Unlocking Language Learning Potential: Undergraduates' Attitude to Virtual Reality in Open Distance Learning for Learning of English Language.

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Abstract

Government should invest in the development of these technologies and make provisions to improve accessibility for both teachers and students of the urban and rural areas of the country. The rapid development of digital technologies has revolutionised education, particularly in Open Distance Learning (ODL). This study investigated unlocking language learning potential: undergraduates' attitude to virtual reality in open distance learning for learning of English language. The study used a survey research design, selecting the Departments of Arts and Social Science Education from the Faculty of Education, National Open University of Nigeria. A simple random sampling technique selected one department and 150 English Language students in their 200 level. The study employed a Questionnaire on Students' Attitude to Virtual Reality in Open Distance Learning, showing a reliability of r=0.78. Data analysis included descriptive and inferential statistics using t-test at a 0.05 significance level. The study revealed that most undergraduates had a positive attitude toward Virtual Reality in Open Distance Learning for English, with a mean of 2.56, above the 2.50 threshold. The result indicated that there was no significant difference between male and female undergraduates' attitudes towards Virtual Reality in Open Distance Learning for English Language (t = .414; df = 148; p > 0.05). Recommendations include integrating virtual reality technologies into curricula to boost engagement and fostering a positive attitude towards such technologies among students. It urges government investment in technology and improved access for educators and students in both urban and rural areas, along with training to help educators effectively use virtual reality tools in teaching methodologies.

Keywords: Unlocking, Language Learning Potential, Virtual Reality, Open Distance Learning, English Language Learning

Introduction

The transformative impact of digital technologies on education has been profound; reshaping the way knowledge is disseminated and absorbed. Among the most significant shifts in recent decades has been the advent of open distance learning (ODL), a model that offers flexibility and accessibility to learners irrespective of their geographical location (Garrison & Vaughan, 2020). Currently, ODL is valuable in a world driven by global interconnectedness, where lifelong learning and skill acquisition are essential. However, ODL presents unique challenges, especially for language

acquisition, which traditionally relies on interactive and immersive practices (Lai, 2021).

English, being the most widely spoken second language and a global lingua franca, plays a pivotal role in communication, professional development, and international relations (Wang et al., 2019). Effective language learning requires engaging in authentic communication, practicing pronunciation, and developing listening skills; all fostered in interactive settings. This presents a challenge for ODL environments, which often lack the interpersonal and contextual elements necessary for comprehensive language learning.

Traditional ODL methods have struggled to replicate the dynamic and interactive nature of face-to-face language classes. The reliance on video lessons, reading materials, and recorded audio can limit the learner's ability to engage in real-world language use. As a result, educators and researchers have sought innovative solutions to create more engaging, interactive, and effective ODL experiences. The emergence of immersive technologies, particularly virtual reality (VR), has presented a promising solution to these challenges. VR creates three-dimensional, computer-generated environments that users can interact with in a seemingly real or physical way. These immersive experiences can replicate real-life scenarios, allowing users to engage with virtual spaces and objects and even communicate with avatars that simulate real people (Derakhshan et al., 2022).

Research has shown that VR can offer substantial benefits for language acquisition. The use of VR in language education has been associated with increased learner confidence, as it allows real-life interactions (Chen et al., 2022). Moreover, VR can simulate culturally rich environments, providing learners with insights into linguistic and cultural nuances that are difficult to convey through traditional ODL methods. However, while the theoretical potential of VR for language learning is clear, empirical research specific to its application in ODL remains limited. Most studies have focused on VR in traditional classroom settings or as a supplementary tool rather than as an integrated component of ODL (Liu et al., 2021). This gap in the literature highlights the need for targeted research that explores how VR can be effectively utilised within the context of ODL to improve language learning outcomes. The present study

addressed this gap by investigating the use of VR as a tool for English language acquisition in an ODL framework, in developing speaking, listening, and comprehension skills.

The evolution of language learning in distance education has been significantly influenced by advancements in technology, which have transformed traditional methods into more interactive and engaging experiences. This shift has opened up new avenues for learners, allowing them to access resources and engage with content in ways that were previously unimaginable. In particular, the integration of virtual reality (VR) technologies has emerged as a transformative force, enabling immersive language experiences that further bridge the gap between traditional and distance learning methodologies.

This innovative approach not only enhances learner engagement but also provides authentic contexts for practicing language skills. By employing VR scenarios, learners can immerse themselves in real-world environments, facilitating natural language acquisition through interaction and contextual learning. This immersive experience not only enhances vocabulary acquisition but also promotes the development of conversational skills as learners navigate various social situations. As they interact with their virtual environment, learners gain confidence in their language abilities, fostering a deeper understanding of cultural contexts and communication nuances. This immersive approach allows for personalized learning experiences that cater to individual learning styles, thereby enhancing the overall effectiveness of language acquisition in distance education. As learners engage with the virtual environment, they can practice their speaking and listening skills in real-time with interactive scenarios that simulate real-life conversations. This not only builds confidence but also allows for immediate feedback, which is crucial for language development.

The ability to acquire the English language has become increasingly vital in today's globalised world, serving as a gateway to numerous opportunities in education, career advancement, and cross-cultural communication. As such, mastering English not only enhances an individual's prospects for higher education but also facilitates effective engagement in an increasingly interconnected international community. Moreover, proficiency in English opens doors to global job opportunities, allowing individuals to

compete in an international job market that increasingly values multilingual candidates. This not only contributes to personal career growth but also enhances cultural exchange and collaboration across borders. Furthermore, as individuals become more proficient in English, they are better equipped to navigate global markets and engage with diverse communities, ultimately leading to a more interconnected world. In Nigeria, the growing emphasis on English proficiency has significant implications for educational policy and investment in language resources. This is particularly relevant in Nigeria, where English serves as both a second language and a primary means of communication in business and government. This bilingual nature enhances the importance of English language acquisition, as proficiency in English not only facilitates better communication but also opens doors to numerous opportunities in the global economy. Consequently, investing in effective language learning methodologies, such as virtual reality, becomes essential for enhancing English language skills across diverse populations.

Attitude is an internal state that moderates the choice of personal action made by the individual. This means that attitude is regulation of all behaviours. One's behaviour at a time is not caused but is the consequences of what is going on within the individual (Lengzakka, 2006). Ochonogor (2003) notes that an attitude may be thought as an expression of a person's values which results from the influence of the environment, past and present acting upon the personality of an individual. This appears to prove that attitude of individual is learned and somewhat, emotional pictures of his personality.

Mkpa (2001) asserts that attitude forms a part of affective domain as one of the three generally classified educational objectives. Mkpa pointed out that attitude is measurable at different levels adopting suitable items and indices. Attitude can be measured by carefully accepting or rejecting opinions. It is the way of feeling, thinking or behaving towards something, event or situation. Attitude is expressible in words or action which depicts one's positive or negative reaction towards something or given situation (Mkpa, 2001). Obodo (2002) views attitude as system of positive or negative evaluation of emotional feelings. Harbour-Peters (2002) asserts that attitude is a state that influences and modifies the individual choice of personal action. Attitude is very important in life because it determines the direction of activities (Ajzen, 2005). This

study investigated unlocking language learning potential: undergraduates' attitude to virtual reality in open distance learning for learning of English language.

Statement of the Problem

Virtual Reality allows learners to engage in activities that require them to use language as they would in daily life. It provides a medium for situated learning by placing students in culturally relevant environments where they can observe and participate in interactions that reflect authentic language use. Research has shown that VR can offer substantial benefits for language acquisition. The use of VR in language education has been associated with increased learner confidence, as it allows real-life interactions. It holds significant potential for improving language learning Despite the importance attached to VR, it has failed to provide realistic practice opportunities. As a way of addressing this problem, scholars and researchers have carried out numerous studies on language learning outcomes between students using VR and those using video-based ODL platforms, the integration of VR with AI-driven language tools in ODL. All these studies came up with good sight to teaching and learning in universities but with less research focus on attitude to unlocking language learning potential: undergraduates' attitude to virtual reality in open distance learning for learning of English language especially in the Faculty of Education, National Open University of Nigeria. Therefore, this study investigated unlocking language learning potential: undergraduates' attitude to virtual reality in open distance learning for learning of English language.

Objectives of the study

This study determined the following:

1. the attitude of undergraduates to Virtual Reality in Open Distance Learning for Learning of English Language

2. if there is significant difference between male and female undergraduates' attitude to Virtual Reality in Open Distance Learning for Learning of English Language

Research Questions

1. What is the attitude of undergraduates to Virtual Reality in Open Distance Learning for Learning of English Language?

Hypothesis

$H_0 1$: there is no significant difference between male and female undergraduates' attitude to Virtual Reality in Open Distance Learning for Learning of English Language

Theoretical Framework

Vygotsky's (1978) theory of the Zone of Proximal Development (ZPD) is a fundamental concept in educational psychology and sociocultural theory. The ZPD refers to the difference between what a learner can do independently and what they can achieve with guidance and support from a more knowledgeable individual, such as a teacher, peer, or mentor. Vygotsky's theory of the Zone of Proximal Development (ZPD) is a cornerstone of sociocultural learning theory. It describes the cognitive space where learning is most effective between what a learner can do independently and what they can achieve with guided support. Unlike theories that emphasize individual development in isolation, Vygotsky's approach underscores the social nature of learning, highlighting the role of interaction with more knowledgeable others in cognitive growth.

Vygotsky's Zone of Proximal Development remains a foundational theory in education, emphasizing that learning is a socially mediated process requiring tailored support and interaction. Through scaffolding, peer learning, and adaptive teaching strategies, educators can help students move from assisted to independent mastery. In contemporary educational settings, particularly in online and distance learning, the principles of the ZPD continue to guide instructional design, fostering meaningful and personalized learning experiences.

Literature Review

The Role of Virtual Reality in Education

Virtual reality, as an immersive technology, has revolutionised the field of education by providing learners with interactive, 3D environments that simulate real-world experiences. VR's capacity for immersion is one of its most distinctive attributes, allowing learners to actively participate in scenarios that enhance understanding and engagement (Derakhshan et al., 2022). Unlike traditional learning methods that rely heavily on passive content consumption, VR facilitates active learning, where students engage directly with the content, (Lin & Lan, 2020). VR's interactive capabilities extend beyond simple participation, enabling learners to receive immediate feedback and adjust their language use accordingly (Alalwan et al., 2020).

Challenges in Open Distance Learning for Language Acquisition

Open distance learning enables learners from diverse backgrounds to pursue academic and personal development at their own pace. However, while ODL offers flexibility and accessibility, it presents significant challenges, especially for courses that rely on interpersonal and experiential learning, such as language acquisition (Garrison & Vaughan, 2020). One of the most significant limitations of ODL is the reduced opportunity for interaction and engagement. Unlike traditional classroom settings where students can practice speaking and listening through face-to-face communication, ODL environments often rely on text-based or pre-recorded content (Lai, 2021). This lack of real-time interaction inhibits learners' ability to practice spontaneous conversation with peer and respond to linguistic cues, both essential for language mastery and play a critical role in building confidence and fluency.

Language acquisition is most effective when learners are exposed to contextual learning opportunities, where they can see the practical application of language in different scenarios (Wang et al., 2019). ODL platforms, however, often lack the ability to provide context-rich experiences. Lessons are typically delivered through static content such as slides, videos, and documents that do not replicate real-world language use. This limitation highlights the need for ODL programs to incorporate tools and methods that simulate real-life language use.

Methodology

The study adopted the survey research design. The Departments of Arts and social science Education was selected from the Faculty of Education, National Open University of Nigeria. Simple random sampling technique was used to select one Department. The simple random sampling technique was used to select 150 200 level students of English Language. In all, a total number of 150 students of English Language participated in the study. One instrument: Questionnaire on Students' Attitude to Virtual Reality in Open Distance Learning for Learning of English Language (r=0.78) was used for data collection. Data collected were analysed using descriptive statistics of percentage, mean, standard deviation and inferential statistics of t-test at 0.05 level of significance.

Results

1. What is the attitude of undergraduates to Virtual Reality in Open Distance Learning for Learning of English Language?

Table 1: the attitude of undergraduates to Virtual Reality in Open Distance Learning for Learning of English Language

S/N	ITEMS	SA	A	D	SD	Mean	St. D.
1	I have a favourable attitude to Virtual Reality in Open Distance Learning for Learning of English Language.	87 (58%)	43 (28.7%)	14 (9.3%)	6 (4%)	3.40	.820
2	I prefer learning on Virtual Reality in Open Distance Learning for Learning of English Language. to physical class.	65 (43.3%)	60 (40%)	21 (14%)	4 (2.7%)	3.24	.791
3	I am favourable disclosed to learn through the Virtual Reality in Open Distance Learning for Learning of English Language.	72 (48%)	61 (40.7%)	15 (10%)	2 (1.3%)	3.35	.715
4	Interacting with Virtual Reality in Open Distance Learning for Learning of English Language does not require a lot of mental effort.	70 (46.7%)	68 (45.3%)	9 (6%)	3 (2%)	1.63	.689
5	I revert to Virtual Reality in Open Distance Learning for Learning of English Language. each time I need materials on English Language.	52 (34.7%)	92 (61.3%)	4 (2.7%)	2 (1.3%)	3.29	.585
6	I like Virtual Reality in Open Distance Learning for Learning of English Language.	66 (44%)	63 (42%)	19 (12.7%)	2 (1.3%)	3.28	.735
7	If I have my way, I will not learn on the Virtual Reality in Open Distance Learning for Learning of English Language	72 (48%)	61 (40.7%)	17 (11.3%)	-	1.63	.679
8	Virtual Reality in Open Distance Learning for Learning of English Language allows easy return to previous display page.	77 (51.3%)	55 (36.7%)	16 (10.7%)	2 (1.3%)	3.38	.729
9	Learning through the Virtual Reality in Open Distance Learning for Learning of English Language is burdensome.	62 (41.3%)	82 (54.7%)	5 (3.3%)	1 (0.7%)	1.63	.584
10	I am not comfortable with Virtual Reality in Open Distance Learning for Learning of English Language.	57 (38%)	89 (59.3%)	4 (2.7%)	-	1.64	.532
11	I always enjoy learning on Virtual Reality in Open Distance Learning for Learning of English Language.	76 (50.7%)	71 (47.3%)	3 (2%)	-	3.48	.540
12	If I have my way, I wish learning Virtual Reality in Open Distance Learning for Learning of English Language is used forever.	68 (45.3%)	79 (52.7%)	3 (2%)	-	3.43	.536
13	Using Virtual Reality in Open Distance Learning for Learning of English Language	59 (39.3%)	83 (55.3%)	8 (5.3%)	-	3.34	.577

	would increase my productivity in my coursework.						
14	Virtual Reality in Open Distance Learning for Learning of English Language is not beneficial.	76 (50.7%)	66 (44%)	8 (5.3%)	-	1.54	.597
15	Learning through the use of Virtual Reality in Open Distance Learning for Learning of English Language is a waste of time.	86 (57.3%)	60 (40%)	4 (2.7%)	-	1.45	.550
16	Virtual Reality in Open Distance Learning for Learning of English Language consumes money.	69 (46%)	74 (49.3%)	7 (4.7%)	-	1.58	.581
17	I am not encouraged to learn from Virtual Reality in Open Distance Learning for Learning of English Language	78 (52%)	67 (44.7%)	5 (3.3%)	-	1.51	.564
18	Virtual Reality in Open Distance Learning for Learning of English Language is convenient to use.	60 (40%)	82 (54.7%)	8 (5.3%)	-	3.34	.579
19	Using Virtual Reality in Open Distance Learning for Learning of English Language enables me to have more accurate information.	70 (46.7%)	74 (49.3%)	4 (2.7%)	2 (1.3%)	3.41	.615
20	Virtual Reality in Open Distance Learning for Learning of English Language does not promote effective learning.	48 (32%)	90 (60%)	8 (5.3%)	4 (2.7%)	1.78	.661
Weighted Mean = 2.56; Threshold = 2.50							

Table 1 shows the attitude of undergraduates to Virtual Reality in Open Distance Learning for Learning of English Language. The result indicates a weighted mean of 2.56 which is greater than the threshold set at 2.50. This result implies that majority of the selected undergraduates had a positive attitude to the Virtual Reality in Open Distance Learning for Learning of English Language.

Hypothesis

H_01: there is no significant difference between male and female undergraduates' attitude to Virtual Reality in Open Distance Learning for Learning of English Language

Difference between male and female undergraduates' attitude to Virtual Reality in Open Distance Learning for Learning of English Language

Group	N	Mean	Standard Deviation	Mean Difference	t	df	p-value	Remarks
Male	46	51.5652	2.72969	.21906	.414	148	.680	Not sig.
Female	104	51.3462	3.09641					

Table 2 shows the difference between male and female undergraduates' attitude to Virtual Reality in Open Distance Learning for Learning of English Language using the independent samples t-test analysis. The result indicates that there was no significant difference between male and female undergraduates' attitude to Virtual Reality in Open Distance Learning for Learning of English Language (t = .414; df=148; p>0.05). This implies that gender did not cause a variance in the undergraduates' attitude to Virtual Reality in Open Distance Learning for Learning of English Language.

Discussion of Findings

The study revealed that undergraduate English language students had positive attitude to Virtual Reality in Open Distance Learning for Learning of English Language. The finding might be due to the fact that the students considered the integration of virtual reality (VR) in open distance learning to have significant potential in enhancing English language acquisition. Then they would express positive attitude towards the learning and can influence their performance in English language. The finding is in line with Chen et al. (2022) who revealed that VR could offer personalised learning experiences by adjusting content difficulty in real-time based on learner input. This is contrary to the study of Liu et al (2021) who reported most studies have focused on VR in traditional classroom settings or as a supplementary tool rather than as an integrated component of ODL. Also, Adeniyi (2007) revealed that teachers had negative attitude towards the use of ICT in teaching English language.

The second hypothesis shows that, there was no significant difference between male and female undergraduates' attitude to Virtual Reality in Open Distance Learning for Learning of English Language. This implies that gender did not cause a variance in the undergraduates' attitude to Virtual Reality in Open Distance Learning for Learning of English Language. This is in agreement with the findings of Alalwan et al. (2020) who revealed that gender did not cause a variance in the undergraduates' attitude to Virtual Reality in Open Distance Learning for Learning of English Language. This is against the finding of Coates, James and Baldwin (2005) who revealed in their separate studies

that there was difference between male and female gender attitude to Learning Management System.

Conclusion

The study has shown that Virtual Reality in Open Distance Learning for Learning of English Language could be enhanced by undergraduates' attitude. This study has provided a better understanding of attitude to Virtual Reality in Open Distance Learning for Learning of English Language.

Recommendations

Based on the findings of this study, it is recommended that:

1. Relevant educational bodies and stakeholders should ensure that undergraduates of English language have positive attitude to Virtual Reality in Open Distance Learning for Learning of English Language.

2. Educators and instructional designers should explore and implement immersive learning experiences that cater to diverse learning styles.

3. Government should invest in the development of these technologies and make provisions to improve accessibility for both teachers and students of the urban and rural areas of the country.

4. Curriculum planners should consider incorporating immersive experiences that leverage virtual reality to create engaging and interactive learning opportunities. This approach would not only motivate learners but also facilitate deeper understanding of the language through contextualized scenarios.

5. Training should be provided for educators to effectively integrate virtual reality tools into their teaching methodologies.

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