Embracing the Disrupted Language Teaching and Learning Field: Analyzing YouTube Content Creation Related to ChatGPT

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Recent Publications

Manuscripts Currently in Review

Research Focus
Embracing the disrupted language teaching and learning field: Analyzing YouTube content creation related to ChatGPT.

- Exploring the multilingual applications of ChatGPT: Uncovering language learning affordances in YouTuber videos.
- Reconceptualizing self-directed language learning in the era of generative AI: An exploratory analysis.
- Educational affordance best practice
- SDL learning & instruction
- SDL design & model
- Benefits, drawbacks, and concerns

Research Team
Curtis J. Bonk is a professor in the School of Education at Indiana University teaching psychology and technology courses and adjunct in the School of Informatics.
Belle Li is a Dean’s full scholarship doctoral student studying Learning Design & Technology at Purdue University.
Xiaojing Kou has served as Director for Center for Language Technology at Indiana University since 2012.
Charon Wang is a Multilingual Writing Specialist and an Assistant Professor of Writing at Colby College.

Huang, Hew, and Fryer (2022) – A review of 25 articles on the topic of chatbot-supported language learning.

- Three technical affordances of chatbots: timeliness, ease of use, and personalization.
- Five pedagogical uses: interlocutors, simulations, transmission devices, helplines, and recommendation systems.
- Chatbot challenges: technological limitations, novelty effects, and dealing with cognitive load.

## ChatGPT in Education

1. Most of the current discussions about ChatGPT’s implications for education focus on the accuracy and the quality of the content it provides (Rudolph, et al., 2023).
2. Policies and frequently raise cautionary flags about the potential for misuse (e.g., Yurkevich, 2023).
3. Provide guidance (e.g., Cox Communications, 2023; McAfee, 2023) and education on ethical use (e.g., Baidoo-Anu & Owusu Ansah, 2023; Mhlanga, 2023).

## ChatGPT in Language Education

1. Baskara and Mukarto (2023) explored the integration of ChatGPT into language courses, considering the associated benefits and challenges in higher education.
2. Kohske et al. (2023) examined the affordances of the ChatGPT for language teaching and learning.
3. Koraishi (2023) examined material development and assessment in teaching English as a foreign language (EFL), highlighting ChatGPT as a valuable tool for EFL teachers.

4. Hong (2023) investigated the implications of ChatGPT for foreign language teachers, shedding light on its mechanisms and misconceptions.
5. Ali et al. (2023) revealed the positive impact of ChatGPT on reading and writing skills, while, at the same time, attitudes toward listening and speaking skills were neutral.
Why YouTuber?

Content creators who facilitate learning on YouTube are often deemed digital pioneers (Chao, 2022; Zavyalova & Galvin, 2022).

- YouTubers are:
  1. Early adopters.
  2. Digital pioneers.

- YouTube videos:
  3. Play a key role in shaping the ways in which the newly emerging learning tools are perceived and used.

June 17, 2023, YouTubers using ChatGPT
Learning is Increasingly Informal
Will AI change the future of language learning?
ShuoshuoChinese
ShuoshuoChinese
https://www.youtube.com/watch?v=TzFepHlIfGo

June 12, 2023
ShuoshuoChinese
ShuoshuoChinese
https://www.youtube.com/watch?v=JgGz1HfIa&t=727s
June 12, 2023
ShuoshuoChinese
https://www.youtube.com/watch?v=JgGtrjhFis&t=727s

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ShuoshuoChinese
https://www.youtube.com/watch?v=JgGtrjhFis&t=727s

June 17, 2023, YouTubers using ChatGPT
I built my own AI tutor to teach me Chinese. Mind blown.
Xiaomanyc 小马在纽约, Streetsmart Languages
https://www.youtube.com/watch?v=Fr8k7EnpoxY
https://join.streetsmartlanguages.com/ai

June 17, 2023, YouTubers using ChatGPT
How to use ChatGPT to accelerate language learning, Malika Yunus
https://www.youtube.com/watch?v=H5simmU00eY

June 17, 2023, YouTubers using ChatGPT
I let chatGPT be my Japanese teacher for a day. Here’s what happened, Ty’s Take
https://www.youtube.com/watch?v=Xgj7JJfz0Yw

June 17, 2023, YouTubers using ChatGPT
How to Learn Japanese with AI (ChatGPT)
That Japanese Man Yuta
https://www.youtube.com/watch?v=HDEvmsvXBww
**June 17, 2023, YouTubers using ChatGPT**

<table>
<thead>
<tr>
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<td>Can ChatGPT Replace a Cantonese Teacher? How to Use ChatGPT to Learn Cantonese</td>
<td><a href="https://www.youtube.com/watch?v=s5yAg3qksI4">https://www.youtube.com/watch?v=s5yAg3qksI4</a></td>
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**Data Sources for Studies (#1-#4)**

1. Embracing the disrupted language teaching and learning field: Analyzing YouTube content creation related to ChatGPT. 140 YouTube Videos
2. Exploring the multilingual applications of ChatGPT: Uncovering language learning affordances in YouTuber videos. YouTube videos & comments across 18 languages
4. Reconceptualizing the self-directed language learning in the era of generative AI: An exploratory analysis. 19 YouTubers & 30 Videos

**Research Methods for Studies (#1-#4)**

   - online observations
   - content publishing tracking
   - systematic content analysis of online videos.
2. Qualitative: Inductive content analysis (Elo & Kyngäs, 2008; Stenner, 2000) #2-YouTube videos & comments
3. Qualitative: Iterative thematic analysis (Braun & Clarke, 2006; Braun et al., 2014) #3-14 YouTubers (teacher/professor)
4. Qualitative: Iterative thematic analysis (Braun & Clarke, 2006) #4-19 YouTubers
**Data Collection Procedures (#1 & #2)**

- Identify Keywords
- Manual Sampling
- Video Sampling
-Filtering
- Normalization
- External Verification

**Video Sampling (#1 & #2)**

"ChatGPT AND language learning," "ChatGPT AND language education," and "ChatGPT AND (Chinese OR Japanese OR Spanish OR French OR English OR German OR additional languages here)."

- Include videos directly discussing or representing ChatGPT in language education.
- Exclude videos not primarily focused on language education (e.g., academic writing).
- Exclude videos shorter than a certain duration (e.g., less than 2 minutes).

**Utilize video crawler to collect YouTube videos tagged with ChatGPT and relevant keywords.**

Cross-check with existing Google spreadsheet to ensure no eligible videos are missed.

Total of 140 videos were identified by April 10, 2023.

**Video Selection Criteria (#2)**

1. Quality and Engagement
2. Uniqueness and Relevance
3. Diversification
4. Validity and Credibility
INDIANA UNIVERSITY ALUMNI ASSOCIATION

Criteria for Video Selection

<table>
<thead>
<tr>
<th>Criteria</th>
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<tr>
<td>Quality and Engagement</td>
<td>Content creators with a substantial number of subscribers and high levels of engagement were prioritized. This criterion ensured that the selected videos would likely have a significant number of comments, providing sufficient data for content analysis of YouTube videos and comments.</td>
</tr>
<tr>
<td>Originality and Relevance</td>
<td>Content creators offering unique insights, perspectives, or approaches to integrating ChatGPT across different languages were preferred. The inclusion of videos that focused on or discussed less widely used languages was prioritized.</td>
</tr>
<tr>
<td>Diversification</td>
<td>Content creators were selected from various backgrounds and perspectives, including educators, AI experts, language learning enthusiasts, and individuals with expertise in multilingual integration. This criterion aimed to include a wide range of perspectives and experiences.</td>
</tr>
<tr>
<td>Validity and Credibility</td>
<td>Content creators known for providing accurate information, supported by reliable sources and evidence, were given preference. Channels that demonstrated a commitment to knowledge sharing and rigorous research were considered trustworthy for inclusion.</td>
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</tbody>
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Data Analysis (#2- Inductive content analysis)

Research Questions

SECTION 4

Study #1

1. What is the focus of the discussion and demonstrations by the YouTube content creators of ChatGPT in language education?

2. How do content creators describe their current practices of using ChatGPT in language education?

RQ1: What is the focus of the discussion and demonstrations by the YouTube content creators of ChatGPT in language education?

a. How has the discussion around ChatGPT and related AI technologies evolved during its brief history as a tool for language education on YouTube?

b. Who is producing videos about ChatGPT in language education on YouTube?

c. What are the common topics and themes present in these discussions and demonstrations?
RQ1: What is the focus of the discussion and demonstrations by the YouTube content creators of ChatGPT in language education?

1a. How has the discussion around ChatGPT and related AI technologies evolved during its brief history as a tool for language education on YouTube?

**Figure 1. Trends in Video Releases from November 30, 2022 to April 10, 2023**

**Figure 2. Trend of videos posted in different languages**

1b. Who is producing videos about ChatGPT in language education on YouTube?

**Figure 3. Distribution of Content Creators Producing Videos about ChatGPT in Language Education on YouTube**

**Figure 4. Distribution of Educators Producing Videos about ChatGPT in Language Education on YouTube**

**Figure 5. Distribution of Language Teachers and Learners by Language**

1c. What are common topics & themes present in these discussions and demos?

**Theme Codes**

- **Introduce ChatGPT**
  - Natural / human-like conversation
  - Ask it questions and it gives you answers
  - Possessing extensive knowledge

- **Roles of ChatGPT**
  - Virtual Assistant
  - Tutor
  - On-demand English teacher
  - Personal writing assistant
  - Research Assistance
  - Virtual friend
  - Multi-language support
  - Language genius
  - Language coach
  - Teacher’s toolkit

- **Hands-on Demonstration**
  - Techniques & Tips & Strategies for learners
  - Techniques & Tips & Strategies for teachers
  - Common mistakes to avoid when using ChatGPT for language learning
  - The innovative way of using ChatGPT
  - Testing ChatGPT’s ideology on language learning

- **Attitudes toward ChatGPT**
  - A game changer for language learning
  - High-tech plagiarism
  - Cannot replace language teachers

- **Solutions**
  - Integrated with other tools (e.g., DeepL, Youglish, Duolingo)
  - Need for empathy and assistance
  - Pedagogy considerations
RQ1: What is the focus of the discussion and demonstrations by the YouTube content creators of ChatGPT in language education?

1c. What are the common topics and themes present in these discussions and demonstrations?

Figure 6. The structure pattern of videos about ChatGPT in language education on YouTube

RQ2: How do content creators describe their current practices of using ChatGPT in language education?

a. How do they perceive the potential benefits and drawbacks of incorporating ChatGPT in language learning?

b. What strategies do they use to mitigate any drawbacks and ensure that ChatGPT is effectively used in language education?

Q2a. How do they perceive the potential benefits and drawbacks of incorporating ChatGPT in language learning?

Benefits of ChatGPT

1. Providing optimization and enhancement of language learning platforms as an augmentative learning device.
3. Acting as an accessible and affordable 24/7 tutor providing relevant information to users as it learns from their interactions.
4. Engaging in conversations and practicing the language in a safe and comfortable environment without fear of judgment or mistakes.
5. Being especially beneficial for students who struggle with traditional teaching methods or have special learning needs.

6. Creating bespoke content such as learning texts, worksheets, and lesson plans.
7. Helping with job interviews in a foreign language and practicing conversation by generating responses to questions.
8. Providing highly tailored content and transforming how individuals learn languages.
9. Enhancing the language learning experience by fostering learner motivation, improving efficiency, and promoting attentiveness and observation skills.
10. Creating an engaging and accessible learning environment that makes language education more enjoyable and readily accessible for learners.
11. Reducing the workload of language teachers.

RQ2: How do content creators describe their current practices of using ChatGPT in language ed?

Q2a. How do they perceive the potential benefits and drawbacks of incorporating ChatGPT in language learning?
RQ2: How do content creators describe their current practices of using ChatGPT in language education?

Interview Data (from Study #3)

"I think that's our future. Like it's, it's inevitable right now."

Lucas & Fabricio

"...It can generate flawless English...if language can produce in that way that isn't taken from chunks out[,] that's machine-produced language, it's not machine-translated language...that really does change things, so the machines can produce language that's accessible in an easy way." (Jo Gakonga)

Interview Data (from Study #3)

"I can talk about anything, and the answers are both positive in terms of the optimism displayed by the bots, and informative. It is very rare to find that combination in a human interlocutor, especially when you want to interact for extended periods, which is what sets it apart..." (Carlos, Interview, May 17, 2023)

Interview Data (from Study #3)

"...can you use those words and write an article about love, for example, and 10 out of 10 times it gives me a really boring article which I don't think is quite catchy or engaging." (Shuo Xiong, Interview, June 12, 2023)

Sometimes it begins to hallucinate or feed you with incorrect information because what it is doing is creating text and it's not always correct." (Craig Wheland, Interview, May 17, 2023)

RQ2: How do content creators describe their current practices of using ChatGPT in language education?

Q2a. How do they perceive the potential benefits and drawbacks of incorporating ChatGPT in language learning?

Concerns of ChatGPT
1. The danger of being too dependent on ChatGPT for writing essays and creative writing.
2. Potentially replacing human workers.
3. Creating competition, insecurity, and fear.
4. Data privacy.
5. No connection between the rapid development of AI and the growth of human language faculty.
6. Challenge for teachers as well as organizations and institutions to detect plagiarism.
7. Many replicates countless previous failed attempts to introduce new technology to language education, such as printed books and LP records.

Drawbacks of ChatGPT
1. Lack of emotional or empathetic responses.
2. Limited creativity.
3. Lack of context awareness.
4. Potential of generating inaccurate or inappropriate responses.
5. Incomplete information.
7. Potential for bias.
8. Inability to learn beyond its training data which goes up until 2021.
10. Syntax and grammatical errors.
11. Does not provide much opportunity for speaking practice.
Interview Data (from Study #3)

“"We have a lot of different versions of English, but it produces this kind of very white bread textbook style, not too old fashioned, not too slang.” (Tom Gally, Interview, May 2, 2023)

“There are concerns when we've got to think about how we are going to make sure that chatGPT is a tool that helps students and doesn’t basically undermine some of the skills that really we do believe are fundamental for them.”(Russell, Interview, May 7, 2023)

RQ2: How do content creators describe their current practices of using ChatGPT in language education?

Q2b: What strategies do they use to mitigate any drawbacks and ensure that ChatGPT is effectively used in language teaching and learning?

1. The need for empathy and assistance for those who cannot use ChatGPT.
2. Overcoming Limitations of ChatGPT through Using it together with other language learning tools and resources.
3. Double-checking the answer received from ChatGPT and using other resources such as native speakers or online checking tools.
4. Integrating effective methods of learning and pedagogy before using ChatGPT in language learning and teaching.

5. Emphasizing the importance of a learner’s motivation and efforts.
6. What you get depends on what you ask—users need to learn how to write effective prompts.

RQ1. How do these communities perceive the educational affordance of incorporating ChatGPT across different languages?

Based on Lai et al. (2023)

“High resource” languages, including English, Japanese, Chinese, French, Spanish, German, Portuguese, and Russian.
Korean, Bulgarian and Turkish were categorized as “medium resource” languages.
Lai et al.’s research didn’t include the remaining six languages, Latin, Sorbian, Tajik, Irish, Kashubian, and Latgalian.

1. ChatGPT is its resemblance to a knowledgeable native speaker rather than a professional language teacher.
2. ChatGPT’s behavior can be both positive and informative for users: In situations where finding a human interlocutor who possesses these qualities can be challenging, ChatGPT serves as a valuable tool in avoiding language fatigue during extended conversations.
Two Gaps

1. Learning Optimization Gap: The first gap arises from learners' inability to fully leverage ChatGPT's technical affordances, leading to reduced educational affordability.

2. Knowledge Comprehension Gap/ Cognitive Alignment Gap: The second gap emerges between the materials presented by ChatGPT and the learners' capacity to comprehend and absorb the knowledge being conveyed.

Best Practice Cases #1 - Intensive Reading With ChatGPT
Language Learning With Chat GPT: Intensive Reading in Japanese, Spanish, Chinese & French (NJJohnGo)
https://www.youtube.com/watch?v=v8bGGnDysbo

Best Practice Cases #2 - Interactive Text Adventure Game
Language Learning With Chat GPT: Intensive Reading in Japanese, Spanish, Chinese & French (Dustin)
https://www.youtube.com/watch?v=v8bGGnDysbo

Best Practice Cases #3 - PPP Approach With ChatGTP
ChatGTP for language learning
https://www.youtube.com/watch?v=v8bGGnDysbo

Best Practice Cases #4 – Personalized Vocabulary Table and Reading Materials
How to MAXIMIZE the use of ChatGPT's current functions to learn Chinese in 2023 (The Ultimate Guide)
https://www.youtube.com/watch?v=JgGtrjhFis

Study #3

Strategies for
- Enhancing reading skills
- Improving vocabulary
- Developing comprehension
- Increasing speed

Limitations of current ChatGPT
- Lack of cultural context
- Limited language proficiency
- Insufficient interaction

Strategies for
- Enhancing reading skills
- Improving vocabulary
- Developing comprehension
- Increasing speed

Indicators of successful learning
- Improvement in reading speed
- Increase in vocabulary
- Enhanced comprehension skills
- Reduced reliance on external resources
Study #3

1. Harnessing ChatGPT As A Loyal Conversational Partner For Language Practice.
2. Embrace ChatGPT’s Imperfections, Don’t Dismiss Its Potential.
3. Use It as A Tool, Not A Crutch.
4. Fostering a Learner-Centric Approach to GenAI Instruction.
5. Cultivating Responsible AI Utilization in Language Education.

Limitations and Implications

- Relying solely on YouTube as a source of information for language education
- The availability of language learning resources in YouTube may not be equal across different languages.
- YouTube videos are created by individuals or organizations with varying levels of expertise and qualifications.


