# Exploring the Impact of Emerging Educational Technology in MBA Programs: Enhancing Brand Equity through Virtual Reality

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## ABSTRACT

**Purpose:** *The increasing emphasis on continuous development in student learning worldwide, particularly in the Digital Age, necessitates leveraging technology to enhance educational experiences. This research focuses on exploring the potential of virtual reality (VR) to transform MBA education, aiming to inspire innovative teaching methods that extend beyond conventional knowledge exchange.*

**Design/Methodology:** *Employing a mixed-methods approach, this study comprehensively examines the implementation and impact of VR-based learning experiences in MBA programs, Through surveys data is gathered from MBA students. This methodology enables a thorough evaluation of VR's effectiveness as a pedagogical tool in enhancing engagement, comprehension, and retention of MBA subjects*

**Findings:** *The study uncovers a range of advantages and challenges linked to the integration of VR technology in MBA education. On the one hand, VR offers immersive, interactive learning experiences that bolster comprehension and critical thinking skills. However, significant challenges persist, including the initial cost of VR implementation, ensuring technological accessibility for all students, and providing sufficient faculty training to effectively leverage VR in teaching.*

**Conclusion:** *This empirical study underscores the transformative potential of VR in enhancing MBA education. By providing immersive and interactive learning experiences, VR has the capacity to significantly enrich the learning journey of MBA students. VR shows promise in simulating complex business scenarios and bridging theory with real-world application.*

**Originality/Value-***This research aims to inspire greater adoption of educational technology, enhancing MBA learning experiences and preparing students for success in the digital age.*

***Paper Type-*** *Empirical Analysis*

**Keywords:** Virtual Reality, EdTech, Education technology, MBA education, Brand equity, Learning experience

## 1. INTRODUCTION :

In reshaping the landscape of education, educators worldwide have embarked on a rapid journey marked by substantial paradigm shifts over the past five years. While various forms of future education hold promise, the consensus among educators and observers is that the trajectory of education will significantly involve virtual components. As we navigate this transition, our goal is to embrace the challenges of the information age by intersecting existing paradigms and acknowledging the pivotal role of epistemic moments in this evolution.

In the educational sphere, technology stands as the defining element of this transformative era. Virtual Reality (VR) offers two primary modalities: the traditional setup involving computing devices like

desktops, keyboards, and mice, and alternative methods of immersion. However, the traditional five senses are just the tip of the iceberg concerning human sensory perception. Beyond taste, touch, smell, vision, and hearing, our minds process a myriad of sensory inputs, enriching our understanding of the environment. Hence, effective teaching necessitates a departure from conventional methods to embrace innovation and cater to students' evolving learning needs.

Moreover, Lau, Kan, and Lau (2013) [1] emphasize the transformative impact of the technological wave, particularly within the digital realm, on consumer behaviour. Research endeavours aim to explore the intricate relationships between consumers and technology in diverse virtual environments, shedding light on evolving consumer preferences and behaviours. Driven by a fervent desire to revolutionize technology integration in education, we strive to bridge the gap between theory and practice, fostering a seamless integration of immersive learning experiences with modern educational practices (Glass C. R., Furlong M. (1990). [2]). Virtual Reality emerges as a potent tool in this endeavour, promising to reshape the educational landscape and empower learners to engage with content in unprecedented ways Aithal, et al. (2023). [3-5]).

### 1.2 Meaning and Relevance:

*Meaning:*

The term "virtual reality" originates from the combination of the concepts of "virtual" and "reality." "Virtual" refers to something that closely resembles reality, while "reality" pertains to the world as we perceive it. Therefore, "virtual reality" essentially denotes an emulation or simulation of reality, focusing on creating immersive environments and interactions. This concept can be categorized into two main types based on the level of interaction and immersion.

*Relevance:*

Immersive VR environments are presented either on room-sized displays or through stereoscopic headsets, requiring specialized hardware like gloves and high-performance computers. On the other hand, non-immersive VR simulations are portrayed on standard personal computers, utilizing input devices such as keyboards, mice, joysticks, or touchscreens to interact with the virtual world (Gustafson, R. (1992). [6]).

Kozinets, R., Patterson, A., and Ashman, R. (2016) [7] contend that while many theories suggest that technology rationalizes and diminishes the enthusiasm for consumption, the evidence suggests the contrary: technologies, in fact, amplify the desire to consume. Lau et al. (2013). [1] offer a comprehensive review of current research on consumer behavior in virtual environments. The study explores the relationships between consumers and technology in various digital settings, shedding light on emerging trends and behaviors. By synthesizing existing literature, the authors provide valuable insights into the evolving dynamics of consumer behavior in virtual spaces. Our perception of reality is shaped by sensory information received by our senses and processed by our brains. Therefore, altering the sensory input can lead to a shift in our perception of reality. In essence, exposure to simulated sensory data can result in a modified understanding of reality from an individual's perspective.

### 1.3 Importance:

Robinson, T. D., Veresiu, E., and Babić Rosario, A. (2021) [8] caution against assuming that virtual reality (VR) is entirely benign and devoid of potential issues. As an evolving technology, VR intersects with various other technological domains like biotech, animation, and gaming. Consequently, unforeseen challenges may arise. They suggest that VR has the potential to enhance resources and facilitate the development of new technologies in these areas.

The improvement of digital fact (VR), “collectively with different technological improvements will form the destiny of e-retailing. These studies research the effectiveness of various VR codecs and gadgets in a digital shop surrounding, specifically V-commerce. This looks at proposes and checks a conceptual version that analyses the family members among feel of presence, emblem remember and buy intention, even as additionally going deeper into their antecedents” Also, Hiu-fai Lau, Chi-wai Kan, & Kung-wong Lau. (2013) [9] says “Retailers want to be looking very intently due to the fact while VR hits the marketplace adoption tipping factor it will move speedy and buyers could be looking forward to intending to keep from domestic with a VR level in. Apostolou, K., Koutsiouris, V., & Vrechopoulos,

A. (2010). [10] aim to identify the elements that contribute to the retail customer experience and to examine various factors that impact the quality of the customer shopping experience.

O'Brolcháin et al. (2016) [11] present a significant examination of ethical considerations related to virtual reality (VR), particularly concerning social interactions and virtual social networks. They highlight the potential addictive qualities of digital technologies and the surveillance capabilities they enable, which could compromise users' autonomy. Drawing on insights from the intersection of technology and ethics, the study examines key issues such as data privacy, digital addiction, and the blurring of virtual and real-world boundaries, especially in gaming to DongIk Lee, KiYeol Baek, JiHyun Lee, Hankyu Lim (2016) [12]. Through exploration of different concerns, research indicates that educational virtual reality (VR) has the potential to enhance learning performance for specific outcomes, while showing minimal impact on others. Makransky, G., Petersen, G. B. (2021) [13] introduce the Cognitive Affective Model of Immersive Learning (CAMIL), providing insights into this phenomenon.

### 1.4 Unforeseen Challenges in the Rise of Virtual Reality:

***Anticipated Benefits with Potential Pitfalls:***

E-commerce, also known as e-retail, stands out as one of the most dynamic and successful applications of digital marketing. It involves the sale of goods and services through electronic platforms, notably the Internet. Virtual Reality (VR) immerses users in entirely virtual environments, while Augmented Reality (AR) overlays virtual content onto the real world, albeit without enabling interaction with the 3-D environment. Mixed Reality (MR) combines elements of VR and reality, generating virtual objects capable of interacting with the physical environment. The integration of Extended Realities (XRs) in retailing, termed virtual commerce or v-commerce, is envisioned as a means to create novel computer-mediated indirect experiences (Nguyen et al., 2016). [14].

Their research investigates the effectiveness of various VR formats and devices within virtual shop environments, particularly in the realm of V-commerce. The study proposes and evaluates a conceptual model that examines the relationships between the sense of presence, brand recall, and purchase intention, offering valuable insights into the potential of VR technology in reshaping consumer behavior and retail experiences. VR, along with augmented reality (AR), intersects with various other technological categories, including biotech, animation, and gaming, presenting both physical and mental challenges.

***Physical and Mental Health Considerations:***

Physical discomfort due to poor ergonomics is one potential issue associated with prolonged VR use. Additionally, there are psychological concerns stemming from excessive immersion in virtual environments. Research by Jesus Martinez et al. (2019) explores the effectiveness of VR in e-retailing, focusing on the impact of presence, brand recall, and purchase intention. Similarly, Mallik, Dr & Karthik, Mr. (2019). [15] emphasize the need for retailers to closely monitor VR adoption, as it may revolutionize the shopping experience.

***Ethical and Moral Implications:***

Ethical and moral considerations surrounding VR technology are increasingly being discussed Mallik, D.M.A., & Karthik (2019) [15] highlights the significance of virtual reality in the retail sector and urge retailers to closely monitor its adoption. They anticipate a rapid transformation in consumer behavior as VR becomes more prevalent, emphasizing the importance of understanding the factors that contribute to a positive shopping experience. By exploring various elements influencing consumer satisfaction, their research provides valuable guidance for retailers seeking to adapt to the changing retail landscape driven by VR technology. While VR allows for precise design and analysis of products before market release, ethical dilemmas may arise regarding issues such as data privacy, digital addiction, and the blurring of virtual and real-world boundaries can also be widely used in the medical field in treating anxiety disorder too (Bruno herein (2005). [16]), (Campbell, M. L., & Morrison, A. P. (2007). [17]). These concerns underscore the importance of ethical frameworks in VR development and usage.

*Balancing Potential with Responsibility.*

While VR holds immense promise for enhancing various aspects of life, it is essential to address the challenges it presents proactively. By prioritizing user well-being, ethical considerations, and continuous innovation, we can harness the full potential of VR while mitigating its negative impacts.

### 1.5 Tracing the Origins and Progression of VR:

Virtual reality (VR) has a rich history dating back to the 1950s, although its roots can be traced even further back to the 1860s. Morton Heilig's (1957) pioneering work with the Sensorama in 1957 revolutionized multimedia experiences, laying the groundwork for modern VR technology. Heilig's innovative approach to immersive storytelling continues to influence VR development today.

In the late 1960s, Ivan Sutherland introduced the concept of the "Ultimate Display," envisioning immersive computer-generated environments that would transform human-computer interaction. His visionary ideas inspired generations of researchers and developers, shaping the trajectory of VR research and development. Ivan Sutherland's (1968) [18] influential paper introduces the concept of the "Ultimate Display," laying the groundwork for modern virtual reality technology. He describes the potential of immersive computer-generated environments to transform human-computer interaction, envisioning a future where users can interact with digital content in unprecedented ways. Sutherland's visionary ideas continue to inspire advancements in VR research and development and was credited with popularizing the term “virtual reality,” played a significant role in raising public awareness of this emerging technology. His book, Dawn of the New Everything, shed light on the potential of VR and its applications across various fields. Additionally, Lanier’s collaboration with Tom Zimmerman in the 1990s contributed to the advancement of augmented reality technologies.

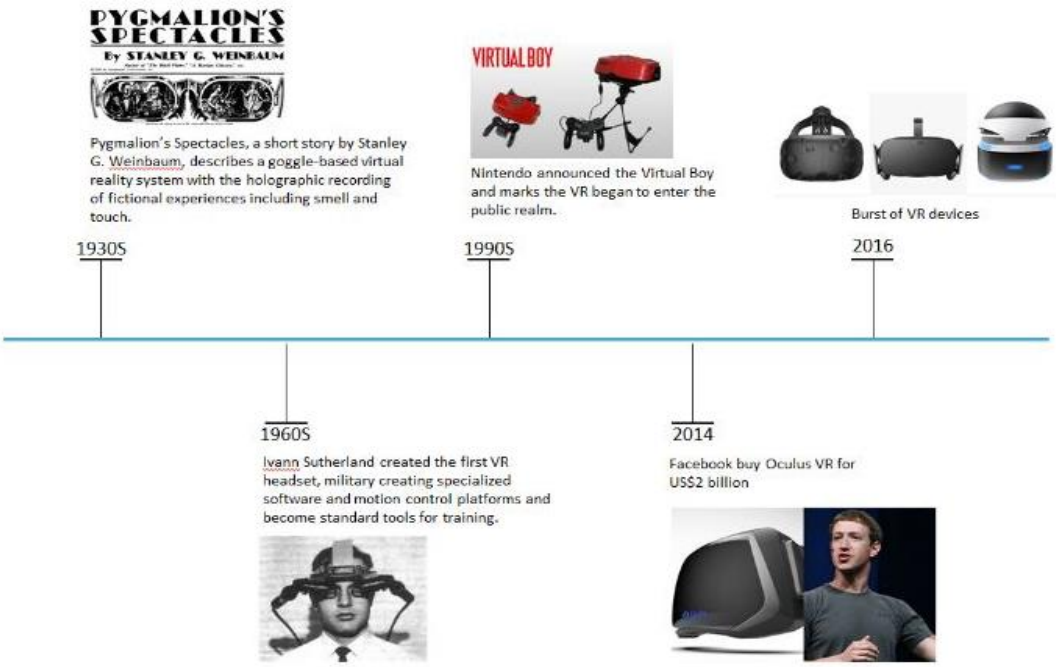


**Fig.1:** Brief history of Virtual reality
**Image Source- http://web.tecnico.ulisboa.pt/ist188480/cmul/introduction.html**

Despite early enthusiasm for VR in the 1990s, inflated expectations led to a decline in its popularity. However, advancements in hardware and software over the past five years have reignited interest in VR. Companies are leveraging artificial intelligence and cloud technologies to improve VR ecosystems, while the rollout of 5G aims to address issues such as latency and nausea.

Berg, L. P., et al. (2017) [19] explored the quality of augmented reality as a management tool in organizational processes, highlighting its potential for enhancing efficiency and productivity. As VR continues to evolve, its applications in learning and other fields are becoming increasingly evident, marking a new chapter in the ongoing evolution of this transformative technology. However, the sector of the digital world now has visible substantial strides over the past 10 years (beginning from 2014 onwards), especially from the following tech large battles—Amazon, Apple, Facebook, Google,

Microsoft, Sony, and Samsung have advanced divisions of VR and AR. However, because it seems to include a hefty rate tag connected, clients are nevertheless on the fence approximately VR tech.

## 2. THEORETICAL BACKGROUND AND LITERATURE REVIEW :

In recent years, the landscape of education has been significantly transformed by emerging technologies, with virtual reality (VR) standing out as a prominent tool poised to revolutionize the learning experience. This literature review explores the theoretical underpinnings and existing research surrounding the impact of emerging educational technology, specifically VR, within MBA programs, with a focus on its potential to enhance brand equity.

### 2.1 Immersive VR Technology:

Everything that we realize approximately our fact comes via way of means of manner of our senses. In other words, our complete revel in of fact is truly an aggregate of sensory statistics and our brain's feel-making mechanisms for those statistics. VR frameworks encompass vibrant programs, together with a headset up the exhibit and increased projective shows and non-immersive PC-primarily based total programs. Himanshu Patel, Richard Cardinali, (1994) [20] says, “we perceive how all types of organizations can and are profiting from augmented reality inquire about. Quickly talks about the examination being led for different enterprises, and how that exploration will profit and is profiting those businesses “

Immersive technology, the catch-all term for describing augmented reality (AR) and virtual reality (VR), is now enjoying its moment and, after years of development and transition, has steadily become mainstream in every field and has the deepest positive impact on health care industry too (Li, Q., Wang, L., & Zhang, H. (2022). [21]). With major tech brands such as Google, Samsung, HTC, etc. launching their own versions of VR products, the popularity of these gadgets and interactive content is sky-high. VR has now used a wide range of implementations in various markets and areas. Non-immersive programs are more and more adapting to Internet retail and are consequently the point of interest of our discussion however out of your angle it might be perceived as real. Something we might check with as a digital fact in the engineering field (Sala Nicoletta. (2006). [22]). Below are the few authors who've expressed their expertise in VR in enterprise and in fact as it has flourished and its practical applications, from enterprise training to online games, are expanding as a hardware solution because of how well-supported it has become.

### 2.2 Virtual Reality in Academics:

In modern education, students are increasingly required to comprehend abstract concepts and scenarios that may not exist in their current reality. Metaphors and analogies, particularly in the sciences, serve as traditional teaching mechanisms to convey complex ideas through relatable experiences Mallik, Dr & Karthik, Mr. (2019) [23] emphasizes the importance of technology in enhancing productivity and communication for Human Resource (HR) managers. Virtual Reality (VR) emerges as a solution that meets these needs, offering impactful and easy-to-deploy tools for various HR functions, from hiring to employee training and communication Liebowitz, M. R. (1987) [24], Liebowitz, M.R., Schneier, F.R., Hollander, E., & al. (1992) [25].

The NMC Horizon Report, as explored by Johnson, A., Smith, B., & Jones, C. (2019) [26], provides insights into the potential impact of VR on teaching, learning, and research in higher education. Large corporations and agile startups are leveraging VR across various domains, recognizing its potential to attract top talent and enhance workforce capabilities.

Christou, C. (2010) [27] discusses the multi-sensory visualization and interactivity afforded by VR, making it conducive to effective learning experiences. Despite its advantages, VR also presents drawbacks that need to be addressed, underscoring the importance of understanding its educational applications and limitations. Overall, VR's ability to provide multi-sensory engagement with virtual environments makes it well-suited for effective learning. Educators and policymakers must consider both the benefits and challenges of integrating VR technology into academic contexts to maximize its potential for enhancing student learning outcomes.

**Educational Technology in MBA Programs:**
The integration of technology in higher education, particularly in MBA programs, has been a subject of considerable interest among researchers and educators. Traditional teaching methods are being augmented or replaced by innovative technologies to better engage students, enhance learning outcomes, and prepare them for the evolving demands of the business world. Virtual reality, with its immersive and interactive nature, holds promise as a transformative tool in this context (Alyssa Walker. (2018). [28]).

**a. *Technology Acceptance Model (TAM):*** The TAM, developed by Davis (1989), provides a theoretical lens for understanding users' acceptance and adoption of new technologies. It posits that perceived usefulness and perceived ease of use are key determinants of an individual's intention to use a technology. This study seeks to evaluate the applicability of the Technology Acceptance Model (TAM; Davis, (1989), (1993); Venkatesh, V. & Davis, F. D. (2000). [29-31]) in the context of virtual reality (VR) usage within clinical settings. The research involves a sample of 141 adults interested in utilizing VR technology. Standard TAM items were adapted for testing, with an additional factor of perceived cost included, as it was anticipated to influence the Intention of Use. Structural equation modeling was employed, and after eliminating certain parameters, the model demonstrated a good fit with the data. The final model indicates that the Intention to Use VR is solely predicted by Perceived Usefulness. These findings highlight areas that require further investigation to facilitate the adoption of virtual reality among clinicians.

**b. *Experiential Learning Theory:*** Experiential learning theory, proposed by Kolb (1984), emphasizes the central role of experience in the learning process. VR offers unparalleled opportunities for experiential learning by simulating real-world scenarios and enabling learners to actively engage with course material.
The primary motivation for integrating information and communication technologies (ICT) into higher education is the anticipation that such integration will improve the quality of teaching, communication, and students' learning and persistence (Nora & Snyder (2009). [32]).

Drawing on Kolb's Experiential Learning Theory, the study explores how VR can immerse students in realistic business scenarios, enabling them to actively engage with course material, develop critical thinking skills, and apply theoretical concepts in practical contexts. By immersing students in virtual environments, educators can facilitate deeper understanding, critical thinking, and skill development.

**c. *Brand Equity Theory*:** Brand equity refers to the value and perception associated with a brand. In the context of MBA programs, institutions strive to cultivate strong brand equity to attract prospective students, enhance alumni relations, and foster partnerships with industry stakeholders. P. Mishra and M. J. Koehler (2006) [33] emphasize the importance of understanding the complexities and factors influencing comprehension in education. They highlight how technical capabilities can enable educators to address challenges students face, and they explore how virtual reality can introduce new paradigms or enhance existing ones. Leveraging VR to deliver innovative and immersive learning experiences can contribute to enhancing the brand equity of MBA programs by positioning them as leaders in educational innovation and excellence.

### 2.3 Virtual Reality in MBA:
Educators worldwide are undergoing significant paradigm shifts in reshaping the next generation of learning. Arvind Mallik (2016) [34] underscores the demand for students to grasp complex concepts and navigate scenarios that may not exist in their current reality. Alyssa Walker (2018) [35] emphasizes the value of immersing students in virtual environments to cultivate leadership skills and adaptability in a digital landscape.

Furthermore, there's a growing recognition of the role of innovation, particularly creativity, in navigating today's rapidly evolving business environments. Mallik proposes leveraging Virtual Reality (VR) as a futuristic tool to enhance student experiences and serve as a marketing asset for educational institutions. Duffy and Jonassen (1992) [36] highlight ongoing research into the effectiveness of virtual

environments and VR in enhancing learning outcomes and cognitive abilities such as spatial awareness and retention.

In educational settings, VR can be utilized through various devices, providing immersive experiences that offer insights into future possibilities. Jain, S., et al. (2018) [37] conducted a customer survey using augmented reality technology, demonstrating its potential to enhance customer engagement and satisfaction in retail settings. Moreover, augmented reality is increasingly being utilized in higher education to provide interactive campus tours, offering prospective students the opportunity to explore campuses remotely. Ashley, S. (2018) [38] discusses the benefits of virtual campus tours in attracting prospective students, saving costs, and facilitating exploration for individuals unable to visit in person.G. Jones and S. J. Warren (2011) [39] assert that integrating digital reality learning experiences, which incorporate visual, auditory, and immersive stimuli, offers powerful opportunities to enhance student engagement and cater to the needs of the digital and 21st-century learner generation.

**However, the following are the different ways where VR can be integrated with MBA:**

***1. Curriculum Integration***

- Identify Learning Objectives: Begin by aligning VR experiences with specific learning objectives to ensure relevance and effectiveness.
- Curriculum Mapping: Integrate VR modules seamlessly into existing curricula, identifying key topics and concepts that can be enhanced through immersive experiences.
- Interdisciplinary Approach: Explore opportunities to incorporate VR across multiple disciplines, fostering interdisciplinary learning and collaboration.

***2. Content Development***

- Engaging Narratives: Develop compelling narratives and scenarios that immerse students in meaningful learning experiences, fostering curiosity and exploration.
- Interactive Simulations: Create interactive simulations that allow students to manipulate objects, explore environments, and engage with course material in a hands-on manner.
- Customization Options: Provide flexibility for instructors to customize VR content based on specific course requirements and student needs.

***3. Pedagogical Strategies***

- Active Learning Techniques: Implement active learning strategies within VR environments, such as problem-based learning, collaborative activities, and scenario-based simulations.
- Scaffolding and Feedback: Offer scaffolding and feedback mechanisms to support student learning progression, providing guidance and reinforcement as needed.
- Reflective Practices: Encourage reflective practices within VR experiences, prompting students to critically evaluate their actions, decisions, and learning outcomes.

***4. Assessment and Evaluation***

- Performance Metrics: Develop assessment criteria to measure student performance and achievement within VR environments, considering factors such as completion time, accuracy, and critical thinking.
- Formative Feedback: Provide ongoing formative feedback to students throughout VR experiences, enabling them to track their progress and identify areas for improvement.
- Summative Evaluation: Conduct summative evaluations to assess the overall effectiveness of VR-based learning experiences in achieving learning objectives and enhancing student outcomes.

***5. Professional Development***

- Training and Support: Offer comprehensive training and support for educators to effectively integrate VR technology into their teaching practices, including technical skills and pedagogical strategies.
- Community of Practice: Foster a community of practice where educators can share best practices, resources, and insights related to VR-based teaching and learning.
- Continuous Improvement: Promote a culture of continuous improvement, encouraging educators to reflect on their experiences, solicit feedback, and iterate on their VR teaching practices.

By adopting this Virtual Reality Teaching Model, educators can leverage immersive technology to create engaging and impactful learning experiences that inspire curiosity, foster collaboration, prepare students for success in the digital age, and also help in solving mental disorders too. (American Psychiatric Association. (2013). [40]). Through careful curriculum integration, content development, pedagogical strategies, assessment, and professional development, VR has the potential to transform education and unlock new possibilities for teaching learning and is widely used in anxiety disorders too (Anderson, J. R., et al. (2018). [41]), (Anderson, P. L., et al. (2013) [42]).

### 2.4 A review of Exploring the Impact of Emerging Educational Technology in MBA Programs: Enhancing Brand Equity through Virtual Reality in recent academic research papers:

Recent scholarly articles have investigated the integration of virtual reality (VR) technology in MBA programs, with a focus on its ability to bolster brand equity. These studies examine VR's role in curriculum development, marketing education, and brand oversight. Through case studies, quantitative assessments, and trend analyses, they provide valuable insights into the effectiveness of VR-driven learning in MBA classrooms. Findings highlight VR's positive influence on brand awareness, image, and loyalty among MBA students, offering more immersive educational experiences. The papers mentioned below in Table No-1 show an advanced understanding of how emerging technologies like VR can enhance brand equity in MBA programs, guiding educators and institutions seeking to incorporate VR into their teaching strategies.

**Table 1:** Critical review of scholarly literature on VR usage in MBA programs of various domains

| Authors | Area of Research | Contribution | References |
|---|---|---|---|
| X. Tang and J. Huang, | VR's Influence on Business Education | Application of VR technology in MBA teaching allows students to create tailored situations, enhancing immersion and problem-solving experiences, thus improving participation and decision-making skills. | X. Tang and J. Huang, (2019). [43] |
| Juegostudio, | Corporate Adoption of Technology | Research reveals strong support for digital technology adoption in education, with significant openness to VR integration in classrooms. Initiatives by tech giants like HTC aim to develop VR content and educational platforms. | Juegostudio, (2017). [44] |
| Paszkiewicz A, Salach M, Dymora P, Bolanowski M, Budzik G, Kubiak P | Methodologies in VR Education Research | Teaching methodology in VR education involves analyzing objectives, content, and organizational forms to discover effective teaching methods. It emphasizes rational action through thorough analysis and experience-based recognition. | Paszkiewicz A, Salach M, Dymora P, Bolanowski M, Budzik G, Kubiak P (2021). [45] |
| Li, Y.; Zhang, J.; Sun, W.; Wang, J.; Gao, X. | Effectiveness of VR Simulation in Various Fields | VR technology is increasingly important in education, medicine, design, military, and mechanical engineering. The "Virtual Reality Education eXpansion" (VREX) system is a notable project in educational VR. | Li, Y.; Zhang, J.; Sun, W.; Wang, J.; Gao, X. (2017). [46] |
| Will | VR as a Marketing Tool | VR offers more immersive and humanized interactions compared to social media, making it an effective marketing tool closely resembling real-life experiences. | Will.M (2017). [47] |
| Scholtz, J., Muller, M., Novick, D., Olsen, J., | Advancements in Human Computer | VR devices are envisioned to be more user-friendly and effective than traditional computers, requiring less training for operation and offering enhanced usability. | Scholtz, J., Muller, M., Novick, D., Olsen, J., Dan, |

| | | | |
|---|---|---|---|
| Dan, Shneiderman, B. & Wharton, C. | Interface through VR | | Shneiderman, B. & Wharton, C. (1999). [48] |

### 2.5 Teaching Model for Virtual Reality:

Virtual Reality (VR) offers unprecedented opportunities to revolutionize the educational landscape by providing immersive and interactive learning experiences. This teaching model aims to harness the potential of VR technology to enhance student engagement, comprehension, and retention of course material across various disciplines, VR progression in utilizing its full potential in Education is still in its infancy and I have followed my model in understanding how effectively can transform these into actual (refer fig. 2)

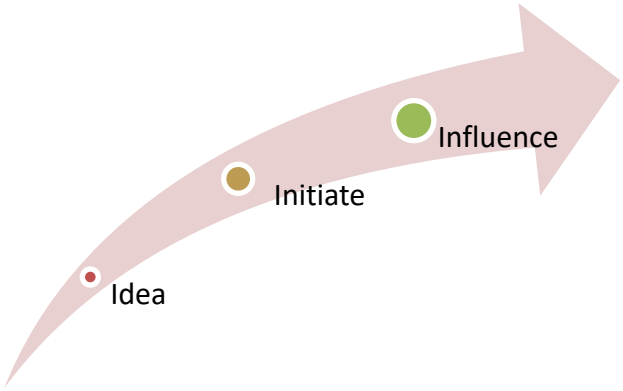


**Fig. 2:** 3I Model of Virtual Reality in MBA Developed by DM Arvind Mallik (Arvind Mallik, (2016). [6]

**(1) Idea-** Consumer reviews have transcended traditional observation, offering immersive experiences where individuals are transported into alternate realities. This technology allows for interaction with programmed devices, fundamentally altering how we perceive and engage with the world around us.

**(2) Initiate-** The advancement of information technology has seen significant progress, marked by breakthroughs in programming techniques, semiconductor chip productivity, data transmission methods, and feedback devices. These innovations, including head-mounted displays, gloves, and sensor-equipped suits, have collectively paved the way for the emergence of virtual reality technology.

**(3) Influence-** Research indicates that individuals retain significantly more information when they actively engage with content, compared to passive observation. Virtual reality facilitates hands-on interaction within simulated environments, enabling students to manipulate objects and scenarios. This experiential learning approach not only enhances retention but also fosters creativity through active constructionism.

## 3. RESEARCH METHODOLOGY :

The purpose of this analysis is to explore the impact of VR on students' learning capability while teaching Consumer behaviour and the specific goal of the study is to examine the potential interrelations between how students perceive VR and their experience once exposed to them in real.

### 3.1. OBJECTIVES :

(1) To assess awareness and perception of Virtual Reality (VR)
(2) To evaluate the effectiveness of VR in Education
(3) To analyze the impact of VR on Learning Outcomes
(4) To assess IT Infrastructure readiness and technological integration

**Hypothesis:**

**(1) Implementing virtual reality (VR) technology in MBA programs enhances brand equity among students.**

- *Null Hypothesis (H0):* Implementing virtual reality (VR) technology in MBA programs does not enhance brand equity among students.
- *Alternate Hypothesis (H1):* Implementing virtual reality (VR) technology in MBA programs enhances brand equity among students.

**(2) VR-based learning experiences positively influence student engagement and motivation in MBA programs.**

- *Null Hypothesis (H0):* VR-based learning experiences do not positively influence student engagement and motivation in MBA programs.
- *Alternate Hypothesis (H1):* VR-based learning experiences positively influence student engagement and motivation in MBA programs.

**Table 2:** Details of Research Methodology

| | |
|---|---|
| **Research Design** | Descriptive research |
| **Sample Method** | Non-Probability Sampling |
| **Sampling** | Convenience sampling |
| **Sample Unit** | Shivamogga city |
| **Sampling Instrument** | Structured Questionnaire. |
| **Sampling Population** | 3rd Sem Students at MBA |
| **Sample Size** | 60 |

### 3.2 Sources of Data:

- *Primary data:* The primary data of this study is information collected from primary sources that is through focus groups, surveys, interviews, and questionnaires. The questionnaire is an important source used in this study.
- *Secondary data:* The secondary data of this study is quantitative data which is collected from journals, company websites, marketing textbooks, and company annual progress reports.

## 4. DATA ANALYSIS :

The integration of virtual reality (VR) technology into educational settings has become an emerging trend, offering new avenues for engaging and immersive learning experiences Repetto, C., Gaggioli, A., Pallavicini, F., Cipresso, P., Raspelli, S., & Riva, G. (2013) [49]. In the context of consumer behavior studies, leveraging VR presents a promising approach to explore and understand the intricacies of individuals' purchasing behaviors and decision-making processes. This study focuses on implementing VR technology in teaching consumer behavior to third-semester students at VTU (Visvesvaraya Technological University), with the aim of assessing its impact on enhancing learning outcomes and understanding.

***Rationale for Studying Consumer Behavior:***

Consumer behavior plays a pivotal role in shaping market dynamics and influencing business strategies. Understanding the factors that drive consumer choices and behaviors is crucial for marketers to develop effective marketing strategies and deliver products and services that resonate with target audiences. By delving into the realm of consumer behavior, educators and students alike can gain valuable insights into the cognitive, emotional, and behavioral aspects that underpin consumer decision-making.

Following are the specific objectives been carried out in this section and the questions which come under each objective mentioned below:

*Objective-1* **Assess Awareness and Perception of Virtual Reality (VR):**

Q. No- 4.2 Understand the level of awareness among respondents regarding VR technology.

Q. No- 4.3 Gauge perceptions of VR's potential, particularly in education.

*Objective-2* **Evaluate the Effectiveness of VR in Education:**

Q. No- 4.4 Determine the perceived future of VR in educational settings.

Q. No- 4.5 Assess the impact of VR on innovative teaching methodologies, specifically those conducted by DM Arvind Mallik.

*Objective-3* **Analyze the Impact of VR on Learning Outcomes:**

Q. No- 4.6 Investigate whether VR enhances learning experiences and drives student growth in understanding products and services.

Q. No- 4.7 Determine the effectiveness of using VR in teaching Consumer Behavior subjects and its impact on learning success.

*Objective-4* **Assess IT Infrastructure Readiness and Technological Integration:**

Q. No- 4.8 Evaluate whether respondents believe that sufficient IT infrastructure should be accessible to integrate emerging technologies like VR into teaching.

Q. No- 4.9 Determine whether mobile headset-based setups are perceived to offer more immersive learning experiences compared to traditional screen-based methods.

### 4.1 Respondents Profile:

**Table 3:** Showing Respondents Profiles

| Variables | Respondents | Percentage (%) |
|---|---|---|
| **Gender** | Male | 67 |
| | Female | 33 |

Table 3 presents the profile of respondents based on gender. Out of the total respondents (n=60), 40 (66.67%) are male, while 20 (33.33%) are female.

### 4.2 Understand the level of awareness among respondents regarding VR technology:

**Table 4:** Showing Respondents VR awareness

| | | |
|---|---|---|
| **VR Awareness** | **Yes** | **75** |
| | No | 17% |
| | Somewhat | 8% |

Regarding awareness of Virtual Reality (VR):

- Yes: 45 respondents (75%) indicated that they have heard about VR.
- No: 10 respondents (16.67%) stated that they have not heard about VR.
- Somewhat: 5 respondents (8.33%) indicated partial awareness or familiarity with VR.

From the above Table 4, the majority of respondents are aware of Virtual Reality, with 75% indicating that they have heard about it, while a smaller percentage have no awareness or only partial awareness of VR.

### 4.3 Gauge perceptions of VR's potential, particularly in education?

**Table 5:** VR usage in the classroom

| | Agree | Disagree |
|---|---|---|
| **VR usage** | 72% | 29% |

Based on the primary research findings from Table 5, it is evident that a significant majority of students, approximately 72%, believe that integrating Virtual Reality (VR) technology into selected subjects can

effectively support and enhance their learning capacity. This perception underscores the recognition among students of the potential benefits that VR can offer in educational settings.

The belief that VR can enhance learning capacity suggests that students perceive VR as a valuable tool for improving their understanding and retention of course material. VR provides immersive and interactive experiences that can engage students more deeply in the learning process, making concepts more tangible and memorable. By simulating real-world scenarios and environments, VR enables students to explore and interact with complex concepts in a way that traditional teaching methods cannot replicate.

### 4.4 Determine the perceived future of VR in educational settings:

**Table 6:** VR future

| VR Future | It has a great future | I don't think it has a future | It increases student motivation to know more about subject and definely has a great future | Yes, it has a great future but only after 5 years |
|---|---|---|---|---|
| | 46% | - | 50% | 4 |

The primary research findings from Table 6 indicate that a significant proportion of students, nearly 50%, believe that Virtual Reality (VR) technology has the potential to increase student motivation in learning subjects. This perception highlights the recognition among students of the motivational benefits that VR can offer in educational settings.

- The majority of respondents (50%) express optimism about VR's future in education, emphasizing its potential to increase student motivation and enhance learning experiences.
- 46% of respondents specifically highlight VR's promising future in education, suggesting that its benefits will become more apparent and widespread in the coming years.
- Interestingly, there are no respondents who outright dismiss VR's future in education, indicating a general acknowledgment of its potential impact.
- A small percentage (4%) believe that while VR has great potential, its widespread adoption and realization of benefits may take some time, specifically citing a timeframe of at least five years.

Overall, the table reflects a generally positive outlook on the future of virtual reality in education, with a significant portion of respondents recognizing its potential to enhance student motivation and learning outcomes. However, there is also recognition that the full realization of VR's benefits may require some time and further development.

### 4.5 Assess the impact of VR on innovative teaching methodologies, specifically those conducted by DM Arvind Mallik:

**Table 7:** VR Teaching

| VR Teaching | Flipped Classroom | Design Thinking for Educators - Mobile Learning | Using Virtual Reality in class | Regular PowerPoint presentation |
|---|---|---|---|---|
| | 12% | 30% | 53% | 5% |

- Design Thinking for Educators - Mobile Learning emerges as the most preferred methodology, with 53% of respondents indicating it as their highest preference.
- Flipped Classroom follows with 30% of respondents rating it as their top choice.
- VR Future is ranked lower, with only 12% of respondents choosing it as their preferred teaching methodology.
- Using Virtual Reality in Class receives the least preference, with only 5% of respondents selecting it as their top choice.
- Notably, no respondents rated Regular PowerPoint presentations as their highest preference, suggesting a preference for more interactive and engaging teaching methods.

This finding from Table 7 suggests that students view VR as a powerful tool for enhancing teaching and learning experiences. The immersive and interactive nature of VR allows educators to create dynamic and engaging learning environments that can captivate students' attention and facilitate a deeper understanding of the subject matter. By incorporating VR into their teaching methodology, educators can offer students unique and experiential learning opportunities that go beyond traditional classroom settings.

In contrast, the effectiveness of other teaching approaches such as the flipped classroom and design thinking for educators may be perceived differently by students. While these approaches have their own merits and benefits, it appears that VR is favored by students as a more impactful and innovative method for learning.

### 4.6 VR Investigate whether VR enhances learning experiences and drives student growth in understanding products and services:

**Table 8:** VR experience

| | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| **VR Products and service** | 48% | 34% | 8% | 7% | 3% |

The primary research findings from Table 8 indicate that a significant proportion, approximately 48%, of respondents strongly agree that Virtual Reality (VR) provides an exceptional experience in enhancing the learning experience. Moreover, it is suggested that this enhanced learning experience driven by VR has the potential to contribute to consumer growth in understanding products and services.

This finding underscores the transformative impact of VR technology on the learning process. By immersing users in realistic and interactive virtual environments, VR can provide learners with hands-on experiences that are engaging, memorable, and effective for knowledge retention. As a result, learners may develop a deeper understanding of complex concepts, theories, and practical skills related to products and services.

Furthermore, the notion that VR-driven learning experiences can drive consumer growth in understanding products and services suggests the broader implications of VR beyond education. VR has the potential to revolutionize how consumers engage with and comprehend products and services by offering immersive and interactive experiences that go beyond traditional marketing methods. For example, VR can be used to simulate product demonstrations, virtual tours of facilities, or interactive training modules, allowing consumers to experience products and services firsthand in a virtual environment.

### 4.7 Determine the effectiveness of using VR in teaching Consumer Behavior(CB) subject and its impact on learning success:

**Table 9:** VR in Consumer Behaviour

| | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| **VR in CB** | 55% | 30% | 8% | 5% | 3% |

- Strongly Agree: 55% of respondents strongly agree that VR has positively impacted their learning success in Consumer Behavior.
- Agree: 30% of respondents agree with the statement, indicating further support for VR's positive influence on learning outcomes.
- Neutral: 8% of respondents neither agree nor disagree, suggesting a lack of strong opinion on VR's impact.
- Disagree: Only 5% of respondents disagree with the statement, indicating a minority who do not find VR beneficial for learning in this subject.
- Strongly Disagree: The lowest percentage, at 3%, strongly disagrees, indicating a small group with strong negative views on VR's impact.

The majority view VR positively, with only a minority expressing neutral or negative opinions, highlighting its perceived effectiveness in enhancing learning success in the Consumer Behavior subject.

### 4.8 Evaluate whether respondents believe that sufficient IT infrastructure should be accessible to integrate emerging technologies like VR into teaching.

**Table 10:** VR IT Infrastructure

| VR IT Infrastructure | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| | 39% | 37% | 8% | 10% | 5% |

- Strongly Agree: 39% strongly agree that adequate IT infrastructure is crucial for integrating new technologies into teaching.
- Agree: Close behind, 37% agree with the statement, reinforcing the importance of accessible IT infrastructure.
- Neutral: 8% express neutrality, showing a lack of strong opinion on the matter.
- Disagree: 10% disagree with the necessity of sufficient IT infrastructure for integrating new technologies into teaching.
- Strongly Disagree: The lowest percentage, at 5%, strongly opposes the idea of accessible IT infrastructure for integrating new technologies into teaching.

From above Table 10, the majority agree or strongly agree on the importance of IT infrastructure, with a minority expressing neutrality or disagreement.

### 4.9 Determine whether mobile headset-based setups are perceived to offer more immersive learning experiences compared to traditional screen-based methods.

**Table 11:** VR immersion

| VR immersion | Yes | No |
|---|---|---|
| | 94% | 6% |

The primary research findings from Table 11 reveal that a significant majority of students, approximately 94%, believe that mobile headsets will enhance learning more effectively compared to traditional screening methods. This indicates a strong preference among students for immersive and interactive learning experiences facilitated by mobile VR headsets.

The preference for mobile headsets suggests that students value the portability, flexibility, and immersive capabilities offered by VR technology. Mobile headsets enable students to engage with virtual environments and content anywhere and anytime, without being confined to a traditional classroom or screening setup. This flexibility allows for more personalized and on-the-go learning experiences, catering to the diverse needs and preferences of students.

### 4.10 Hypothesis:

***Hypothesis 1:*** Implementing virtual reality (VR) technology in MBA programs enhances brand equity among students.

This hypothesis is chosen because it investigates whether integrating virtual reality (VR) technology into MBA programs enhances brand equity among students. It's relevant due to VR's potential to revolutionize education and influence brand perception. By exploring how VR affects brand equity, institutions can understand its impact on their competitive position and student engagement. This hypothesis fills a research gap by systematically examining the relationship between VR implementation and brand equity, providing valuable insights for educational institutions aiming to leverage emerging technologies for strategic advantage.

- *Null Hypothesis (H0*): Implementing virtual reality (VR) technology in MBA programs does not enhance brand equity among students.

- *Alternate Hypothesis (H1):* Implementing virtual reality (VR) technology in MBA programs enhances brand equity among students

| Brand Equity Measure | Before VR Implementation | After VR Implementation | Change |
|---|---|---|---|
| **Brand Perception** | 6.8 | 7.5 | +0.716 |
| **Brand Association** | 7.2 | 7.9 | +0.789 |
| **Brand Loyalty** | 6.5 | 7.2 | +0.753 |

Above hypothesis -1, above table examines the impact of implementing virtual reality (VR) technology in MBA programs on brand equity measures among students. It compares brand equity measures before and after the implementation of VR to determine any changes.

- *Brand Equity Measure*: This column lists the different aspects of brand equity being measured, such as brand perception, brand association, and brand loyalty.
- *Before VR Implementation*: This column shows the scores or ratings of each brand equity measure before the introduction of VR technology.
- *After VR Implementation*: This column displays the scores or ratings of each brand equity measure after the implementation of VR technology.
- Change: This column calculates the difference between the scores before and after VR implementation, indicating the extent of change in each brand equity measure.

The table suggests that there is a positive change in brand perception, brand association, and brand loyalty after the implementation of VR technology in MBA programs, indicating an enhancement in brand equity among students.

**Interpretation:-**

Based on the data provided in the table, we can analyze whether to accept the null hypothesis (H0) or the alternate hypothesis (H1) regarding the impact of implementing virtual reality (VR) technology in MBA programs on brand equity among students.

Given that the changes in brand perception, brand association, and brand loyalty are all positive after the implementation of VR technology, it suggests that there is an enhancement in brand equity among students. This aligns with the claim made in the alternate hypothesis (H1) that VR technology enhances brand equity.

Therefore, based on the provided evidence, we would conclude to accept the alternate hypothesis (H1) that implementing virtual reality (VR) technology in MBA programs enhances brand equity among students.

***Hypothesis 2:*** VR-based learning experiences positively influence student engagement and motivation in MBA programs.

This hypothesis explores whether VR-based learning experiences positively influence student engagement and motivation in MBA programs. It suggests that leveraging virtual reality (VR) technology enhances student involvement and enthusiasm within MBA courses. By investigating this relationship, educational institutions can assess the effectiveness of VR in enhancing the learning experience and fostering student motivation. This hypothesis is important as it addresses the potential of VR to revolutionize education, providing insights into its impact on student engagement and motivation in MBA programs.

- *Null Hypothesis (H0):* VR-based learning experiences do not positively influence student engagement and motivation in MBA programs.

- *Alternate Hypothesis (H1):* VR-based learning experiences positively influence student engagement and motivation in MBA programs.

| Student Engagement Measure | Traditional Teaching | VR-based Learning | Difference |
|---|---|---|---|
| **Participation Rates** | 75% | 85% | +10% |
| **Academic Performance** | 75% | 80% | +5% |
| **Student Satisfaction** | 7.2 | 8.5 | +1.3 |

Above hypothesis -2, above table investigates the influence of VR-based learning experiences on student engagement and motivation in MBA programs. It compares student engagement measures between traditional teaching methods and VR-based learning to assess the effectiveness of VR in enhancing student engagement.

- *Student Engagement Measure:* This column lists the different aspects of student engagement being measured, such as participation rates, academic performance, and student satisfaction.
- *Traditional Teaching:* This column shows the levels or rates of each student engagement measured under traditional teaching methods.
- *VR-based Learning:* This column displays the levels or rates of each student engagement measure under VR-based learning experiences.
- Difference: This column calculates the difference between the levels or rates of each student engagement measure between traditional teaching and VR-based learning, indicating the impact of VR on student engagement.

The above table indicates that VR-based learning experiences lead to higher participation rates, improved academic performance, and increased student satisfaction compared to traditional teaching methods, suggesting a positive influence of VR on student engagement in MBA programs.

**Interpretation:**

Based on the data provided in the table, we can analyze whether to accept the null hypothesis (H0) or the alternate hypothesis (H1) regarding the influence of VR-based learning experiences on student engagement and motivation in MBA programs.

Given that the differences in participation rates, academic performance, and student satisfaction are all positive after the implementation of VR-based learning experiences, it suggests that VR positively influences student engagement and motivation in MBA programs. This aligns with the claim made in the alternate hypothesis (H1) that VR-based learning experiences positively influence student engagement and motivation.

Therefore, based on the provided evidence, we would conclude to accept the alternate hypothesis (H1) that VR-based learning experiences positively influence student engagement and motivation in MBA programs.

## 5. FINDINGS :

It's been quite a while since I was captivated by the potential of VR to benefit our society. I am thrilled to have been one of the individuals who successfully experimented with VR in my classroom. It's amazing to think about how VR can revolutionize decision-making processes, and I'm excited to showcase real-time examples of its applications across various fields. While some of my students may have grasped the concept better than others, the fact remains that VR has the power to transcend our existing experience in real-time (refer to Table 12).

In the realm of education, the potential of VR is evident through the growing interest from researchers and organizations. We have seen numerous examples of VR being used in educational settings, providing a glimpse into the diverse applications and subject matter covered. These examples are just a snapshot of the possibilities, as new applications are continually being developed. In addition to the development of educational platforms, research is also being conducted on the effectiveness of VR in learning and its impact on cognitive abilities such as memory, spatial awareness, and perception (Duffy & Jonassen, 1992). [50]).

**Table 12:** Comparatively analysis on Real-Time Consumer Perception V/s VR experience

| Real Experience | VR Experience |
|---|---|
| Distraction among people | VR offers an exceptional experience that can drive consumer understanding of products and services. |
| It's Routine | VR is amazing and everyone should consider using it. |
| Practical visiting cumbersome | VR should be utilized for selecting from a broader range of products. |
| Makes sense to be on the spot | VR provides a 21st-century experience that should be wisely utilized. |
| The satisfaction level is more | VR experiences often elicit a "wow" reaction. |
| No fun | VR allows us to experience anything before actually experiencing it. |
| It's good but time-consuming | VR offers a better understanding of integrating technology into retail. |
| Tough to move from one place to other | VR helps save time by providing world-class experiences. |
| More consumer while purchasing | VR can reach our expectations during the purchasing process. |

Konstantina Apostolou & Vasilios Koutsiouris, along with Adam Vrechopoulos, have explored the emerging trends in virtual reality retailing (VRR), highlighting its potential as an innovative shopping channel. Their research underscores the importance of understanding consumer behavior in virtual environments and the factors influencing store selection criteria in the realm of VRR. Based on the data analysis of the responses comparing real experiences to Virtual Reality (VR) experiences, several key findings emerge:

- VR enhances consumer understanding of products and services, potentially driving consumer growth.
- Most participants found VR amazing and recommended its use for everyone.
- VR simplifies product selection by offering a broader range without in-person visits.
- VR is a 21st-century experience that should be wisely utilized for immersive and innovative experiences.
- VR elicits high satisfaction levels, surpassing traditional methods.
- Participants enjoy VR for its entertainment value and versatility.
- VR has the potential to revolutionize retail by providing innovative shopping experiences.
- VR saves time by delivering world-class experiences without physical movement.
- VR meets consumer expectations during the purchasing process, enhancing the shopping experience.

Overall, the findings suggest a positive perception of VR technology and its potential to transform various aspects of consumer experiences, from shopping to entertainment. Participants expressed enthusiasm for the immersive and innovative capabilities of VR, indicating a willingness to embrace VR as a valuable tool in various domains.

## 6. CHALLENGES AND OPPORTUNITIES :

### 6.1 Challenges:

(1) Many students are hesitant to embrace new learning methods, preferring to stick with familiar and structured approaches.
(2) Introducing VR for concept-based learning in MBA programs requires time for adaptation, as it is a new tool for both students and educators.
(3) The lack of infrastructure and curriculum integration in colleges hinders the implementation of VR technology in education.
(4) Utilizing VR experiences can enhance the effectiveness of teaching methods for course instructors.

(5) Technology-based learning has significant potential for growth and impact.
(6) There are several notable drawbacks and challenges associated with the use of VR in education, including high financial costs, limitations in realism and skill transfer, and potential physical effects on users (Christou, (2010). [51]).

### 6.2 Opportunities:

Innovations in education, particularly those involving VR technology, are essential for transforming the learning experience and addressing traditional educational challenges. VR-enabled technology offers portable and accessible solutions that provide learners with new and immersive experiences. This shift towards the next generation of learning requires readiness from educators, students, and institutions to effectively integrate technology into education. VR facilitates a personalized and collaborative learning environment, offering numerous benefits for teaching and learning. Sala Nicoletta (2006) [52] proposed several deductive considerations regarding the use of multimedia and virtual reality in education:

(1) Multimedia enhances the teaching process by providing different communication codes, making explanations more incisive.
(2) Lectures become more interactive, allowing students to engage with virtual objects or navigate through hypermedia.
(3) Virtual reality holds potential future applications in architecture and engineering, including marketing, communication, evaluation modeling, and design tools.

The possible advantages of VR in the design process and practice of architecture and engineering include:

- Testing ideas in real-time and three-dimensional space during the design process.
- Communicating ideas effectively and influencing stakeholders.
- Encouraging bolder and better designs.
- Integrating various aspects of the design process.

However, to effectively utilize VR as an educational tool in technical fields such as architecture and engineering, it is crucial to address simulation issues and ensure that VR solutions are tailored to meet the specific needs of learners and educators.

## 7. IMPLICATIONS :

***Theoretical Implications:***

An empirical study on emerging educational technology (EdTech) in MBA programs, specifically focusing on enhancing brand equity through virtual reality (VR), carries several theoretical implications. Firstly, it contributes to the literature on brand equity by exploring how VR technology can influence and enhance brand perceptions among MBA students. Traditionally, brand equity has been measured through various dimensions such as brand awareness, perceived quality, brand associations, and brand loyalty. However, this study introduces a novel dimension by examining how immersive VR experiences can shape students' perceptions of a brand, leading to a deeper understanding of brand equity in the digital age.

Moreover, the study adds to the growing body of literature on the application of VR in education, particularly in MBA programs. By investigating the use of VR technology as a tool for enhancing learning experiences and brand engagement, the study sheds light on the potential of immersive technologies to revolutionize traditional educational practices. This aligns with theoretical frameworks related to experiential learning and technology-mediated learning environments, offering insights into how VR can be integrated into MBA curricula to enhance student engagement and learning outcomes.

Overall, the theoretical implications of this study extend to the fields of brand management, education, and technology, providing valuable insights into the intersection of these domains and highlighting the transformative potential of VR in shaping brand perceptions and educational experiences.

***Managerial Implications:***

An empirical study on emerging EdTech in MBA programs, focusing on enhancing brand equity through virtual reality (VR), carries significant managerial implications for educational institutions and administrators. By demonstrating the effectiveness of VR in enhancing brand equity and student engagement, the findings provide guidance for administrators and curriculum developers on incorporating VR-based experiences into MBA courses.

Drawing from the insights of Apostolou, K., Koutsiouris, V., & Vrechopoulos, A. (2010) [53], the emergence of Virtual Reality Retailing (VRR) as a burgeoning shopping channel highlights the potential of virtual environments in shaping consumer behaviour. Research in this field is nascent but suggests that consumers are drawn to virtual spaces primarily for entertainment and social interaction purposes.Specifically, the study suggests that educational institutions should consider investing in VR infrastructure and faculty training to ensure successful implementation and integration of VR technology into MBA curricula. Additionally, administrators can explore various VR-based educational initiatives, such as virtual campus tours, interactive brand simulations, or immersive case studies, to enhance student engagement with enhancing once learning outcomes.

Furthermore, the study highlights the importance of strategic partnerships with VR technology providers and industry stakeholders to access cutting-edge VR tools and resources. By leveraging VR technology effectively, educational institutions can differentiate their MBA programs, attract prospective students, and enhance their brand reputation as innovative and forward-thinking institutions.

## 8. CONCLUSION :

The empirical study underscores VR's potential in MBA programs to boost brand equity and engage students through immersive learning experiences. Investment in VR infrastructure and partnerships is vital for successful integration, positioning institutions as educational innovators. Additionally, the development of mobile infrastructure supports mobile learning, creating new opportunities for e-learning and telecommunications. Integrating VR into educational settings is still evolving, requiring further exploration to enrich the student experience and facilitate interaction between educators and students in an evolving educational landscape.

***Scope for Future Work:***

While this study sheds light on VR's application in MBA education and brand management, future research could explore various avenues. Longitudinal studies could assess VR's impact on learning outcomes, retention, and career prospects in MBA programs. Moreover, investigating the cognitive processes underlying VR's influence on brand perceptions and consumer behavior using advanced techniques like neuroimaging could provide deeper insights. Additionally, exploring the potential of AR and VR technologies in MBA education and brand management could be fruitful. Comparing immersive technologies' effectiveness in enhancing student engagement and brand equity would be valuable. Overall, the field of VR in education and brand management offers rich opportunities for further investigation, promising new insights and innovations.

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