this topic with a focus on critical thinking.

Scenario Topic: Should facial recognition systems be installed across all school campuses?

Please discuss the following:

1. How would you structure the lesson? (e.g., background input, classroom activities, discussion format)
2. Which teaching strategies would you use to promote critical thinking? Why?
3. What difficulties do you anticipate from students? How would you support them?
4. What learning outcomes would you expect in terms of students' critical thinking?

Section 6: Reflections and Suggestions

10. What do you feel you still need to improve in terms of teaching critical thinking?
11. If you were to give advice to other novice teachers about teaching critical thinking in citizenship education, what would it be?

Appendix-II: Thematic Coding Table

Theme	Sub-Themes / Codes	Example Quotes
Understanding of Critical Thinking	1.Critical thinking as questioning and reasoning 2. Importance in civic life 3. Teachability of critical thinking	"I think critical thinking means not blindly accepting things—you have to think from multiple perspectives."“Students need this skill for real life."
Teaching Strategies for Critical Thinking	1. Group discussion 2. News analysis 3. Role play 4. Dilemma scenarios 5. Encouraging student voice	"I often use news reports and ask students to write their opinions."“When students argue in discussions, their thinking becomes deeper."
Challenges in Implementation	1. Students seek standard answers 2. Lack of background knowledge 3. Difficulty forming personal stance 4. Learning differences 5. Lack of training or assessment tools	"Students always want the 'right answer' and don't dare to share their own opinions."“I was never trained on how to assess critical thinking growth."
Lesson Design for Critical Thinking	1. Knowledge before thinking 2. Student decision-making 3. Real-life topics enhance engagement	"Students need foundational knowledge first; otherwise the discussion is empty."“They started choosing sides when we discussed whether to install cameras."