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Generative AI Chatbots - ChatGPT versus YouChat versus Chatsonic: Use Cases of Selected Areas of Applied English Language Studies

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Abstract. This paper reports on the comparison of the accuracy and quality of the responses produced by the three artificial intelligence (AI) chatbots, ChatGPT, YouChat, and Chatsonic, based on the prompts (use cases) related to selected areas of applied English language studies (AELS). An exploratory research design was employed and we utilised purposive sampling. The three aforementioned AI chatbots were used to collect data sets. Of the three chatbots, YouChat was technically unstable and unreliable, and had some inconsistency in generating responses. The other two chatbots, ChatGPT and Chatsonic, consistently exhibited a tendency to plagiarise responses from internet information without acknowledging the sources. In certain cases, the three chatbots all generated almost similar responses for different and unrelated prompts. This made their responses look like run-of-the-mill responses that lacked credibility, accuracy, and quality. One chatbot (ChatGPT) could not recognise a scholar mentioned in one of the prompts, while the other one (Chatsonic) misrecognised this scholar, and ended up rambling parts of its response. Additionally, the three chatbots all mechanically and superficially generated phrases and ideas in their responses without detecting the related critical nuances in the original sources in which they were used. This made the knowledge communicated by those responses appearing too fluffy. In this paper the educational and knowledge implications of the generated responses for AELS were educed. Based on the shortcomings the three AI chatbots displayed, I concluded that these three chatbots are not yet credible and reliable generators of knowledge for the aspects of AELS discussed.

Keywords: ChatGPT; YouChat; Chatsonic; AI chatbots; responses; applied English language studies

1. Introduction

Shortly after ChatGPT, an OpenAI-owned artificial intelligence (AI) powered, generative chatbot, was launched in late November 2022, followed by an AI and Internet search engine race, similar, maybe, to the space race. Of course, prior to

this, AI has been making its presence visible in, for example, areas such as drones, self-driving cars, mobile phones, and robotic personal assistants (Chaka, 2020). If so, then, what has changed now? The sudden and almost unannounced arrival of ChatGPT seems to have changed and rattled the generative AI world. Existing Internet search engines such as Bing and Google instantly started incorporating AI chatbots like Bing AI and Bard AI into their search engine ecosystems, respectively. Bard AI seems to be Google's answer to, or its intended killer of ChatGPT and Bing AI (Eliaçık, 2023a; Kamran, 2023; Knight, 2023; ul Haq, 2023).

Similarly, other new AI chatbots suddenly emerged. These include Caktus, Chatsonic, Chinchilla, Jasper Chat, Perplexity, and YouChat. At the moment, the general view is that ChatGPT rules the roost on a *first come, first served* basis (Eliaçık, 2023b), even though the final determinant of the ultimate ruler will be the best large language model each of these AI-powered chatbots will have when compared to one another. On this score alone, Chinchilla, which is still in its beta stage, is likely to be the winner as it has 1.4 trillion training tokens vis-à-vis ChatGPT's 300 billion training tokens (Eliaçık, 2023c). These are staggering and intimidating numbers. But in the realm of generative AI spheres, an entity is not a winner until it has won the contest. Be that as it may, a human brain comprises, as Nawrocki (2011) points out, about 100 billion neurons and almost 1,000 trillion synaptic connections organised into many and varied areas that perform different brain functions, which include, among others, complex cognitive functions (Ackerman, 1992; Atallah et al., 2004; Deacon, 1997; cf. Adesso, 2023). While this analogy is way too far-fetched as it does not represent a like-like comparison, it, nonetheless, brings home the vast difference between the capacity (and the depth and breadth) of the current generative AI chatbots and that of a human brain.

The emerging impact of AI chatbots is felt in various spheres of human lives and in different sectors of life. This is because, by their very nature, these chatbots serve multiple purposes in each sector. In the education sector, these purposes are many and varied. For example, they can operate as online search engines, respond to written prompts, write essays on topics (Anders, 2023; Kumar, 2023; Pittalwala, 2023), summarise and translate text, and correct grammar errors (Eliaçık, 2023c; SGA Knowledge Team, 2023). They can also define concepts/terms, remix, edit and improve writing, and generate lesson plans (Cutcliffe, 2022; Harris, 2022). Moreover, they can offer advice on conducting research in the digital age, create a structure for a research proposal, offer advice about given aspects of a research proposal, and provide sources of citations (at least some of them) (Chaka, 2023a).

Given the multiple purposes that AI chatbots can serve within the education sector as outlined above, assertions have been made that these chatbots are a big deal for education (Anders, 2023), may challenge disciplinary specialisation (they can generate responses across a range of academic disciplinary boundaries [Chaka, 2023b]), could be game-changers (Harris, 2022) and disruptors (Fraser, 2023), possess essay-writing skills that can stun teachers (Bowman, 2023; Hern, 2022), and can do homework for students (Pittalwala, 2023). Taking into account the multiple functions the AI chatbots can perform and considering the foregoing assertions made about them within the education sector, it appears that these

chatbots can do almost anything. Therefore, there are concerns that AI chatbots will churn out plagiarised information (Dilmegani, 2023; Pittalwala, 2023), generate responses containing factual inaccuracies, and invent fictitious names (Browne, 2023), hallucinate about things (ul Haq, 2023), waffle facts and misattribute work (Ceres, 2023). These may be used by students in their academic tasks without them noticing all these drawbacks.

However, regardless of the afore-mentioned issues, some suggested positive educational applications of ChatGPT exist. Dilmegani (2023), for example, suggests the following for teachers and for students:

- **For teachers:** Content creation; grammar and writing corrections (e.g., proof-reading and editing, offering student feedback, and writing-skills teaching); grading; designing course outlines (e.g., course goals and objectives, generating course topics, lesson plans, and locating and identifying course materials and resources).
- **For students:** Assisting with homework (e.g., answering questions, reinforcing concepts, improving writing skills, and solving problems); research (e.g., selecting a topic, topic background information, locating and identifying suitable resources, organising research, and locating citations or sources of reference); and learning language (Dilmegani, 2023; cf. Chaka, 2023a).

A case that employed a different AI chatbot is the one used by Wiggers (2023). The used case entailed generating samples of writing covering diverse genres. These diverse writing genres (applications) were:

- An application letter for a paralegal position
- A curriculum vitae for a software engineer
- An email message to market shoe polish
- An online news article covering the 2020 U.S. presidential elections
- An essay outline focusing on the merits of gun control (in the U.S.)
- A college-level essay on the fall of Rome
- An encyclopaedia entry for Mesoamerica (Wiggers, 2023).

Taking cognisance of the diverse applications of chatbots, the current paper argues that, thus far, there have not yet been enough documented-use cases of AI chatbots that focus on given academic disciplines in the higher education (HE) sector, particularly, on the specific aspects of such academic disciplines. Mostly, AI chatbots have been used to respond to generic prompts that are not related to specific academic disciplines. Even in instances where they have been used to respond to generic prompts as in Wiggers's (2023) case, they have not been employed in a sustained and robust manner to interrogate the types of responses they generate in respect of specific aspects of given academic disciplines in the HE sector. Against this background, in this paper an attempt is made to fill the gap that has not yet been explored by using three generative AI chatbots, namely ChatGPT, YouChat, and Chatsonic, to generate responses related to selected areas of applied English language studies (AELS). The aim was to compare the accuracy

and quality of the responses these three AI chatbots generated about the selected areas of AELS as informed by the specific prompts provided as input.

In this regard, in this paper it was strived to find answers to the following two research questions (RQs):

- How accurate are the responses generated by ChatGPT, YouChat, and Chatsonic to selected areas of applied English language studies such as decolonial applied linguistics, critical southern decoloniality, and translanguaging, multilanguaging, and languaging as based on the prompts inputted to them?
- What is the quality of the responses of these three AI chatbots?

2. ChatGPT, YouChat, and Chatsonic: A Brief Overview

As, at the time of writing this paper, there were not yet scholarly papers published on the use cases of AI chatbots in AELS in the HE sector, as highlighted above, the paper rather offers a brief overview of the three AI chatbots it employed for its use case.

2.1 ChatGPT

Since its release in late November 2022, ChatGPT has had several comments, reports, descriptive analyses, and reviews (Bowman, 2023; Cutcliffe, 2022; Harris, 2022; Hern, 2022; Meghmala, 2023; Ofgang, 2023; Solé, 2023). At the time of writing this paper, the number of such comments, reports, descriptive analyses, and reviews was increasing exponentially. ChatGPT is an AI chatbot, whose parent company is OpenAI. On its website, OpenAI says that it is "an AI research and deployment company", whose mission "is to ensure that artificial intelligence benefits all of humanity". It defines artificial general intelligence as "AI systems that are generally smarter than humans" (OpenAI, 2015-2023). The GPT in ChatGPT stands for Generative Pre-trained Transformer. As an AI-powered chatbot, ChatGPT is one of the new-generation AIs that employ large language models (LLMs). As Eliaçık (2023c) points out, LLMs utilise deep learning, which relies on multi-layered neural networks for collecting, processing, and analysing complex datasets with a view to making predictions and generating natural language responses (OpenAI, 2022; SGA Knowledge Team, 2023; Stiennon et al., 2020).

Moreover, as a third generation of the Generative Pre-trained Transformer (GPT-3) based chatbot, ChatGPT also utilises an autoregressive language model that helps it to generate text that cannot be distinguished from human-written text (Eliaçık, 2023c). Importantly, ChatGPT has a *reinforcement learning from human feedback* (RLHF) enhancement, which is a form of machine learning that enables a tool to learn through trial-and-error experimentation (Aleem, 2023; SGA Knowledge Team, 2023; ul Haq, 2023). As SGA Knowledge Team (2023) puts it, RLHR offers an added layer of input training, which helps the chatbot to have the ability to learn from the input and follow prompts so that it can generate satisfactory responses (Kumar, 2023).

2.1.1 Capabilities

ChatGPT, as an AI chatbot has many and diverse capabilities. For example, it is pre-trained on large amounts of data that enable it to predict an accurate sequence of words in a sentence. It does this in an autocompletion form in generating sentences and paragraphs (Kumar, 2023). To this end, Aleem (2023) states that ChatGPT possesses a hyper-sophisticated autocomplete function. In this sense, it is an autoregressive model that uses past behaviour (data) to predict future behaviour (data) (Eliaçık, 2023c). As a GPT 3.5 system, ChatGPT also was trained on massive databases sourced from the internet, reddit discussions (Kumar, 2023); Wikipedia, web texts, online articles, books, and other internet-related information. Together, these databases amount to 570GB (Fraser, 2023; Hughes, 2023; Sharma, 2023).

Additionally, ChatGPT possesses a natural language comprehension because of its ability to figure out various levels of abstraction from text input. This allows it, among other things, to answer questions, summarise text, and analyse sentiments, meaning that it has generative capabilities. Therefore, as a generative AI employing LLM, ChatGPT can produce large chunks of human-like sentences and paragraphs, and massive human-like conversational responses. It is able to remember what was said to it in previous conversations, and allows for follow-up corrections, including regenerating responses (OpenAI, 2015-2023). Crucially, ChatGPT possesses contextual language embeddings that help it have a better semantic understanding through linking words and phrases within their provided context (Eliaçık, 2023c).

2.1.2 Uses

ChatGPT has different uses or applications. For example, it can respond to written queries and can write poems, short stories, and songs (in line with an author's style) in addition to being able to write essays on nearly any topic. It is able to create structures for articles (Anders, 2023; Kumar, 2023). Its other application is to summarise different types of articles or documents, translate text (Eliaçık, 2023c; SGA Knowledge Team, 2023), rectify grammar mistakes, and make customised recommendations (Eliaçık, 2023c).

What is more, it can edit, remix, and mend writing, as well as define concepts or terms and simple or complex explanations. Moreover, it can write reports and cover letters, and produce lesson plans, reports, and email drafts (Cutcliffe, 2022; Harris, 2022; Hetler, 2023).

2.1.3 Limitations

ChatGPT's limitations are well known. Even its parent company, OpenAI, openly flags and acknowledges them on its website. First, some of the information in its training data lacks recency because the cut-off date for its training data was September 2021. It has been programmed not to provide harmful or toxic information (Kumar, 2023; OpenAI, 2015-2023; SGA Knowledge Team, 2023). Second, there are times when it provides inaccurate or wildly incorrect responses or answers (Kumar, 2023; OpenAI, 2015-2023; SGA Knowledge Team, 2023; ul Haq, 2023), or plausible-sounding answers that are nonsensical (OpenAI, 2022). Called *artificial* hallucination, this is a propensity in which ChatGPT unexpectedly

deviates from its training data output (ul Haq, 2023). The chatbot is also sensitive to input phrasal tweaks, especially when feeding it the same prompt several times. For example, it may claim to not know the answer when a prompt is phrased one way, but will provide the answer when the prompt is tweaked in another way.

Third, the chatbot is sometimes prone to verbosity and overusing certain phrases due to training data bias. It even has the tendency to guess the intent of the user's prompts rather than asking for clarification when the prompt is ambiguous. At times it displays biased responses or responds to harmful prompts, notwithstanding a disclaimer that it cannot do so (OpenAI, 2022). Fourth, the quality of its output depends on the quality of the input it receives (Kumar, 2023; SGA Knowledge Team, 2023).

Another limitation, but which also may be an advantage, depending on how it is perceived, is that ChatGPT generates different text responses at different instants (Aleem, 2023). Moreover, ChatGPT does not understand the sentences it churns out, nor does it possess the capacity to reason like humans. Instead, all it does is mimic and reorder human language based on vast numbers of datasets it has been trained in, and make probabilistic calculations concerning words related to an answer without even comprehending the underlying concepts for those words. So, it is reasonable to say that it operates more in the realm of the plausibility of words than in the truth or moral value of words. To suggest otherwise would be to commit an anthropomorphic error (Aleem, 2023).

Beyond its limitations, two of its major criticisms have been plagiarism and *copyright laundering*. The latter refers to a practice in which information is derived from existing sources, especially from internet sources, without breaching copyright (Chaka, 2023b; Hern, 2022). Something worth noting is that as at the time of writing this paper, OpenAI announced the launch of GPT-4, a ChatGPT successor. It is said that GPT-4 can respond to images, and caption and describe them, and process 25,000 words, which is eight times as many as ChatGPT can (Derico & Kleinman, 2023).

2.2 YouChat

YouChat, which is owned by You.com and was released on 30 December 2022, is a free-to-use, alternative generative AI to ChatGPT. At the time of writing this paper, it was still in a beta stage (Ortiz, 2023), and there were not yet many comments, reports, reviews, analyses, and use cases written about it. However, it was already functional with no *waitlist* requirement such as currently characterising Bing AI (Eliaçık, 2023d). It combines both a generative AI tool and a search engine (Conroy, 2023; Eliaçık, 2023b, 2023d), and has a conversational or natural language offering (Eliaçık (2023d). In terms of its architecture, it uses OpenAI's GPT-3 model that has been slightly refined. On its website, it states that it can reply to general queries, suggest ideas, explain things, summarise text, translate, write code, and compose emails, among other things (Conroy, 2023; Eliaçık, 2023b, 2023d; Ortiz, 2023; YouChat, 2023). YouChat can also create images, send letters (Eliaçık, 2023b, 2023d), and respond to math prompts (Ortiz, 2023). Besides its being a free AI chatbot, two of YouChat's major differentiating features

are that it provides citations to its responses and offers sources from which its citations have been derived. Sources it cites are from Google. In this case, it has access to the latest internet sources, which is something that ChatGPT does not have (Conroy, 2023; Ortiz, 2023).

Moreover, YouChat is capable of generating charts, photos, videos, tables, graphs, text, or code through its YouChat 2.0's C-A-L (Chat, Apps, and Links) LLM. All of this is enabled by YouChat's integrated YouChat, YouCode, YouWrite, and YouImagine features (Eliaçık, 2023d). Nevertheless, like any other AI tool, it has drawbacks, one of which is that it, too, at times, generates incorrect answers or responses. This is something it acknowledges on its website (YouChat, 2023).

2.3 Chatsonic AI

Chatsonic AI is owned by Writesonic. Like YouChat, at the time of writing this paper not many comments, reports, reviews, analyses, and use cases had been written about it. It is based on ChatGPT's foundational structure and leverages its capabilities. However, unlike ChatGPT, it has access to the internet as is the case with YouChat. Four of its differentiating features are: different personas, real-time data access, a web browser extension, and up-to-datedness. It has a free trial version and a premium version. The former has a 2,500-word limit per month (Eliaçık, 2023b), which can be consumed in a large, single response, or, which can be staggered in smaller responses over a month. This free trial version has been used for this paper. Chatsonic is supported by Google, has an AI image generator, and offers voice dictation. The voice dictation feature allows the user to initiate voice-powered prompts (Ortiz, 2023). As is the case with any AI tool, Chatsonic, too, is prone to generating incorrect answers or responses.

3. Research Methodology

3.1 Study Design

This study was exploratory in nature. Exploratory research studies are employed for exploring new areas, or for investigating areas that have not been studied much (Leavy, 2017; Nkhobo & Chaka, 2021, 2023). The use cases of AI chatbots in relation to applied English language studies (AELS) in higher education (HE) are new areas that have not yet been investigated much as the AI chatbots under study in this paper only came into existence after 30 November 2022.

3.2 Sampling

The study utilised purposive sampling to collect its data sets. Two of the salient features of purposive sampling are: approaching the sample with a specific purpose in mind, and predetermining the criteria of what is to be included in the sample (Alvi, 2016). For this study, the data comprised the responses generated by ChatGPT, YouChat, and Chatsonic on the selected areas of AELS as informed by the four prompts stated below. These selected areas were: decolonial applied linguistics, critical southern decoloniality, and translanguaging, multilanguaging, and languaging. The purpose was to find out the accuracy and the quality of the responses these three AI chatbots would generate in these selected areas, based on the four prompts. AELS is one of research interests of the writer of this paper

and the selected areas are some of the areas in which the writer has published journal articles.

3.3 Data Collection Procedure and Data Analysis

As mentioned above, four prompts related to selected areas of AELS were used as input to each of the three AI chatbots to yield responses from each of them. These four prompts, which were in the form of queries, were phrased as follows:

- What is decolonial applied linguistics?
- What is critical southern decoloniality?
- What does Chaka say about critical southern decoloniality?
- What is the difference between translanguaging, multilanguaging, and languaging?

All the queries were used as input to ChatGPT on 29 January 2023, while all were used as input to both YouChat and Chatsonic on 07 March 2023. The reason for this temporal difference is that before 07 March 2023, I did not know about nor was I aware of the existence of YouChat and Chatsonic including the other generative AI chatbots mentioned earlier.

All the responses generated by each AI chatbot, as per their respective prompts, were copied and stored in MS Word files (Appendices A, B and C). The accuracy and quality of the generated responses were verified and benchmarked against the relevant sources that were cited by YouChat. In some instances, it failed to cite sources. Both ChatGPT and Chatsonic generated responses that did not provide cited sources. This, then, constituted the manner in which these AI chatbot-generated responses, as data sets for this paper, were analysed.

4. Findings and Discussion

4.1 What Is Decolonial Applied Linguistics?

ChatGPT generated a definitional response to this prompt as depicted in Appendix A. It viewed decolonial applied linguistics as a theoretical and methodological framework for studying language and power, the aim of which is to question and disrupt colonial representations and legacies in applied linguistic research and practice, and which focuses on colonial impacts on language and society. It did not cite any source for its generated response. On its landing page, ChatGPT mentions its capabilities and limitations, and displays its disclaimer statement (Appendix D). Initially, when YouChat was fed the same prompt, it had a technical glitch, and exhibited a message that read, "☹ Sorry, too many people have been asking me questions at once. Give me a moment and try again", which was prefaced by a sadness emoji. It also depicted a disclaimer that read as follows: "This product is in beta and its accuracy may be limited. You.com is not liable for content generated" (Appendix B). Nonetheless, it was able to display three possible sources that dealt with some aspects of decolonial applied linguistics, one of which was from Rosa and Flores' (2021) *Decolonization, language, and race in applied linguistics and social justice* (Appendix B). When, finally, YouChat was able to generate its response to the prompt under the spotlight, it identified decolonial applied linguistics as a field of study the purpose of which is to decolonise language and linguistics through challenging the power dynamics and

assumptions informing traditional language studies. It also contended that this type of linguistics attempts to disrupt and problematise Eurocentric biases and colonial legacies underpinning language and discourse, and advocates just, inclusive, and equitable linguistic environment in which all languages and language varieties have equal respect and value (Appendix B). However, no sources were cited.

The same prompt was used as input to Chatsonic. The chatbot, which has a Regenerate feature that ChatGPT also has, identified decolonial applied linguistics as a field of study aiming at challenging colonial legacies and power imbalances inherent in language and linguistics, and Western, Eurocentric views informing traditional approaches. It stated that this linguistics decentres these views so as to create an inclusive, equitable approach to language, which accommodates diverse and marginalised linguistic practices. Additionally, it pointed out that this type of linguistics is aligned with postcolonial studies, critical race theory, and interdisciplinary approaches that question hegemonic power structures (Appendix C). Chatsonic, too, did not cite sources for its generated response.

At a mechanical, academic level, the three AI chatbots managed to respond to this prompt, even though YouChat initially had a technical glitch. However, not one of them cited or referenced the sources of their responses, even when it was manifestly evident that they stitched together their responses from some currently published online sources. In this case, this highlights their proclivity to plagiarise others' ideas in generating their responses to a prompt. The odd thing is that YouChat provided titles of its reference sources in an instance in which it did not give an actual response to this prompt due to its technical glitch. This points to some inconsistency on its part. Both YouChat and Chatsonic identified decolonial applied linguistics as a field of study, while ChatGPT recognised it as a theoretical and methodological framework for studying language and power.

At a substantive, qualitative level, the three chatbots responses shared certain core aspects. Two of these aspects are *inclusivity* and *equitability*, two notions which have to do with social justice, or, in this case, with linguistic justice (Piller, 2021; Randolph Jr. & Johnson, 2017). One of the sources listed by YouChat in an instance in which it could not provide a response as mentioned above, which deals with inclusion and equality, is Rosa and Flores' (2021) work (journal article). This work critiques the notions of inclusion, equity and affirmation as they relate to marginalised languages, and as advocated and promoted by mainstream applied linguistics. It maintains that these notions are a deceptive trap that feeds into normative sociolinguistic and applied linguistic logics and notions (e.g., linguistic deficiency frequently associated with "raciolinguistic Others") (Rosa & Flores, 2021, p. 1164), which are grounded on global colonialism, racism, and whiteness. Additionally, it foregrounds a raciolinguistic perspective in which racism and colonialism, and not conventional language use, are centred in engaging with applied linguistics. While this work has a decolonial angle, it explicitly states that it has less interest in associating itself with any specific decolonial or anticolonial

perspective, but rather, that it is more inclined to centring and critiquing global colonialisms.

These points of departure in this particular work are some of the nuances that the three AI chatbots could not pick up in their responses. Their responses lacked qualitative richness (essential qualitative nuances) and the accuracy of detail. They all tended to uncritically associate decolonial applied linguistics with inclusivity and equity. The same applies to the other two reference sources, Motha (2020) and Canagarajah (2022), listed by YouChat. For example, the former reference source is focused on antiracist and decolonising applied linguistics, and not just on decolonial linguistics, while the latter reference source foregrounds disability studies and (crip) linguistics. Needless to say, there are other online sources dealing with some aspects of decolonial applied linguistics, aspects of which comprise the three responses, but which have not been acknowledged in any of these responses (Appendix E). Two of such online sources are Chaka (2021) and Makoni and Severo (2022).

4.2 What Is Critical Southern Decoloniality?

Concerning this prompt, the three chatbots responded and reacted in a manner similar to how they responded to the first prompt. For example, YouChat exhibited its system's instability and unreliability: it had the same technical glitch and only generated a response in the second attempt, except that it did not list any reference source related to the prompt in the first attempt. Rather, it did so with the second attempt when it was able to generate a response. It listed six sources, which it had not cited within its response. Two of these listed reference sources were Chaka (2022a) and Chaka (2022b) (Appendix B). Pertaining to the three chatbots' responses, two of them, a ChatGPT's response and a YouChat's response, mimicked, verbatim, some of the phrases and clauses they had generated for responding to the first prompt, *What is decolonial applied linguistics?* That is, of ChatGPT's response comprising 131 words, 37 words were the same as those it used in its first response. Similarly, 69 words of the 114 words that YouChat used to respond to the second prompt were exactly the same as those it generated in responding to the first prompt (Appendices A and B). Chatsonic's response to the second prompt sparingly replicated the words it had used in its first response to the first prompt. Both ChatGPT and Chatsonic had few identical phrases in their responses, two examples of which were *passive recipient* and *active resistance*.

This second prompt, again, reflects the inconsistency in which YouChat generated its response: listing sources it had failed to cite or acknowledge. It also demonstrates the propensity for both ChatGPT and Chatsonic to generate responses without citing their reference sources and without providing any reference list for them. This practice, which they displayed in their responses to the first prompt, is tantamount to plagiarism, as the responses they generated are scholarly published information available online. Of the six sources listed by YouChat for its unacknowledged response, only two were directly related to critical southern decoloniality (CSD). The rest were not. In fact, they have little to do with this notion in its current conceptualisation. The two reference sources that

have a direct relation to CSD are Chaka (2022a) and Chaka (2022b). Both of these reference sources use the acronym, CSD, which YouChat also uses right at the beginning of its response, and twice in this response. However, they are employed in two different and unrelated contexts: CSD as an approach to datafication, algorithms, and digital citizenship; and CSD as a two-eyed framing to critique, problematise, and challenge knowledge production practices (the geopolitics of knowledge production) in applied English language studies (AELS). By contrast, the responses generated by the three AI chatbots referred to CSD generically in relation to traditional language studies, non-Western languages (cf. YouChat's response in Appendix B), colonialism, imperialism, and the Global South (cf. ChatGPT's response and Chatsonic's response in Appendices A and C, respectively). They could not detect these finer nuances and their accompanying differential usage contexts. It should, nonetheless, be mentioned that ChatGPT's response made reference to the fact that CSD critiques (dominant) research and knowledge production. But that was all it could say. It is also worth mentioning, as pointed out earlier on, that of the three chatbots, ChatGPT's training data cut-off date is 2021. Overall, then, the three AI chatbots' responses lacked the accuracy of detail and were devoid of fundamental subtle differences inherent in the use of CSD by Chaka (2022a) and Chaka (2022b).

4.3 What Does Chaka Say About Critical Southern Decoloniality?

Regarding this prompt, only YouChat generated, at face value, a rather convincing response, that had in-text citations and references for the cited sources. The other two chatbots responses were not up to scratch. For example, ChatGPT said that "I'm not aware of any specific quotes or writings from an individual named 'Chaka' on the topic of critical southern decoloniality" (Appendix A). Then it went on to assert that CSD is a relatively recent (new and emerging) framework. Yet, in its response to the second prompt above, it never made such a claim. It, thereafter, offered completely different and new information about CSD as a complex and multidisciplinary framework. Chatsonic started its response by making up a surname for Chaka, and continued to assert that this person had written much on both CSD and decolonisation. Besides, mimicking some of the terms and phrases it used in its response to the second prompt, most of the views it attributed to Chaka, barring knowledge production, had nothing to do with Chaka's views of CSD as highlighted under the second prompt above.

With reference to YouChat, it correctly identified Chaka's professional title, his academic department, and his affiliation, and referenced this information using Chaka's Academia.edu's online profile. Then, it regurgitated the phrases and clauses it used in its response to the second prompt by providing two in-text citations for one part of its response, but not by offering any citation for the remaining part. The two citations it referenced were Chaka's ResearchGate's online profile and Chaka (2022a). The three sources of reference it listed at the end of its response were Chaka (2022a), Chaka (2022b), and Ndlangamandla and Chaka (2022). As the focus of the first two reference sources and their use of CSD were mentioned under the second prompt above, only the third reference source is worth contextualising. This source of reference employs CSD specifically for challenging Eurocentric scholarship of teaching and learning (SoTL) practices and

colonialist English language paradigms. It does not appropriate it in a broad-stroke manner suggested by YouChat's response.

What emerges from the three chatbots' responses to this prompt is that YouChat correctly identified the personal, professional, and affiliation detail of the scholar whose name was mentioned in the prompt. It provided in-text citations for one part of its response, but did not do so for the other part, something which lends itself well to plagiarism. It offered a correct reference list for its cited sources, even for the other two sources it had not cited. In this sense, it was consistent in one instance, but inconsistent in another instance. ChatGPT could not recognise the scholar mentioned in the prompt, but went on to provide the new information about CSD, which it did not provide in its response to the second prompt above. In addition, it plagiarised its response as it did not acknowledge it. For its part, Chatsonic invented the surname of the scholar mentioned in the prompt, moved on to regurgitate parts of its response to the second prompt, and started hallucinating (Anders, 2023; Browne, 2023; Knight, 2023; Metz, 2022; ul Haq, 2023) certain parts of its response, which it misattributed to the scholar in question. Again, the three AI chatbots responses lacked the accuracy of substantive details, except for the correct mechanical/personal details that YouChat generated. Additionally, these three responses did not reflect the fundamental subtle differences Chaka (2022a), Chaka (2022b), and Ndlangamandla and Chaka (2022) make in their use of CSD.

4.4 What Is the Difference Between Translanguaging, Multilanguaging, and Languaging?

The three AI chatbots responses to these fourth prompts resembled their responses to the first two prompts. For instance, YouChat was unstable and unreliable in the first prompt that it was fed. It only generated the actual response in subsequent attempts. It listed its three sources of reference at the end of its response for which it had not provided in-text citations. And, its response was way shorter (96 words) compared to ChatGPT's 292-word-long response and to Chatsonic's 209-word-long response. The three responses exhibited a similarity of words and phrases, and none of them had any in-text citations. With its telegraphic definition and differentiation of the three concepts mentioned in the prompt, YouChat regards translanguaging as a process in which multiple languages and varieties of language are used for effective and accurate communication. It states that multilanguaging is similar to translanguaging, even though it is about using multiple languages in a single interaction. Then, it says languaging is a process in which multiple languages and varieties of language are used in an interaction. To this end, it points out that the major difference between these three concepts is that translanguaging focuses on the fluidity of language use, while both multilanguaging and languaging are about using multiple languages in an interaction (Appendix B).

ChatGPT starts off its response by stating that the three concepts are both related but different. It sees translanguaging as a framework involving the dynamic and fluid use of language by speakers possessing wide-ranging linguistic resources, which they use simultaneously in a given context. Its view of multilanguaging is that it entails the use of multiple languages by speakers in different domains or

contexts (e.g., home, school, or workplace). Concerning languaging, it points out that it is an ongoing and dynamic process (the act of making language itself) in which speakers use language creatively to construct and communicate meaning. It, then, maintains that the three concepts involve multilingualism and language use (Appendix A).

For its part, Chatsonic begins by saying that the three concepts are related in that they focus on fluid and dynamic language use, even though their meanings are slightly different. It regards translanguaging as a meaning-making and effective communication process in which speakers draw on all available linguistic resources, including different languages, dialects, and registers. This process entails moving between languages fluidly/fluently. In addition, it asserts that multilanguaging has similarity to translanguaging, but that it foregrounds the use of multiple languages (multilingualism) in a single interaction or conversation. It states that languaging is a broader concept referring to the process in which meaning is made by means of any kind of communication that includes language, facial expressions, gestures, and other types of non-verbal communication. Finally, Chatsonic contends that the common point shared by the three concepts is their emphasis on the fluid and dynamic use of language and their valorising of linguistic and cultural diversity. However, it says their difference lies in their focus and scope, with both translanguaging and multilanguaging foregrounding the use of multiple languages, whereas languaging is more generic as it entails all communication forms.

YouChat regards the three concepts mentioned in the fourth prompt as processes involving the use of multiple languages for communication (translanguaging) in a single interaction (multilanguaging and languaging). This is more of an alternation between various languages. It sees translanguaging's focus on the fluidity of language use as its differentiating factor. The view of translanguaging, multilanguaging, and languaging as processes is too limiting and superficial. The same applies to fluidity as a differentiating factor between translanguaging and multilanguaging and languaging, and to reducing the three concepts to communication alone. ChatGPT sees the three concepts as simultaneously related and unrelated, and maintains that translanguaging is a framework (unnamed) for the dynamic and fluid use of language. Its view of multilanguaging is not dissimilar to the perspective it attaches to translanguaging. Its characterisation of translanguaging is actually an alternation among multiple languages, and among varieties of language. Thus, its view of these three concepts and its characterisation of them are too shallow and mechanical. Chatsonic, like ChatGPT, asserts that the three terms are both related and unrelated (their meanings slightly differ), with their relatedness being the fluid and dynamic language use. It says the slight difference in the meanings of the three terms is their focus and scope. This is very vague and unhelpful as one does not know what both focus and scope in this case entail. Its reference to languaging as a more generic term for communication is equally vague and shallow.

This, then, takes us to the three reference sources YouChat listed at the end of its response, but which it did not cite within its response. These were Li (2018a), Li

(2018b), and Mora et al. (2022). I will briefly use the first source as a case in point, and highlight only its key relevant aspects related to the three responses. Li (2018a), who uses translanguaging with a capital "T" and whose article's major objective is to explicate the theoretical reasons for translanguaging, responds to some of the questions asked about it, and clarifies some of the confusion related to its increasing usage, talks about translanguaging as a theory of language (theoretical concept) and as a pedagogical practice. He also focuses on a *translanguaging space*, the translanguaging instinct, and translanguaging and multimodality. Additionally, he argues that translanguaging is transformative and re-envisions language as a multilingual, multimodal, multi-semiotic, and multisensory resource for meaning- and sense-making. Importantly, he contends that translanguaging challenges and breaks border between named languages, and between language varieties. Concerning languaging, which Li (2018a) varyingly writes in lower-case "l" and in capital "L", and whose origins he traces to multidisciplinary fields of study, it might do to sum up his view of it as a heterogeneous human linguistic performance that challenges named and nameable languages, formalistic language structures, and the divide between linguistic, paralinguistic, and extralinguistic properties of human communication. All of these truncated nuances of both translanguaging and languaging are what the three AI chatbots' responses could not pick up. Rather, their responses strung together some of the words and phrases used in Li's work (2018a) without matching them to their related and underlying finer nuances.

5. Implications for Applied English Language Studies (AELS)

Of the three AI chatbots tested and discussed in this paper, YouChat appears to be an AI chatbot dogged by technical glitches and instability. It also displayed inconsistency in generating responses: in some instances, it never provided in-text citations for its responses, but in one instance it did. This inconsistency is a drawback for AELS undergraduate and graduate students looking for generated responses related to their discipline, which are always acknowledged through in-text citations. Even in instances where it provided lists of references for its responses, some of the sources listed in those reference lists were not entirely relevant to the generated information. This is another pitfall. The other two AI chatbots, ChatGPT and Chatsonic, exhibited a proclivity to generate uncited responses. As such, they seem to be prone to generating plagiarised information from their training data (ChatGPT) and from the internet (Chatsonic). This is one of the major shortcomings these two chatbots currently have. All these shortcomings displayed by the three chatbots manifestly imply that AELS undergraduate and graduate students need to consult the relevant sources of information (e.g., journal articles, books, and monographs), many of which are now available online, and for their teachers/professors to know that others' views are always acknowledged, and for students to master citation and referencing skills.

Additionally, the three chatbots displayed a tendency to generate almost similar responses for different and unrelated prompts. Not only that, but in one instance, one of them (ChatGPT) could not recognise a scholar mentioned in the prompt, while the other one (Chatsonic) misrecognised the scholar in question and

misappropriated the views it generated in its response to him. Thereafter, it reproduced parts of its response to the second prompt, and hallucinated the other parts of its response. Again, in this case, AELS undergraduate and graduate students have to rely on relevant original sources and on their teachers/professors to get the credible and reliable type of scholarly information.

Moreover, the three AI chatbots simplistically and superficially parsed phrases and ideas from uncited sources without detecting the nuances inherent in the ideas with which those sources deal. Importantly, the responses of the three AI chatbots lacked the accuracy of substantive details. All of this is tantamount to generating a fluffy form of knowledge, which flies in the face of the deep, credible, nuanced form of knowledge that AELS undergraduate and graduate students are eagerly looking for in their discipline.

All of the above-mentioned shortcomings mean that AELS undergraduate and graduate students and scholars need always to double-check the authenticity, credibility, and depth of the responses generated by these three AI chatbots. These shortcomings also mean that only the uninitiated undergraduate and graduate students might be persuaded to believe and blindly accept the responses (answers) generated by these chatbots to the prompts they were fed in this paper as the correct and credible responses. Undergraduate and graduate students who are well-grounded in the AELS aspects discussed in this paper will not be persuaded to do so. In view of how the three chatbots performed pertaining to the prompts they were required to respond to in this paper, it is plausible to say that they do not yet signal the end of nor a threat to human-generated or classroom-based knowledge. Neither do they spell the end of original thinking or original ideas (Careen, 2023; Coleman, 2023). Maybe, in this case, the role these chatbots can play is that of primers and catalysts for discussing and debating the types of AELS information generated by AELS undergraduate and graduate students and scholars.

6. Conclusion and Future Research

This paper was aimed at comparing the accuracy and quality of the responses produced by the three AI chatbots, ChatGPT, YouChat, and Chatsonic, based on the prompts related to selected areas of applied English language studies (AELS). It also provided the educational and knowledge implications of the generated responses for AELS. YouChat stood out as a technically unstable and unreliable chatbot with a degree of inconsistency in generating responses. The other two chatbots, ChatGPT and Chatsonic, consistently displayed a propensity to plagiarise responses from the information available on the internet without acknowledging sources. In certain instances, the three chatbots generated nearly similar responses for different and unrelated prompts, something which made their responses look like run-of-the-mill responses that lacked credibility, accuracy, and quality. One chatbot (ChatGPT) failed to recognise a scholar mentioned in a prompt, while the other one (Chatsonic) misrecognised this scholar, and ended up hallucinating parts of its response. Again, the three chatbots mechanically and superficially strung together phrases and ideas in their responses without detecting the subtleties associated with them in the original

sources that used them. This caused the knowledge embedded in those responses to appear too flossy and to lack nuances. Given all these shortcomings, these three AI chatbots are not yet credible and reliable generators of knowledge for the aspects of AELS discussed in this paper.

As generative AI chatbots are emerging technologies, the presence of which has been heralded by ChatGPT, more research is needed to study the accuracy and quality of the responses these AI technologies generate in AELS as well as in other academic subject areas offered at the higher education (HE) level. This is crucial as there is an ever-increasing overload of information across academic disciplines in HE. In the midst of incremental information overload and in the era of AI chatbots, there is a need to verify and authenticate the credibility and integrity of the information provided by AI chatbots like ChatGPT, YouChat, and Chatsonic, and many others, by both faculty and students. Failure to do so, will result in a shoddy and fluffy form of knowledge being accepted as credible and sound. This is what the current study has attempted to avoid by investigating the types of academic responses the three AI chatbots generated in respect of selected areas of AELS.

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