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A Study on Critical Thinking Cultivation in Senior High School English Teaching Considering the Internet+ Background

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Abstract

Undeniably, language education and thinking cultivation are intrinsically linked. Considering Internet+, English teaching aimed at senior high school students is inseparable from the Internet and online network tools. Hence, the cultivation and development of senior high school students' critical thinking abilities is deeply affected by Internet+. Following critical questionnaires and teaching case analyses, this study investigates the timely instances reflective of the cultivation of students' critical thinking. Specifically, it is focused on senior high school English classes and their relationship with "Internet+". Moreover, it also advises on how to most effectively cultivate senior high school students' critical thinking abilities, reaping the benefits of "Internet+". According to vital research, a diverse range of critical thinking sub-skills is cultivated depending on the different types of high school English teaching methods applicable. The development of critical thinking sub-skills ranges from high to low: explanation > interpretation > analysis > inference > evaluation > self-regulation, respectively. Concurrently, the cultivation of critical thinking in high school English teaching methodology can be promoted based on the cooperation of educational institutions, teaching and research groups, teachers, and students.

Keywords

Internet+, High School English, English Teaching, Critical Thinking, Cultivation of Critical Thinking

1. Introduction

The groundbreaking book, *English Curriculum Standards for Senior High Schools* (2017 Edition), outlines the distinct significance of cultivating critical

thinking capacities in English teaching methodology to promote adequate value judgements made by students (Ministry of Education, 2018: p. 5). In the modern era characterized by "Internet+", cultivating students' critical thinking abilities, especially on high levels, has become a cornerstone of education (Zhang, Chen, Cheng, Han, & Qi, 2018). In light of the rapid improvement of the Internet, the utilization of Internet+ in education has gradually proliferated (Song & Tian, 2017). Moreover, when teaching English, the usage of Internet technology to promote students' critical thinking has become a trending topic. In the era of "Internet+", the most effective method for cultivating foreign language learners' critical thinking abilities must be investigated and explored, especially concerning foreign language teaching (Wang, 2016).

This paper aims to review relevant literature, analyze vital cases of senior high school English teaching, and contrast questionnaires to explore critical thinking cultivation in the context of Internet+ and the strategies used for it. Notably, the paper enriches the research on English education and critical thinking cultivation in light of the rise of "Internet+", helping teachers use the Internet to skillfully develop high school students' critical thinking in English classes, and benefiting English subject teachers by improving the quality of their teaching. The research is of unprecedented significance to the development of English subject education, enhancing competitiveness and improving long-term teaching efficiency.

2. Literature Review

2.1. Internet+

The concept behind "Internet+" was first developed by Yu Yang, Chairman of Analysis International in 2012. In short, it means synthesizing Internet technology with traditional industries to promote the latter's upgrading through the power harvested from the Internet. At its core, it aims to promote structural optimization, improve efficiency, and develop innovation in the integration field through information-based management and services found on the Internet. "Internet+", in this study's context, is used to reinstate the advantages of Internet technology and to make use of it with innovative thinking. This can promote the development of digital, intelligent, and networked critical thinking among senior high school English students, holding potential and possibility of wider application within timely research.

"Internet+" has received attention both domestically and internationally over the last decade (Song & Tian, 2017). Having undergone nearly 10 years of development, Internet+ has extended to a wide range of fields and has become a critical force in actively promoting economic development and social progress. Research on the topic was undertaken earlier abroad than in China. Remarkably, Internet information technology was applied to fields such as entrepreneurship, commerce, and manufacturing, realizing the intellectualization and automation of industrial endeavors. Domestically in China, Internet+ research into e-commerce, finance, education, medical care, agriculture, as well as other fields has also

recorded exceptional achievements. It henceforth promoted the upgrading and innovation of traditional industries. As opposed to the macro perspective claiming that foreign countries are more considerate of the practical application of the Internet, China's research on the topic is centered on "Internet+" and its integration within a wider array of fields.

"Internet+ education" is a significant part of the nationwide strategy, with "Internet+" attracting the attention of countless educators. First, scholars focused more on the negative impact of the Internet; for instance, they feared that the emergence of unidentifiable resources related to the Internet would affect how students thought. However, scholars soon began concentrating on the positive impact the Internet could have on education. Taking English as an example, the English Language Teaching Reform and Innovation: Internet+ Education Discussion suggested viable English teaching reforms and innovation paths with the Internet in mind. Moreover, it emphasized the necessity for dialectical thinking regarding English learning in the Internet era, systematically introducing the application of Internet technology in English language teaching. Lastly, it proposed a series of innovative teaching models and strategies (Li, 2015). Wang (2016) surveyed English major students at a specific university and found that they lack critical thinking skills when using online resources. Hence, he made recommendations for schools and teachers to guide students as to how to use online resources correctly and strive to ameliorate their discernment ability and critical thinking awareness. Nevertheless, "Internet+" provides a diversified source of knowledge for use within education. Unmistakably, thinking and using network resources displaying a multitude of perspectives can promote the development of students' critical thinking (Song & Tian, 2017).

In sum, researchers', teachers' and scholars' approaches toward education must remain rational and cultivate critical thinking (Li, 2018). Numerous successful cases have been recorded throughout the research and development of "Internet+" both domestically and abroad. In light of continuous technological progress and human desire for innovation, Internet+ is bound to play a role in an increasing number of fields, such as critical thinking training. This is expected to bring both opportunities and challenges to English subject education. However, it will also ensure the cultivation and development of core discipline quality.

2.2. Students' Critical Thinking Cultivation in Senior High School English Teaching

When faced with the term "critical thinking" it is vital to make note of its origins. The word "critical" is derived from the Greek word Kriticos, meaning "critique". Ennis (1985) redefined critical thinking as "engaging in rational reflection to determine what to believe or do". Subsequently, the definition provided by Moore and Parker is that critical thinking is the process of expanding one's thinking (Liu, 2018). As a Chinese pioneer in the study of thinking qualities, Lin (2005) found that critical thinking refers to the degree of independent thinking and judgment

analysis, which refers to thinking in oneself or the outside world. This may include self-reflection, self-monitoring, metacognition, etc. and aims to deeply understand the essence of things (Lin, 2005). The Chinese scholars Chen, Wang, and Qian (2019) have taken on the task of interpreting and elaborating on the critical thinking qualities in reference to the English curriculum standards. Although scholars differ in their understanding of critical thinking, fundamentally, critical thinking remains the characteristic of learners being able to make correct judgments based on their inner dialogue and external factors.

Critical thinking began to gradually attract the attention of Western countries from 1970 to 2000. Universities and primary and secondary schools have set up courses aiming to promote the cultivation of students' critical thinking; they strive to standardize the research around the topic (Luo, 2001). *The Delphi Report* (1990) put forward a critical thinking model designed by multiple experts, thus providing a mature analytical framework for critical thinking research. Yet, in the past 10 - 15 years, cultivating students' critical thinking has gradually gained further global attention (Wang & Wu, 2023). Based on Li's (2002) observations, three factors affect the cultivation of critical thinking: education, culture, and cognition. To promote successful critical thinking, teachers are vital. Ou, Wang, & Hu (2024) summarized the leading characteristics of critical thinking by analyzing the concepts, elements, and related research behind it, namely impartiality, agency, stability, and sensitivity.

Following the widely utilized teaching methods, the cultivation of critical thinking can be divided twofold: into the cultivation of independent courses and critical thinking integrated with subject teaching. Considering the stages of education, the cultivation of critical thinking within institutions can be divided into primary school, secondary school, and higher education. The "cultivation of critical thinking in high school English classes", explored throughout this study, primarily refers to the teaching content assisting in the cultivation of critical thinking in high school English subject teaching; thus, it is the integration of critical thinking cultivation with the teaching of English as a subject. Considering this noteworthy process, students' critical thinking is cultivated and immersed due to the teaching performed in English classrooms.

According to Brown's (2004) pivotal research, foreign language courses, such as English classes, should not only focus on language-level knowledge but also emphasize the cultivation of critical thinking. Following the recent release of the curriculum standards for high school English, research on cultivating critical thinking in high school English classrooms, and the focus on fostering critical thinking has moderately integrated with English subject teaching in primary and secondary schools.

At this moment in time, the research on nurturing critical thinking in middle school English teaching distinguishes the following trends:

1) The papers published on China National Knowledge Infrastructure primarily originate from academic journals; many studies concentrate on the cultivation

strategies of critical thinking when teaching listening, speaking, reading, and writing. Still, for the most part, they narrow down to reading and writing. Hence, there is relatively limited research on the cultivation of critical thinking in oral listening and speaking in classrooms;

2) The results of the research on the integration of critical thinking cultivation in English subject teaching have been increasingly focused over the past three years. The cultivation of critical thinking and its interconnected abilities in English subject education is an area of growing attention;

3) Still, the field has a dwindling number of cases and empirical research, with no research performed on the integration of critical thinking cultivation and foreign language teaching when considering digital education, such as "Internet+".

The research performed within existing literature enables the identification of the following research gaps:

1) Given the popularity of "Internet+", pedagogical researchers have come to study it from a macro perspective, such as its impact on education and the strategies behind education reform, the effect of "Internet+" on pedagogy, and the cultivation of critical thinking abilities. Still, there is meagre research on the fostering of critical thinking from the perspective of "Internet+";

2) Currently, few studies target universities, with no research placing high school students as its subjects. In addition, limited empirical studies combine case analysis and questionnaire surveys;

3) Notably, educators pay significant attention to the cultivation of students' critical thinking; nevertheless, there is limited research on the timely situation concerning the cultivation of critical thinking in English teaching from the perspective of "Internet+".

2.3. Theoretical Groundwork

This paper applies Schrock's (1998) critical thinking and its indicators to evaluate Internet information and utilize it as the theoretical basis to analyze the generated research results. To ensure its suitability, it is noted that it has been used as a standard, widely recognized and applied in several critical studies (Wang, 2016). This indicator can be separated into four dimensions: authenticity, authority, objectivity, and relevance. According to these four dimensions, the study aims to set up a series of questions aiding the participants' self-evaluation regarding their critical thinking process when obtaining online information.

Secondly, the aforementioned Delphi Report emerged as a highly influential critical thinking framework. It was developed by 46 experts in the United States based on empirical evidence and reached a consensus on skills related to critical thinking. Since its release, it has been widely applied by countries worldwide (Facione, 1990). Thus, the binary model proposed by the Delphi group is both compelling and systematic. Concurrently, the researchers referred to the specific division of the framework dimensions outlined by Zhou (2018). Following a detailed division of the critical thinking skills as per the theoretical framework based

on the Delphi Report, the explanation is applied to the classification and analysis of high school English teaching. The noteworthy critical thinking skills can be separated into six sub-skills: interpretation, analysis, evaluation, inference, explanation, and self-regulation.

3. Methodology

3.1. Research Questions

The study aims to investigate the cultivation of senior high school students' critical thinking in English classes under the influence of "Internet+". Additionally, it explores the methods behind cultivating students' critical thinking during senior high school English classes. The research sets out to solve the following issues:

1) Considering "Internet+", how is critical thinking training implemented in listening, reading, speaking, and writing tasks in high school English classes?

2) In senior high school English teaching methodology, which sub-skills do teachers focus on the most when aiming to cultivate students' critical thinking?

3.2. Research Subjects

By and large, the study focuses on the design of four high school English classroom courses. A survey was conducted, followed by an analysis of 206 high school students from various cities in Zhejiang Province who participated in the questionnaire survey. They were all convenience samples. The central survey subjects were Hangzhou, Shaoxing, and Jinhua, followed by a small number of high school students from Huzhou, Taizhou, as well as other cities in the Zhejiang Province. The primary information gathered on the research subjects is detailed in Table 1.

The textbooks published by People's Education Press (PEP) in 2019 are widely used teaching materials in Zhejiang Province. In class, students can have some opportunities to engage in critical thinking. Specifically, four hours of class (Table 2) held in a high school English classroom were selected to distinguish the varied teaching design of English teachers for case analysis. The teaching plans outlined in the study were all teaching designs used by young and middle-aged teachers for real-life classroom teaching. All research data utilized throughout this project has first been approved by the participants.

Table 1. Basic information on survey subjects.

	Category	Number	Proportion
Grade	Grade 10	65	31.6%
	Grade 11	101	49.0%
	Grade 12	40	19.4%
Gender	Male	110	53.4%
	Female	96	46.6%

Continued

Type	In cities	124	60.2%
	In villages	82	39.8%
Nature	Provincial High School	100	48.5%
	Ordinary public high school	95	46.1%
	Private high school	11	5.3%
Region	S City	77	37.4%
	J City	83	40.3%
	H City	25	12.1%
	T City	11	5.3%
	W City	10	4.9%

Table 2. Basic information on teaching design.

No.	Teacher	Topic	Source	Lesson type	Teaching Duration
1	J	The Chinese Writing System	PEP Compulsory Book 1 Unit 5	Reading	40 minutes
2	G	Choose a school club	PEP Compulsory Book 1 Unit 1	Listening	40 minutes
3	L	Write a blog post	PEP Compulsory Book 2 Unit 3	Writing	40 minutes
4	S	Talk About Air Pollution	PEP Selective Compulsory Book 3 Unit 3	Speaking	40 minutes

3.3. Research Instruments

3.3.1. Questionnaire

Schrock's (1998) evaluation indicators are applied within the field of critical thinking (certainty, authority, objectivity, relevance), with the researchers modifying the original question form to a declarative sentence. Its measurement is performed using the Likert five-point scale, and the Delphi Report's critical thinking framework (interpretation, analysis, evaluation, inference, explanation, self-regulation). Subsequently, a Likert five-point scale questionnaire was brought forth for standardized testing, and a critical thinking self-assessment, aimed at the students, was included to construct a full-scale picture of present-day critical thinking cultivation in high school English teaching. More than 200 questionnaires were collected from students attending three high schools in the Zhejiang Province by convenience principle. The questionnaire survey was conducted through both electronic and paper questionnaires. Following collection, the data was transcribed, statistically analyzed, and reviewed in detail to understand critical thinking cultivation in English subject teaching. The first part of the questionnaire is composed of

basic background information on the students, including their gender, grade, school classification, school ownership, frequency of use of Internet resources, and so forth. The second part relates to critical thinking and its indicators when students evaluate information found on the Internet. Lastly, the third part is a survey on cultivating students' critical thinking.

A total of 210 questionnaires were collected. Establishing validity criteria such as duration of answering questions and completeness, four invalid questionnaires were excluded from the data pool, resulting in a total of 206 valid questionnaires. SPSS 22.0 was applied for reliability, validity, and descriptive analysis.

3.3.2. Case Analysis

Aware of the time constraints, the research team selected four high school English classroom teaching designs; this included one listening lesson, one reading lesson, one speaking lesson, and one writing lesson. They were held by four middle-aged teachers, who had over a decade of teaching experience and were under 45 years old. Four lessons were chosen as typical cases for further analysis. The selection of four cases follows the principles of typicality, accessibility, and diversity. The research team selected four representative lessons from four influential teachers, each of different types and regions, to comprehensively solve the research questions. All four classes have permission from relevant teachers to access relevant data and information for in-depth research and analysis. Next, the research team classified and coded the teaching activities within the lesson plans according to the framework of critical thinking harvested from the Delphi Report; this has six dimensions: interpretation, analysis, evaluation, inference, explanation, and self-regulation, used to measure critical thinking in instructional classroom design and obtain the timely cases displaying critical thinking cultivation. Following the aforementioned case analysis, the research aims to explore the practical and standard problems related to the cultivation of critical thinking in high school English classes and to answer the questions raised as part of the research. Finally, it aims to summarize existing patterns through the analysis of individual case phenomena.

4. Results

The questionnaire survey reveals a high frequency of the use of Internet resources in senior high school English teaching. Nearly half of the students indicate that they "use every time" Internet resources, while only 3.4% refrain from taking advantage of them. As such, in the context of Internet+, Internet resources play a significant role in senior high school English education and teaching, and it is challenging to separate the online world from students' English teaching.

4.1. Overall Cultivation of Critical Thinking

Data analysis was performed by SPSS 22.0 and the overall mean of critical thinking skills and the mean of each sub-skill are outlined in **Table 3**. Based on the data, it can be found that the overall mean of critical thinking skills is 3.12; the highest mean is explanatory skills, scoring 3.32 points. Explanatory, analytical, inferential,

and evaluative skills have all scored above 3.00 points, while self-regulation displays the lowest mean below 3.00 points. Indisputably, self-regulation skills prove the lowest, while the average of the remaining critical thinking sub-skills remains the same. The sub-skills of critical thinking cultivation derived from the questionnaire survey are explanation > interpretation > analysis > inference > evaluation > self-regulation.

Regarding the critical thinking cultivation index for students' evaluation of Internet information in the context of Internet+, the total average value equals 2.91. Out of this value, the average value of authenticity and authority is slightly above 3, and the average value of correlation is moderately lower than 3; however, it is flat, with the average value of objectivity proving the lowest. The result is authenticity > authority > correlation > objectivity. See Table 3 for further details.

Table 3. Mean of critical thinking skills and sub-skills.

No.	Dimension	Number	Average	Average
1	Authenticity	206	3.04	2.91
	Authority	206	3.01	
	Objectivity	206	2.64	
	Relevance	206	2.96	
2	Interpretation	206	3.28	3.12
	Analysis	206	3.21	
	Evaluation	206	3.04	
	Inference	206	3.11	
	Explanation	206	3.32	
	Self-regulation	206	2.78	

4.2. Implementation of Different Teaching Cases to Cultivating Critical Thinking in High School English Teaching

Based on the case analysis featuring four lesson plans designed by researchers, the emphasis on cultivating critical thinking in high school English teaching is overall moderate, with an average frequency of 2.42 critical thinking training sessions per lesson for students. As per Table 4, the cultivation of sub-skills of critical thinking varies, with the frequencies ranking as follows: explanation > analysis > interpretation > inference > evaluation > self-regulation. All in all, the average frequency of cultivating critical thinking in each course amounts to 2.42 times.

The average ranking of sub-skills in the questionnaire survey slightly differs from the results obtained within the case analysis, with the average of sub-skills analyzed in the case analysis slightly higher. In light of the small sample size of lesson plans, likely the statistical frequency of case analysis does not thoroughly reflect the overall status of critical thinking skills development. Hence, the data

analyzed in this article remains primarily based on the results of the questionnaire survey, additionally supplemented by the results obtained from the case analysis.

Table 4. Statistics of "critical thinking skills cultivation" frequencies.

Basic information				Lesson type						Total
No.	Type	Topic	Source	Interpretation	Analysis	Evaluation	Inference	Explanation	Self-regulation	
L1	Reading	The Chinese Writing System: Connecting the Past and the Present	PEP Compulsory Book 1	1	2	2	3	5	0	13
L2	Listening	Write a blog post	PEP Compulsory Book 1	5	5	1	2	3	3	19
L3	Listening	Choose a school club	PEP Compulsory Book 1	2	5	0	2	3	0	12
L4	Speaking	Talk About Air Pollution	PEP Selective Compulsory Book 3	4	1	1	4	4	0	14
		Total frequency		12	13	4	11	15	3	58
		Mean frequency		3	3.25	1	2.75	3.75	0.75	2.42

The emphasis on which critical thinking sub-skills are fostered varies depending on the course type. Notably, writing classes prioritize cultivating self-regulation while reading, listening, and speaking classes place the least emphasis on the sub-skill. In addition, reading classes prove most effective in cultivating explanatory sub-skills. Moreover, the frequency of developing students' analytical sub-skills in listening and writing classes proves relatively high. On the other hand, the writing class finds the cultivation of sub-skills in interpretation to be of the highest importance.

According to the data obtained from interviews, the content of what is taught by teachers in English classrooms and the time spent on it are adjusted according to real-life student cases. Still, the vast majority of classrooms are dominated by lectures held by teachers, which limit the time set aside for students to think, analyze, and discuss; hence, this indicates that the implementation of critical thinking cultivation in the classroom is generally average. Four teachers declared that their English writing and reading classes have a higher impact on cultivating students' critical thinking than listening and speaking classes.

4.3. Critical Thinking in Evaluating Internet Information

Table 5 displays an overview of the sum of effective percentages of all dimensions. It can be listed that the sum of effective percentages from high to low is authority, authenticity, relevance, and objectivity, corresponding to 37.5, 37.5, 37.2, and 29.1, respectively. The average value of the four dimensions proves moderately

higher than 3 for authenticity, and authority, and slightly lower than 3 for objectivity and relevance. As such, the 206 students surveyed do not have a high recognition rate for the items listed, and the situation remains moderate. This indicates that the teachers' emphasis on critical thinking concerning students' evaluation of network information is not high concerning Internet+.

The highest percentage of positive answers cumulates in question 9, which states "Teachers will teach us to think or verify the sources of online information." Students display the most notable level of recognition. The teacher is said to teach the students how to use information from more than one website or look outside of the specified references to obtain information. However, students do not significantly relate to the statement "Teachers will encourage me to consider the purpose of a website, such as providing potential benefits to the website's authors by reading it." The rest of the questions range between 28.2 - 47.1, with differences in emphasis, and have been recognized by a proportion of students.

Table 5. Critical thinking concerning the evaluation of internet information.

Dimension	Question No.	Sum of the frequencies of "often" and "always"	Sum of effective percentage	Sum of effective percentage	Mean of effective percentage
Authenticity	1	76	36.9	37.5	35.9
	8	59	28.6		
	10	97	47.1		
Authority	2	60	29.1	37.5	
	6	58	28.2		
	9	114	55.3		
Objectivity	3	80	38.8	29.1	
	7	40	19.4		
Relevance	4	79	38.3	37.2	
	5	74	35.9		
	11	77	37.4		

4.4. Teachers' Dimensional Emphasis in Cultivating Students' Critical Thinking

The timely case reflecting the fostering of critical thinking sub-skills in various dimensions of teaching is presented with the help of questionnaire surveys and interviews. Descriptive statistical analysis is conducted using SPSS 22.0, aiming to calculate the frequency of each item in the second and third parts of the questionnaire. The sum of the percentages selecting the high-frequency options "often" and "always" is displayed, and the results of the questionnaire survey are combined with teacher interviews and case analysis to offer a timely overview of the current situation.

4.4.1. Interpretation

In Table 6, it can be observed that 48.48% of the students chose "often" and "always", believing that the cultivation of critical thinking skills in interpretation is positive. Of particular interest was question 15: "Guide students to make multiple choices and foresee the order of choices for the relevant problems to be solved." This behavior performed by teachers has scored the highest frequency in the development of explanatory sub-skills in high school English teaching. This can be contrasted with question 24: "Ask students to explain the hierarchy and coherence of arguments, as well as the depth of evidence." This behavior had the lowest frequency in the development of explanatory sub-skills in high school English teaching, with only 43.7% of students believing that teachers have done a satisfying job, rather than indicating that they have been neglectful toward students in this instance.

Table 6. Effective percentages in the cultivation of interpretation.

Question No.	Sum of the frequencies of "often" and "always"	Sum of effective percentage	Mean of effective percentage
12	95	46.2	
13	101	49.1	
15	107	51.9	48.48
22	106	51.5	
24	90	43.7	

Following the case analysis, researchers discovered that the cultivation of interpretive skills primarily narrows down to the following categories:

1) Students' identification of the stylistic features of reading materials (such as poetry, argumentative essays, etc.); 2) Promote students' understanding of the text's theme by displaying relevant knowledge on the author or topic; 3) Encourage students to distinguish and categorize information found in the text; 4) Interpret specific writing techniques, literary devices and skills (such as metaphor, personification, contrast, etc.); 5) Understand or define unfamiliar vocabulary or concepts through relevant examples and other means.

4.4.2. Analysis

Per Table 7, 45.82% of students believe that teachers do well at developing students' analytical skills. Question 16 states that the teachers "Let me connect the viewpoints presented in the classroom with other viewpoints." This behavior occurs at a high frequency of 69.4% in high school English teaching, highlighting that teachers perform well in this area and students' skills have been well cultivated. The frequency of agreement with question 21, "Guiding me to identify logical relationships (causality, hypothesis, progression, etc.) between various arguments," is the lowest; as such, students believe that teachers lack the necessary

training to master this skill.

Following case analysis, researchers found that the cultivation of analytical skills primarily manifests as first, identifying the topic of the text or paragraph; second, summarizing the general idea behind the paragraph; third, determining the relationship between the paragraph's message and the main theme of the text; fourth, identifying the logical relationships of textual statements (such as causal relationships); fifth, analyzing the wider structure of the article.

Table 7. Effective percentages in the cultivation of analysis.

Question No.	Sum of the frequencies of "often" and "always"	Sum of effective percentage	Mean of effective percentage
16	143	69.4	
18	82	39.8	
21	79	38.4	45.82
28	83	40.3	
32	85	41.2	

4.4.3. Evaluation

According to Table 8, 47.6% of students believe that question 33, "Guide me when examining the author's background and the relationship between viewpoints", has been well cultivated by the teachers; however, for item 30, "Guide me to evaluate the credibility and related viewpoints in the material", the percentage is the lowest.

Table 8. Effective percentages in the cultivation of evaluation.

Question No.	Sum of the frequencies of "often" and "always"	Sum of effective percentage	Mean of effective percentage
27	91	44.1	
29	95	46.1	
30	52	25.2	41.14
33	98	47.6	
37	88	42.7	

By performing case analysis, researchers discovered that the cultivation of assessment skills tends to manifest as first, evaluating the text's topics, images, materials, etc. from multiple perspectives; second, when making judgments, considering both the positives and negatives, as well as the pros and cons of the problem; third, evaluating, grading, and providing critical opinions on one's own or others' writing, oral expression, and performance.

Within the analysis of case studies, no relevant teaching behaviors indicating that teachers inspire students to verify the credibility and effectiveness of others'

viewpoints have been identified.

4.4.4. Inference

Based on Table 9, 42.22% of students found that teachers have performed well in developing inference skills, with a relatively low percentage of students considering "guiding me to infer implicit results in articles." Hence, teachers' training in this area is not entirely effective.

Through case analysis, the researchers discovered that the cultivation of inference skills primarily manifests as first, predicting the direction of the content and dialogue of an article based on the title, image, or context; second, inferring the leading idea of the article based on the provided materials; third, speculating on the cause and effect of the character's psychological traits, behavior, or events; fourth, speculating on the content or results that are not evident within the article or materials; fifth, assume the central problem with the situation and guess as the most viable improvements.

Table 9. Effective percentages in the cultivation of inference.

Question No.	Sum of the frequencies of "often" and "always"	Sum of effective percentage	Mean of effective percentage
14	100	48.5	
20	84	40.8	
23	63	30.6	42.22
26	114	55.3	
34	74	35.9	

4.4.5. Explanation

Based on Table 10, the cultivation of explanatory skills is sufficient, with item 17, "Let me express my own opinions based on relevant content", reaffirming this. Although this teaching behavior is very frequent, item 31, "Let me explain the rationality of the author's viewpoint or the effectiveness of the argument in my own words", proves relatively uncommon.

Table 10. Effective percentages in the cultivation of explanation.

Question No.	Sum of the frequencies of "often" and "always"	Sum of effective percentage	Mean of effective percentage
17	148	71.9	
25	92	44.7	
31	63	30.5	49.52
35	102	49.5	
38	105	51	

By performing case analysis, the author found that the cultivation of explanatory skills primarily manifests as: first, presenting one's opinions based on the content of the text; second, explaining specific language phenomena or problems within a situation; third, explaining and outlining the hierarchy, coherence, and ideas in the article; fourth, present valid reasoning to prove your viewpoint.

4.4.6. Self-Regulation

Per Table 11, among the sub-skills of self-regulation, question 19 "Asks me to judge to what extent my thinking is affected by factors such as lack of knowledge or bias, stereotypes, emotions, etc. during the reading" is the lowest, as opposed to question 39 "guides me to make an objective evaluation of my own opinions and reasons for persistence".

The cultivation of "self-regulation" skills summarized through case analysis primarily includes: first, students reflect on their understanding of articles, materials, and dialogues (whether there are errors or changes within them); second, students should revise and adjust their writing and oral expression accordingly; third, students must reflect and correct one's erroneous judgments and inferences (such as structure, expression, understanding, etc.).

Based on the case analysis results, there is no teaching behavior which would motivate students to reflect, think, and make objective and fair changes. They must therefore work on making an objective evaluation based on their opinions and reasoning.

Table 11. Effective percentages in the cultivation of self-regulation.

Question No.	Sum of the frequencies of "often" and "always"	Sum of effective percentage	Mean of effective percentage
19	40	19.4	27.65
36	54	26.2	
39	72	34.9	
40	62	30.1	

5. Strategies for Cultivating Students' Critical Thinking in the Context of "Internet+"

It is found that teachers have not received sufficient training in critical thinking and Internet+ related training. As such, schools and administrative policies must offer more support and guidance to teachers, aiming to improve teachers' tutorials and exercises and make up for the contents declared missing. This can enable classroom English teachers greater freedom, allowing them to innovate their teaching content and methods. Excellent teachers, students, and teaching equipment require ongoing cooperation to provide teachers with more critical thinking teaching support and help students improve (Li, 2002). Additionally, the school and the teaching and research groups can invite local and international guest

experts and scholars to use the Internet for online training and promote critical thinking training among front-line high school English teachers. Communicative learning is critical for teachers to use Internet+ resources to cultivate students' critical thinking in English. Compared with the things from the Internet, textbooks have a certain lag. For new topics appearing on the Internet, if there are some resources suitable for debate or evaluation from multiple perspectives, teachers of English in senior high schools can select appropriate materials for students and conduct critical discussions on rich topics. Teachers can also set problems with different levels of cognition and thinking to enrich students' learning and activate students' thinking. In addition, teachers can activate students' existing knowledge and abilities by using slightly higher levels of knowledge and skills, encouraging students to innovate and enhance learning effectiveness.

Moreover, teachers can encourage students to use a wide array of tools promoted by Internet+ for creative and critical learning and writing, rather than mechanically completing traditional homework. Furthermore, teachers can use English apps for students, inviting them to participate in fun English voice acting, activities, or meetings on the weekend, such as practicing speeches and debates. This aims to enhance students' English proficiency, logical thinking, and critical thinking. The potential of the tools can be fully unleashed while enabling high school students to engage in critical thinking exercises.

Learning, as a process, does not solely rely on receiving knowledge, but also on discovering, analyzing, solving challenges, expressing opinions, and brainstorming thoughts (Li, 2002). Throughout this process, both teachers and students must speak up. High school students have to critically consider and use Internet+ tools, balancing between using Internet+ tools and independent thinking (Zhou & Wei, 2018). During this experimental process, self-regulation is vital to ensure that students do not overly rely on digital help, but instead view it as an auxiliary tool. In short, students must cultivate their abilities to critically evaluate information, learn to distinguish between facts and personal viewpoints, judge the authenticity of information, and learn to look at problems from a range of perspectives. Students must know not to blindly believe the information found on the Internet. Instead, they have to pose questions using their independent thinking.

6. Conclusion

English Curriculum Standards for Senior High Schools (2017 Edition) lists thinking quality as a core competency in the English subject, which refers to the abilities demonstrated by thinking in terms of being logical, critical, and innovative. This saying illustrates the importance of cultivating critical thinking in high school English teaching.

The researchers have found that distinct types of high school English teaching methods focus on cultivating different critical thinking sub-skills. The results are indicative of critical thinking sub-skills ranging from high to low as follows: explanation > interpretation > analysis > inference > evaluation > self-regulation.

Among them, writing classes place greater emphasis on cultivating self-regulation and interpretive skills, while reading classes prioritize fostering interpretive sub-skills. Additionally, the frequency of cultivating students' analytical sub-skills in listening classes proves fairly high. Gender, school type, grade, and school nature show no significant variety in critical thinking teaching; however, there are moderate differences between boys and girls when evaluating critical thinking regarding Internet information. Thus, it is imperative to explore how to effectively cultivate foreign language learners' critical thinking abilities and avoid any negative effect of "Internet+" on critical thinking in the process.

There are three viable methods to further promote critical thinking in high school English teaching: first, through schools and research groups; second, by educating teachers; third, by targeting students. Currently, there is an imbalance in fostering critical thinking skills, with a focus on explanatory and interpretive skills, and less stress on evaluation and self-regulation. Hence, schools and research groups must strengthen teachers' critical thinking and provide them with additional support. Senior high school English classroom teachers must establish a critical thinking methodology based on their classroom teaching, optimizing high school English teaching methods and content, flexibly applying diverse teaching methods, and cultivating students' critical thinking.

Concurrently, students should also work together to balance critical thinking and "Internet+" and self-regulation.

This study successfully examined English teaching in the context of "Internet+" considering critical thinking. It was enriched in similar research, and committed to improving the overall quality of senior high school English teachers' performance. Alas, it sheds light on the value of classroom teaching and educating youth, aiming to improve senior high school students' core English literacy and critical thinking abilities.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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