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Exploring EFL Learners' Perspectives on Using AI Tools and Their Impacts in Reading Instruction: An Exploratory Study

Talal Waleed Daweli
Department of Languages and Translation
College of Arts and Humanities, Taibah University, Medina, Saudi Arabia
Corresponding Author: tdewali@taibahu.edu.sa

Rain Abdulrahman Moqbel Mahyoub
Department of Education, EFLU, Hyderabad, India
Email: rianmahyoub@gmail.com

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Abstract

This study explored the impacts of artificial intelligence (AI) tools on English as a foreign language (EFL) reading instruction. The main aim was to examine EFL learners' perceptions of using AI tools in their EFL reading classes and explore how those tools could impact their learning. The study tried to answer those questions: What were EFL learners' perceptions of AI tools in reading instruction? And, how could AI tools impact EFL learners' reading skills? To achieve the objectives, an online survey was used to investigate EFL learners' perspectives on using AI tools and their effects in instructing reading. The findings indicated that learners had positive perceptions of using AI tools in their learning because they helped improve their reading skills and increased their confidence and motivation in reading. In addition, using AI tools for instructing reading enhanced EFL learners' skills because they provided supportive and adaptive learning tailored to their needs. However, concerns were raised regarding long-term impacts and optimal integration models. The findings suggested AI showed promise for supporting reading instruction when combined judiciously with traditional methods. The study recommended EFL instructors consider the strategic blending of AI tools in the classroom to enhance reading proficiency and motivation.

Keywords: Artificial intelligence, English as a foreign language, reading instruction, large language models, exploratory study

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Introduction

Education is undergoing substantial changes due to the swift advancement of artificial intelligence (AI) technologies. The incorporation of AI in educational settings holds promise to meaningfully improve instruction and the learning process for both educators and learners (Seo et al., 2021). Its integration provides opportunities to enhance teaching methods and make learning more impactful. As AI capabilities continue to evolve rapidly, its judicious application when supporting human teachers offers a means to update pedagogical approaches and better serve student needs. As an emerging field of expertise, educational AI has the potential to transform teachers' practices, and the experiences of students. (Bates et al., 2020). If implemented strategically with appropriate guidance and oversight, AI has the potential to help transform education into a more personalized and effective experience for all stakeholders. Its rising role therefore warrants ongoing research and refinement to maximize AI's contributions within a framework that recognizes its appropriate role as a supplement rather than a replacement for expert human teachers. The rapid developments in AI have sparked particular interest in exploring the impacts of AI-assisted approaches for teaching language skills to English as a Foreign Language (EFL) learners. Several studies have shown that AI tools, such as Computer-Assisted Instruction, can enhance the quality of instruction for EFL learners. AI can serve as a valuable tool for teachers, providing them with enhanced resources and support to become more effective educators. Intelligent tutoring systems powered by AI can offer personalized and adaptive learning experiences, tailoring instruction to the unique needs of individual students (Koedinger et al., 2012). Such Intelligent systems can help teachers address specific learning gaps more efficiently by pinpointing the needs indicated by the systems.

The sudden spike in AI technologies has had and continues to have a huge impact on many domains, including education. The advent of AI-powered large language models, such as ChatGPT, will significantly enhance the way EFL is taught and learned (Koraishi, 2023). As artificial intelligence becomes more ubiquitous in daily life, discussions around implementing AI in education often center on "integration" - seamlessly incorporating these technologies into the classroom. With AI's capabilities being so vital across many domains, teachers and students need to re-examine the prospective benefits that AI could offer in learning environments. Rather than view AI as an external add-on, educators should find ways to adopt AI to enhance EFL instruction thoughtfully. To find those ways, there is a need for research to explore how AI can be embedded into pedagogical approaches and its effects on EFL learning.

However, Saudi university contexts have less research on the use of AI in EFL instruction, especially reading. It is essential to explore how AI can support effective reading instruction for EFL learners and how those learners viewed AI in enhancing their reading in their settings. Therefore, this study aimed to investigate the impacts of AI tools in teaching reading and EFL learners' perceptions of AI tools in reading. The results of the present study could contribute to the growing body of literature on the use of AI in language education in EFL contexts. Likewise, the results might highlight some implications for EFL teachers and curriculum developers seeking to deliver impactful and motivating online reading instruction.

Research Questions

This study aimed to address the need for AI reading tools in EFL reading classes and to determine if they had positive effects in enhancing reading skills, such as reading comprehension and reading independently. Specifically, it aimed to find answers to the following questions:

1. What were EFL learners' perceptions of AI tools in reading instruction?
2. How could AI tools impact EFL learners' reading skills?

Literature Review

AI has enhanced the learning process for students by offering personalized and adaptive educational experiences. AI-powered platforms analyzed vast amounts of data on student performances and preferences, identified individual learning patterns, and tailored content accordingly (Blikstein, 2013). By adapting the pace, difficulty level, and style of instruction to each student, AI promoted engagement, independent learning, and a deeper understanding of the subject matter (Baker et al., 2004). Digital technologies, including AI-enabled tools, could effectively augment EFL reading instruction. They provided access to diverse, level-appropriate online texts, e-readers, audiobooks, and videos to support language learning.

Instructors developed digital literacy by teaching skills for online reading contexts, like adjusting font sizes, employing search functions, and navigating hyperlinks. With guidance on effective strategies, educators cultivated independent, self-directed readers who fully benefit from digital resources. Several studies examined technology integration in EFL classrooms. Thu Ha Bui's (2022) study sought to provide insights into how English teachers integrated digital technologies in the classroom and the factors influencing this process. She reviewed 20 articles and revealed that teachers primarily used technologies for content delivery and meeting student-teacher needs. Factors influencing adoption included pedagogical beliefs, competence, confidence, resource availability, professional development opportunities, and socio-cultural context. In summary, digital tools expanded reading materials while literacy instruction optimized their use and empowered lifelong learning as revealed in research on technology integration factors.

AI-powered devices, such as intelligent teaching systems incorporating self-regulated learning, have played a crucial role in enhancing reading instruction for EFL students. These devices can engage in conversation with students, understand their spoken language, and provide personalized feedback on their language issues while intelligent teaching systems create interactive English language learning experiences.

As a result of the rapid advancements in utilizing AI for EFL, several investigations into the efficacy of AI in EFL instruction have been conducted. The findings from these studies implied that AI may serve as a beneficial instrument for enhancing language acquisition results. Adiguzel et al. (2023) explored AI applications in education like chatbots and discourse simulations. Their analysis showed promise for enhancing teaching and learning. However, the authors acknowledged ethical issues and practical challenges that required attention to properly align AI and maximize benefits, such as potential biases, automation consequences, and judicious tool development/use. The study offered a balanced perspective on AI's opportunities and the need to safeguard learners and social trust during education's transformation.

In "Artificial Intelligence in Second Language Learning: Raising Error Awareness," Dodigovic (2013) explored how artificial intelligence technology can be used to improve second language (L2) learning. Dodigovic (2013) argued that AI helped L2 learners by providing them with immediate feedback on their speech errors, which raised their error awareness and helped them improve their language skills. The book offered insights into the potential of AI to enhance L2 learning and provided a useful resource for researchers, educators, and developers interested in this area.

In the sphere of reading pedagogy, AI-powered platforms had the potential to deliver customized and dynamic learning experiences tailored to individual learners' specific needs and preferences. One of AI's strengths in language acquisition was its capability to offer personalized feedback to learners; thus, addressing students' skills, weak areas, interests, and pace of learning on an individualized basis. By gathering and analyzing student data, AI technologies could pinpoint learning gaps and effective approaches for each learner and adjust support and guidance accordingly. This level of personalization facilitated through AI feedback mechanisms represents a valuable asset for addressing reading instruction and remediating challenges in a targeted, customized fashion. Alshriedeh (2021) investigated the impact of Artificial Intelligence programs on the reading skills of EFL learners. The study employed the Hot Bot strategy on a sample of 10 students to assess their reading abilities. The study findings indicated that reading was closely linked to understanding the content of educational materials, as it required critical thinking and relied on a student's language proficiency to comprehend the written text. By reading in English, foreign language students expanded their vocabulary and gained new knowledge. Likewise, Hsiao and Chang (2023) integrated AI-powered tools Linggle Read, Write, and Search into an online course and found that they enhanced reading skills by connecting online and offline practices to learners' specific needs. Liman Khan (2021) also suggested after exploring the potential of personalized electronic reading settings in terms of contributing to presence and interaction in online learning that "electronic reading lessons could significantly improve the learners' reading comprehension skills and participation in class and out-of-class activities" (Liman Khan's, 2021, p 205). Another study outlined wider benefits of AI language learning tools such as reducing time, increasing speed, personalization, and cultural exposure (Vall & Araya, 2023).

The reviewed literature revealed the positive effects of AI-based reading instruction for EFL learners. While AI has been adopted in many EFL reading contexts, using it in Saudi reading settings seems to be uncommon. Therefore, this study aimed to explore the effects of AI in reading instruction and investigate EFL learners' perceptions of AI tools in reading.

Research Method

This section provided detailed information about the research design, participants, data sources and analysis, and ethics.

Research Design

This was an exploratory study to explore research questions that have not been studied in depth (Swedberg et al., 2023). In this regard, this study examined two research questions that focused on EFL learners' perceptions of using AI tools in their learning and the effects of those tools in EFL reading classes. A cross-sectional survey design was used to collect data from university EFL learners in the Spring of 2024. The survey included 11 questions designed to assess EFL learners' perceptions and the impacts of AI tools on reading skills. EFL learners, who were interested in participating in the study, received a shared survey link in their email. Furthermore, they were made aware of the study's aims, their participation rights, and the confidentiality of their answers.

Participants

The participants in this study were undergraduate students enrolled in the English Language program, Department of Languages and Translation at Taibah University's AL-Ula Campus in

Saudi Arabia. They were taking reading courses that focused on developing reading comprehension abilities and strategies such as skimming and scanning. These courses included Reading Strategies, Extended Reading, and Advanced Reading. These EFL learners were targeted for the study because they obtained some knowledge of IA from instructors who used AI applications in their reading classes. For instance, some instructors used Microsoft Reading Coach, a free AI reading application for those who own a Microsoft account. Through the application, EFL learners could read aloud stories. Through reading, the Reading Coach analyzed EFL learners' reading fluency and other reading skills and provided needed feedback accordingly. For instance, if a learner found difficulties in pronouncing some words, the Reading Coach created engaging word practices to help him overcome his word challenges and gain confidence in reading. However, this research was not to examine the impacts of Microsoft Reading Coach specifically on reading instruction. Rather, it aimed to understand EFL learners' views of any AI tools they used and the impact of those tools on their reading.

Data Collection and Analysis

Data was collected through an 11-item online survey. The survey was conducted using Google Forms, and participants were requested to complete it voluntarily and anonymously in Spring 2024. The survey enlisted participants from diverse age groups (with the largest proportion falling within the 20-25 age range), educational backgrounds (with the highest number being undergraduate students), and genders. For analyzing the data, the survey responses were collected and analyzed using Google Forms. Descriptive statistics were calculated to summarize the perceptions of EFL learners on AI tools in reading and the impacts of AI tools on enhancing their reading skills.

Results

Table 1 displays the outcomes of a survey that investigated the effects of AI tools on EFL learners' learning of reading and their perceptions of those tools in reading instruction.

Table 1 *Results of the survey*

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I find the use of AI tools in teaching reading to be helpful.	31%	41.4%	17.2%	3.4%	6.9%
2. AI tools are effective in enhancing my comprehension skills.	16.7%	60%	13.3%	0%	10%
3. AI tools provide personalized assistance to me in reading.	16.7%	66.7%	13.3%	0%	3.3&
4. AI tools help me to improve my vocabulary and grammar skills.	27.6%	55.2%	6.9%	3.4%	6.9%

5. AI tools reduce my learning burden and make the reading process more enjoyable.	27.6%	44.8%	20.7%	0%	6.9%
6. AI tools provide me with immediate feedback, which helps me to learn better.	26.7%	56.7%	6.7%	3.3%	6.7%
7. I feel more confident in my reading abilities when using AI tools independently.	33.3%	43.3%	10%	6.7%	6.7%
8. I think AI tools must be an essential part of EFL reading instruction.	30%	50%	10%	6.7%	3.3%
9. I think that AI tools can help to develop a deeper understanding of the text I'm reading.	16.7%	66.7%	6.7%	0%	0%
10. I think that AI tools can help me to read faster and more accurately.	26.7%	60%	13.3%	0%	0%
11. I think that AI tools have improved my ability to learn independently.	24.1%	55.2%	17.2%	3.4%	0%

As seen in Table 1, the survey encompassed a set of 11 statements, and respondents were requested to indicate their level of agreement by selecting from options. For the first statement, the survey results provided insight into the usefulness of AI tools for teaching reading. Most respondents, representing 72.4%, either strongly agreed or agreed that using AI tools for this purpose was helpful. This indicated an overall positive sentiment toward incorporating such tools into reading instruction. An even larger subset, at 31%, strongly agreed AI tools are beneficial. This suggested that certain individuals found value in features like personalized learning, adaptive feedback, or tools catering to different learning styles. Comparatively few, only 10.3% combined, disagreed or strongly disagreed. Therefore, the general perceptions of AI tools for teaching reading were predominantly positive. A notable 17.2% took a neutral stance, presumably due to lacking firsthand experience or needing more information to decide. While most viewed AI tools favorably, this analysis was limited by the data provided. Further research could lend deeper insight into how AI tools may support reading education.

For the second statement, the survey results revealed that AI tools could enhance comprehension skills. The majority (60%) of respondents agreed that AI tools positively impacted comprehension, indicating their belief that these tools were valuable for improving this learning outcome. An even stronger subset (16.7%) strongly agreed, suggesting certain AI tools were particularly useful for adaptive learning experiences that benefit comprehension. However, a portion maintained a neutral stance (13.3%), potentially due to a lack of experience with AI tools. Additionally, 10% disagreed with the statement, possibly relating to individual learning preferences or unsatisfactory experiences with specific tools. While most viewed AI tools favorably, research would be needed on their application, as the analysis was limited.

Regarding the third statement, most respondents (66.7%) agreed with the statement, indicating that most saw that AI tools provided personalized assistance with reading. 16.7% strongly agreed, suggesting a subset sees AI tools as highly effective at personalized assistance. 13.3% remained neutral, which could be due to a lack of experience using AI for reading or needing more information. No respondents disagreed with the statement. A small percentage (3.3%) strongly disagreed that AI provides personalized assistance. Overall, the responses showed a positive view of AI's ability to personalize assistance for reading, with over 80% agreeing or strongly agreeing. However, the neutral and strongly disagreeing stances indicate this is still an emerging area, and more comprehensive evaluation is needed to fully understand AI's personalization capabilities.

For the fourth statement, the survey results for this statement "AI tools help me to improve my vocabulary and grammar skills", the majority of respondents agreed or strongly agreed that AI tools helped improve their vocabulary and grammar skills, with over 80% falling into these categories. 27.6% strongly agreed and 55.2% agreed, indicating most students see

AI-based reading tools were beneficial for developing key language competencies in addition to reading comprehension. This high level of agreement suggested that AI tools were providing value by strengthening learners' knowledge of vocabulary and grammar through activities like defining unfamiliar words, explaining complex structures, and offering personalized feedback and practice encountered in texts. A small percentage remained neutral or disagreed, demonstrating some might need more time to observe benefits, while overall the low disagreement showed that learners recognized AI's benefits for language development. The positive response highlighted the promise of AI reading tools to make vocabulary and grammar building a more productive outcome of the reading process.

The results for statement 5 contributed to the positive effects of AI tools in reading instruction because most respondents agreed or strongly agreed that AI tools reduced the learning burden and increased the enjoyment of reading. Specifically, 27.6% strongly agreed and 44.8% agreed, showing that most learners found reading less laborious and more pleasant with AI assistance, which provided supports like vocabulary definitions, personalized recommendations, and interactive exercises to lessen comprehension effort while adaptive support and feedback made reading more engaging. However, about 20% remained neutral in their views of AI's impact, potentially needing more experience or being satisfied with traditional methods. Very few disagreed that AI increased burden or enjoyment. While largely positive, the mixed response warranted further optimizing AI tool design to better promote independent reading through greater ease of use. Overall, the data reflected students' positive outlook on AI's ability to lighten the workload and boost self-directed reading.

The sixth the statement "AI tools provide me with immediate feedback, which helps me to learn better", the vast majority (over 80%) of respondents either agreed or strongly agreed that AI tools provided immediate feedback which helped them learn better. Specifically, 26.7% strongly agreed and 56.7% agreed, indicating most EFL learners found real-time feedback from AI enabled more effective learning. Very few EFL learners disagreed to any significant extent. This showed that prompt AI feedback was advantageous for their reading progress, aligning with AI's ability to provide instant personalized corrections and assessments. The data portrayed that immediate feedback from AI tools was positive for enhancing EFL reading outcomes through accelerated self-correction and learning. EFL learners valued this feature of AI for improving comprehension and skills acquisition.

The survey responses to the seventh statement "I feel more confident in my reading abilities when using AI tools" demonstrated that the majority (76.6%) either agreed or strongly agreed, indicating that most students feel AI tools boost their reading confidence. 33.3% strongly agreed, suggesting a substantial proportion experience a significant confidence increase through AI use. 43.3% simply agreed, showing AI tools provide at least some confidence benefits for many learners. 10% remained neutral on the impact on their confidence. They might need more experience or information. 6.7% disagreed that AI improved their reading self-assurance. Their preferences or tool experiences could differ. An equal 6.7% strongly disagreed AI assisted their confidence. Their views might relate to a perceived lack of utility. In summary, while most students thought AI tools elevate reading self-belief, a small minority experienced no or even reduced confidence in AI.

Regarding the eighth statement, the survey results showed strong agreement that AI tools could be an essential part of EFL reading instruction, with 80% agreeing or strongly agreeing with the statement. Specifically, 30% of respondents strongly agreed that AI had an important role, while 50% simply agreed. This high level of agreement indicated that most EFL learners saw AI as a valuable addition to reading education. However, 10% remained neutral on whether AI was indispensable, likely due to a lack of experience using the tools. Additionally, a small minority of 6.7% disagreed and 3.3% strongly disagreed that AI was essential. While the response was predominantly positive overall, the neutral and dissenting opinions also revealed that AI's role was not universally accepted. Further research examining effective integration strategies could help address varying perspectives and optimize how AI supports reading classrooms. Still, the data largely reflects that AI tools are viewed as beneficial for EFL reading instruction by the majority of respondents.

Additionally, the survey results showed strong agreement that AI tools could help develop a deeper understanding of the text being read, with over 83% of respondents agreeing or strongly agreeing with this statement. Specifically, 16.7% strongly agreed that AI helped facilitate more comprehensive text comprehension, while 66.7% simply agreed it could support developing a deeper understanding. Only 6.7% remained neutral in their assessment.

Remarkably, none of the respondents disagreed or strongly disagreed. This overwhelmingly positive response indicated that AI tools could enrich EFL learners' reading comprehension and other reading skills through assistance functions like vocabulary support, summaries, and questions/answers. The lack of any dissent suggested that EFL learners were nearly unanimous in their confidence in AI's ability to meaningfully aid critical thinking and analysis of what was read.

In statement number ten, the survey results showed strong agreement that AI tools helped students read faster and more accurately, with over 86% of respondents agreeing or strongly agreeing with this statement. Specifically, 26.7% strongly agreed that using AI facilitates improved speed and precision in reading. Additionally, 60% agreed AI could help readers enhance their fluency and reduce errors. Only 13.3% remained neutral in their assessment of AI's impact on reading rate and accuracy. Remarkably, none of the respondents disagreed or strongly disagreed with the statement. This overwhelmingly positive response conveyed students' confidence that functions such as text highlights, definitions, and translations provided by AI tools would help expedite the processing of information while minimizing mistakes, resulting in faster and more consistent reading abilities. The unanimous perceptions among students underscored their belief

in AI's capability to support quantitative reading skills development as well as qualitative comprehension.

The last statement "I think that AI tools have improved my ability to learn independently", the results found that the majority of respondents agreed or strongly agreed that AI tools have increased their independent learning abilities, with over 79% in these categories. Specifically, 24.1% strongly agreed that using AI helped improve their self-directed studies, while 55.2% agreed it positively impacted autonomous learning. This result about learning reading independently suggested that AI was effectively supporting more self-reliant studying for many students through functions that guided without direct supervision. While most responses were positive, 17.2% remained neutral on whether AI influences independent learning because other factors might also impact this skill. Additionally, a small percentage disagreed 3.4%, implying AI might not effectively develop self-study for all learners. However, only a minimal number expressed disagreement, indicating AI was predominantly perceived as aiding the development of independent learning skills according to students.

Discussions

The overall responses to the survey questions indicated that respondents held positive perceptions of using AI tools for teaching reading as those tools were helpful for their learning of reading. As demonstrated by responses to the survey statements, the majority of respondents found AI tools to be effective, personalized, and supportive in improving reading comprehension, vocabulary, grammar, and other skills. These findings from the current study were largely consistent with the existing literature on AI-enhanced reading instruction for EFL learners. For example, one result of this study was that EFL learners recognized the positive effects of AI's tool in improving their reading comprehension, and this finding was in line with Alshriedeh's (2021) work that explored the impacts of using the HOT BOT strategy on an EFL reading class. The results of the current study revealed that learners acknowledged AI's role in reading since it provided content that enhanced their comprehension and vocabulary bank and helped them obtain new data. Hsiao and Chang (2023) also had a similar finding after investigating how learners perceived learning experiences with AI-powered tools in online English courses in high school English classes. The findings showed that learners had optimal learning experiences in reading classes where they used the Linggle Reading tool to prompt their reading skills independently. Overall, while supporting much of the literature on benefits, the survey revealed students prefer a mixed model where AI supplements rather than substitutes traditional instruction, providing meaningful additions to understanding their perceptions.

Based on the survey findings, further research could be conducted to optimize the effective integration of AI tools in EFL reading instruction. EFL educators could conduct research by collecting data from various data sources such as classroom observations and interviews to assess how different tools might impact reading skills and comprehension abilities. EFL educators should also explore integrating AI tools into their teaching while recognizing learners' differences and the continued importance of human teachers. AI design should focus on personalization to accommodate diverse learning styles and needs through personalized feedback, while interactive exercises, adaptive supports, and motivation-enhancing recommendations can make reading with AI tools more engaging for learners. However, a balanced approach that also incorporates traditional materials is important given varying student preferences. Ongoing assessment is crucial to refine AI tools implementation and ensure their contribution to reading instruction over time.

Conclusion

The study found that EFL learners held positive perceptions toward using AI tools in reading instruction. Those tools improved their reading skills. Likewise, the findings indicated that AI-enabled reading platforms furnished personalized and malleable pedagogical encounters attuned to discrete EFL learners' needs and proclivities, thereby enhancing lexicological adeptness, augmenting self-assurance, and inspiring engagement. Platforms empowered by AI capabilities could facilitate customized and relative pedagogical encounters addressing singular student needs and predilections, rendering the learning process more involving and efficacious. Such technologies may also help lighten instructors' duties by mechanizing specific functions and providing cost-beneficial alternatives for educational institutions. However, the efficacy of AI tools could depend on factors like tool quality, and learning context. Therefore, it is recommended that EFL educators consider integrating reviewed, and lesson-planned AI tools to enhance learners' reading skills and self-learning through personalized learning experiences. The integration of AI showed promise for improving student outcomes and engagement if implemented thoughtfully as a supplement to, not a replacement for human teachers within the educational process. While the study findings indicated the impacts of AI tools on enhancing reading instruction for EFL learners, further research, exploration, and optimization were needed to harness the utilization of AI in this domain.

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About the Authors

Dr. Talal Waleed Daweli is an assistant professor of TESOL and director of the Department of Languages and Translation at Taibah University, Al Ula, Saudi Arabia. He earned a Ph.D. Degree in TESOL from Illinois State University, USA. Daweli's research interests include second language writing instruction, responding to student writing, writing assessment, and reading instruction. He has published his scholarly works in several journals, such as Arab World English Journal and Heliyon Journal. https://orcid.org0000-0001-5765-0248

Rain Abdulrahman Moqbel Mahyoub is a Ph.D. student in the Department of Education, EFLU, Hyderabad, India. His areas of interest are English language teaching and reading instruction. https://orcid.org0009-0008-8404-2166

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