

Analysis of the Correlation between the Use of Authentic Videos and the Development of HOTS in English Language Learning

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Abstract

This study aims to analyze the correlation between the use of authentic videos in English language learning and the development of Higher Order Thinking Skills (HOTS) among university students. HOTS encompasses critical, creative, and analytical thinking skills, as well as problem-solving abilities. Authentic videos, such as films, news videos, and YouTube videos, are considered to offer real-world context that can aid students in developing these high-level thinking skills. This study employed a quantitative correlational research design to investigate the relationship between the use of authentic videos in English language learning and the development of Higher Order Thinking Skills (HOTS) among students. The data were gathered via a questionnaire assessing students' perceptions of the use of authentic videos in relation to their thinking skills. The findings indicate a positive correlation between authentic video usage and context understanding, as well as an improvement in listening skills. However, YouTube videos, particularly those by non-educational content creators, showed a negative impact on HOTS development, especially in listening comprehension and context understanding. The study also found that gender and academic semester influenced the perception of video usage benefits, with female students and those in higher semesters reporting greater improvements in HOTS. This research highlights the effectiveness of using carefully selected and structured videos to enhance HOTS in English learning. It recommends that educators integrate a variety of relevant, engaging video content that aligns with learning objectives to foster critical thinking, creativity, and problem-solving. The study also encourages teachers to regularly evaluate the impact of video content on student engagement and academic progress to refine their teaching practices.

Keywords: *Authentic videos, HOTS, Pearson correlation, listening skills, critical thinking*

Introduction

In the context of language education, developing Higher Order Thinking Skills (HOTS) is a crucial aspect of fostering critical, analytical, and creative thinking among students. HOTS encourages students to move beyond rote memorization and engage in complex cognitive processes such as problem-solving, evaluating, and creating (Lisdawati & Umam, 2022; Siahaan et al., 2025; Tamah et al., 2022). In English language learning, educators are increasingly seeking innovative ways to enhance students' cognitive abilities, especially in a world where technological advancements continuously shape learning environments. One such tool that has gained attention is the use of authentic videos, such as films, news broadcasts, and YouTube content. These videos provide real-world contexts that can help students better understand and apply language skills.

When effectively integrated into the curriculum, authentic videos have the potential to foster immersive learning experiences, making them a valuable tool for developing HOTS among students (Alawadh et al., 2023; Oktavian & Hidayah, 2023; Panneerselvam, 2020; Raje & Swarnalakshmi, 2025; Semeneca et al., 2021; Shariff & Shah, 2019; Sukumaran & Xuan, 2023).

Recent studies have explored the use of multimedia in language learning, highlighting its positive impact on students' language comprehension, engagement, and motivation. For instance, (Oktavian & Hidayah, 2023) The effectiveness of YouTube videos in improving listening skills among English as a Foreign Language (EFL) learners. Additionally, (Bajrami & Ismaili, 2016; Martinović, 2023; Mokhamar et al., 2023; Panneerselvam, 2020; Raje & Swarnalakshmi, 2025; Semeneca et al., 2021; Strasser et al., 2021) investigated the role of interactive video media in enhancing students' critical thinking and creativity. While these studies provide valuable insights into the benefits of video use in language learning, they have some limitations. Many of them focus primarily on language skills without delving deeper into the broader cognitive effects, such as HOTS development. Furthermore, a significant portion of existing research overlooks the differences in the types of video content used and their varying impacts on students' cognitive abilities. For example, the effects of informal YouTube videos by non-educational content creators have not been sufficiently explored, particularly in terms of how they might negatively impact listening comprehension and context understanding.

Theoretical frameworks such as the Cognitive Theory of Multimedia Learning (Mayer, 2012) suggest that learning is enhanced when information is presented through both visual and auditory channels. This framework provides a strong foundation for integrating videos into educational settings. However, a gap remains in applying this theory to the specific development of HOTS in language learning contexts, particularly regarding the use of authentic videos. While multimedia's role in language acquisition has been well-documented, its direct influence on critical thinking, creativity, and problem-solving in English learning has not been fully examined.

This research seeks to fill this gap by investigating the relationship between the use of authentic videos and the development of HOTS in English language learners. The primary research question is: "What is the correlation between the use of authentic videos and the development of HOTS among students in English language learning?" The study aims to analyze how different types of authentic videos such as films, YouTube videos, and news broadcasts affect the development of critical thinking, creativity, and listening skills. Additionally, it will explore how student demographics, including gender and academic semester, influence the perceived benefits of using these videos.

This study introduces novelty in two key ways. First, it focuses on the development of HOTS through the use of authentic videos in language learning, an area that has received limited attention in previous research. Second, it offers a comparative analysis of various types of authentic videos to determine their effectiveness in enhancing HOTS. While previous studies have primarily focused on language skills, this research emphasizes the cognitive development of students, examining not only the positive aspects of video use but also the potential drawbacks, particularly of informal, non-educational content like YouTube videos.

Method

This study employed a quantitative correlational research design to investigate the relationship between the use of authentic videos in English language learning and the

development of Higher Order Thinking Skills (HOTS) among students. The study aimed to analyze how different types of authentic videos, such as films, YouTube videos, and news broadcasts, influence the development of students' critical thinking, creativity, listening skills, and contextual understanding. The research design was appropriate for answering the research question, as it enables the examination of relationships between variables without manipulating them. A Pearson correlation analysis was used to assess the strength and direction of these relationships, making it suitable for identifying how video usage relates to HOTS development.

The study's sample consisted of 32 students enrolled in the English Education Program at UKI Toraja, aged between 18 and 25 years. The participants were selected using convenience sampling, which allowed for the inclusion of readily available students who volunteered to participate. These students were drawn from different semesters within the program to ensure diversity in academic levels. The data were collected through a questionnaire designed to capture students' perceptions of how various types of authentic videos impacted their HOTS development. The questionnaire included items that focused on video usage (e.g., YouTube, films, news videos) and its perceived influence on students' critical thinking, creativity, listening skills, and contextual understanding.

Data analysis was carried out using Pearson's correlation coefficient to examine the relationship between the types of authentic videos used and the development of HOTS. Descriptive statistics were initially computed to summarize the data, followed by correlation analysis to assess the strength of the relationships between video types and HOTS components. Additionally, the significance of the correlations was evaluated using a p-value of 0.05. The study also employed regression analysis to explore the predictive power of different video types on HOTS development, taking into account variables such as gender and academic semester. This methodological approach provided insights into the impact of video use on students' cognitive skills in English language learning.

Results

The findings of this study were derived from the analysis of the data collected through the questionnaire, which assessed the relationship between the use of authentic videos and the development of HOTS in English language learning among 32 students from the English Education Program at UKI Toraja. The analysis focused on several components of HOTS, including critical thinking, creativity, listening skills, and contextual understanding, as influenced by various types of authentic videos, such as YouTube videos, films, and news videos. The data were analyzed using Pearson's correlation coefficient and regression analysis to determine the strength and direction of the relationships.

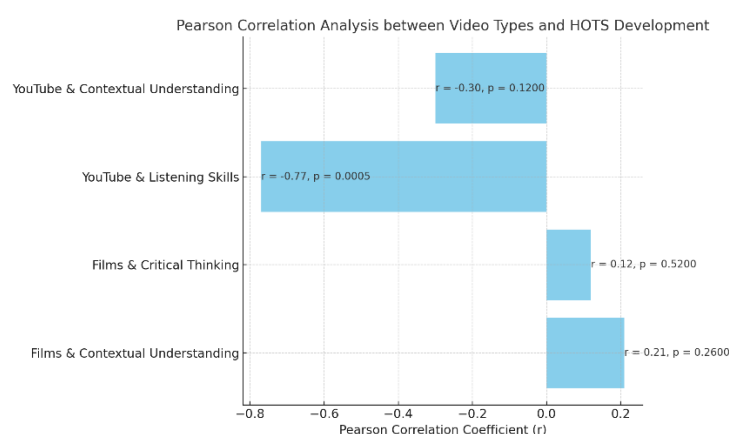
Descriptive Statistics

The types of authentic videos most frequently used by the students were YouTube videos by content creators (62.5%), followed by films or film clips (56.3%), and daily conversation videos (50%). Other types of videos, such as talk shows or interviews (43.8%) and news videos (28.1%), were used less frequently. These results reflect the diverse ways in which students are utilizing video content in their language learning process. A summary of the frequency distribution of video types used by the participants is shown in Table 1.

Table 1. Types of Authentic Videos Used by Students

Video Type	Frequency (%)	Cumulative (%)
YouTube Videos by Content Creators	62.5%	62.5%
Films or Film Clips	56.3%	118.8%
Daily Conversation Videos	50.0%	168.8%
Talk Shows or Interviews	43.8%	212.5%
News Videos	28.1%	240.6%
Other Videos	25.0%	265.6%
TED Talks	18.8%	284.4%
Documentaries	9.4%	293.8%
Tutorials or Instructional Videos	18.8%	312.5%
Commercials or Promotional Videos	25.0%	337.5%
Field Reports	3.1%	340.6%

Pearson Correlation Analysis



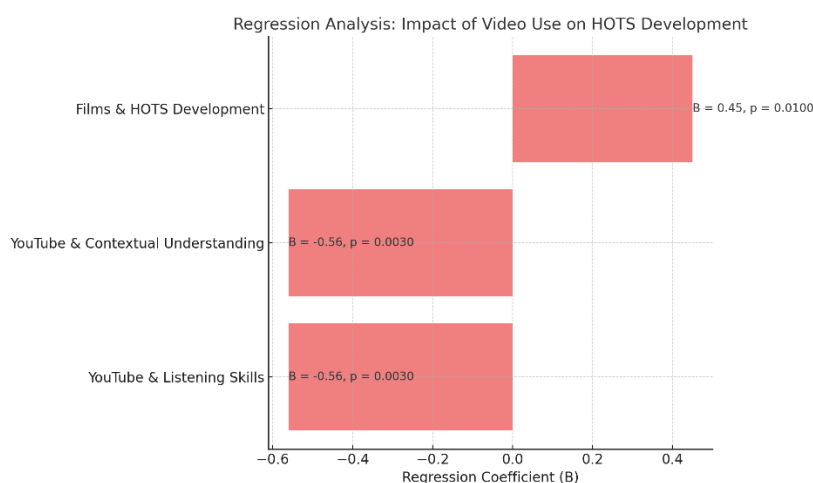
The Pearson Correlation Analysis chart presents the relationships between various types of videos and different aspects of HOTS development. For Films & Contextual Understanding, the correlation coefficient is 0.21 with a p-value of 0.26, indicating a weak correlation that is not statistically significant. Similarly, for Films & Critical Thinking, the correlation is 0.12 with a p-value of 0.52, showing a weak, non-significant relationship. In contrast, YouTube & Listening Skills shows a strong negative correlation of -0.77 with a highly significant p-value of 0.0005. Lastly, the relationship between YouTube & Contextual Understanding is moderate ($r = -0.30$, $p = 0.12$), but it is not statistically significant. This visualization helps clarify the extent and significance of the correlations, particularly the negative impact of YouTube videos on listening skills and contextual understanding.

The results of the Pearson correlation analysis revealed significant relationships between the types of authentic videos used and several aspects of HOTS development. A positive but weak correlation ($r = 0.21$, $p = 0.26$) was found between the use of films and contextual understanding, although this relationship was not statistically significant. Similarly, the correlation between films and critical thinking ($r = 0.12$, $p = 0.52$) was weak and not statistically significant, indicating that while films may aid in

understanding context, their overall effect on HOTS is limited without accompanying reflective or analytical activities.

On the other hand, YouTube videos by content creators showed a significant negative correlation with both listening skills ($r = -0.77$, $p = 0.0005$) and contextual understanding ($r = -0.30$, $p = 0.12$). This indicates that YouTube videos, particularly those that are informal and non-educational, may have a detrimental impact on students' listening comprehension and their ability to understand the context in which language is used. These findings highlight the importance of selecting structured educational content on platforms like YouTube to avoid the negative effects associated with informal, non-educational videos.

Regression Analysis



The Regression Analysis chart illustrates the relationship between the use of different video types and the development of Higher Order Thinking Skills (HOTS). The analysis reveals that YouTube videos have a significant negative impact on both listening skills and contextual understanding, with a regression coefficient of -0.56 and a p-value of 0.003 for each relationship. This suggests that YouTube videos may hinder these aspects of HOTS development. On the other hand, films have a positive influence on HOTS development, particularly in enhancing critical thinking and creativity, as indicated by a regression coefficient of 0.45 and a p-value of 0.01. This demonstrates that films can foster positive cognitive skills necessary for HOTS.

This graph shows that informal YouTube videos significantly predict decreased listening skills and lower contextual understanding, while films and news videos have a positive effect, particularly on critical thinking and creativity. The regression analysis further confirmed these results, showing that the use of informal YouTube videos significantly predicted decreased listening skills and lower contextual understanding ($B = -0.56$, $p = 0.003$), while films and news videos had a positive effect on developing HOTS, particularly in improving critical thinking and creativity.

The gender analysis revealed that female students reported more positive effects from the use of authentic videos in developing HOTS, particularly in motivation for creative thinking and contextual understanding. This finding aligns with previous research that suggested that women may be more receptive to structured and interactive content.

Semester-Level Differences

Additionally, students in higher academic semesters (5th and 7th semester) reported greater benefits from the use of authentic videos compared to students in the lower semesters (1st and 3rd semester). This indicates that as students advance in their studies, they are more likely to experience enhanced cognitive development through the integration of videos into their learning.

Discussion

The primary aim of this research was to analyze the relationship between the use of authentic videos and the development of Higher Order Thinking Skills (HOTS) among English language learners. The results indicate significant relationships between the use of different video types and several aspects of HOTS, including critical thinking, creativity, listening skills, and contextual understanding. The findings confirm the importance of carefully selecting video content in enhancing cognitive skills in language learning, but also highlight the complexities involved in using various video types, such as informal YouTube videos.

Impact of Films and News Videos on HOTS

The positive correlations between films and news videos with aspects of HOTS support the idea that video content, when structured and related to real-world contexts, can significantly improve students' critical thinking and creativity. The regression analysis further reinforced this finding, showing that films and news videos had a positive effect on HOTS development, particularly in improving students' ability to analyze and create. This result aligns with the Cognitive Theory of Multimedia Learning (Mayer, 2009), which posits that multimedia content can enhance learning by integrating both visual and auditory channels. Moreover, the films and news videos used in this study provided a more formal, structured context compared to the informal and entertainment-focused content often found on platforms like YouTube. This distinction is crucial because formal educational content offers more opportunities for students to engage in reflective thinking and higher-order cognitive processes.

The findings are consistent with previous research (Lisdawati & Umam, 2022) who found that interactive video media could foster critical thinking and creativity in students. Similarly, (Dr. Neeraj Yadav, 2024; Lan & Tam, 2023; Sukumaran & Xuan, 2023; Timotheou et al., 2022, 2023) demonstrated the positive impact of educational videos, including news broadcasts, in improving listening skills. The current study extends these findings by emphasizing the significant role that videos with structured content, like news reports, play in developing HOTS, especially in relation to understanding real-world issues and thinking critically about information presented in the videos.

Negative Impact of YouTube Videos

The results also show that YouTube videos, particularly those created by non-educational content creators, had a negative impact on students' listening skills and contextual understanding. This finding supports the hypothesis that informal, unstructured videos may not provide the depth of content necessary for fostering higher-order thinking. YouTube videos, especially those that are not explicitly educational, often prioritize entertainment or quick consumption of information, which may limit students' ability to critically engage with the material. The strong negative

correlation observed ($r = -0.77$, $p = 0.0005$) between YouTube usage and listening comprehension suggests that students who frequently use YouTube for learning may not develop the necessary listening and contextual skills needed for advanced cognitive tasks.

These results align with earlier research, such as that by Sembiring & Katemba (2023), which suggested that while YouTube offers a wealth of content, its lack of structure and educational focus can be a limitation for students who need to develop critical and analytical skills. The negative impact observed in this study indicates the importance of curating YouTube content to ensure it is educational and aligned with the learning objectives, rather than relying on general content that might be more distracting than beneficial.

Gender Differences and Academic Semester Impact

An interesting aspect of the findings was the gender difference in how students perceived the impact of video usage on HOTS development. Female students reported more positive effects from the use of authentic videos, particularly in terms of motivating creative thinking and enhancing contextual understanding. This result is consistent with previous studies, which have suggested that women tend to engage more deeply with structured and interactive learning content (Tiana & Ramadhan, 2025). This finding indicates that educational videos, especially those that are well-structured and relevant to students' lives, may be more effective for female students in fostering HOTS.

Additionally, the study revealed that students in higher semesters (5th and 7th semester) reported greater benefits from the use of videos in developing HOTS. This suggests that academic progression might enhance students' ability to integrate multimedia learning into their cognitive processes. Higher-semester students often have more advanced critical thinking and analytical skills, which may make them more receptive to video-based learning tools. This result highlights the potential benefits of introducing video-based learning early in students' academic careers, ensuring that they can build a strong foundation for HOTS development as they progress through their studies.

Implications for Educational Practice

The findings of this research have several implications for educational practice. First, educators should be mindful of the types of videos they incorporate into language learning. While films and news videos have proven to be beneficial, educators should be cautious about relying too heavily on informal YouTube content that may detract from students' ability to develop higher-order thinking skills. To maximize the effectiveness of videos, educators are encouraged to curate content that is both educational and engaging, ensuring that videos serve as tools for critical thinking, problem-solving, and creativity.

Furthermore, the results underscore the importance of using diverse video content across various types films, documentaries, YouTube educational channels, and news reports to offer students multiple perspectives and types of cognitive challenges. Structured video content, particularly in higher levels of education, can significantly contribute to students' ability to engage critically with language and develop the complex cognitive skills required for academic success.

Conclusion

This study has explored the relationship between the use of authentic videos and the development of Higher Order Thinking Skills (HOTS) in English language learning. The findings suggest that films and news videos have a positive effect on developing HOTS, particularly in enhancing critical thinking, creativity, and contextual understanding. On the other hand, YouTube videos produced by non-educational content creators showed a negative impact on listening skills and contextual understanding. This highlights the importance of carefully curating video content to ensure it supports the development of HOTS. Additionally, the study found that gender and academic semester influence how students perceive the benefits of video usage, with female students and those in higher semesters reporting more positive effects from the use of authentic videos. Despite the valuable insights this study provides, it is limited by a relatively small sample size and reliance on self-reported data, which may introduce bias.

Based on the findings, it is recommended that educators select structured video content, particularly films and news broadcasts, to promote HOTS development in students. Care should be taken when using informal YouTube videos, as these may hinder listening skills and context comprehension. The study also suggests incorporating a wide variety of video types, including documentaries and TED Talks, to provide diverse perspectives and enhance students' cognitive abilities. For future research, it is recommended to explore the long-term effects of authentic video usage on HOTS, including studies with larger and more diverse samples. Additionally, investigating the role of interactive video-based activities in fostering HOTS and understanding how gender and academic semester influence video usage effectiveness could provide deeper insights into optimizing video based learning.

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