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Immersive education for entrepreneurship and management disciplines: Metaverse's experience

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ABSTRACT

The purpose of this study is to analyze the application of immersion edu cation in the subject of entrepreneurship and management in the unified general high school of jadan education unit, jadan Parish, guaracio, azuai province. Hybrid methodology. 88.5% of the students agreed to use immersive technology in the process of learning. Teachers said that it was difficult for them to use technology, so they needed training in information and communication technology, virtual platform, use and management of these digital educational resources, such as meta-database, in order to achieve immersive education in educational institutions.

Keywords: educational technology; educational software; educational games

1. Introduction

The current research work is guided by immersive education and uses information and communication technology to promote development. In this new era of virtual education, technology is developing in all environments of our life. In terms of society, work and education, it has become a necessity in the classroom. In many cases, it is wasted due to the lack of digital literacy, Understand the new methods and learning based on connectionism to make use of the virtual space or meta poetry of teachers.

It can be said that immersive technology is a new teaching method. It makes use of the characteristics of virtual reality (VR) and augmented reality (RA), which has a positive impact on students' learning motivation. Immersive technology is based on two pillars. One is the graphical user interface, which provides us with a relaxed face–to–face simulation environment, and the other is the interaction with content. It allows us to use technology to create experience from stories. Here comes the concept of immersive technology, which tries to make people contact with technology and immerse them in the teaching process[1].

The exploration of new technologies is an important aspect, as work is currently being carried out in a digital era in which the use of information

and communication technologies exists in an educational environment to support teaching. Pala[2] mentioned that one of the places where technology has the greatest impact is education, which in turn affects the current role of teachers and becomes a part of school daily life. In this regard, it can be said that the application of information and communication technologies has had an impact on the education system in order to narrow the learning gap today.

As a result of health emergencies, the education system has undergone great changes, thus changing the teaching methods; a new suggestion was made to use immersive technology, especially in the field of entrepreneurship and management, because it is an abstract high school course, which is difficult for students to understand, frustrated and indifferent to the course. By using meta poetry in the field of information exchange and all its benefits, we will enable students and teachers to interact dynamically and creatively in the learning process.

The purpose of this work is to enrich the digital experience, make it more sensory and thus more immersive. It is suggested to develop a collaborative work in which they are more active participants, or at least let us live it as a more real thing. In this work, teachers use E-education resources that meet the needs of educational background.

In view of the above, the purpose of this study is to analyze the application of immersive education in the unified entrepreneurship and management subjects of ordinary high schools in jadan education unit of jadan diocese, guaracio, azuai province.

2. Theoretical reference

The entry of technology into education is a fact. At present, these technologies and digital media are being developed and used as part of education and training, but the use of these media does not guarantee positive results in acquiring knowledge. Other factors should also be considered, such as teachers' understanding of ICT and the diversity of existing methods and strategies to achieve learning objectives. It is necessary to reflect on the enabling classroom methods supported by digital ICT resources in order to obtain a virtual learning space conducive to the teaching process[3].

Therefore, the current education has changed, and the teaching method must be combined with the reality of the current environment, which means that the role of teachers must adapt to the needs of students by implementing the method of using ICT in the teaching process. Teachers are direct witnesses of contemporary changes. In this generation, young people are locals of interactive information and technology. They require education according to their own needs and interests. Many teachers are looking for ways to update themselves so that their students can continue to prepare for the world today. However, there are also negative reactions, such as rejecting these technology driven changes, and a group of teachers are afraid of the implementation of ICT and reflected in their performance. In addition, the media did not help us predict the advantages of online education, which brought uncertainty to the use and application of these digital media in the field of formal education[4].

Meaningful learning helps to develop the ability to explain and acquire knowledge. This learning should consider education as an overall plan, giving priority to teaching resources and collaborative work, to promote the whole teaching and training. Using ICT in students' learning process, it is found that educational technology resources are rarely used as support in this process. In this regard, the popularity of innovative teaching strategies is a means to promote dynamic cognitive processes rather than traditional teaching methods, in which meaningful, autonomous and innovative learning is dominant, which goes beyond the training intention needed in today's world[5].

One of the most powerful tools to induce learning in the teaching process is to use immersive education, stimulate the motivation of peers to work, enable us to cooperate and participate in work in the virtual space, and provide us with various alternatives to create an action environment parallel to the daily reality, all of which bring us into one environment, This has led to the exploration and implementation of new spaces with augmented reality and reduced reality, and innovative experience must be incorporated into current education[6].

In order to provide students with a new level of academic and technological interaction in the classroom, we can provide students with more realistic educational resources in a new way. Metaverse is an interactive virtual environment. It provides us with a network created by the integration of virtual enhanced physical reality, that is, digital environment. It refers to any virtual environment created from computer, in which all information is no longer physical, but virtual.

It can be said that immersive technology is a necessary condition today, because it makes full use of all the benefits provided by metaverse. At the same time, it also leads us to adopt a new teaching method, which makes use of the characteristics of virtual reality and augmented reality, two immersive technologies based on the two pillars, and has a positive impact on students' learning motivation. One is the graphical user interface, which provides an easy to perceive face-to-face simulation environment. The second is the interaction with content, which allows us to use technology to create experience from stories. Here comes the concept of immersive technology, which attempts to immerse skilled people in the teaching process[1].

In 2018, we can combine the multimedia technology with the surreal learning environment, because it can produce a wide range of information in the surreal learning environment.

The emergence of new technologies, especially virtual reality, is changing education by changing the teaching process. Virtual reality breaks the paradigm of traditional education and improves the learning environment. In this environment, education is not based on the physical environment such as classroom, but provides us with the possibility of using cyberspace or virtual world to obtain knowledge anywhere or at any time. When students learn in different environments and situations in a cooperative and participatory way, the role of teachers should focus on providing the best conditions that meet the needs of contemporary people. In short, the focus of immersive education is to select applications that meet the environmental needs of students and teachers to acquire knowledge and develop the skills and objectives of the educational system, Encourage improved logical thinking, creative thinking and responsible use of digital media by optimizing space and time[7].

If teachers in the digital age want to play their role effectively, they must make full use of technical resources in the teaching process. In order to get the most benefits from virtual education, a teaching method suitable for the current situation. When implementing these new strategies to enable students to learn better, we must pay attention to the difficulties that students encounter when they can plan activities according to their own needs. Due to technological progress, the role of teachers has changed significantly. They must build leadership, implement positive and collaborative methods, help promote learning in the virtual environment, help synthesize and clarify the content of the learning process, and constantly enrich the discussion through these digital media. Teachers should use these tools as facilitators to encourage student participation[8].

RA provides the possibility of interaction and exploration to adapt to the characteristics of the development stage. At present, students' learning is very active and need a certain degree of free activities, which interferes with the traditional teaching technology. RA includes exploratory activities that involve students in the process of continuous discovery. This makes students want to know what is

behind the image and discover it by using different virtual reality and meta version applications. One of the characteristics of RA is a divergent cognitive process. Students can solve practical problems by making and testing different formulas or methods, RA has the potential to attract and motivate students to explore materials from different perspectives and has proven particularly useful for teaching materials that students cannot experience in the real world[9].

Augmented reality is a new proposition in the field of education, especially in abstract disciplines, which have no creative motivation to develop their application skills in the educational environment, which can be applied according to the educational level of Ecuador's educational system. The unified general secondary education includes three-year compulsory education. Its purpose is to prepare students for work, entrepreneurship and higher education by developing their lifelong learning ability, and to provide individuals with general training and interdisciplinary preparation[10].

We focus on the entrepreneurship and management theme studied in the past three years. Noting that there are no teaching resources available for this theme, we recommend metavers as a learning experience because it is an attractive guidance for students in the fields of art, economy and culture. Because it is an interdisciplinary discipline, it should be emphasized that entrepreneurship is mainly based not on activities, but on participation and strengthening initiatives. These experiences must be carried out in the context of student development[11].

Entrepreneurship requires action, so the proposal aims to train teachers on how to use augmented reality as a methodological strategy, involving collaborative work using immersive education, in which students provide them with countless planning, organization and use the metaverse application as an augmented reality reference to control the execution of the enterprise.

Metaverse is a free augmented reality platform designed to create an educational experience without becoming a programming expert. The animation produced can be shared through a single URL or QR code. Once we install this application on our mobile device, we can scan some QR codes of augmented reality experience. The time required to design effective learning activities using augmented reality (AR) may make teachers hesitant, but metaverse makes the process easier to access through its scene centric platform. It promotes the game of student teams, challenges them, and brings the magic of virtual reality to the classroom, including a 360 degree video scene.

It may be difficult for teachers to let students control their learning, but metaverse is a tool that teachers can learn how to use with students. In short, it is an interactive tool with great educational potential, because the new experience starts with a blank graphic script, which allows an almost unlimited combination of scenes, characters, commands and navigation options.

Scenes can include tracks, addresses, questions, Web links, videos, etc. Users connect scenes to create a partial or complete experience to adapt to the audience's response. Once a user has created an experience, they can copy and edit it to create another experience, so users don't have to create additional experiences from scratch. Metaverse studio is designed for students in the 21st century to promote digital skills, skills and abilities. By design, this tool promotes the user's trial and error experience, and each scenario must be carefully planned and connected to work in the application[12].

Metaverse provides a series of interesting functions. From the perspective of education, it includes a learning tool to create RA experience, which can enhance students' learning and integrate a variety of online resources. The experience may require students to carry out activities in physical space, such as solving problems, experimenting or simply exploring the environment, and then use the

overlapping functions of the application to verify or verify their findings, providing the ability to link the experience to location-based triggers, which is impossible in many other RA tools. Positioning can then become a key part of the learning experience. In addition, it integrates Google's AI services and the ability to import user created artifacts, and these additional functions are also used to create a more advanced RA experience[13].

3. Methodology

The method used in the study is non experimental, using hybrid method and cross queue method. The sample consists of 61 students and 12 teachers from the jadan education unit of Jadan diocese, Guaracio state, Azuai province, which is a financial and rural institution at the unified general high school level.

In order to collect qualitative data, interviews were used as a technique and as a tool. Delphi method was used to conduct a validation questionnaire survey on Teachers Teaching Entrepreneurship and management courses. Quantitative data were collected through Likert scale and Cronbach alpha verification tool, with a reliability of 0.760. These data were collected by sending links through whatsapp using Google forms application. Descriptive analysis and quantitative analysis were used to analyze the data generated by Pearson's test.

4. Results

When introducing the results obtained and explained in the interviews with teachers who teach entrepreneurship and management courses and the survey of high school students, the following results are obtained through qualitative and quantitative analysis.

Table 1. Teacher interview

Analysis unit	Category	Paragraph
Implementation of ICT to teach their classes	ICT in education today	Partial ignorance of teachers' implementation of ICT in education.
Virtual platforms favor interaction in the educational process	Virtual platforms	Virtual platform is indispensable in today's education process.
Methodologies used in virtual spaces	Methodologies in virtual education	The method of implementation in virtual space is unknown.
Teachers are trained to deal with this digital era in education	Teachers in the digital era	Teachers need to be trained in digital education resources.
What is immersive education	Immersive education	Teachers don't know the word immersion education.

Source: Authors' own creation.

Based on the analysis in **Table 1**, teachers say that there is some ignorance in the implementation of ICT in education, and virtual platforms are essential in the process of education. These platforms should aim to implement appropriate methods in the virtual learning space. Therefore, teachers need to be trained in the use and management of digital education resources in order to realize immersive education in educational institutions.

According to **Table 2**, we can confirm that 90% of the respondents agree that teachers use digital technology and resources as support in the classroom.

According to **Table 3**, 88.5% of students agreed to try immersive technology for their learning process.

According to **Table 4** and the results of chi square test, we can determine that ICT is used in the teaching process and guide them to try new immersive technologies to innovate the learning process.

Table 2. Teachers use digital technologies and resources to support their classrooms

		Frequency	Percentage	Effective percentage	Cumulative percentage
Effective	Disagree	1	1.6	1.6	1.6
	Indifferent	10	16.4	16.4	18.0
	Agree	37	60.7	60.7	78.7
	Very much	13	21.3	21.3	100.0
	Total	61	100.0	100.0	

Source: Authors' own creation.

Table 3. Would you like to experiment with immersive technologies in the learning process?

		Frequency	Percentage	Effective percentage	Cumulative percentage
Effective	Disagree	1	1.6	1.6	1.6
	Indifferent	6	9.8	9.8	11.5
	Agree	33	54.1	54.1	65.6
	Very much	21	34.4	34.4	100.0
	Total	61	100.0	100.0	

Source: Authors' own creation.

Table 4. Would you like to experiment with immersive technologies in the learning process?

		Disagree	Indifferent	Agree	Very much	Total
Technical assistance	Indifferent	1	3	3	3	10
Incentive process	Agree	0	3	25	5	33
Teaching and learning	Very much	0	0	5	13	18
Total		1	6	33	21	61

Source: Authors' own creation.

| Chi-square test			
	Value	gl	Asymptotic sign (bilateral)
Pearson chi square	28.350	6	0.000
Rationality	26.699	6	0.000
Linear correlation	13.940	1	0.000
N of valid cases	61		

Source: Authors' own creation.

The development of the Internet has affected the learning methods of education, thus affecting the teaching methods of education. Today's young people are digital natives, so they must receive education that meets their needs and interests. Therefore, teachers must adapt to this new learning method and be able to meet the digital challenges brought by this new knowledge society[4].

I agree with the above author that teachers must update the use and management of technical resources according to the needs of the educational background. Therefore, we intend to use immersive education, in which teachers use these virtual spaces to involve students in the teaching process.

5. Proposal

Considering that the content of entrepreneurship and management course is very abstract, so students have difficulties in learning, which reflects the need to find alternative solutions to this problem, so teachers need to be trained to use metaverse to improve the learning process of this course. The use of ICT in the classroom is essential. Finally, we should know that teachers and students want to try immersive technology to make the classroom attractive and stimulating.

Metaverse application analysis. This is a free, easy-to-access web application that helps the learning process while allowing teachers and students to create experiences from augmented reality that are the same as those copied by the metaverse studio application.
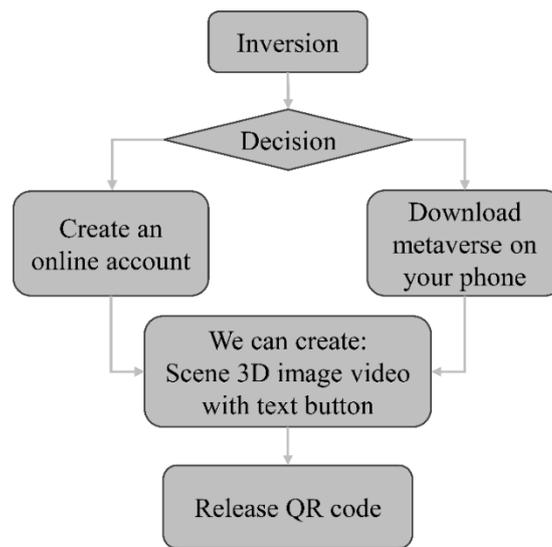
Figure 1. To use metaverse.

One of the benefits of this application is to create an experience that entrepreneurship and management teachers can apply, generate creative skills in designing logos, homogeneity, etc., and improve advertising and marketing through augmented reality, 2D, 3D, 360 degree images and videos to interact and improve the learning process.

Create an account. To create a link to your Facebook app or to sign in to your app from Google play, you can also use one of the options.

Use the metaverse element. Through the resources provided by metaverse, we can create interactive experience of three-dimensional, two-dimensional and 360 degree images, add scenes, buttons and text, all of which are based on augmented reality, and encourage students to promote their understanding of entrepreneurship and management topics through collaborative work and project learning.

Publication. Once our work scenario is developed, we will start publishing and select the publishing option. There, we will briefly describe the work by generating QR code. In order to view the publishing, we will download metaverse application, scan the code on the mobile phone and perform the demonstration of the work done.

Table 5. Proposed training workshops

Target	Activity	Hours	Resources	Modality
To train teachers in the use of Metaverse for the teaching and learning process in the subject of Entrepreneurship and Management.	Dynamic integral	30 minutes	Facilitator	Virtual
	Exhibition content	4.5 hours	Platform Zoom, slides	
	Practical practice	5 hours	Metaverse	
	Final work	5 hours	Metaverse	

6. Conclusions

Today, due to the progress and implementation of information and communication technology, education is developing by leaps and bounds and innovating classroom teaching methods. As students want new experience in immersive technology, teachers must be trained to adapt to today's digital native students.

The survey results show that teachers have difficulties in using technology, so there is a need for training in information and communication technology, virtual platform, use and management

of these digital educational resources (such as metaverse) in order to achieve immersive education in educational institutions.

These platforms have had a considerable impact on society, enabling us to acquire knowledge through the Internet and combine them with positive methods. These methods strengthen learning through games, use educational software, such as metaverse, and take the virtual world as metaverse, to achieve more relevant learning, better understand entrepreneurship and management among students.

Students also said they wanted to learn about immersive, augmented reality technologies and believed that these resources would stimulate interest in the above topics.

Conflict of interest

The authors declare no conflict of interest.

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