

**Using AI to Generate a Paper About the Importance of Closed Captions in Educational Videos**

Assignment 2, Part 1 SAMPLE PAPER

Rob Power

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### Disclaimer



Certain sections of this paper have been generated using the ChatGPT (OpenAI, n.d.). Large Language Model (LLM) artificial intelligence (AI) application. AI-generated content has been clearly identified. The author does not claim the AI-generated content to be their own work.

### Using AI to Generate a Paper About the Importance of Closed Captions in Educational Videos

The significance and use of closed captions when creating educational videos is a topic with which I am already familiar, and on which I have previously written on multiple occasions (Power, 2022, 2023, 2024). For this reason, I chose this topic as the focus of this exercise in the use of the artificial intelligence tool ChatGPT (OpenAI, n.d.) to generate an academic paper. The purpose of this exercise is to investigate, first-hand, the process of getting an AI tool to generate a fully-formed academic paper. Subsequent stages of this course activity will involve systematically analyzing the essay output from ChatGPT for such elements as writing style, adherence to APA v7 formatting conventions, and accuracy of the output content (including what ChatGPT gets correct, as well as any factual errors or omissions). My existing familiarity with the chosen topic will be essential to this investigation. My findings from this process will inform a multimedia presentation that I will prepare in the final stage of this activity, outlining the process of using ChatGPT to write academic essays, the findings of my systematic review, and my recommendations to teachers, students, and educational leaders about the efficacy and appropriate use of AI tools in the academic research and writing process.

### Prompting ChatGPT

The following queries were used to prompt ChatGPT to generate the required components of a 1000-word academic essay on my chosen topic.

1. Provide a 400-500 word literature review, with real academic citations in APA version 7 format, on the topic of the importance of closed captions in educational videos.
2. Drawing from this literature review, provide a 200-300 word discussion of recommendations for educators on the use of closed captions in educational videos.
3. Write a 150-200 word essay introduction paragraph, based on the previously generated literature review and recommendations.
4. Compile a complete list of all references from the previously generated essay sections.

### The Output



The following section presents the unedited output from ChatGPT, arranged in appropriate sequence for an academic essay.

### Introduction

The use of closed captions (CC) in educational videos has gained increasing recognition for its numerous benefits in enhancing learning outcomes, particularly in fostering accessibility, language acquisition, and literacy development. As educational institutions increasingly rely on multimedia to engage students, incorporating captions in videos has become a key strategy for creating inclusive learning environments. Research has shown that captions significantly support students with hearing impairments by providing access to spoken content (Marsh, 2019), while also aiding non-native speakers in improving language comprehension and vocabulary retention (Sugiura, 2016). Additionally, captions contribute to literacy

development by reinforcing reading skills and improving attention and retention (Baker et al., 2021; Tindell & Shepard, 2017). These advantages suggest that closed captions are a valuable tool for educators seeking to enhance student engagement and promote equitable learning experiences. This essay will explore the importance of closed captions in educational videos, highlighting their impact on accessibility, language learning, and literacy development, and offer practical recommendations for educators on how to effectively integrate captions into their video-based teaching materials.

### **Literature Review: The Importance of Closed Captions in Educational Videos**

Closed captions (CC) have become an essential component of multimedia content, particularly in educational settings, due to their potential to enhance accessibility, learning outcomes, and engagement for diverse audiences. A growing body of research highlights the benefits of incorporating closed captions in educational videos, which can assist learners with varied needs, including those with hearing impairments, non-native speakers, and individuals seeking to improve literacy skills.

First, closed captions play a crucial role in increasing accessibility for students with hearing impairments. According to Marsh (2019), captions allow deaf and hard-of-hearing students to access the spoken content in educational videos, thereby leveling the playing field with their hearing peers. This becomes especially important as educational institutions increasingly rely on multimedia to deliver instructional content. Furthermore, closed captions can provide clarity when audio quality is poor, which may otherwise hinder comprehension (Baker & Hutt, 2020). Thus, the provision of closed captions in educational media is not merely a matter of legal compliance but a vital aspect of inclusive education.

Closed captions also benefit non-native speakers of a language. Studies suggest that captions can improve language comprehension by allowing learners to read along while listening to the spoken word, facilitating better understanding of vocabulary, grammar, and pronunciation (Sugiura, 2016). For instance, research by Vesselinov and Grego (2018) found that students learning English as a second language exhibited improved retention and fluency when provided with captioned videos. The dual modality of hearing and seeing the words reinforces language acquisition, helping learners bridge gaps in comprehension and vocabulary knowledge.

Moreover, closed captions contribute to improved literacy skills for all learners. A study by Baker et al. (2021) indicates that students, particularly those with low literacy levels, can benefit from the text-based support that captions provide. Captions expose students to written words in context, aiding in vocabulary acquisition, spelling, and reading fluency. This is particularly beneficial for struggling readers who may have difficulty processing spoken language alone. Additionally, the integration of captions in videos can facilitate better attention and retention of information, as it offers an additional avenue for engagement and learning (Leong, 2018).

Furthermore, captions have been shown to enhance overall student engagement and academic performance. Research by Tindell and Shepard (2017) found that students watching videos with captions showed increased attention and retention of course material compared to those who viewed videos without captions. Captions provide an additional layer of cognitive processing, which can help students focus more on the content, thus improving learning outcomes. This is particularly important in the context of multimedia learning, where the combination of visual and auditory stimuli can enhance understanding and retention.

In conclusion, closed captions in educational videos serve as a powerful tool for enhancing accessibility, language acquisition, literacy, and engagement. As educational institutions continue to integrate multimedia resources, the importance of captions cannot be overstated. Providing captions not only supports diverse learners but also contributes to a more inclusive and effective learning environment.

### **Discussion: Recommendations for Educators on the Use of Closed Captions in Educational Videos**

Given the significant benefits of closed captions (CC) for diverse learners, educators are encouraged to integrate captions into their video-based instructional materials. First and foremost, educators should make captions available for all videos used in the classroom, ensuring accessibility for students with hearing impairments. This practice not only complies with accessibility standards but also supports inclusive education by giving all students an equal opportunity to engage with the content (Marsh, 2019).

In addition, captions should be utilized to aid non-native speakers of the language in acquiring new vocabulary, improving pronunciation, and enhancing overall comprehension. By offering the option to view both the spoken and written form of the content, captions help reinforce language acquisition, making videos a valuable tool for English language learners (Sugiura, 2016). Educators may consider selecting videos with high-quality, accurately synced captions or providing captions for videos that do not already have them.

Moreover, closed captions can support literacy development, especially for students who struggle with reading or have lower literacy levels. The exposure to written text within the context of the video can boost vocabulary acquisition, reading fluency, and retention (Baker et al., 2021). Educators should therefore not only offer captions but also encourage students to use them as a tool for active learning.

Finally, captions can increase overall student engagement by enhancing attention and information retention (Tindell & Shepard, 2017). Educators are advised to use captions strategically in videos to help students remain focused and retain more from multimedia content. Overall, integrating captions into educational videos can enhance learning outcomes and promote a more inclusive, engaging educational environment.

### **References (from ChatGPT Output)**

Baker, S. K., & Hutt, S. J. (2020). The impact of closed captions on student learning in higher education. *Journal of Educational Technology*, 29(3), 215-229. <https://doi.org/10.1007/s42439-020-00040-7>

Baker, W. E., Shepherd, M. T., Hume, K. E., & Thomas, T. S. (2021). Closed captions and literacy development: A meta-analysis. *Journal of Literacy and Language Education*, 42(1), 82-99. <https://doi.org/10.1007/jllr.2021.0032>

Leong, M. (2018). Engaging learners through multimedia: The role of captions in digital education. *Educational Technology Research and Development*, 66(1), 63-79. <https://doi.org/10.1007/s11423-017-9525-4>

Marsh, S. (2019). Accessibility and learning: How closed captions support students with hearing impairments. *Journal of Special Education Technology*, 34(2), 25-34.  
<https://doi.org/10.1177/0162643419835107>

Sugiura, L. (2016). The benefits of captions for English language learners. *Language Learning & Technology*, 20(3), 24-42. <https://doi.org/10.1016/j.llt.2016.08.002>

Tindell, D. R., & Shepard, M. T. (2017). The impact of captions on student engagement and performance in video-based learning. *Computers & Education*, 112, 87-95.  
<https://doi.org/10.1016/j.compedu.2017.05.005>

Vesselinov, R., & Grego, J. (2018). The effectiveness of closed captioning in language acquisition: A longitudinal study. *Journal of Second Language Acquisition and Teaching*, 12(2), 33-47.  
<https://doi.org/10.1007/jslat.2018.004>

## References

- OpenAI (n.d.). *ChatGPT*. [Software application]. <https://chat.openai.com>
- Power, R. (2022). Accessibility in Online Learning. In R. H. Kay & W.J. Hunter (Eds.), *Thriving Online: A Guide for Busy Educators* (pp. 101-108). Ontario Tech University. <https://doi.org/10.51357/ERZM7438>
- Power, R. (2023). Creating Instructional Videos. In *Everyday Instructional Design: A Practical Resource for Educators and Instructional Designers*. Power Learning Solutions. <https://pressbooks.pub/everydayid/chapter/creating-instructional-videos/>
- Power, R. (2024). Making Your Text-Only Videos Accessible. In *The ALT Text: Accessible Learning with Technology*. Power Learning Solutions. <https://pressbooks.pub/thealttext/chapter/making-your-text-only-videos-accessible/>