# IMMERSIVE LEARNING AND ACQUISITION OF PRACTICAL AND MODERN WORK-RELATED SKILLS IN VOCATIONAL EDUCATION

By

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#### **Abstract**

This study determined the extent of utilisation of immersive learning techniques and the acquisition of practical and modern work-related skills in business and home economics education. The study provided answer the research question, "What is the extent of utilisation of immersive learning techniques and the acquisition of practical and modern work-related skills in business and home economics education? The null hypothesis tested was, "There is no significant influence of the extent of utilisation of immersive learning techniques on the acquisition of practical and modern workrelated skills in business and home economics education". A survey was conducted using 70 lecturers from business and home economics education in two federal tertiary institutions. The entire population of 70 lecturers were purposively used based on its manageable size. Extent of utilisation of immersive learning techniques and the acquisition of practical and modern work-related skills in business and home economics education questionnaire (EUILTAPMWSBHEEQ)" generated data analysed using independent t-test. The weighted mean of 2.21 indicates that the extent of utilisation of immersive learning techniques on the acquisition of practical and modern work-related skills in business and home economics education is to a low extent. Further, out of the 25 items, four items indicated to a high extent of influence,

only one to a very low extent while the other 20 indicated to a low extent. Calculated t-test of 1.1 is less than the critical t-value of 1.99 at .05 levels of significance. Therefore, the null hypothesis, "There is no significant influence of the extent of utilisation of immersive learning techniques on the acquisition of practical and modern work-related skills in business and home economics education" is upheld. Based on the finding of this study, it is concluded that lecturers in business and home economics education in tertiary institutions in Nigeria are yet to utilise immersive learning technique as the traditional classroom is still highly predominant. Based on the conclusion drawn, it is recommended that lecturers in business and home economics education in tertiary institutions, in collaboration with relevant stakeholders in Nigeria should, as a matter of urgency, put modalities in place for effective utilisation of immersive learning technique alongside the traditional classroom.

**Keywords:** Immersion, immersive learning, learning, business education, home economics education, skills, skill acquisition, tertiary institution

## Introduction

The goals of vocational education to provide trained manpower in the applied sciences, technology and business particularly at craft, advance craft and technical levels; provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development; and give training and impart the necessary skills to individual for self-reliance economically demands that practical approaches and techniques be applied in vocational education classrooms and workshop or at every learning situation for vocational education courses. The demand of scientific and practically oriented approaches and techniques in delivering vocational education courses has been acknowledged in the Nigeria's National Policy on education, where it is clearly stated that the curriculum for each trade shall consist of five components such as general education, theory and related courses, workshop practice, industrial training/production work, and entrepreneurial training (Federal Republic of Nigeria – FRN, (2014).

The acquisition of (practical) skills by vocational education students is not one-shut task but a process that continues throughout the period of training in an academic institution or training centre. The teaching and learning process put students through a training process wherefore, skills are acquired. Okon (2015) maintained that practical training is required for students if they are actually expected to graduate with competent skills for employability. Lack of essential equipment partly account for low level of practical tasks required to

be carried out by business education students under the guidance of the teachers. Views of what vocational education represents have been widely stated. Obiyai and Ogeibiri (2016) noted that vocational equips students with required skills which they need to survive in the work environment.

The central mandate of vocational education follows the very essence African society prepared the younger generation for transition into adulthood. This was observed by Oluwaseun (2018) that education in the traditional African society was to set afoot a man with functional skills that would help him live peacefully among others and contribute his quota to the overall development of himself and his community. In linking the mandate of vocational education with Africa's traditional education setting, it is pertinent to understand what such traditional education portrays. Okon, Akpan and Essien (2013) said that traditional education is characterised by vocational training, character training and functionality. It helps to train the younger ones in vocations which are of utilitarian value to them in the society in which they live. With the knowledge and skills already acquired from traditional occupations, people soon saw the need to provide special training to the younger generation by giving out the younger ones to master craftsmen for such training. This culture seems not jettisoned in modern African education system. For instance, in some parts of Africa, several initiatives have been put in place by the governments of such nations as well as interested (external) bodies at the international and global levels through regional and international integration such as UNESCO - UNEVOC International Centre for Technical and Vocational Education and Training. These activities add to what is tenable in the school system to adopt approaches that enhance skill acquisition in vocational education. Therefore, approaches adopted by UNECO and other TVET partners are very important. Many of these approaches are aimed at supporting innovativeness, accessibility and greater participation in TVET for the sake of creating an enabling environment for development (UNESCO, 2019).

In the learning process, many factors come to play. Therefore, learning can be affected by certain conditions within and outside the school environment. These can range from home factors, socio-emotional factors, cultural demands and social expectation, relationship with teachers, parents and peers, democratic setup, mutual respect and faith from people, attributes peculiar to the individual learner, among others and exert different dimension of influence on the learner and the extent on which the learner can acquire

skills and understanding of concepts. Incidentally, a distorted and unhealthy environment adversely affects learning and the extent the learner can acquire skills and understanding of concepts. When the learner is exposed to learning activities, it becomes necessary to examine and determine the level of acquisition of skills and understanding of concepts. What is portrayed in this regard is learning achievement. Achievement is therefore, the result of an activity that has been done, created, pleasing, obtained with tenacity and of course, dexterity in its performance either individually or in group. At this stage it is learning that has yielded result.

Thus, learning, a process of one's efforts to acquire new behaviour changes as a whole, as a result of experience in interaction with the environment can be directed in the positive direction, can be improved and can be judged. Learning achievement is therefore used when the result had been achieved or acquired; and in this case, based on the level of acquiring practical and modern work-related skills. Learning achievement is the result or level of ability that has been achieved by students after attending a teaching-learning process within a certain time in the form of changes in behaviour, skills and knowledge and will then be measured and assessed and then realized in numbers or statement. Thus, there is goal setting in any learning process and involves processes from specific to complex as enunciated in the goal setting theory by Edwin Locke that specific and difficult goals, with feedback lead to higher performance (Robbins, Judge & Vohra, 2011) and this depends to some extent by the individual learner as enunciated by Albert Bandura in selfefficacy theory that there is a belief in an individual belief that he or she can perform a task (Robbins, Judge & Vohra, 2011). In this case, the higher one's self-efficacy the more confidence in the person's ability to succeed. The theory by B. F. Skinner which states that behaviours are a function of its consequence (Robbins et al) and that re-enforcement strengthens behaviour.

Interestingly, the teacher can vary the methods of teaching to capture learners' understanding and enhance their ability and competence in the acquisition of skills. If a teacher does not display competence in the way he handles and organises the learning situation, a student will most likely develop that attitude as well (Ryan, 2013). Ryan further noted that one way that a teacher can do this is to utilize students' skills in creating lesson plans and visual elements to pair alongside the lesson. For instance, a student who is gifted in art and design can help the teacher decorate the walls and windows of the classroom to make it a more entertaining environment to learn in. A student

who is musically inclined might know of different songs from certain time periods or with certain messages that relate to the content that is being taught. This will allow the students to receive information about the material in a different medium. Teachers are not only in class to teach content, but they are also in a position to teach social skills. A classroom with fresh, warm air can create an atmosphere conducive to learning.

Some researchers have queried the potency of the kind of training provided in Nigeria education system and the skills students acquire. Tchombe (2010) stated succinctly that education trains students for the wrong kinds of jobs and create skilled workforce inappropriate to the demands of the job market. Meanwhile, Nigeria's graduates do not only need to fit into the labour market, but global labour market and the world of work. Thus, the concept of employability should be taken into consideration in the course providing training to vocational education students. This applies in all areas of vocational education. For instance, Association of Business Educators of Nigeria – ABEN (2017:11) put succinctly that business education develops "life skills" for economic success"; "encourages creativity and innovation in entrepreneurial thinking. Again, business education courses prepare students to work in small businesses and/or set up their own businesses and develop the requisite entrepreneurial attitudes. Globally, modern work-related skills have emerged and Nigerian graduates cannot be exempted in acquiring them if they must compete globally. Emerging skills that can make business education students in Africa compete favourably with their counterparts in the world, among others include entrepreneurship, ICT proficiency, business forecast, data, document and information management, corporate responsibility, Problemsolving, general leadership, effective communication, practice approach and business development (Okon, 2015).

Whatever skills that are embedded in the content of vocational education can only be transferred to the learner through learning activities. A study by Adekeyo (2004) on the influence of practical skill acquisition and socio-economic experiment of youths in Nigeria using a sample of 150 students revealed that youth's practical skills acquisition significantly influences their socio-economic empowerment in the larger society. Thus, employers of labour and the global business demand require that those seeking for job acquire employable skills. This would have informed Obanya (2012) to point out that the most disturbing manifestation of the challenge is the increasing un-employability of graduates from Nigeria's higher education

institutions. In the world of work therefore, acquisition of practical skills preferred to paper qualification through the presentation of certificates while seeking for employment and when such graduates are engaged they they record low productivity.

The practical contents of any course provide undergraduates with skills that will make them to be self-reliant. Duruamaku- Dim (2002) in his description of what skill is noted that skill is the ability to use one's knowledge effectively and readily in execution or performance, the dexterity or coordination especially in the execution of learned physical task.

The high premium accorded skills acquisition in vocational education and the quest for skill competencies among graduates informed the introduction of the students' industrial work experience scheme aimed to acquaint students with practical experience in a real work situation. Tajudeen (2015) in a study on acquisition of entrepreneurial skills by polytechnic students identified lack of training facilities in the school system. In the teaching job, possession of teaching skill is required. This is why vocational education students have to proceed on teaching practice before graduation. Oyekan (2015) sees teaching practice as a means of inculcating in the students various practical skills and habits that will facilitate learning and achievements.

Immersive learning promotes skills acquisition as it lends itself to experiential training methods that use Virtual Reality (VR) to simulate real-world situation. It brings real-world situation to the presence of students in the class, laboratory or workshop and creates an impressed situation that one is in a virtual environment. Expertise of the teacher or resource persons in a vast dimension of fields such as instructional designs, sound design, filmmaking and data science, among others is of critical importance here. This learning technique is reported to have originated from the cognitive and behavioural science.

According to Fraser (2021), immersive learning technique is typically used to teach and improve core business skills, also known as soft or key skills such as communication, collaboration, critical thinking and creativity. It is imperative to note that these skills have become as important as technical skills that are in the past given more attention. Interestingly, business or soft skills have become increasingly important than technical skills because of the modern work-related and business environment that are driven by information superhighway. This is not to ignore the fact that immersive technique can

equally be used in teaching technical or specific skills. There virtually no area of vocational education that immersive learning cannot be applied to teach.

It is good to gain understanding for the creation of immersive learning activities. Clear objectives have to be set out for participants and the framework for making decisions should not be narrowed to a yes or no answer and create an ideal foundation that will help participants improve their skills. In a pandemic era as was witnessed in the year 2020, immersive learning can be conducted remotely with the use of technology. On the other hand, in a normal situation, except in learning technology-based skills and without pandemic, the use of technology may not be appropriate. Immersive learning makes use of puzzles in relation to learning objectives. Fraser highlighted the following importance of puzzles as guides alongside contents:

- 1. Allows for the creation of content that caters for all levels, abilities and skill sets:
- 2. Overwhelm participants, thereby forcing them to create and execute an effective strategy as a team;
- 3. Allows participants to play to their strengths or provide the opportunity to explore something completely new;
- 4. Facilitate leaders within the group the more complex, the more there will be the need for participants to assume roles and responsibilities;
- 5. Make communication absolutely necessary by making it impossible for one person or a small group to complete the task in isolation so that everyone can pull together in order to achieve success.

Immersive learning can be more effective than traditional learning methods (Fraser, 2021) for the following reasons:

- 1. It promotes higher levels of engagement such that participants cannot learn unless they actively engage with the learning thus, helping them to maximise opportunities for that engagement by creating freedom within an immersive world.
- 2. Builds confidence where everybody experiences the new world together.
- 3. Creates a level playing field since everyone is given equal opportunities to lead, teach others and succeed. In the process, emerging leaders can be revealed.
- 4. Participants become emotionally invested, thus stimulating parts of the brain that are not normally engaged when learning. This boosts

engagement, reduces distractions and crucially aids retention of new information.

- 5. Allows opportunity for immediate application of new skills.
- 6. There are no right or wrong pathways to completion and creates infinite possibilities that give freedom for creativity and innovative problem-solving

Immersive learning can be made so special when participants are the co-creators of their own experience. The participant influence makes each event unique and avail participants at the same event a complete unique experience.

A study conducted by de Back, Tinga and Louwerse (2021) reported that immersive learning is increasingly regarded as a viable means to support learning, noting that Cave Automatic Virtual Environments (CAVEs) support immersive learning in groups of learners and is of potential interest for educational institutions searching for novel ways to bolster learning in their students. In the study, de Back et al remarked that previous works showed that the use a CAVE-based virtual learning environment yielded higher learning gains compared to conventional textbook study. de Back et al further noted that few prior studies have explored the circumstances that yield a trade-off between learning gains and the practical feasibility of providing immersive learning to large student numbers. In the views of de Black et al, to gain insight into these circumstances the study examined two factors: Group size (small, medium and large), and time of application (pre-, mid- and late-term of a course). Results indicated learning gains were present for all group sizes and application time periods, with highest learning gains in smaller groups. This, de Back et al further reported that learning gains were consistent across how learning rime periods and additionally, structural equation modelling was applied to assess how learning may result from the use immersive virtual reality. Results indicated technological virtual reality features predicted learning outcomes via self-reported usability but less so via self-reported presence.

Drawing from views of other researches, de Black et al summarised that immersive learning which uses VR places the viewer inside the virtual content; immersive effect is further enhanced by reflecting natural body motions into the experience; is most commonly experienced using VR headsets, the display which is contained inside a device worn by the viewer; CAVE Automatic Virtual Environment (CAVE) mixed reality systems present

virtual environments on the walls of a room, which serve as display surfaces; the virtual environments are then viewed using see-through 3D glasses. Further, they maintained that both VR headsets and CAVEs allow for benefits absent from non-immersive 2D desktops, such as stereoscopic 3D, as well as tracking of head and hand movements, allowing free and active interaction with virtual content.

In the views of Fleming (2021), as the world becomes increasingly technologically driven, traditional classroom based learning where a teacher, lecturer or trainer stands at the front of a class is increasingly becoming a thing of the past; creating a participatory environment, where educators are facilitating active, immersive learning can be hugely beneficial to a learner's development; enriching their knowledge base and practical skills. Fleming asked, could immersive learning not only hold the key to addressing the challenges of the digital age, but significantly improve education skills development by harnessing the power of technologies such as virtual, augmented and mixed reality? Fleming further explained that traditional classroom based learning techniques largely rely on auditory and written learning styles whether in an educational or work related training space and that this has significant and widely recognised limitations. Further, Fleming holds that every learner is unique and this is reflected on how they process and retain information and for many, providing engaging and interactive content offers a more inclusive and accessible learning experience, especially for those that are predisposed to visual and kinaesthetic style of learning. Immersive learning is a hugely effective way for many learners to develop their knowledge and skills (Fleming, 2021). Fleming further noted that immersive learning provides artificial, digitally created content and environments that accurately replicates real life scenarios so that new skills and techniques can be learned and perfected.

A study by Duncan (2020) examining the effects of immersive game-based learning on student engagement and the development of collaboration, communication, creativity and critical thinking adopted mixed-methods on Grade three students who used immersive game-based learning activities using Breakout EDU strategies compared to students who used traditional small-group methods. There were 76 Grade three students and 40 students in the immersive game-based learning group and 36 students in the tradition small-group. The overall quantitative results showed no significant results for engagement or the development of twenty-first-century learning skills of

students, who participates using BOEDU strategies versus students who did not participate in BOEDU strategies. However, the subgroup of non-ELL students showed significant results for behavioural engagement and overall disaffection. In addition, the overall qualitative results showed teamwork, challenge and fun as the most frequent themes of motivational engagement triggers. The students who participated in the focus group interviews, both the engaged students and the disaffection students stated that they enjoyed this method of learning and wanted to do it more often.

Similarly, Calvert and Abadia (2020) in a study on impact of immersing university and high school students in educational linear narratives using virtual reality technology noted that immersive VR can increase cognitive and affective outcomes in students learning; higher affective scores for university students when using immersive VR; higher test scores for high school students due to deeper perception experience; and higher affective and cognitive scores for immersive VR compared to 360° video. Traditional classroom may be advantageous in some ways such as accessibility during school hours, feelings of the school structure, discipline, social and educational development and instructor-driven training (ISBM University, 2019), it is gradually becoming less popular with the realities of the present era, which has prompted the use of online learning from where immersive learning is made possible. However, in a study by Chen and Jones (2007) comparing blended learning with traditional classroom settings, majority of MBA accounting students in the blended learning section indicated that they would take another accounting course using the approach if it were offered.

In the United States, immersion programme (Cody, 2009) is growing rapidly such that new immersion teachers are hired each year owing to its growing importance of integrating both content and language. In Africa, there is Africa collaborative learning initiatives and Africa studies association that have been organising round table discussion where many strategies for enhanced learning, including immersive learning have been promoted. Therefore, Hodgkin (2019) noted that the selective digitisation and open access to personal archives will be increased and that these activities will be guided by the priorities identified during African Studies Association (ASA) brainstorming session with the following focus areas: Engaged scholarship and immersive learning; improving African access to, and co-production of knowledge; building democracy and reclaiming security. Uwameiye (2015) noted that level of performance among students has been fully linked to

classroom variables. The study specifically examined students' perception of their home economics classroom learning environment using a population of all students from public schools in Edo State with a sample of 540 students through systematic random sampling technique. Perception of students of home economics classroom learning environment was the instrument for data collection. Findings indicated that home economics teachers do not have good method of teaching, since they are unable to make home economics lessons attractive and interesting to students. Findings further revealed that teachers of home economics are unable to encourage, support and give room for individual differences in the course of teaching their subject. The absence of immersive learning and other online-facilitated learning would have made the learning of home economics in such class unattractive.

What constitutes a good classroom for effective learning of business and home economics education cannot exclude online resources. In view of the foregoing, Uwameiye (2015) explained that a good classroom is essential for effective learning to take place and that good classroom environments are those with adequate equipment for teaching and learning, with motivated teachers who use standard teaching methodologies and have adequate facilities. Similarly, Okon and Chukwurah (2020) observed that technology required for the art of teaching and learning are in varieties. These include software, applications and resources that support teaching and learning. Okon and Chukwurah further noted that business education lecturers can use this software, applications and other resources in guiding their students use, create, manipulate and share information on computer devices and over computer networks. In most advanced societies, technological devices and networks have changed our schools and classrooms.

Components of vocational education such as business education and home economics are widely offered in tertiary education institutions. It is expected that graduates of business and home economics education are exposed to diverse skills that would make them self-reliance by initiating, establishing and managing businesses and become employer of labour; and equally fit into the modern work environment that has been globalised. Unfortunately, it is still widely reported that graduates of vocational education, especially in the business and home economics education areas prefer office occupation to self-reliance. More unfortunately, these graduates hardly find and secure office occupation as this is scarce, especially when comparing the available vacancies with the number of applicants jostling for the few

positions. This has been a source of worries. However, decades after decades, scholars are still talking about skill gap between graduates of vocational education and industry and business demand of the 21<sup>st</sup> Century.

It is time to query the media adopted in the facilitation of teaching and learning to ensure that students are exposed to and acquire skills relevant to the industry and business demand of the area and to always adjust to new development that characterised this ever-changing work and business environment due to technological advancement and other factors.

It is on this premises that this study is apt and sought to determine the extent of utilisation of immersive learning techniques and the acquisition of practical and modern work-related skills in business and home economics education. This objective is postulated to the only research question thus:

What is the extent of utilisation of immersive learning techniques and the acquisition of practical and modern work-related skills in business and home economics education?

Similarly, the only null hypothesis formulated states thus:

H0: There is no significant influence of the extent of utilisation of immersive learning techniques on the acquisition of practical and modern work-related skills in business and home economics education

#### **Research methods**

A survey was conducted using lecturers from business and home economics education in two federal tertiary institutions offering business and home economics Cross River State of Nigeria. The study made use of 70 academic staff of business and home economics education, in the two institutions, including 7 from cognate department to home economics in University of Calabar. The population consisted of 16 home economics lecturers and 54 business education lecturers. The two institutions used are University of Calabar, Calabar and Federal College of Education, Obudu. The entire population of 70 lecturers were purposively used based on its manageable size. The researchers designed a structured questionnaire and administered on the respondents, having validated and ascertained the reliability co-efficient of the instrument with a coefficient of .84 using test-retest techniques. The instrument tagged, "extent of utilisation of immersive learning techniques and the acquisition of practical and modern work-related

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skills in business and home economics education questionnaire (EUILTAPMWSBHEEQ)".

The questionnaire consisted of 25 items with four-point scale of: Very high extent of influence (VHEI); high extent of influence (HEI); low extent of influence (LEI); and very low extent of influence (VLEI) with 4, 3, 2 and a point respectively. Data obtained were analysed using the Independent t-test to test the only null hypothesis at .05 levels of significant.

## **Results**

What is the extent of utilisation of immersive learning techniques and the acquisition of practical and modern work-related skills in business and home economics education?

Table 1: Weighted mean of extent of influence on the utilisation of immersive learning

miniersive learning											
S/N.		ITEMS						WEIGHTED MEAN			
REMARK											
Ext	ent o	of utili	sing	imme	rsive	learn	ing	in/for	business/home		
economics edu	cation	:									
1	1.	Using		practi	cally		orie	nted	approaches		
2.47		LEI									
2	2.	Using	appro	aches	aime	d at	sup	porting	innovativeness		
2.14		LEI					_	_			
3	3.	To			ä	acquire	;		skills		
2.11		LEI									
4	4.	To			und	erstand	l		concepts		
2.39		LEI	1								
5	5.	For bus	iness/l	nome e	conom	ics edu	icatio	on to			
Ċ	develo	p life sk	ills fo	r econo	mic su	access			2.29		
LEI											
6	6.	For bus	iness/l	nome e	conom	ics edu	icatio	on to			
Ċ	develo	p creativ	ity						2.57		
HEI											
7	7.	Through	h		e	xperie	ntial		training		
2.17		LEI									
8	8.	Using				virtua	ıl		reality		
2.20		LEI									
9	9.	To		simulat	te	1	eal-v	vorld	situation		

2.29	LEI
	<b>10.</b> Using virtual reality to bring real-world situation
1 171	to the presence of students in the class 1.96
LEI	11. To teach and improve core business skills
2.13	LEI
	12. To allow for the creation of content that
	caters for all levels 1.99
LEI	42 T II C d d d d
	13. To allow for the creation of content that caters for all abilities 2.99
HEI	Caters for an admittes 2.99
	<b>14.</b> To allow for the creation of content that
	caters for all skill sets 2.51
HEI	
	<b>15.</b> To overwhelm participants, thereby forcing them to create an effective strategy as a team 2.01
LEI	to create an effective strategy as a team 2.01
	<b>16.</b> To overwhelm participants, thereby forcing them
	to execute an effective strategy as a team 2.14
LEI	17 To allow word in a state or and a secretary
	17. To allow participants to explore something completely new 2.26
LEI	2.20
	<b>18.</b> By making it impossible for one person or
*****	a small group to complete task in isolation 2.61
HEI	19. To promote higher levels of engagement
2.47	19. To promote higher levels of engagement LEI
_,,	<b>20.</b> To build confidence where everybody experiences
	the new world together. 1.90
VLEI	To anada a lavel playing field and a surel
	21. To create a level playing field and equal Opportunities for everyone to lead others and succeed 2.07
LEI	2.07
	<b>22.</b> To create a level playing field and equal
	opportunities for everyone to teach others and succeed 2.31

LEI							
	23.	For	participants	to	become	emotionally	invested,
2.07		LI	EΙ				
	24.	For p	articipants to s	timula	ate parts of	the brain that	
	are n	ot norn	nally engaged	when	learning.		2.13
LEI							
	<b>25.</b>	Utilis	sing virtual lear	ning	environmen	t that yields hig	her
	learni	ng gai	ns compared	to con	nventional	textbook study	2.13
LEI							
	Total					55.	37143/2.21
Low e	extent o	f influ	ence (LEI)				

Based on the decision rule (for answering research question) -1.4 and below (Very low extent of influence - VLEI); 1.5 to 2.4 (low extent of influence - LEI); 2.5 - 3.4 (high extent of influence - HEI); 3.5 - 4.0 (very high extent of influence - VHEI), the grand weighted mean of 2.21 indicates that the extent of utilisation of immersive learning techniques on the acquisition of practical and modern work-related skills in business and home economics education is to a low extent. Further, out of the 25 items, four items indicated to a high extent of influence, only one to a very low extent while the other 20 indicated to a low extent.

H0: There is no significant influence of the extent of utilisation of immersive learning techniques on the acquisition of practical and modern work-related skills in business and home economics education

Table 2: Independent t-test of no significant influence of the extent of utilisation of immersive learning techniques on the acquisition of practical and modern work-related skills in business and home economics education

Variables		N	Mean	Standard
Deviation t-cal				
Home Economics	16	56.562	5	4.92570

1.1

Business Education 54 55.0185 5.21424

Critical t = 1.99; N = 70; df = 68; significant levels = .05

Test for equality of variances

Test for equality of variances											
		ever Tes for Equ y Var ces	t ıalit of	t-test for Equality of Means							
			ig.		f	ig. (2- taile d)	ean Differe nce	td. Error Differe nce	Confid Intervathe Difference	ıl of	
I mmersi ve learnin g	qual varian ces assum ed	02	86 5	.05	8	296	.54398	.46645	1.382	.4702	
	qual varian ces not assum ed			.08 6	5.80 9	287	.54398	.42123	1.378 45	.4664 1	

The results presented above shows that the calculated t-test of 1.1 is less than the critical t-value of 1.99 at .05 levels of significance. Therefore, the null hypothesis, "There is no significant influence of the extent of utilisation of immersive learning techniques on the acquisition of practical and modern work-related skills in business and home economics education" is upheld.

The implication of this finding is that immersive learning is not popular in most tertiary institutions in Nigeria. Immersive learning facilities are not adequately provided, hence, it utilisation cannot be to a high extent but to a low extent. The fact is that lecturers in business and home economics in tertiary institutions are aware of the positive influence the utilisation of immersive learning technique has on the acquisition of practical and workrelated skills but cannot utilise it in the circumstance where the facilities as well as technical know-how is unavailable and low. Other researchers found that immersive learning influences the acquisition of skills. However, the finding of this study further strengthens that of Duncan (2020) that examined the effects of immersive game-based learning on student engagement and the development of collaboration, communication, creativity and critical thinking adopted mixed-methods on Grade three students who used immersive gamebased learning activities using Breakout EDU strategies compared to students who used traditional small-group methods; where the overall quantitative results showed no significant results for engagement or the development of twenty-first-century learning skills of students, who participates using BOEDU strategies versus students who did not participate in BOEDU strategies. On the other hand, a study by Calvert and Abadia (2020) on the impact of immersing university and high school students in educational linear narratives using virtual reality technology found that immersive VR can increase cognitive and affective outcomes in students learning; higher affective scores for university students when using immersive VR; higher test scores for high school students due to deeper perception experience; and higher affective and cognitive scores for immersive VR compared to 360° video.

## Conclusion

Based on the finding of this study, it is concluded that lecturers in business and home economics education in tertiary institutions in Nigeria are yet to utilise immersive learning technique as the traditional classroom is still highly predominant.

# Recommendation

Based on the conclusion drawn, it is recommended that lecturers in business and home economics education in tertiary institutions, in collaboration with relevant stakeholders in Nigeria should, as a matter of urgency, put modalities in place for effective utilisation of immersive learning technique alongside the traditional classroom.

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