



## Enhancing Undergraduate Critical Listening Through Discord-Based Video Chain-Question Strategy

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### Abstract

The advancement of digital technology has reshaped language learning, demanding pedagogical approaches that foster higher-order skills. Critical listening, the ability to evaluate and analyze spoken content, is crucial in higher education, yet students often struggle to develop it in online settings that lack interaction. This study addresses this gap by investigating the effectiveness of the Video Chain-Question strategy, implemented via the Discord platform, in enhancing the critical listening skills of undergraduate EFL students. This study employed a developmental research (R&D) design following the 3PS Model (Analysis, Strategy, Application & Evaluation). Twenty fifth-semester students from an International Class Program participated in the research. The intervention used authentic documentary videos within Discord's collaborative environment. Data were collected using pre-tests and post-tests, and subsequently analyzed using a Paired Sample T-Test. The findings revealed a statistically significant improvement in students' critical listening abilities following the intervention. The results of this study indicate that there is a significant difference between the pre-test and post-test, with 92% of scores being above average. The needs analysis also confirmed that both students and lecturers were active technology users, validating the choice of Discord as an alternative LMS. The results suggest that the integration of the Video Chain-Question strategy within Discord creates a dynamic, interactive, and effective environment that successfully enhances students' critical listening skills.

### Keywords:

Critical Listening; Cooperative Learning; Discord; English as a Foreign Language; Video Chain-Question Strategy

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## A. INTRODUCTION

The rapid advancement of digital technology has transformed education, particularly in language learning. In higher education, online platforms have become essential for flexible, interactive, and collaborative learning environments in the post-pandemic era (Azizah et al., 2021). Listening, as a receptive skill, is fundamental to language acquisition and supports the development of other skills such as speaking, reading, and writing (Vandergrift, 2007). However, students still face challenges in listening comprehension due to speech rate, accent variation, and limited authentic exposure in online settings (Purwaningsih & Wahyuni, 2023).

Listening, as a receptive skill, is fundamental to language acquisition and supports the development of other skills such as speaking, reading, and writing. However, students still face challenges in listening comprehension due to speech rate, accent variation, and limited authentic exposure in online settings. These challenges are often exacerbated by the passive nature of traditional online listening instruction, where students process information in isolation without opportunities to verify their understanding or negotiate meaning with peers. When learners are confined to solitary listening tasks, they lack the social scaffolding necessary to deconstruct

complex audio materials critically. Consequently, there is a pressing need for instructional strategies that shift the focus from individual reception to collaborative engagement.

To address these issues, cooperative learning has been increasingly integrated into online environments to promote interaction and engagement. Studies have shown that online cooperative strategies, such as virtual interviews and group discussions, enhance students' motivation, confidence, and comprehension outcomes (Hidayah, 2022; Hidayati, Emiliana, & Pratama, 2023). These approaches are especially relevant for Generations Z and Alpha, who prefer interactive and technology-driven learning (Harianingsih & Jusoh, 2022).

Listening comprehension difficulties often stem not only from linguistic factors, such as speech rate, accent variation, and vocabulary load, but also from the passive nature of traditional listening instruction, where students have limited opportunities to interact and negotiate meaning. In response, scholars have highlighted the importance of integrating interaction-based pedagogies that allow learners to co-construct understanding through dialogue and collaboration. Cooperative learning, which emphasizes shared responsibility and active engagement, offers a promising framework for overcoming such challenges in listening classes. When adapted to online environments, cooperative strategies, such as virtual interviews, peer questioning, and group discussions have been shown to enhance students' motivation, confidence, and comprehension outcomes (Hidayah, 2022; Hidayati, Emiliana, & Pratama, 2023). These approaches are particularly effective for Generations Z and Alpha, who thrive in interactive and technology-driven learning contexts (Harianingsih & Jusoh, 2022).

Listening skills have become even more crucial in the digital era as learners are exposed to podcasts, videos, and social media interactions. Beyond understanding spoken content, critical listening, the ability to evaluate and reflect on what is heard has become an essential competence in academic and professional settings (Yue, 2022). A recent study in Heliyon (2024) reported that blended and online learning modes significantly improved students' listening proficiency compared to traditional methods.

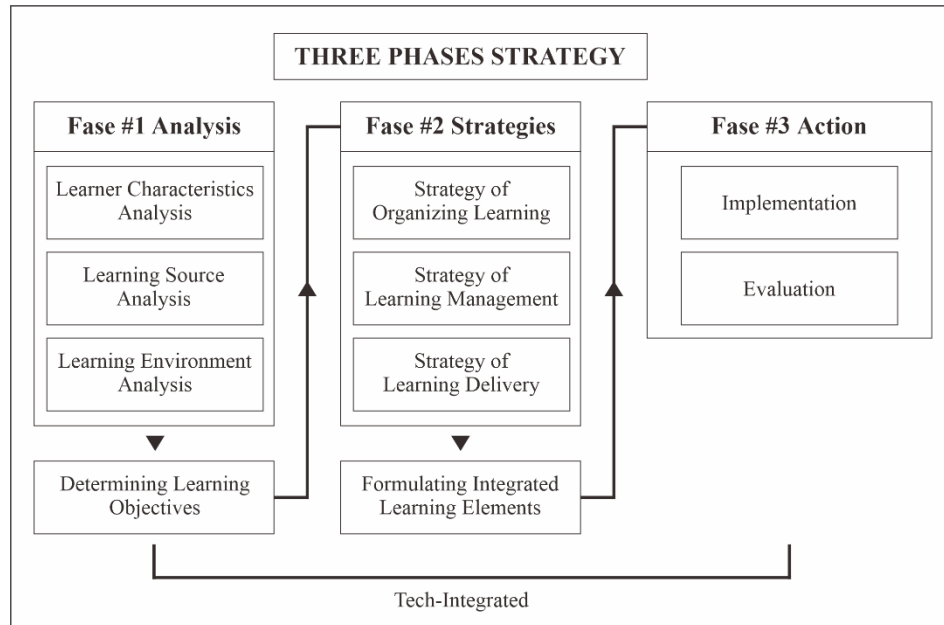
Given that Generations Z and Alpha thrive in digital and collaborative environments, the integration of cooperative learning with authentic audiovisual materials is timely and relevant. Discord, a platform originally designed for gamers, has recently gained attention for its potential as a digital learning space due to its real-time voice, video, and screen-sharing features that support collaborative learning (Makridou et al., 2021; Septiawan & Permana, 2022). To optimize its pedagogical potential, an effective teaching strategy such as the Video Chain-Question method can be applied. This strategy encourages active and critical listening through a cycle of watching documentary-based videos, generating questions, and discussing them with peers (Rahman et al., 2021).

Although various digital tools and video-based methods have been used in listening instruction, few researchers have focused on integrating Discord-based cooperative learning with the Video Chain-Question strategy to enhance critical listening skills. There have been limited studies examining how digital interactions foster analytical and reflective listening among EFL learners in higher education. Therefore, this research aims to fill this gap by exploring the effectiveness of implementing the Video Chain-Question strategy through Discord in developing students' critical listening abilities.

## **B. METHODS**

### ***Research Design***

This study adopts a developmental research design (R&D) to design, implement, and evaluate an instructional model. The framework follows Ramadhan's (2025) 3Ps Model (Fase Analisis, Fase Strategi, Fase Penerapan & Evaluasi).



**Figure 1.** Three Phases Strategy Framework

### ***The Research Procedure***

The first phase is analysis phase, it serves as the foundation of the instructional design process, paving the way for effective teaching and learning. Several essential stages must be completed before moving to the next phase, namely: (1) analysis of learner characteristics, (2) analysis of learning resources, and (3) analysis of the learning environment. These three stages collectively define the learning objectives, ensuring that the instructional process proceeds with a clear and measurable direction.

The second is the strategy design phase, this phase constitutes the core of implementing effective, efficient, and engaging instruction. Upon completing the initial analysis, the learning objectives aligned with students' needs and classroom conditions are determined. Understanding these needs assists instructors in tailoring pedagogical approaches to optimize the learning experience. Three major components are designed in this phase: (1) organizational strategy, (2) delivery strategy, and (3) learning mode strategy. The integration of these three components results in a coherent and adaptive instructional formula that meets the contextual demands of the teaching and learning process.

Phase of implementation and evaluation were conducted in two online sessions through the Discord platform, enabling synchronous face-to-face interaction between the lecturer and students. During the first meeting, after an initial briefing on the instructional strategy, a documentary video entitled Higher Education in Finland was played collectively. Following the viewing session, the lecturer initiated a chain of questions directed to one student, who then continued the sequence by posing questions to another peer, thereby creating a continuous dialogic learning flow. The second meeting followed the same structure, using a different documentary entitled Higher Education in Australia. Similar interactive activities were carried out as in the first session. Both meetings concluded with an evaluation phase, which was critical for assessing learning outcomes and identifying potential improvements for future instructional model development.

### ***Participants of the Study***

The participants of this study were 20 fifth-semester students from the English Education Department enrolled in the International Class Program (ICP). They were purposively selected due to their advanced English proficiency and familiarity with technology-enhanced learning, which were necessary for the successful implementation of the Discord-based strategy.

The data collection procedure was conducted fully online over a period of two weeks, comprised of two 90-minute synchronous sessions. In each session, participants engaged in the Video Chain-Question strategy on Discord, which involved three main stages: watching a documentary, generating critical questions, and recording video responses to peers.

To ensure a comprehensive analysis, this study employed a mixed-method approach where qualitative data were used to corroborate and explain the quantitative findings. While the pre- and post-tests measured the degree of improvement in critical listening scores, the qualitative data gathered from students recorded interactions and reflection journals provided evidence of the learning process. Specifically, these qualitative insights helped to attribute the statistical improvements directly to the students' engagement with the specific features of the Video Chain-Question strategy, thereby strengthening the validity of the study's conclusions.

### Learning Materials and Duration

The learning material consisted of a 30-minute English-language documentary selected for its authentic academic content and intermediate-level linguistic complexity. The Video Chain-Question strategy required students to attentively watch the documentary, formulate content-based questions, and respond to peers' inquiries. This design fostered both listening comprehension and critical inquiry. Each instructional session lasted for 100 minutes, which was deemed sufficient for implementing the designed learning strategy effectively.

#### Data Analysis Techniques

In the analysis phase, data were collected through observation and interviews to identify learners' needs and formulate specific learning objectives. These methods provided qualitative insights into student characteristics, learning challenges, and instructional preferences.

To evaluate the effectiveness of the developed instructional design, statistical analyses were performed on the students' learning outcome data. The analysis began with tests of homogeneity and normality to determine the data distribution characteristics. The Kolmogorov-Smirnov test was applied to assess whether the data followed a normal distribution.

Subsequently, a Paired Sample T-Test was used to compare the pre-test and post-test scores following the implementation of the Discord-based instructional design. This test was selected as it effectively measures differences in learning outcomes within the same group before and after the intervention. The t-value was calculated using the following formula:

$$t_{hitung} = \frac{\bar{X}_D}{\sqrt{\frac{\sum d^2}{N(N-1)}}$$

The results of this analysis provide evidence regarding the effectiveness of the instructional model. Specifically, they determine whether the use of Discord as a learning management platform, in combination with the Video Chain-Question strategy, leads to a significant improvement in students' critical listening skills.

### C. RESULT & DISCUSSION

The implementation of this learning strategy required a preliminary analysis to determine learning objectives aligned with the 3PS theory. The findings revealed that both learners and lecturers are active technology users who are already accustomed to studying anytime, anywhere, and with anyone. This became the foundation for utilizing technology in the teaching and learning process. The observation results were supported by interviews conducted with the participants of this study. The learners' statements regarding the use of technology as a learning companion further strengthened the research findings.

*"I am used to using mobile technology in my learning, even if it is just to search for supporting information. The Internet today serves as an effective and efficient source that helps me in learning."* (Respondent 1)

*"The flexibility in learning really helps me adjust to my own learning pace. Since I am quite slow in understanding the material, I can search for additional information from other learning sources provided by the lecturer."* (Respondent 2)

The data analysis also included insights from all participants involved in the teaching and learning process, including lecturers. One of the lecturers' statements supported the use of the 3PS framework in this analysis:

*"The use of technology in teaching certainly helps me in giving instructions and even in collecting assignments. Besides teaching, I can also find various information and teaching strategies, which provides me with many alternatives."* (Supervisor)

The interview findings above correspond to the first phase, which involves analyzing three main aspects: the learning environment, learning resources, and learner characteristics. It can be concluded that both the environment and the classroom participants are highly digital native. Learning objectives could then be formulated after completing this phase, namely, to develop students' *critical listening* skills through the use of video chain-question activities. After determining the objectives, the process continued to the second phase, which involved selecting the appropriate media, LMS, and learning strategies to optimize the teaching and learning process. Online learning was deemed highly feasible based on the observation results, and Discord was chosen as the most suitable LMS. The selected learning strategy was a chain question, aimed at enhancing learners' listening skills.

To provide a deeper understanding of the participants' readiness, a thematic analysis of the interview data was conducted, revealing three core themes: *digital resourcefulness*, *learning autonomy*, and *pedagogical efficiency*. First, in terms of digital resourcefulness, students demonstrated a high degree of reliance on mobile technology as a primary research tool. As noted by Respondent 1, the internet is viewed not merely as a supplement but as an "effective and efficient source" for finding supporting information during the learning process.

Second, regarding learning autonomy, the findings suggest that the digital format catered to diverse learning speeds. Respondent 2 highlighted that the flexibility of online learning allowed them to "adjust to [their] own learning pace," particularly by accessing additional resources independently when they struggled to understand materials in real-time. Finally, from the perspective of pedagogical efficiency, the lecturer emphasized that technology streamlined classroom management. The supervisor noted that digital tools significantly aided in "giving instructions and collecting assignments," while simultaneously providing access to a wider variety of teaching alternatives. These qualitative insights confirm that the learning environment was conducive to the implementation of the Discord-based strategy.

#### Learning Outcome Analysis

To evaluate the effectiveness of the intervention, this study measured the improvement in students' critical listening skills (N = 20) by comparing their pre-test scores (before the treatment) and post-test scores (after the treatment). The data were analyzed using descriptive statistics and a Paired Sample T-Test.

**Table 1.** The Score of Pre-test and Post-test

Partisipan (N=20)	Nilai Pre- Test	Nilai Post- Test
Student 1	55	75
Student 2	60	80
Student 3	48	72
Student 4	52	78
Student 5	65	85
Student 6	70	90
Student 7	45	68
Student 8	58	82

Student 9	62	81
Student 10	50	77
Student 11	55	79
Student 12	68	88
Student 13	53	75
Student 14	61	83
Student 15	49	74
Student 16	66	86
Student 17	57	80
Student 18	63	84
Student 19	51	76
Student 20	59	82
Rata-Rata (Mean)	56.85	79.75
Standar Deviasi	7.08	5.71

**Table 2.** Mean and Standard Deviation

Test	N	Rata-rata (Mean)	Standard Deviation
Pre-Test	20	56.85	7.08
Post-Test	20	79.75	5.71

Table 2 shows a clear increase in the mean score. The mean pre-test score was 56.85, indicating the participants' initial level of understanding. After the implementation of the Discord-based Video Chain-Question strategy, the mean post-test score substantially increased to 79.75. To examine whether this improvement was statistically significant, a Paired Sample T-Test was conducted. The results of the T-Test are presented in Table 3.

**Table 3.** Mean and Standard Deviation

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Devia tion	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 PRETEST - POSTTES T	22.400	2.349	.525	-23.499	-21.301	42.654	19	.000

The T-Test results in Table 3 show a t-value of -42.654 with degrees of freedom (df) = 19. The obtained significance value (2-tailed) was  $p = .000$ . Based on the decision criterion where  $p < 0.05$ , these results indicate that the Null Hypothesis ( $H_0$ ) is rejected. This confirms that there is a statistically significant difference between the pre-test and post-test scores. The mean score improvement of 22.4 points can be attributed to the effectiveness of the applied intervention. These quantitative findings support that the use of the Video Chain-Question strategy, implemented through the Discord platform, had a positive and significant impact on enhancing students' critical listening skills.

The statistically significant improvement in scores ( $p = .000$ ) confirms that the Discord-based Video Chain-Question intervention successfully bridged the gap between passive and critical listening. These findings validate Anderson and Krathwohl's (2001) revised cognitive taxonomy, which posits that critical listening extends beyond mere 'remembering' or 'understanding' to require 'analyzing' and 'evaluating.' In the context of the Chain-Question strategy, students were not only required to absorb information from documentary videos but were also compelled to process that information deeply to formulate valid questions for their peers. It is this process of question formulation that triggered high-order thinking skills (HOTS), as reflected in the surge of post-test scores.

Furthermore, the success of this intervention corroborates Vygotsky's (1978) social constructivist theory regarding the Zone of Proximal Development (ZPD). The Discord platform facilitated a cooperative learning environment where peer interaction served as scaffolding. The 'chain' nature of the strategy created positive interdependence; students had to critically listen to their peers' previous responses before providing their own. These dynamics transformed the listening process from a solitary act into a dialectical social activity. Therefore, the improved learning outcomes in this study were not solely due to the use of technology, but rather the result of a collaborative instructional design that enabled students to co-construct understanding through critical dialogue.

#### **D. CONCLUSION**

This study was designed to investigate the effectiveness of implementing the Video Chain-Question strategy through the Discord platform in enhancing university-level EFL students' critical listening skills. The research adopted a Research and Development (R&D) design following the 3PS Model framework (Analysis, Strategy, Implementation & Evaluation). Based on the findings obtained, several conclusions can be drawn.

This study concludes that integrating the Video Chain-Question strategy through the Discord platform significantly enhances students' critical listening performance by transforming listening from a passive receptive activity into an active, reflective, and collaborative learning process. Theoretically, the findings extend Anderson and Krathwohl's (2001) taxonomy by demonstrating how higher-order cognitive processes analysis, evaluation, and creation can be effectively stimulated through digitally mediated cooperative tasks. The results also reinforce Vygotsky's (1978) concept of social constructivism, showing that critical listening development is strengthened through dialogic interaction and peer scaffolding in online spaces. Practically, this study contributes to the growing body of digital pedagogy by validating Discord (Anggraini & Yulianawati, 2020; Ghazali, 2021) as a viable learning management platform that supports engagement and learner autonomy, consistent with Anderson's (2008) and Garrison and Vaughan's (2008) principles of online learning communities. Future studies are encouraged to replicate and expand this model across broader contexts to further substantiate its pedagogical impact and scalability. Based on the findings obtained, several conclusions can be drawn.

Beyond these statistical improvements, this study offers a distinct theoretical and pedagogical contribution to the field of Computer-Assisted Language Learning (CALL). Theoretically, it extends the understanding of critical listening by demonstrating that this cognitive skill often treated as a solitary internal process can be effectively scaffolded through socially distributed online interactions. Unlike previous studies that position Discord merely as a supplementary tool for casual communication, this research establishes its viability as a primary ecosystem for structured, higher-order thinking interventions. Consequently, the proposed 'Video Chain-Question' strategy provides a validated instructional model for educators, proving that recreational social platforms can be successfully repurposed to overcome the 'passive engagement' trap in remote language education.

First, in the Analysis phase, qualitative findings from observations and interviews confirmed that both learners and lecturers are active technology users who are already accustomed to utilizing digital resources for learning. This validates the feasibility and relevance

of using digital platforms such as Discord as an alternative learning environment to support cooperative learning strategies.

Second, the quantitative findings from the Implementation & Evaluation phase demonstrated the effectiveness of the intervention. The statistical results revealed a significant improvement in students' critical listening abilities. The participants' mean score ( $N = 20$ ) increased from 56.85 on the pre-test to 79.75 on the post-test. The Paired Sample T-Test confirmed that this improvement was statistically significant ( $p = .000$ , which is lower than the alpha value of 0.05).

These results indicate that the integration of the Video Chain-Question strategy with Discord's interactive features (such as voice and text channels) successfully transformed passive listening activities into an active, dialogic, and reflective process. This model encouraged students not only to comprehend audiovisual content but also to critically analyze, evaluate, and formulate questions, which are the core components of critical listening. However, this study has limitations, particularly regarding the small sample size ( $N = 20$ ). Therefore, future research is recommended to test this model on a larger scale and in different contexts to strengthen the generalizability of the findings.

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