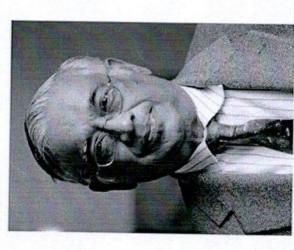
ISSUE - 77 ISSN : 0976 - 0997 Printed Version VOLUME - 14 APRIL 2023

lian Journal of Natural Sciences



Padma Vibhushan S.R. Srinivasa Varadhan The Great Indian Mathemetician Abel Prize Winner (2007)

Subscription Rate/Annum

Institution - Rs.1500/-Individual - Rs.1000/- Published by Dr.S.Vijikumar on behalf of Tamilnadu Scientific Research Organisation, Admin. Off.: 39, Mura Bhavan, Koodal Nagar, Rajagopalapuram Post, Pudukkottai -3,

Tamil Nadu, India and printed by SP Xerox, Pudukkottai -1, Phone: 04322 261088, Editor in Chief: Dr.S.Vijikumar.

Tamil Nadu Scientific Research Organisation Regd, Off.; NO 46-14I, Meenakshipuram Rd, Near Post Office, Arimalam 622 20I, Pudukkoftai, Tamil Nadu, India. www.tnsroindia.org.in

https://mail.google.com/mail/u/0/#inbox/FMfcgzGsmrDNFnzBgchtFKtmgVmxwLCP?projector=1&messagePartId=0.1

| - |
|---|
| - |
| 0 |
| - |
| xwLCP?projector=1&messagePartId=0.1 |
| E |
| a |
| О. |
| Φ. |
| 0 |
| a |
| 99 |
| ď, |
| ĕ |
| S |
| ∞ |
| - |
| ii |
| 0 |
| # |
| 8 |
| - 5 |
| 5 |
| 0 |
| C |
| 0 |
| () |
| 7 |
| 3 |
| 5 |
| 2 |
| F |
| > |
| 9 |
| 8 |
| Æ |
| X |
| щ |
| t |
| to |
| Ö |
| m |
| N |
| 2 |
| II |
| 7 |
| 5 |
| 닌 |
| F |
| 20 |
| C |
| \sim |
| Ď. |
| Ö |
| # |
| 2 |
| T |
| 2 |
| ô |
| Ā |
| _ |
| # |
| 5 |
| 9 |
| |
| nail/u/0/#inbox/FMfcgzGsmrDNFnzBgchtFKtmgVmxw |
| a |
| F |
| - |
| E |
| 0 |
| O |
| a |
| = |
| 00 |
| ŏ |
| ŏ |
| - |
| m' |
| č |
| - |
| 5 |
| S |
| 0 |
| https://mail.google.com/m |
| _ |
| |
| |

| 150 | What Sparks Customer Loyalty? Analysing the Catalysts of Customer Loyalty and Their Impact P.Rajini and R.Bhuvaneswaran | 55011-55025 |
|-----|--|-------------|
| 151 | HPTLC Analysis and Data Interpretation of Phenolic Compounds of Various Aerial Parts of <i>Putranjiva roxburghii</i> Wall. using rTLC an Open source Online Software: A Gateway to Metabolomics Mamatha Shivalingegowda and Manjunath Kiragandur | 55026-55033 |
| 152 | Family Business Leadership: A Thematic Analysis on Scientific Approaches Nataraj R.T and Mousumi Sengupta | 55034-55043 |
| 153 | Impact of COVID 19 Lockdown on QoL and Mental Health in Adolescents: A Literature Review Advita Neville Deepak, Shumaila Hasan, Madhavan G Iyenger and Bhavana Gadhavi | 55044-55048 |
| 154 | The Microbial Biosynthesis of α -Amylase: a Review Bhimana Sasisdhar and Ravindran Saravanan | 55049-55062 |
| 155 | A Review on Emerging Trends in Block Chain Technology and its Applications K. Ashtalakshmi | 55063-55067 |
| 156 | Impact of Game Addiction to Emotional, Physical Distress and Academic Performance on College Students: Prediction using Machine Learning and Ensemble Algorithms Nisha Varghese and Shafi Shereef | 55068-55075 |
| 157 | Leveraging Autonomous Robotics in Supply Chain Manish Shashi and Puja Shashi | 55076-55081 |
| 158 | The Impact of Social Media Images on Youth: A Literature Review Indu Joseph Thoppil | 55082-55086 |
| 159 | Exploring the Prospects and Challenges of using Artificial Intelligence in Teaching LSRW Skills J.Umamaheswari | 55087-55091 |
| 160 | Isolation of Streptococcus mutans From Clinical Dental Caries Samples and Extraction of Glucosyltransferase Enzyme from S. mutans J Anusha, A Salman, Shramya, M. Vishal and N. Mallikarjun | 55092-55098 |
| 161 | A Critical Analysis of E-Learning during the Pandemic using Data Mining S. Annie Christila | 55099-55104 |
| 162 | Non-Newtonian Bingham Plastic Fluid Flow across A Porous Medium Neeraj Khirwar and Rajesh Johari | 55105-55110 |
| 163 | Development, Validation and Pilot Testing of a Tool for Assessing Knowledge, Attitude and Practices (KAP) on First Aid Emergency Management of Dental Trauma and Tooth Avulsion among ASHA Workers in Mysuru City Chandrashekar BR, Suma S, Shubhi Goel and Mirunalini Sundaravadivelu | 55111-55118 |
| 164 | Comparative of Static and Dynamic Balance Exercise on Pain and Balance Performance in Sub-Acute Ankle Sprain Vineetkumar R Vaghela, Rushi Gajjar and Gaurav Patel | 55119-55123 |
| 165 | Role of Artificial Intelligence in Teaching and Learning: An Exploratory Study Noor Nigar | 55124-55129 |



Vol.14 / Issue 77 / April / 2023 International Bimonthly (Print) - Open Access

ISSN: 0976 - 0997

RESEARCH ARTICLE

Exploring the Prospects and Challenges of using Artificial Intelligence in Teaching LSRW Skills

J.Umamaheswari*

Assistant Professor, SFS Degree College, Bangaluru, Karnataka, India.

Received: 04 Jan 2023

Revised: 20 Feb 2023

Accepted: 30 Mar 2023

*Address for Correspondence J.Umamaheswari

Assistant Professor. SFS Degree College,

Bangaluru, Karnataka, India.

E. Mail: umamahibala2014@gmail.com

This is an Open Access Journal / article distributed under the terms of the Creative Commons Attribution License (CC BY-NC-ND 3.0) which permits unrestricted use, distribution, and reproduction in any medium, provided the This is an Open Access Journal / article distributed under the terms of the Creative Commons Attribution License original work is properly cited. All rights reserved.

ABSTRACT

In the age of technology, Artificial Intelligence (AI) is a boon to the present generation students to enhance their Listening, Speaking, Reading and Writing(LSRW)skills. When it comes to teachers, the usage of technology in education intimidate them to a great extent. It is prerequisite to understand how the artificial Intelligence can be used according to the needs and interest of the students. This research article aims at exploring the AI tools that can be used to develop the LSRW skills. When the teacher's support and creativity allied with AI tools, will work for students better and also to encourage students master the four skills in English Language. In education, AI has changed the English language teachinglearning scenario and implementation of AI in education integrates the experiential learning in the classroom environment. The different methods which we use in AI are Robotics, Learning Management System (LMS), Virtual Reality and Chat bot. This will help students to get hands-on experience in improving their creativity using AI. The four language skills like Listening, Speaking, Reading and Writing are intertwined and AI can assist students to strengthen their language skills. This research proves that the AI could integrate all four skills and AI tools increase the interest of students in mastering the four language skills.

Keywords: LSRW, Education and Artificial Intelligence

INTRODUCTION

Artificial intelligence (AI) appears to be unavoidable in every area of our life in present scenario. From vehicle driving to house hold chores, AI has long since moved from science fiction to scientific reality. As a result, it plays its vital role everywhere in our life as no surprise that AI can assist us in learning languages more earnestly and effectively. This Study explores the prospects and challenges of AI in teaching LSRW skills to college students. Teachers can utilise AI for teaching LSRW skills to the students effectively by whenever and wherever they choose.





Vol.14 / Issue 77 / April / 2023 International Bimonthly (Print) – Open Access

ISSN: 0976 - 0997

Umamaheswari

Artificial Intelligence and Voice Recognition Technology (AI and VRT)

The role of English in multidisciplinary sectors has been increasing due to upcoming demands of globalization and modernisation. The development of voice recognition technology in Call Assisted Language Learning has great deal for the app creation assisting the learning of speaking skill among the LSRW skills. There are more mobile applications featuring Voice Recognition Technology such as Nuance Dragon Dictation(2018), Praat (2018) and Duolinguo (2018), available for free to improve speaking skills in English. There are some VRT products in the market like Siri (Apple Inc.,2018) was created in 2011 as a virtual user assistance for users of Apple devices such as iPAd and iPhone. This technology helps students to pronounce the word perfectly for speaking skills. Many innovative companies are creating AI tools and some applications which helps in assisting teaching the LSRW skills in English.

Nuance's Dragon Speech Recognition

There is a software which provides speech recognition is Nuance's Dragon Speech Recognition. It can be used by both the students and faculty members. It can transcribe up to 160 words per minute, which helps students who find it difficult to write or type. The main feature of this is supporting verbal commands. It dictates class work with accuracy where the students improve their listening skill using the app.

Knowji

Knowji is an another AI education tool available in the market which is an audio-visual vocabulary application that enhances the current research on education. It is exclusively designed for language learners and it uses various methods and concepts to learn the language based skills easier and faster. In language learning, AI will not chastise or condemn students for their mistakes instead it will give another opportunity to answer correctly. Learners may be assessed without being judged by artificial Intelligence.

Language Bots

Chatbots have created in the way that people think that they are conversing to the real person. Many people use chatbots for learning some foreign languages. All you have to do is to engage in a conversation with an Al bot and learn language and gain many experience out of that. Artificial Intelligence powered language learning chat bots gives feedback and respond to the people immediately according to their questions and requirements.

ROSETTA STONE

Students can study more than 25 languages with this language learning software on any device, at any time. The user gets benefitted from this software to continue their education both offline and online. We can use the software in iOS and Android devices. The true accent speech engine is used by the Rosetta stone software program to ensure that students or users attain the correct articulation. This software teaches students and users in real-time using augmented reality and students gain the practice of using correct pronunciation.

Machine Translation

Machine Translation helps students in better comprehending a language as well as developing comprehension, sentence creation, sentence pattern, vocabulary in the English Language. Machine Translation is a teaching technique in which students find and fix inconsistencies and mistakes in machine-translated material.

Duolingo

Duolingo is the renowned language-learning chatbot. This Duolingo is integrated with AI platform that allow it to comprehend the user's context and reply to them contextually and individually. This is programmed in the way that different users receive different responses to the same question. Duolingo has given the opportunities to thousands of individuals to learn a new language without losing the confidence of miscommunicating with a native speaker. The bots could only converse in English, Spanish, German, or French before. This AI tool can now converse in over





Vol.14 / Issue 77 / April / 2023 International Bimonthly (Print) - Open Access

ISSN: 0976 - 0997

Umamaheswari

interdisciplinary perspective to gain more knowledge in the field of education using AI in the process of teaching LSRW skills.

REFERENCES

- 1. Shute & Rivera (2010). Intelligent Systems. International Encyclopedia of Education (Third Edition).
- 2. Nanda, M.R.D., Harahap, A., & Damayanti, I. (2019). An Analysis of Language Skills' Proportion In The English Textbook Grade XII Published By Kemendik bud 2014. *Journal of English Education and Teaching*, 3(4), 438–451. https://doi.org/10.33369/jeet.3.4.438-451
- 3. Sevy- Biloon, J. (2018). Integrating EFL Skills for Authentically Teaching Specific Grammar and Vocabulary. Studies in English Language and Education, 5(2), 175–184. https://doi.org/10.24815/siele.v5i2.9705
- Aprianoto,&Haerazi.(2019).DevelopmentandAssessmentofAnIntercultural-BasedInstrument Model in the Teaching of Speaking Skills. *Universal Journal of EducationalResearch*,7(12),2796–2805.https://doi.org/10.13189/ujer.2019.071230
- Haerazi, H., Prayati, Z., &Vikasari, R. M. (2019). Practicing Contextual Teaching and Learning(Ctl) Approach
 To Improve Students'reading Comprehension In Relation To Motivation. English Review: Journal of English
 Education, 8(1),139–146.
- 6. Wang. C and Seneff S. A Spoken Translation Game for Second Language Learning. Artificial Intelligence in Education: Building Technology Rich Learning Contexts that work. Lukin et al. (Eds.) IOS Press.
- 7. Swiecki Z. et al (2022). Assessment in the age of artificial intelligence. Computers and Education: Artificial Intelligence, Science Direct, Volume 3. S
- 8. Seung *et al.* (2011). Modeling Narrative-Centered Tutorial Decision Making in Guided Discovery Learning. Artificial Intelligence in Education. 15th International Conference, AIED 2011 Auckland, New Zealand, 2011. Springer.
- Beaven, A., & Neuhoff, A. (2012, January1). Assessing Oral Proficiency for Intercultural Professional Communication: The CEFcult Project. European Association for Computer-Assisted Language Learning (EUROCALL). Retrieved from https://eric.ed.gov/?id=ED544436.
- Faigley, L.. 1990. Subverting the Electronic Workbook: Teaching Writing Using Networked Computers[A] // A. Daiker& M. Morenberg, Eds. The Writing Teacher as Researcher. Portsmouth: Boynton/Cook.
- 11. Gass, S. &SelinkerL.. 1994. Second Language Acquisition: An Introductory Course[M]. Hillsdale, NJ: Lawrence Earlbaum Associates Inc. Greenia, G. D.. 1992. Computers and Teaching Composition in a Foreign Language[J]. Foreign Language Annals, (25): 33-45.
- 12. Peregoy, S. F., & Boyle, O. F.. 2005. Reading, Writing, and Learning in ESL[M]. Boston: Pearson Education.
- 13. Richards, J. C., & Rodgers, T. S.. 2001. Approaches and Methods in Language Teaching. Cambridge University Press
- Brown, H. D.. 1994. Principles of Language Learning and Teaching[M]. 3rd ed. Englewood Cliffs, NJ: Prentice Hall
- 15. Greenia, G. D.. 1992. Computers and Teaching Composition in a Foreign Language [J]. Foreign Language Annals, (25): 33-45.



