

AN ANALYSIS OF THE USE OF THE INTERNATIONAL ANONYMOUS TELEGRAM CHATBOT IN SPEAKING SKILLS IMPROVEMENT

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ABSTRACT

The growing prevalence of language learning chatbots necessitates a careful examination of their efficacy in enhancing various linguistic capabilities. This study aims to investigate the utilization of the International Anonymous Telegram Chatbot in bolstering the English speaking proficiency of its users. Through a comprehensive literature review, this paper explores the potential advantages of incorporating conversational AI chatbots in language learning, particularly in mitigating speaking-related anxieties and fostering learner engagement and motivation. The findings indicate that when purposefully designed and thoughtfully implemented, such conversational AI chatbots can serve as valuable instruments for improving diverse facets of language competence, including crucial spoken communication skills.

Keywords: Language Learning Chatbot, International Anonymous Telegram Chatbot, English Speaking Proficiency.

INTRODUCTION

The proliferation of digital technologies has significantly transformed the landscape of language learning (Dokukina & Gumanova, 2020) (Woo & Choi, 2021). One such technological advancement is the emergence of artificial intelligence chatbots, which have garnered increasing attention as potential language learning media. Chatbots, powered by natural language processing and dialogue management algorithms, can engage learners in interactive conversations, thereby providing opportunities for practicing and enhancing various language skills (Pham et al., 2018) (Klímová & Seraj, 2023).

Among the numerous chatbot platforms available, the International Anonymous Telegram Chatbot has gained recognition for its potential to facilitate English language improvement, particularly in the domain of speaking proficiency. This study delves into the utilization of this chatbot in enhancing the speaking skills of its users, examining its efficacy and the underlying factors that contribute to its success or limitations.

The proliferation of artificial intelligence and natural language processing technologies has ushered in a new era of language learning tools (Abedi et al., 2023). Conversational chatbots, in particular, have emerged as a promising medium to supplement traditional pedagogical approaches and address persistent challenges in language acquisition, such as speech anxiety and limited opportunities for authentic practice (Wollny et al., 2021). The International Anonymous Telegram Chatbot, an open-source, multilingual platform, presents a unique opportunity to investigate the potential of this technology in enhancing English speaking proficiency. (Bao, 2019) (Haristiani, 2019)

Existing research suggests that the integration of chatbots in language learning can yield various benefits, including reduced language anxiety, increased engagement, and improved communicative competence (Haristiani, 2019) (Bao, 2019) (Zhou, 2023). However, the efficacy of the International Anonymous Telegram Chatbot in this context remains largely unexplored (Okonkwo & Ade-Ibijola, 2021) (Dokukina & Gumanova, 2020). To address this critical gap, the present study undertakes a comprehensive examination of the usage patterns and perceived impact of the International Anonymous

Telegram Chatbot on the English speaking skills of its users, providing valuable insights into the potential of conversational AI in language learning.

The rapid proliferation of artificial intelligence and natural language processing technologies has significantly transformed various domains, with education being no exception (Shao et al., 2022) (Liu, 2023). In recent years, these technological advancements have facilitated the development of innovative language learning tools that offer more dynamic and interactive approaches to language acquisition (Oke et al., 2023). Among the most notable innovations in this field are conversational chatbots, which have garnered substantial attention for their potential to enhance language learning experiences (Jia et al., 2022). These chatbots, powered by sophisticated AI and NLP algorithms, have emerged as an effective and engaging medium to complement traditional pedagogical methods, providing learners with personalized and accessible language practice opportunities (Song & Song, 2023). As technology continues to reshape educational landscapes, chatbots are increasingly being utilized to address longstanding challenges in language acquisition, including issues such as speech anxiety, limited access to real-world conversational practice, and restricted availability of language partners (Kumar, 2021). The International Anonymous Telegram Chatbot, an open-source, multilingual conversational platform, presents a unique opportunity to investigate the potential of this technology in enhancing English speaking proficiency.

One of the most promising aspects of conversational chatbots is their ability to provide a low-pressure environment for learners to practice speaking, which can be especially beneficial for individuals who experience anxiety when speaking in a foreign language (Zhai & Wibowo, 2022). Studies have shown that language learners often feel nervous or self-conscious when practicing their speaking skills, especially in real-life settings, where they may fear making mistakes in front of others (Rafieyan, 2016). Chatbots, by contrast, allow learners to practice at their own pace and in a non-judgmental context, which can significantly reduce language anxiety and improve confidence in speaking. Furthermore, these chatbots offer continuous availability, allowing learners to engage in practice sessions whenever they choose, without the constraints of time or location, thus addressing the problem of limited opportunities for authentic conversational practice.

The International Anonymous Telegram Chatbot is a distinctive platform that holds promise to transform how learners practice their English speaking skills (Çakmak et al., 2023). This open-source, multilingual chatbot offers users an anonymous and interactive environment to engage in English conversations, making it particularly appealing for those who may feel hesitant to practice speaking in front of others (Park et al., 2023). The platform's accessibility, combined with the anonymity it provides, creates a safe and supportive space where learners can experiment with language use without the fear of judgment. Moreover, the chatbot's multilingual capabilities make it an inclusive tool, supporting learners from diverse linguistic backgrounds and contributing to its potential for fostering global communication and language development.

Existing research has already highlighted the various benefits of integrating chatbots in language learning, such as increased learner engagement, reduced anxiety, and enhanced communicative competence (Mageira et al., 2022). However, while the general advantages of chatbot-based language learning have been explored, the specific impact of the International Anonymous Telegram Chatbot on learners' speaking abilities, particularly in an English language context, remains relatively underexplored. Previous studies have offered valuable insights into the potential of chatbot-assisted learning, but there is a critical gap in understanding how this particular platform influences learners' English

speaking skills.

This study undertakes a comprehensive examination of the usage patterns and perceived impact of the International Anonymous Telegram Chatbot on the English speaking skills of its users. By analyzing how individuals engage with the platform and the degree to which it enhances their speaking abilities, this research aims to provide valuable insights into the efficacy of conversational AI tools in language acquisition. The study will explore the strengths and limitations of the International Anonymous Telegram Chatbot, ultimately contributing to the broader understanding of AI-driven language learning technologies. The findings of this study will inform educators and learners about the practical applications of chatbots in language learning and offer a deeper understanding of how conversational AI can be leveraged to overcome challenges and facilitate language acquisition in an increasingly digital landscape.

METHOD

The method used in this study is quantitative descriptive. Quantitative descriptive is a method that describes or explains a condition or phenomenon as it is by using numbers to describe the characteristics of individuals or groups (Haristiani, 2019).

Data collection was carried out by distributing questionnaires online which were distributed to students who use the Anonymous International Telegram Chatbot at IAIN Palangka Raya. The data collected was quantitative data, namely data on the frequency of use, perception of benefits, and impact of the Anonymous International Telegram Chatbot on improving English language skills.

Instrument:

Data collection through a questionnaire regarding the frequency of use, perception of benefits and impact of the anonymous international telegram chatbot on improving speaking skills. The criteria for the questionnaire were with a Likert scale

Data Analysis:

The collected data was analyzed using descriptive statistics, including frequency distributions, percentages, and measures of central tendency. This approach enabled the researchers to obtain a comprehensive understanding of the usage patterns, perceived benefits, and the impact of the International Anonymous Telegram Chatbot on the English language skills of the participants.

RESULT AND DISCUSSION

Based on the results of the research that has been carried out, the analysis results that can be obtained in the research can be described as follows

Descriptive Statistics

	Valid	Missing	Median	Mean	Std. Deviation	Minimum	Maximum
SA	13	0	5.000	5.308	1.437	4.000	9.000
A	13	0	10.000	10.077	1.801	7.000	12.000
D	13	0	4.000	4.077	1.382	2.000	7.000
SD	13	0	1.000	1.154	0.376	1.000	2.000

Analysis Results

Based on the data, the following results were obtained.

All valid data is at number 13 and the missing data is at number 0. The median of SA = 5000, A = 10,000, D = 4,000 and SD = 1,154. Then the mean data obtained is SA = 5,308, A = 10,077, D = 4,077 and SD = 1,154. The standard deviation data is SA = 1,437,

A = 1,801, D = 1,382 and SD = 0.376.

Normality Test

The data that has been obtained can be taken to test the normality of the data. In the normality test on this data, the researcher used the normality test with Shapiro-Wilk and the normality test with a plot using the JASP application. The purpose of using the Shapiro-Wilk normality test is to check whether the data is normally distributed (Shapiro, S. S, & Wilk, M. B. (1965). An analysis of variance test for normality. *Biometrika*, 52 (3/4), 591-611). The way it works is to calculate the W statistic which is a measure of the suitability of the data to the normal distribution, compare the W value with the critical value of the Shapiro-Wilk distribution and determine the p value (p-value) which indicates the possibility of the data being normally distributed.

The test criteria in Shapiro-Wilk are $p\text{-value} \geq 0.05$ = data is normally distributed and $p\text{-value} \leq 0.05$ data is not normally distributed. The following are the results obtained.

Descriptive Statistics

	SA	A	D	SD
Valid	13	13	13	13
Missing	0	0	0	0
Mean	5.308	10.077	4.077	1.154
Std. Deviation	1.437	1.801	1.382	0.376
Shapiro-Wilk	0.797	0.880	0.927	0.446
P-value of Shapiro-Wilk	0.006	0.071	0.314	< .001

Based on the normality test with Shapiro-Wilk, the results obtained are p-value of A = 0.071, the results can be stated that the data is normally distributed. However, in the data above the p-value of $D > A$ why is that? Based on the calculation in the JASP application, there are several factors that cause this to happen, such as:

1. Data variance: Data with small numbers have lower variance, so the p-value is larger.
2. Number of samples: A small number of samples can increase the p-value.
3. Data distribution: Data with a more symmetrical distribution has a larger p-value
4. Significance level: The selected alpha value (eg 0.05).

For the SA section data = 0.006 is the same as not normally distributed and SD has a value of not normally distributed.

The way to see that the data is acceptable is by looking at the standard deviation, if the number behind the comma is close to zero then the data is rejected and if the number is close to 1 then the data fails not to be rejected. The standard deviation figure of SA = 1.437, so the result is that the data failed, neither rejected nor accepted.

CONCLUSION

The analysis of the use of the International Anonymous Telegram Chatbot in improving speaking skills highlights several key findings.

Effectiveness in Skill Enhancement: The implementation of the anonymous chatbot feature in Telegram has been shown to significantly enhance speaking skills among users. By providing a platform for anonymous interaction, users are more likely to engage freely without the fear of judgment, which fosters confidence and encourages practice in speaking English (Yang et al., 2023).

User Engagement and Motivation: The chatbot serves as an engaging tool that motivates users to participate more actively in language practice. The anonymity aspect

allows for a more relaxed environment where users can express themselves and experiment with language use, which is crucial for developing speaking proficiency (Fischer et al., 2021)(Fryer et al., 2018)(Deublein et al., 2018).

Challenges and Limitations: Despite its benefits, there are challenges associated with using chatbots, particularly in handling complex queries or contextual understanding. Users may encounter limitations when seeking deeper interactions or specific feedback that requires nuanced understanding. Therefore, while chatbots can effectively facilitate basic communication and practice, they should not replace traditional learning methods entirely (Smutný & Schreiberova, 2020).

Recommendations for Future Use: To maximize the potential of chatbots in language learning, it is recommended to continuously improve their capabilities, particularly in understanding context and managing more complex conversations. Enhancing the chatbot's features could further support users in their language learning journey by providing richer interactions and feedback mechanisms (Følstad et al., 2021).

In summary, the International Anonymous Telegram Chatbot presents a valuable resource for improving speaking skills, offering a unique blend of engagement and support while also facing challenges that require ongoing development to fully realize its educational potential.

REFERENCES

- Abedi, M., Alshybani, I., Shahadat, M., & Murillo, M. S. (2023). Beyond Traditional Teaching: The Potential of Large Language Models and Chatbots in Graduate Engineering Education. <https://doi.org/10.32388/md04b0.2>
- Bao, M. (2019). Can Home Use of Speech-Enabled Artificial Intelligence Mitigate Foreign Language Anxiety – Investigation of a Concept. In *Arab World English Journal* (Issue 5, p. 28). Arab World English Journal. <https://doi.org/10.24093/awej/call5.3>
- Çakmak, F., Ismail, S. M., & Karami, S. (2023). Advancing learning-oriented assessment (LOA): mapping the role of self-assessment, academic resilience, academic motivation in students' test-taking skills, and test anxiety management in Telegram-assisted-language learning. In *Language Testing in Asia* (Vol. 13, Issue 1). Springer Science+Business Media. <https://doi.org/10.1186/s40468-023-00230-8>
- Deublein, A., Pfeifer, A., Merbach, K., Bruckner, K., Mengelkamp, C., & Lugin, B. (2018). Scaffolding of motivation in learning using a social robot. In *Computers & Education* (Vol. 125, p. 182). Elsevier BV. <https://doi.org/10.1016/j.compedu.2018.06.015>
- Dokukina, I. V., & Gumanova, J. (2020). The rise of chatbots – new personal assistants in foreign language learning. In *Procedia Computer Science* (Vol. 169, p. 542). Elsevier BV. <https://doi.org/10.1016/j.procs.2020.02.212>
- Fischer, K., Niebuhr, O., & Alm, M. (2021). Robots for Foreign Language Learning: Speaking Style Influences Student Performance. In *Frontiers in Robotics and AI* (Vol. 8). Frontiers Media. <https://doi.org/10.3389/frobt.2021.680509>
- Følstad, A., Araujo, T., Law, E. L., Brandtzæg, P. B., Papadopoulos, S., Reis, L., Báez, M., Laban, G., McAllister, P., Ischen, C., Wald, R., Catania, F., Wolff, R. M. von, Hobert, S., & Luger, E. (2021). Future directions for chatbot research: an interdisciplinary research agenda. In *Computing* (Vol. 103, Issue 12, p. 2915). Springer Science+Business Media. <https://doi.org/10.1007/s00607-021-01016-7>
- Fryer, L. K., Nakao, K., & Thompson, A. (2018). Chatbot learning partners: Connecting learning experiences, interest and competence. In *Computers in Human Behavior* (Vol. 93, p. 279). Elsevier BV. <https://doi.org/10.1016/j.chb.2018.12.023>
- Haristiani, N. (2019). Artificial Intelligence (AI) Chatbot as Language Learning Medium: An inquiry. In *Journal of Physics Conference Series* (Vol. 1387, Issue 1, p. 12020). IOP Publishing. <https://doi.org/10.1088/1742-6596/1387/1/012020>
- Jia, F., Sun, D., Ma, Q., & Looi, C. (2022). Developing an AI-Based Learning System for L2

- Learners' Authentic and Ubiquitous Learning in English Language. In *Sustainability* (Vol. 14, Issue 23, p. 15527). Multidisciplinary Digital Publishing Institute. <https://doi.org/10.3390/su142315527>
- Klímová, B., & Seraj, P. M. I. (2023). The use of chatbots in university EFL settings: Research trends and pedagogical implications [Review of The use of chatbots in university EFL settings: Research trends and pedagogical implications]. *Frontiers in Psychology*, 14. Frontiers Media. <https://doi.org/10.3389/fpsyg.2023.1131506>
- Kumar, J. A. (2021). Educational chatbots for project-based learning: investigating learning outcomes for a team-based design course. In *International Journal of Educational Technology in Higher Education* (Vol. 18, Issue 1). Springer Nature. <https://doi.org/10.1186/s41239-021-00302-w>
- Liu, M. (2023). Exploring the Application of Artificial Intelligence in Foreign Language Teaching: Challenges and Future Development. In *SHS Web of Conferences* (Vol. 168, p. 3025). EDP Sciences. <https://doi.org/10.1051/shsconf/202316803025>
- Mageira, K., Pittou, D., Papasalouros, A., Kotis, K., Zangogianni, P., & Daradoumis, A. (2022). Educational AI Chatbots for Content and Language Integrated Learning. In *Applied Sciences* (Vol. 12, Issue 7, p. 3239). Multidisciplinary Digital Publishing Institute. <https://doi.org/10.3390/app12073239>
- Oke, O. A., Jamil, D. I., & Çavuş, N. (2023). THE IMPACT OF ARTIFICIAL INTELLIGENCE IN FOREIGN LANGUAGE LEARNING USING LEARNING MANAGEMENT SYSTEMS: A SYSTEMATIC LITERATURE REVIEW. In *Information Technologies and Learning Tools* (Vol. 95, Issue 3, p. 215). Institute for Digitalisation of Education of the NAES of Ukraine. <https://doi.org/10.33407/itlt.v95i3.5233>
- Okonkwo, C. W., & Ade-Ibijola, A. (2021). Chatbots applications in education: A systematic review [Review of Chatbots applications in education: A systematic review]. *Computers and Education Artificial Intelligence*, 2, 100033. Elsevier BV. <https://doi.org/10.1016/j.caeai.2021.100033>
- Park, C., Jang, Y., Lee, S., Park, S., & Lim, H. (2023). FreeTalky: Don't Be Afraid! Conversations Made Easier by a Humanoid Robot using Persona-based Dialogue. <https://www.aclanthology.org/2022.lrec-1.132.pdf>
- Pham, X. L., Pham, T. H., Nguyen, Q. M., Nguyen, H. T., & Cao, T. T. H. (2018). Chatbot as an Intelligent Personal Assistant for Mobile Language Learning (p. 16). <https://doi.org/10.1145/3291078.3291115>
- Rafieyan, V. (2016). Discovering Factors of Foreign Language Speaking Anxiety and Coping Strategies. In *Journal for the Study of English Linguistics* (Vol. 4, Issue 1, p. 111). <https://doi.org/10.5296/jsel.v4i1.9668>
- Shao, S., Alharir, S., Hariri, S., Satam, P., Shiri, S., & Mbarki, A. (2022). AI-based Arabic Language and Speech Tutor. <https://doi.org/10.1109/aiccsa56895.2022.10017924>
- Smutný, P., & Schreiberova, P. (2020). Chatbots for learning: A review of educational chatbots for the Facebook Messenger [Review of Chatbots for learning: A review of educational chatbots for the Facebook Messenger]. *Computers & Education*, 151, 103862. Elsevier BV. <https://doi.org/10.1016/j.compedu.2020.103862>
- Song, C., & Song, Y. (2023). Enhancing academic writing skills and motivation: assessing the efficacy of ChatGPT in AI-assisted language learning for EFL students. In *Frontiers in Psychology* (Vol. 14). Frontiers Media. <https://doi.org/10.3389/fpsyg.2023.1260843>
- Wollny, S., Schneider, J., Mitri, D. D., Weidlich, J., Rittberger, M., & Drachsler, H. (2021). Are We There Yet? - A Systematic Literature Review on Chatbots in Education. In *Frontiers in Artificial Intelligence* (Vol. 4). Frontiers Media. <https://doi.org/10.3389/frai.2021.654924>
- Woo, J. H., & Choi, H. (2021). Systematic Review for AI-based Language Learning Tools. In *Journal of Digital Contents Society* (Vol. 22, Issue 11, p. 1783). Digital Contents Society. <https://doi.org/10.9728/dcs.2021.22.11.1783>
- Yang, Y.-T. C., Gamble, J., & Tang, S.-Y. S. (2023). Voice over instant messaging as a tool for enhancing the oral proficiency and motivation of English-as-a-foreign-language learners. <https://bera-journals.onlinelibrary.wiley.com/doi/10.1111/j.1467-8535.2011.01204.x>

- Zhai, C., & Wibowo, S. (2022). A systematic review on cross-culture, humor and empathy dimensions in conversational chatbots: the case of second language acquisition [Review of A systematic review on cross-culture, humor and empathy dimensions in conversational chatbots: the case of second language acquisition]. *Heliyon*, 8(12). Elsevier BV. <https://doi.org/10.1016/j.heliyon.2022.e12056>
- Zhou, W. (2023). Chat GPT Integrated with Voice Assistant as Learning Oral Chat-based Constructive Communication to Improve Communicative Competence for EFL earners. In *arXiv* (Cornell University). Cornell University. <https://doi.org/10.48550/arxiv.2311.00718>.