E-Learning as a Platform to Enhance the Speaking Skill of Rural Women Visually Challenged Students– An Experimental Study

R. Shruthi[1], Dr. A. Manikandan[2], Dr. Sathya Thangavel[3], Dr. G. Sankar[4], Mariappan. B[5], Dr. Ramesh Manickam[6]

[1] Research Scholar, Department of English, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Avadi, Chennai, India. E-mail: vtd857@veltech.edu.in

[2] Assistant Professor,Department of English, Veltech Rangarajan Dr. Sagunthala R& D Institute of Science and Technology, Avadi, Chennai.

[3] Head, Department of Languages, IFIM College, Bangalore, India. E-mail: drsathyathangavel@gmail.com

[4] Assistant Professor, Department of English, School of Social Sciences and Languages, Vellore Institute of Technology, Vellore -India 632014. E-mail: sankar.g@vit.ac.in

[5] Assistant Professor, Department of English, Sri Ramakrishna Engineering College, Coimbatore-641022, Tamil Nadu, India. E-mail: marssrec@gmail.com

[6] Associate Professor of English, School of Law, Veltech Rangarajan Dr. Sagunthala R& D Institute of Science and Technology, Avadi, Chennai, India. E-mail: rameshm@veltech.edu.in

Correspondence: Dr. Sathya Thangavel, Head, Department of Languages, IFIM College, Bangalore, India. E-mail: drsathyathangavel@gmail.com

Received: June 3, 2024 Accepted: July 24, 2024 Online Published: August 7, 2024

doi:10.5430/wjel.v14n6p445 URL: https://doi.org/10.5430/wjel.v14n6p445

Abstract

In rural government colleges, there are a lot of issues faced by the teachers and the students in the teaching and learning process like infrastructure, materials, usage of technology, implementation of innovative methods, etc. Visually challenged learners need exposure to learning through technology and need to discern the value of the effective learning process through innovative methodologies, especially rural women visually challenged learners. They possess higher concentration levels when compared to the other students. Providing them E-learning platform to enhance their learning process and to acquire language skills is considered an effective and constructive mode of learning. The study aims to design an E-learning module for rural women visually challenged learners and to provide a platform for the learners to acquire language skills rather than learning. The sample of the study is rural women visually challenged learners from various rural Government colleges in Erode and Karur District, Tamilnadu, India. The methodology of the study is analyzing the needs of the learners, designing an e-learning module based on their needs, conducting pre-tests, implementing of e-learning module, and conducting post-tests. Hence the study focuses on enhancing the speaking skills of rural women visually challenged learners through an E-learning platform.

Keywords: E-learning module, Rural Women Visually Challenged Learners, Speaking Skill, Acquisition of Language skills

1. Introduction

Though Education is the safest weapon to confront the problems in society, rural women visually challenged learners are not getting the proper education through a proper platform, especially during the pandemic. Rural women students, who aspire to get a job, are still struggling to confront the interview. They are not getting exposure to learn and acquire language skills through various platforms. So, they feel embarrassed and face many issues when they attend an interview, one such problem is communication skills. Technology acts as a platform to solve the issues in the field of teaching and learning process. It also paves a comfortable mode of learning for rural women visually challenged learners. It helps the teachers and the learners to impart and gain knowledge and skills. It facilitates the teacher and the teaching-learning process, but it cannot replace the teacher.

E-learning can occur inside the classroom as well as outside the classroom. It can be self-paced synchronous learning or asynchronous learning. It can be modified to suit the needs and requirements of learners and can provide a variety of learning experiences, including interactive elements. It is in this sense; it functions as tailored learning.

Learners with visual impairments are always greatly challenged by classroom instructional strategies. They can easily hear the words of the teacher inside the classroom but it is difficult for them to approach syllabi, textbooks, overhead projectors, maps, videos, written exams, demonstrations, and films. Most of the traditional learning materials are visual-oriented. As such, these materials help visually challenged learners in no way. Visually challenged learners can be categorized as completely blind and partially blind. They use their strategies to learn according to their varying needs. Completely blind learners use audio, taped textbooks, and Braille materials, whereas partially sighted learners use larger print books, magnifiers, and so on. E-learning is considered one of the best ways for visually

challenged learners to learn and acquire language skills.

Presumably, the first article ever published about blindness and foreign language learning was written by a blind teacher called Morrissey in 1931. He contended that blind people are particularly well equipped for foreign languages, as their impairment forces them to develop their ears to a much greater extent than the average sighted person. The author considers language learning to be fundamentally a matter of the sense of hearing with very little or no relation to vision and therefore assumes that a well-trained ear guarantees success in mastering a foreign tongue. The author also considered foreign language teaching as a feasible, most appropriate profession for blind people [Morrissey 1931].

In her research dissertation entitled "Teaching English as a Foreign Language to Blind and Visually Impaired Young Learners: The Affective Factor", Helena Aikin Araluce (2005) discussed the tactile instructional material, which was specially designed for blind and visually challenged children enrolled in the second cycle of primary education attending both mainstream and segregated settings. It is intended to facilitate the integration of these learners into an English classroom of sighted children as not only does it take their sensory impairment into account, but it is also designed to enable them to work along with the rest of the class at the same pace [Araluce 2005]

Ifan Shepherd (2001) developed the 'Mutual Adjustment Approach' in the study "Providing Learning Support for Blind and Visually Impaired Students Undertaking Fieldwork and Related Activities". The main principle behind this approach is that visually challenged students together with staff and other students negotiate a set of 'accommodations' to ensure the most effective learning environment for the student concerned. The principle behind this approach is based on the likelihood that it may not be possible to meet all their needs in particular departments or on particular field courses [Shepherd 2001].

In the research paper "Students Attitude towards Using Computer for Language Learning – A Survey", Mamun A. Bharbhuiya (2008) analyzed the role of computer technology in teaching the English language in educational institutions in general and technical institutions in particular. The researcher investigated the attitudes, opinions, and suggestions of a group of technical students on using computer technology for language learning. The analysis showed the positive attitude of the students towards Computer Assisted Language Learning (CALL) to meet their needs in learning English and also in developing communication skills [Bharbhuiya 2008].

In the study "E-Learning and Blindness: Evaluating the Quality of the Learning Experience to Inform Policy and Practice", Shirley B. Evans (2009) focused on issues relating to e-learning and blindness. She found that Blind learners could access e-learning with support and they engaged successfully with e-learning. This study also observed that they took greater effort to adopt e-learning. In addition, they didn't score well on the performance test. The quality of the e-learning experience differed for blind learners when compared to sighted learners [Evans 2009].

In the study, "Advanced IT Education for the Vision Impaired via e-Learning", Helen L. Armstrong (2009) redeveloped the Cisco e-learning materials for visually challenged students. They required at least double the class time allowed for sighted students. Large amounts of information or complex data presented in tables were particularly difficult for the students to interpret without error. Involvement in the program increased their self-confidence in their ability and their ability to perform in an IT role in the industry [Armstrong 2009].

In the study "Characteristics of Learning Styles in People with Visual Impairments in Using Assistive Technologies", Marian Padure (2011) investigated the characteristics of learning styles in the case of visual persons. The approach of learning style was based on how information is used on the strategies and learning models, motivation, and progress in learning. It focused on the influence of assistive technologies and the shaping of an optimal learning style. The results offer not only a global and particular learning style of the persons with visual impairments but also an explanation regarding the relationship between them and assistive technologies [Padure 2011].

In the study "Using e-learning to develop intercultural awareness in ELT: A critical evaluation in a Thai higher education setting", Will Baker (2013) answered the stated aims of this research; to investigate if e-learning was an effective medium for teaching intercultural communication and awareness, the course was well received by both students and teachers and the students discussed several changes in their understanding of intercultural communication that had occurred as a result of the course. It was clear from the participants' responses that these are areas of relevance to their English language learning. Considering the current use of English as the foremost global lingua franca for intercultural communication, ELT needs to incorporate knowledge of global English and intercultural communication education. Hence, an e-learning course offers one example of how this can be delivered [Baker 2013].

Studies on teaching English to ESL learners through customization of Android applications were conducted by Jayakumar et al. in 2016, 2019, and 2010. According to several studies, developing E-learning materials for ESL students to use in their grammar instruction produced excellent recommendations. Furthermore, it emphasized the significance of utilizing e-content for online instruction for the intended audience of learners. Further the paper argued the importance of online teaching and learning in the covid pandemic.

Characteristics of Learners with Visual Impairments

In the book Learners with Special Needs, M.L. Dhawan discusses the characteristics of gifted learners with visual impairments. He says:

The characteristics are a fast rate of learning, superior memory, superior verbal communication skills and vocabulary, advanced problem-solving skills, ease in learning Braille, great persistence, excellent ability to concentrate, and motivation to know. Sometimes they have a slower rate of cognitive development than sighted learners [Dawan 2005].

CHALLENGES FACED BY RURAL WOMEN VISUALLY CHALLENGED LEARNERS INSIDE CLASSROOM

Rural women visually challenged learners have to confront many challenges and problems inside the classroom. They are as follows:

- They need to occupy the seats in the front row to listen carefully.
- They can only listen and cannot see, whatever the teacher has written or drawn on the board.
- They cannot follow the usual textbooks and they cannot understand pictorial representations like diagrams, graphs, and maps.
- Since individual attention may not be possible by the teachers many a time, concepts are easily misunderstood by the learners.
- Computers are not provided for them by many schools in India to learn effectively through technology.
- Training in computers is not provided to them.

ROLE OF A TEACHER IN EDUCATING VISUALLY CHALLENGED LEARNERS

In 1994, Rabindranath Tagore said, "A teacher can never truly teach unless he is still learning himself. A lamp can never light another unless it continues to burn its flame". A teacher is a dynamic force in an academic institution. An academic institution without a teacher is just like a body without a soul, a skeleton without flesh and blood, and a shadow without substance. The teacher must have satisfactory interpersonal relationships with rural women visually challenged learners to make a good and flexible learning situation for them. The roles of teachers in educating visually challenged learners are;

- The teacher has to act as a motivator to motivate the rural women visually challenged learners.
- The teacher must have the ability to identify their problems and needs.
- When they are comfortable with the teacher, they can give their full attention to the learning process.
- Sociability is yet another important quality of a teacher. He/she should have a sound social philosophy and must make his/her contribution to the society.
- A teacher must play an efficient role in teaching with technology in the modern world to make them feel more comfortable.

THE POSITIVE IMPACT OF E-LEARNING ON LEARNERS WITH DISABILITIES

The flexibility and adaptability of E-learning have the potential to remove the barriers of disabled learners by facilitating the two types of access such as access to comprehensive and equitable education and access to the specific learning experience. It also promotes freedom, independence, and individualized learning of disabled learners. The four aspects that furnish the positive impact of E-learning on disabled learners are:

- Flexibility and Adaptability
- Access to Comprehensive and Equitable Education
- Access to Learning Experience
- Empowerment and freedom

THE NEGATIVE IMPACTS OF E-LEARNING ON LEARNERS WITH DISABILITIES

While there are many benefits of E-learning, it also causes some problems and difficulties for disabled learners. It is considered a double-edged sword because it can empower or it can revoke. There is a paradox – it can liberate but it can also confine. Though there are various kinds of screen reader software such as JAWS, NVDA, Apple Voice Over, Orca, Spoken Web, etc., visually challenged learners cannot use the particular software to read the text in all types of operating systems. Especially for second language learners, it is difficult to follow the accent of the screen reader. Many E-learning modules are effective because of their audio and visuals. Deaf learners are not able to understand the concept by watching the images and reading the text alone. So, it has created a negative impact on deaf learners.

RESEARCH GAP

Most existing studies on e-learning and language skills development have focused primarily on convenient urban populations, neglecting individuals with visual disabilities entirely. There exists a stark lack of inquiry specifically exploring the unique struggles and possibilities for rural women visually challenged learners. While considerable research underscores the overall advantages of e-learning, there is restricted substantiation concerning its efficacy in enhancing verbal skills, especially for visually challenged students. The singular impact of e-learning platforms on the speaking abilities of rural women with optical hindrances remains barely examined. The bulk of investigations into educational interventions for visually challenged learners fail to consider the cultural and socioeconomic setting, meaning proposed approaches may not translate effectively to rural environments.

SIGNIFICANCE OF THE STUDY

By focusing on rural women with visual impairments, the study aims to empower a marginalized group that often lacks access to quality education and skill development opportunities. For too long, their voices have been silenced and potentially untapped due to a lack of opportunities. This pioneering study explores new frontiers to enhance speaking skills which can blossom confidence and pave the way for social integration and career prospects unseen before. Overcoming barriers faced by visually impaired students in remote regions

requires thinking outside the box. This exploratory research analyses how digital platforms can circumvent obstacles and deliver diverse dimensions of digitized discovery directly to doorsteps previously deprived. Success could spawn novel educational methods tailored for customized circumstances globally, catalysing a renaissance of rural, and visually impaired voices. By focusing on speaking skills, the study addresses a critical aspect of language proficiency that is essential for personal and professional communication. Improved speaking skills can enhance the overall language competence of visually challenged students, enabling them to participate more fully in educational and social activities. The data of the study can be used to advocate for better resources and support for visually challenged learners in rural areas. This can lead to policy changes and increased investment in e-learning infrastructure and accessibility tools.

OBJECTIVES OF THE STUDY

For every action, there is an underlying objective to attain the goal. The researcher has formulated the objectives for the study as follows.

- To design an E-learning module that meets the needs of rural women visually challenged learners.
- To improve the speaking skills of rural women visually challenged learners
- To test the speaking skills of rural women visually challenged learners
- To find out the effectiveness of the E-learning module in improving their speaking skill.

2. Hypothesis

H_{01}: There is no significant difference between the performance of the speaking skills of rural women visually challenged learners in the pre-test and post-test.

H_1: There is a significant difference between the performance of the speaking skills of rural women visually challenged learners in the pre-test and post-test.

3. Methodology

This study is a small-scale experiment and set of observations undertaken to decide whether E-learning acts as an effective tool to enhance the productive skills of rural women visually challenged learners or not. It is also to test the reliability and validity of implementing E-learning modules in the classroom. Enhancing the Productive Skills of the Visually Challenged Learners through E-learning Modules at Higher Secondary Level. Hence, the researcher aims to enhance the productive skills - speaking skills and writing skills of the visually challenged learners through the study.

To test the research hypothesis, assess their speaking skill through an E-learning module and test their writing skill through an E-learning module,

- The pre-test was conducted to test their speaking skill and writing skills.
- An E-learning module was created and implemented to conduct the study
- The post-test was conducted to test their speaking skill and writing skills.

SAMPLE OF THE STUDY

The study was conducted with twelve rural women visually challenged learners of first-year college students at various Government rural colleges in Erode District and Karur District. The E-learning module was designed by the researcher with the help of technicians. Short stories are selected and converted into electronic form and also as MLM (Multi Media Learning Materials).

THE PROCESS OF DESIGNING E-LEARNING MODULE

The development of the e-learning module for rural women visually challenged learners followed a structured and detailed process to ensure it was both engaging and accessible. The first step involved selecting short stories that were appropriate and engaging for the target audience. Scripts were meticulously written based on these stories, focusing on clear, concise language suitable for audio narration. The primary goal was to create content that could effectively improve the learners' speaking skills while keeping them interested and motivated.

Once the initial scripts were drafted, they underwent a thorough proofreading process to ensure accuracy and clarity. This step was crucial to eliminate any errors and to ensure that the content was easy to understand and follow. Proofreading also involved checking for language simplicity and making sure that the scripts were suitable for visually impaired learners who would rely heavily on audio cues.

Next, multimedia elements such as videos, audio, and images were gathered to complement the script. These materials were carefully selected to enhance the storytelling experience and provide multiple ways for learners to engage with the content. To ensure accessibility, audio descriptions were created for images and videos, allowing visually impaired learners to fully understand and appreciate the multimedia elements.

The multimedia materials and the final draft of the script were then integrated into a cohesive storyboard. This storyboard served as a detailed plan for presenting the content, combining text, audio, and visuals in a synchronized manner to facilitate learning. It ensured that all elements worked together seamlessly to create an immersive and effective learning experience.

A video lecture was recorded to provide a comprehensive overview of the short stories and the associated learning activities. The lecture

included narration, explanations, and guidance on how to engage with the e-learning module, offering learners a clear and structured path to follow. The recorded video and audio materials then underwent a rigorous editing process to enhance their quality and ensure they were free from errors. This step involved refining the audio for clarity, editing the video to make it visually appealing, and adding necessary audio descriptions for visually impaired learners.

Finally, all the edited multimedia materials were compiled into an integrated e-learning module using Visual Studio 2012. This software package was chosen for its ability to create user-friendly and accessible interfaces, ensuring that learners could easily navigate and engage with the content. The resulting e-learning module was a comprehensive, polished, and accessible educational tool designed to enhance the speaking skills of rural women visually challenged learners.

PROCESS OF THE STUDY

The process of implementing the e-learning program for rural women visually challenged learners spanned over seventeen days, each phase meticulously designed to maximize learning effectiveness and accessibility.

Day 1: Needs Analysis

The initiative commenced with a comprehensive needs analysis to identify specific educational needs, challenges, and aspirations of the target group. This step provided crucial insights into tailoring the e-learning content and delivery methods to meet the learners' requirements effectively.

Day 2: Pre-test

A pre-test was conducted to assess the initial speaking and writing skills of the participants. This served as a baseline measurement, helping to gauge the starting point of each learner and guide the customization of the learning experience.

Days 3 and 4: Computer Training and E-Content Familiarization

Participants received intensive training on basic computer operations and navigation skills required to access and interact with the e-learning module. They were also familiarized with opening and utilizing the module's electronic content, ensuring they could independently engage with the educational materials provided.

Days 5 to 14: E-Learning Experience and Skill Enhancement

Over the next ten days, participants immersed themselves in the e-learning environment, independently exploring and learning from the module's short stories and interactive activities. These activities were specifically designed to enhance their speaking skills, providing practical exercises and prompts related to the stories they studied.

Day 15: Electronic Test

Participants were assessed electronically to evaluate their comprehension and retention of the learned material. This electronic test measured their progress and provided valuable feedback on the effectiveness of the e-learning approach in improving their speaking skills.

Day 16: Final Speaking Skill Assessment

A final assessment was conducted to evaluate the participants' speaking skills comprehensively. This assessment measured their overall improvement since the pre-test, reflecting the impact of the e-learning activities on their linguistic abilities.

Day 17: Feedback Collection

The initiative concluded with gathering feedback from the learners regarding their experiences with the e-learning environment. This feedback was instrumental in identifying any challenges faced, gathering suggestions for improvement, and refining the program for future iterations. It ensured that the e-learning module remained responsive to the learners' needs and conducive to their ongoing educational journey.

Throughout these seventeen days, the structured approach ensured that rural women visually challenged learners received comprehensive support, enabling them to actively participate in and benefit from the tailored e-learning program designed to enhance their speaking skills effectively.

TOOLS USED

In the context of this study, the paired sample t-test is used to analyze the effectiveness of e-learning in enhancing the speaking skills of rural women visually challenged students. The test compares the speaking skill scores of the same group of students before and after using the e-learning platform.

4. Result of the Study

Since the rural women visually challenged learners are not much exposed to typing, they found it difficult to type the answers. They could operate the computer only with shortcut keys. Five of them wrote through the Braille method and seven of them wrote with the help of scribes. So, the researcher could not assess their writing skill through electronic mode. The recorded speeches of the visually challenged learners are assessed based on the IELTS four grading criteria Fluency and Coherence, Pronunciation, Lexical resource, Grammar and accuracy, and a bandwidth scale.

Table 1. Pre-test and Post-test Score

S.No	Name of the Student	Pre-test (40)	Post-test (40)
1.	S. Kanmani	8	19
2.	V. Deepika	16	25
3.	T. Sneha	9	16
4.	K. Kalavani	12	23
5.	V. Prabha	11	24
6.	S. Preetha	14	27
7.	M. Indhuja	18	26
8.	P. Swetha	22	30
9.	U. Veera Lakshmi	13	26
10.	D. Viveka	15	27
11.	J. Revathi	10	22
12.	G. Gokula Priya	17	26

Table 2.1. Rural Women Visually Challenged Learners – Paired Samples Statistics

DATA ANALYSIS:

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre	13.75	12	4.093	1.181
	Post	24.25	12	3.817	1.102

Table 2.2. Rural Women Visually Challenged Learners – Paired Sample Test

Paired Samples Test									
		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
RWV CL	Pre - Post	-10.500	2.195	.634	-11.895	-9.105	-16.571	11	**.000**

Significant at 0.05 levels.

The calculated't' value is -16.571. This indicates the magnitude and direction of the difference between the mean scores of the pre-test and post-test. The associated p-value is .000. A p-value of .000 means the probability of obtaining a t-value as extreme as or more extreme than what was observed is very low, suggesting strong evidence against the null hypothesis (no difference between pre-test and post-test scores). The result is significant at the 0.05 level. This means that the observed difference in mean scores between the pre-test and post-test is unlikely to be due to random chance, but rather reflects a true difference in performance. The increase in mean score from 13.75 to 24.25 indicates a substantial improvement in the speaking skills of rural women visually challenged learners after participating in the e-learning module. This improvement suggests that the module effectively facilitated learning and skill development in speaking.

Implications and Inferences

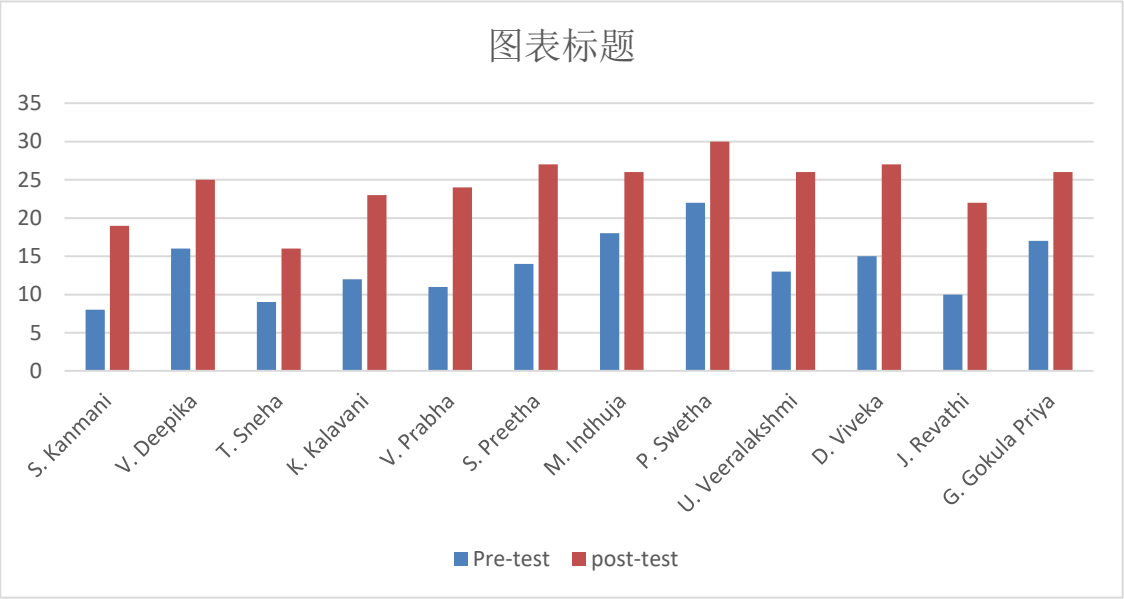
Performance Improvement: The higher mean score in the post-test indicates that the learners significantly improved their speaking skills after completing the e-learning module. This improvement demonstrates the effectiveness of the module in enhancing their linguistic abilities.

Educational Impact: The significant difference between the pre-test and post-test scores underscores the educational impact of the e-learning intervention. It shows that the module successfully addressed learning objectives and contributed to measurable skill enhancement among the participants.

Statistical Significance: The statistical significance of the results (p-value = .000) reinforces the reliability of the findings. It indicates a robust effect of the e-learning module on improving speaking skills, supported by strong evidence from the data.

Thus, it could be inferred that there is a significant difference between the performance of the visually challenged learners in the pre-test and post-test regarding their speaking skills. The significant increase in mean scores from the pre-test to the post-test, along with the calculated't' value and p-value provide compelling evidence of the module's success in achieving its educational goals. These findings not only validate the efficacy of the module but also underscore its potential to positively impact learning outcomes in similar educational contexts. Hence, the null hypothesis is rejected and the alternative hypothesis is accepted.

5. Graphic Representation of the Result of the Study



6. Limitations of the Research

Like the two sides of a coin, this experimental research has both merits and demerits. Though the positives of the research satisfied the rural women visually challenged learners, there were a few limitations, which acted as barriers to perfectly accomplishing the learning process. Since English for social purposes is the most emerging and urgent need for rural women visually challenged learners, the researcher has concentrated only on this particular domain.

The researcher selected only 12 rural women visual learners as the sample of the research from various rural Government colleges because it is impossible to find rural women visually challenged learners at one institution or college. Among the four language skills, the researcher concentrated only on the speaking skills of the visually challenged learners. Some of the activities exceeded the time limit. To perform those activities, they needed extra time, which was not given by the researcher due to various administrative factors.

The limited number of computers available in the school made the visually challenged learners adjusts to the opportunities themselves. The researcher made use of only two voices in the E-learning module, but the visually challenged learners expected multiple voices to avoid the monotonous nature of learning. Some classes were taken in the afternoon and also in the evening. So the learners could not actively participate in the learning process.

7. Scope for Further Research

Though the research was conducted in an innovative way to develop a suitable learning mode for rural women visually challenged learners, the field of the research requires more research from various perspectives.

- An E-learning module can be designed for other differently-abled learners to improve their language skills.
- A comparative study can be done on the effectiveness of
- E-learning module for normal learners and visually challenged learners.
- Research can be taken up to improve other language skills of visually challenged learners through E-learning.
- Research can be carried out to improve the creativity of visually challenged learners through E-learning.
- An E-learning module can be developed for the domain ‘English for Academic Purpose’.
- A comparative study can also be conducted between the implementation of the E-learning module and the traditional method of teaching to visually challenged learners.

8. Conclusion

There is a noted improvement in their performance level of speaking from the entry test to the exit test. Thus E-learning is found to be one of the effective tools to improve the speaking skills of rural women visually challenged learners, rather than their writing skills. It also helps them to acquire speaking skills rather than learning. As discussed earlier they are not given enough training in typing and it is difficult to assess their writing skill through electronic mode. Hence the researcher narrows down the dependent variable from productive skills to speaking skills. Their feedbacks are taken into consideration to plan and design the E-learning module according to their needs and expectations in the future.

Acknowledgments

I acknowledge my friend Lamessa Oli for his support.

Authors' contributions

R. Shruthi, conceptualized and developed the literature review, developed objectives, collected data, analysed data, interpreted data, presented the arguments in the article and wrote the manuscript. Dr. A. Manikandan, contributed to the edition and revision of the paper. Dr. Sathya Thangavel contributed to providing critical insights and ensured the overall clarity of the paper. Dr. G. Sankar, contributed to the edition and revision of the paper. Mariappan B contributed to the edition and revision of the paper. Dr. Ramesh Manickam, contributed to the edition and revision of the paper.

Funding

There are no agency supports this study.

Competing interests

There are no Competing interests for this study

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Sciedu Press.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

References

Araluce, H. A. (2002). *Teaching English as a foreign language to blind and visually challenged young learners: The affective factor* (Doctoral dissertation, Universidad de Castilla-La Mancha (Spain)).

Armstrong, H. L. (2009). Advanced IT education for the vision impaired via e-learning. *Journal of Information Technology Education: Research, 8*(1), 243-256. https://doi.org/10.28945/691

Baker, W. (2013). Using e-learning to develop intercultural awareness in ELT: A critical evaluation in Thai higher education setting. *British Council ELT research papers, 1*, 271-311.

Barbhuiya, A. (2008). *Use of Computer in Developing Writing Skills.* Retrieved May 23, 2011.

Bhuvaneswari, G., Swami, M., & Jayakumar, P. (2020). Online classroom pedagogy: Perspectives of undergraduate students towards digital learning. *International Journal of Advanced Science and Technology*, *29*(04), 6680-6687.

Caladine, R. (2008). *Enhancing E-Learning with Media-Rich Content and Interactions.* New York: Information Science Publishing, Print. https://doi.org/10.4018/978-1-59904-732-4

Dhawan, M. L. (2005). *Learners with Special Needs.* Gyan Publishing House.

Evans, S. B. (2009). *E-learning and Blindness: Evaluating the Quality of the Learning Experience to Inform Policy and Practice.* Diss. University of Birmingham, 2009. Web.

Jayakumar, P. (2019). Teaching English Grammar through Android Application to Teacher Trainees of Chennai District with reference to Verbs An Experimental Study. Retrieved from http://hdl.handle.net/10603/324395

Jayakumar, P., & Ajit, I. (2016). Android app: An instrument in clearing Lacuna of English Grammar through teaching 500 sentence

structures with reference to the verb eat. *Man in India*, *96*(4), 1187-1195.

Mahajan, J., & Nagendra, A. (2014). Developing a training model using orca (assistive technology) to teach IT to visually impaired students. *Procedia economics and finance*, *11*, 500-509. https://doi.org/10.1016/S2212-5671(14)00216-0

Marwa, M. (2018). EFL students and experiences of culture learning: is they worthy to foster intercultural competence? *International Journal of Educational Best Practices*, *2*(2), 1-17. https://doi.org/10.31258/ijebp.v2n2.p1-17

Morrissey, W. P. (1931). Teaching foreign languages in schools for the blind. *Journal of Visual Impairment & Blindness*, *25*(2b), 34-37. https://doi.org/10.1177/0145482X3100400206

Olutola, A. T., Olatoye, O. O., & Olatoye, R. A. (2018). Assessment of e-learning resources utilization by students of tertiary institutions in Katsina State, Nigeria. *Human and Social Studies: Journal of Alexandru Loan Cuza*, *7*(2), 51-66. https://doi.org/10.2478/hssr-2018-0014

Padure, M. (2011). Characteristics of learning styles in people with visual impairments in using assistive technologies (Doctoral dissertation, PhD Thesis, Babeş-Bolyai University Cluj-Napoca Faculty of Psychology and Sciences of Education).

Shepherd, I. (2001). Providing learning support for blind or visually impaired students undertaking fieldwork and related activities. Cheltenham and Gloucester College of Higher Education, Geography Discipline Network (GDN).

Singh, P. P., & Sandhir, S. (2005). *E-Learning: New Trends and Innovations.* New Delhi: Deep & Deep Publications.