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Assessing Awareness and Use of Immersive Technologies in Higher Education: A Focus on Animation Design Practices

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Abstract: Immersive technologies, containing virtual reality (VR), augmented reality (AR), and mixed reality (MR), collectively known as Extended Reality (XR), are transforming educational and creative practices across disciplines. While these technologies offer unparalleled opportunities for engagement, experiential learning, and innovation, their awareness and adoption vary significantly across academic and professional domains. This paper investigates the level of awareness and the diverse applications of immersive technologies in academic discourse and animation design practices. In academia, immersive technologies are increasingly integrated into teaching methodologies, enhancing learning outcomes through interactive and experiential approaches. However, the extent of their adoption and the barriers hindering widespread use remain critical issues. Similarly, in animation design, immersive technologies enable new paradigms of storytelling, character design, and real-time rendering, yet challenges such as accessibility, cost, and skill gaps continue to limit their potential. However, these opportunities remain limited by issues such as accessibility, cost, as well as lack of expertise. This study combines literature review and surveys in this research to determine the potential barriers for awareness and adoption, as well as their relevance, and explain the link between academic research and industry practice. Survey of 351 participants from various academic domains & professionals shows Virtual reality to be most popular technology and Chi-square test conducted shows a significant relation between academic domain and awareness of these technologies.

Keywords: Immersive Technologies, Academic Sphere, Animation, Design, Awareness & Adoption, Virtual Reality & Augmented Reality.

1. INTODUCTION

Immersive technologies, such as virtual reality (VR), augmented reality (AR), mixed reality (MR), and extended reality (XR), are changing the way people interact with digital environments. These advancements provide consumers with a better sensory experience by seamlessly connecting the physical and virtual worlds. In recent years, academics and professionals have begun employing these technologies, realizing their revolutionary power to encourage engagement, comprehension, and innovative inquiry.

Historical Context

The origins of immersive technology date to the 1960s with Morton Heilig's creation of the "Sensorama," a multi-sensory simulator aimed at augmenting cinematic experiences (Heilig, 1962). Subsequently, Ivan Sutherland's creation of the inaugural head-mounted display

(HMD) in 1968 signified a crucial milestone in the development of virtual environments (Sutherland, 1968). Over the decades, enhancements in computational capacity, graphical rendering, and sensory feedback systems have transformed these technologies from experimental ideas to widely utilized tools across several industries.

Current State

Rising as effective strategies for improving academic experience learning, immersive technologies reduce the theoretical knowledge gap by means of practical application. Interactive simulations allow students rapidly and securely assess difficult systems in engineering education (Pantelidis, 2009) and (Manchanda et al., 2024). In the same line, virtual archaeological site visits in history lectures provide students access to contextually rich settings not feasible via traditional teaching approaches (Economou, 2015). Moreover, immersive platforms facilitate international cooperative learning, hence enabling trans disciplinary research projects and global academic relations (Dede, 2009). Apart from education, immersive technologies affect other sectors including retail (Huang & Liao, 2015) where AR improves consumer experiences by means of virtual try-on operations, and healthcare (Viderman et al., 2023), where VR is employed for surgical training and pain treatment. In the fields of architecture and real estate, immersive technologies (Gupta et al., 2022) & (Kumar et al., 2022) enable stakeholders to interact with and see ideas before they are developed, therefore reducing costs and enhancing decision-making (Whyte, 2002). Security (Kumar & Kundu, 2024a) and (Kumar & Kundu, 2024b) issue may also take into consideration.

Application in Animation Design

In the field of animation design, immersive technologies have opened new frontiers for storytelling, design workflows, and audience interaction. By integrating VR and AR into the creative process, animators can design and refine assets in a three-dimensional space, enhancing precision and creativity (Thomas & Johnson, 2018). Furthermore, immersive storytelling enables audiences to engage with narratives in more interactive and participatory ways, transforming the viewer’s role from passive observer to active participant (Murray, 2017).

Familiarity & awareness with Immersive Technologies (Acquaintance with Immersion Technologies)

Although immersive technologies possess transformative potential, it is crucial to assess the level of comprehension and familiarity with these breakthroughs across various demographics. Individuals across various professions, scholars, and students exhibit varying levels of understanding regarding immersive technology and its applications. This research seeks to examine the levels of awareness and perspectives of various groups, thereby identifying gaps in knowledge and opportunities for further information dissemination. Assessing stakeholders' understanding of the advantages and obstacles of immersive technology can facilitate the development of more effective integration and instructional strategies. Image processing (Gupta et al., 2021) and (Kumar & Malhotra, 2023) related work can be consider.

Perspective Trajectories

Immersion technologies offer always rising prospects. Progress in artificial intelligence (AI) and machine learning (ML) (Kodepogu et al., 2022), (Kumar & Aggarwal, 2023), (Kumar et al., 2021), (Kumar & Garg, 2023) will enhance the adaptability and personalization capabilities of immersive events (Yusuf et al., 2024). Immersion technology-driven virtual classrooms may ultimately become standard in academia, as they provide customized learning environments and equitable access to high-quality education globally. The incorporation of immersive technologies and real-time rendering in animation design is anticipated to transform audience engagement and collaboration, hence creating unprecedented creative opportunities.

2. METHODOLOGY

This paper uses a mixed-methods approach to analyze the awareness, uses, and integration of immersive technology in academic discourse and animation design processes. Data collecting mostly consisted in the distribution of a survey form based on Google Forms. The poll was meant to compile qualitative and quantitative information from a wide spectrum of respondents including academics, professionals, university students from many backgrounds, and those employed in administrative capacities.

2.1 Validation and Survey Design

Developed in September 2024, the first questionnaire was inspired by subject-matter experts—including professors from pertinent disciplines—by Feedback from these professionals helped the form to be progressively improved so guaranteeing clarity, relevance, and comprehensiveness. Certain redundant or similar questions were eliminated throughout this validation phase, and more choices were included to more fully represent the range of the study. This iterative process helped the questionnaire to be idealized for validity and dependability.

2.2 Data gathering

Target groups were extensively sent the completed questionnaire using academic networks, professional venues, and direct outreach. Over four months, responses were gathered; their final date is January 20, 2025. Data from 351 respondents were effectively acquired by this date. The poll consisted in several parts with questions about the respondents' knowledge of immersive technologies, expected uses in their particular fields, and views on the future possible of these technologies.

2.3 Test Hypotheses

A hypothesis testing method was used to examine awareness levels between respondents from other fields and those from animation design domains. Proposed as the null hypothesis (H 0 H 0) was that, awareness of immersive technology has no appreciable correlation with the animation domain. On the other hand, the alternative hypothesis (H 1H 1) proposed a noteworthy correlation between these factors. Chi-square tests and p-value calculations were the statistical techniques used to evaluate the validity of the hypotheses and ascertain whether awareness varies domain-specifically.

2.4 Research Analysis of Data

Statistical and qualitative methods were applied in analysis of the gathered data. Descriptive and inferential statistical analysis of quantitative data sought trends, correlations, and notable variances among respondent groups. To better understand how various groups view and apply immersive technology, for example, awareness levels were compared across domains and application preferences were evaluated. Derived from open-ended questions, qualitative data was thematically analyzed to provide complex viewpoints on the future possibilities and obstacles of immersive technologies.

2.5 Ethical considerations

Maintaining the anonymity and secrecy of every respondent, the study guaranteed ethical research procedures. Respondents to the voluntary survey were told the goal of the research prior to offering their responses.

With an especially eye towards animation design and its relative awareness levels, this methodological approach enabled a thorough knowledge of how immersive technologies are seen and used across many spheres. The results shed light on the present level of knowledge and applications as well as guide policies for encouraging more general integration of these transforming instruments in both academic and professional environments.

3. LITERATURE REVIEW

The application of immersive technology in academic and professional domains has been thoroughly studied, producing substantial insights into its transformative potential. This section analyses key research, highlighting the authors, objectives, techniques, conclusions, and shortcomings identified in the existing literature.

3.1 Immersive Technologies in Academic Discourse

(Ananin & Suvirova, 2024) investigated the integration of immersive technologies in Russian higher education. Their study aimed to explore institutional and didactic aspects of immersive technology applications. Using qualitative interviews with university representatives (N=16), the research identified that immersive tools enhance experiential learning, bridging theoretical concepts with real-world applications. However, challenges such as regulatory barriers and faculty readiness were noted (Ananin & Suvirova, 2024)

(Baxter & Hainey, 2023) examined students' perceptions of immersive technology in higher education. The study adopted a mixed-methods approach, collecting data from 83 undergraduate students. Findings revealed a preference for face-to-face learning, yet students acknowledged the engagement benefits of immersive technologies. High costs and motion sickness were cited as major drawbacks (Baxter & Hainey, 2023).

3.2 Applications in Animation Design

(Pilgrim & Pilgrim, 2021) explored immersive storytelling and VR's role in digital narratives. Their book chapter detailed VR's ability to enhance user engagement in animation and cross-disciplinary storytelling. By presenting methodologies for immersive storytelling, the study highlighted VR's potential in animation education and interactive media (Pilgrim & Pilgrim, 2021).

(Kuzmin & Lavlinsky, 2022) examined AR and VR applications in educational media design, focusing on integrating these tools in physics textbooks. The study developed a prototype AR-enhanced learning tool, demonstrating improved comprehension. The authors recommended using free, open-source platforms like Unity for AR animation development (Kuzmin & Lavlinsky, 2022).

(Dede, 2009) investigates the utilization of immersive technologies to enhance engagement and learning in educational environments. The objective was to evaluate how immersive interfaces improve experiential learning by creating realistic and engaging environments. The study demonstrated that students participating in virtual simulations for engineering and history education exhibited enhanced information retention and increased motivation compared to traditional methods. The study identified challenges in accessibility and the need for scalable solutions to integrate immersive technologies into diverse educational settings.

(Pantelidis, 2009) analyzed the rationale for incorporating VR into education and training, emphasizing its ability to provide safe, controlled environments for experimentation. The research utilized qualitative interviews and prototype implementations in several educational institutions. The results demonstrated significant benefits, including improved skill acquisition and reduced learning anxiety. Pantelidis observed the lack of comprehensive guidelines for integrating VR into curricula, emphasizing the need for further research on best practices and evaluations of long-term effects.

(Li et al., 2011): This study examined the utilization of virtual reality in healthcare, namely for pain management. The researchers conducted a meta-analysis of clinical trials employing virtual reality to mitigate patient suffering during challenging procedures. The findings revealed a significant reduction in reported pain levels, with virtual reality exhibiting considerable effectiveness for pediatric patients. The study highlighted the therapeutic potential of VR while recognizing its limitations, such as the high cost of VR technology and the need for more extensive longitudinal trials to confirm lasting benefits.

(Murray, 2017) investigates the impact of immersive storytelling on narrative experiences. The study aimed to investigate the influence of VR and AR technologies on traditional storytelling by engaging users as active participants. Murray discovered that immersive storytelling, via theoretical frameworks and instances from interactive media, expands creative potential and enhances emotional involvement. The study emphasized the technological challenges and substantial learning curves encountered by authors, revealing a lack of user-friendly tools for story creation. The generative AI (Ghosh et al., 2025) and (Malhotra et al., 2025) results may also be consider.

(Huang and Liao, 2015) conducted a study on customer acceptance of augmented reality technology in retail environments. Their objective was to understand the factors influencing user engagement and adoption. Researchers found through surveys and controlled experiments that cognitive innovativeness significantly affected user satisfaction and the likelihood of using AR applications. The study provided valuable data for merchants but exposed shortcomings in understanding cultural and demographic variations in AR acceptability.

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Table 1. Literature Review with Objectives, Outcomes and Research Gaps

Author	Research Title	Objective	Outcome	Research Gap
(Ananin & Suvirova , 2024)	Immersive Technologies in Russian Higher Education	Analyze institutional use of immersive tech	Enhances learning, needs policy support	Lack of regulations
(Baxter & Hainey, 2023)	Using Immersive Technologies in Higher Education	Assess student engagement	Benefits learning, high cost & motion sickness issues	Cost barriers
(Pilgrim & Pilgrim, 2021)	Immersive Storytelling in Digital Narratives	Explore VR storytelling applications	Enhances engagement in animation	Limited empirical testing
(Kuzmin & Lavlinsky,2022)	AR & VR in Educational Media Design	Develop AR-integrated textbooks	Improved comprehension, flexible use	Lack of user adoption studies
(Ijaz et al.,2017)	The Immersive Learning Laboratory	Implement VR-based education lab	Increased engagement, challenges in adoption	Motion sickness issues
(Chen et al.,2023)	A Systematic Review of Research on Immersive Technology-enhanced Writing Education	To review the current state and propose a research agenda for immersive technology in writing education.	Immersive environments provide authentic learning settings	But long-term impact studies are needed.
(Esteves et al., 2023)	Design Recommendations for Immersive Virtual Reality Applications in English Language Learning	To provide guidelines for developing effective immersive virtual reality educational tools.	User-centered design, interactivity, and cultural relevance are crucial, but empirical evidence on effectiveness is limited.	But empirical evidence on effectiveness is limited.
(Talia Tene1, Jessica Alexan	Integrating Immersive Technologies with STEM Education	To assess the impact of VR and AR on student performance and	VR and AR enhance engagement and conceptual understanding, but	But high costs and implementation barriers exist.

dra Marcatoma,2024)		engagement in STEM.	high costs and implementation barriers exist.	
(Shan Wu et al, 2021)	Design and Research of Interactive Animation of Immersive Space Scene Based on Computer Vision Technology	To analyze how spatial animations affect immersive experiences in virtual spaces.	Interactive animation enhances immersion,	But color dynamics in immersive animations need further exploration.
(C. Tollola 2021)	Procedural Animations in Interactive Art Experiences: A State of the Art Review	To examine the use of procedural animations in interactive art experiences.	Sensory displays improve user engagement,	But real-time user feedback integration remains a gap.

Whyte, (2002): Whyte's study concentrated on the application of virtual reality in architecture and real estate. The aim was to evaluate how immersive visualization technologies improve design decision-making and stakeholder communication. Through the examination of architectural case studies, Whyte shown that virtual reality diminishes errors and enhances comprehension of spatial relationships. Nevertheless, the study revealed obstacles including the high expense of VR installation and the restricted technical proficiency of end users. For security sake some emerging techniques as presented in (Kumar et al., 2024), (Aggarwal et al., 2025), (Gupta et al., 2019) and (Kumar et al., 2023)
Can also be consider.
Despite the growing body of research on immersive technologies, several gaps remain. And they are as follows:

- ***Accessibility and Cost***: Many studies highlight the prohibitive cost of immersive technologies, limiting their widespread adoption in educational and professional settings.
- ***Technical Expertise***: Need for more training in immersive storytelling
- **Scalability:** Few studies address the challenges of scaling immersive technologies for large, diverse populations.
- ***Cultural and Demographic Variations***: Research often overlooks the influence of cultural and demographic factors on technology adoption.
- ***Long-term Impact***: While short-term benefits are well-documented, there is a lack of longitudinal studies examining the sustained impact of immersive technologies.

4. RESULTS

The novel innovative technologies are engulfing all domains entertainment to education and training sectors, it has equally impacted the animation and design domains especially in education and training. To check the awareness its applications in academic sphere and in animation design, a survey is performed. And the findings of the survey are as follows.

Survey was filled by university students, Scholars, professionals, academicians of different age groups from 17, 18 to 65 years of age from the different regions and states of India and different universities, companies etc. Here is the outcome of the survey conducted. Accuracy of results greater than 95% (Kumar et al., 2022) is expected in this ML era.
Following are the relationships and characteristics of the survey participants and results.

4.1 Age & Total Percentage

Figure 1. Age & Total %age of Participants

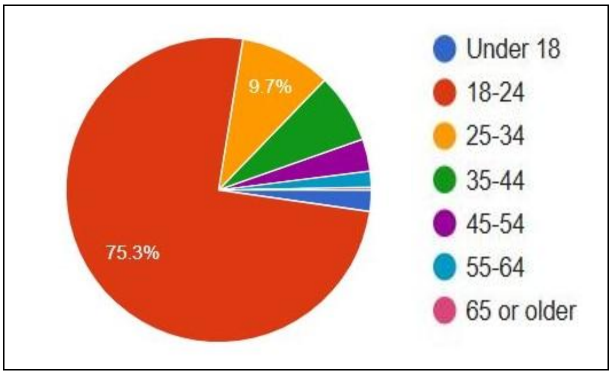

Figure 2 also show the percentage of respective age groups participated in survey.

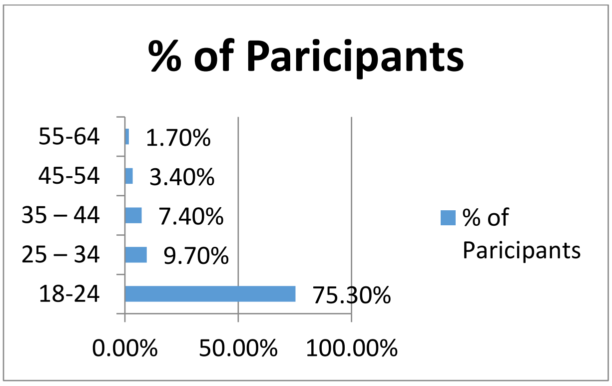

Figure 2. Age & %age of participants

4.2 **Profile & work domain**

Participants of the survey are from different academic fields and are from different professions. Below is the description for that.

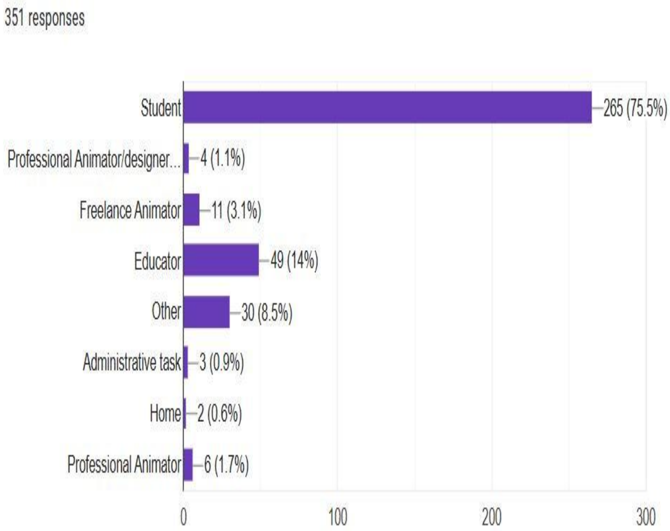

Figure 3. Participants Profile

4.3 **Participants Profile Categories**

Here in figure 4 is the further categorization of domains and their profiles.

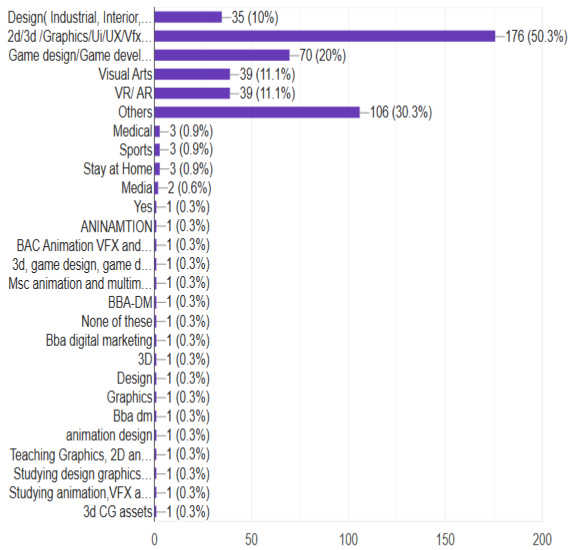

Figure 4. Participants Profile Categories

4.4 **Familiarity with Virtual Reality**

Survey conducted shows variation in the level of awareness of virtual reality.
As shown in Figure 5, Participants familiarity level varies:

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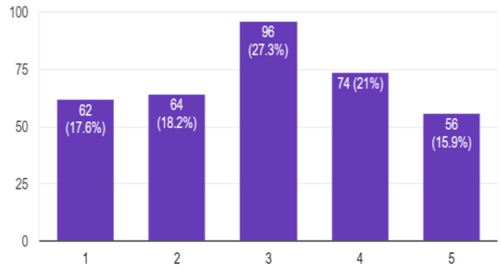

Figure 5. Familiarity with VR

Virtual Reality (VR) Familiarity

- 1 (Not familiar at all): 62 responses (17.6%)
- 2: 64 responses (18.2%)
- 3 (Neutral): 96 responses (27.3%) → Most common response
- 4: 74 responses (21%)
- 5 (Very familiar): 56 responses (15.9%)
- Observation:
  - Most respondents (27.3%) have moderate familiarity (3).
  - A significant portion (17.6% and 18.2%) are on the lower end (1 or 2).
  - Higher familiarity levels (4 and 5) account for 36.9%, suggesting that while many are somewhat

4.5 Familiarity with Augmented Reality

The survey also exhibits the variation in the familiarity level of participants for augmented reality. It is clearly shown in the figure 6. Bar Chart.

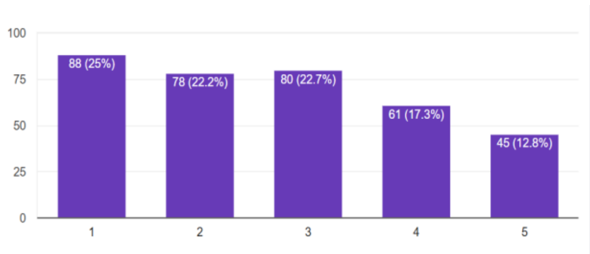

Figure 6. Familiarity with AR

Augmented Reality (AR) Familiarity

- 1 (Not familiar at all): 88 responses (25%) → most common response 2: 78 responses (22.2%)
- 3 (Neutral): 80 responses (22.7%)
- 4: 61 responses (17.3%)
- 5 (Very familiar): 45 responses (12.8%)
- Observation:
  - The largest group (25%) is not familiar at all with AR.

  - Less familiarity compared to VR: More people rated AR as 1 or 2 (47.2%) than VR (35.8%).
  - Only 30.1% rated their familiarity as 4 or 5, which is lower than VR (36.9%).

4.6. Familiarity with Mixed Reality

Similarly survey conducted also displayed the variation in the figures for awareness with mixed reality.

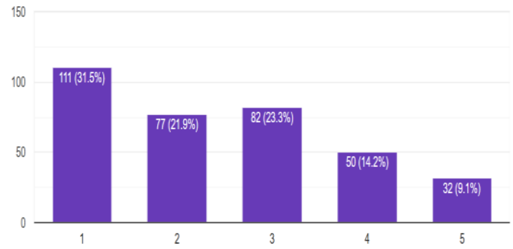

Figure 7. Familiarity with MR

Mixed Reality (MR) Familiarity

- 1 (Not familiar at all): 111 responses (31.5%) → Most common response
- 2: 77 responses (21.9%)
- 3 (Neutral): 82 responses (23.3%)
- 4: 50 responses (14.2%)
- 5 (Very familiar): 32 responses (9.1%)

A big group 31.5% is not familiar with Mixed reality. However 23.3% clicked on neutral which shows either they have moderate knowledge about it.
Only a very small portion of 9.1% percentage are very much familiar with MR.

5. MAIN OBSERVATIONS

Study conclude the following comparisons: VR is more familiar to people than AR:

- More respondents rated VR as 3, 4, or 5 compared to AR.
- AR has a higher proportion of respondents who are not familiar at all (1 and 2).
- Neutral familiarity (3) is common in both:
  - VR: 27.3%
  - AR: 22.7%
- More people are unfamiliar with AR (47.2% rated 1 or 2) than with VR (35.8%), suggesting that AR might be less commonly experienced.

This indicates that VR is the most commonly recognized

5.1 Familiarity Comparison between VR AR & MR

Table 2. Familiarity Comparison between VR AR &MR

	Very Familiar	Not Familiar
VR	15.90%	17.60%
AR	12.80%	22.20%
MR	9.10%	31.50%

In figure 8 and Table 2, study exhibits the following results.

1. VR > AR > MR in terms of overall familiarity.
   More respondents are familiar with VR than AR and MR.

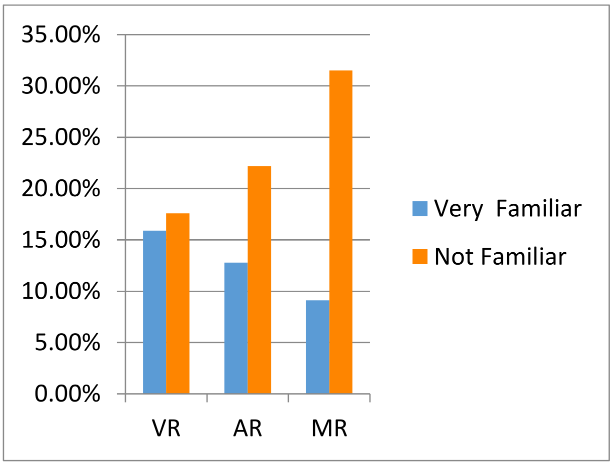

Figure 8. Familiarity Comparison between VR, AR & MR

5.2 Familiarity ranking

In figure 8 and Table 2 study exhibits the following results.

2. MR has the highest percentage (31.5%) of respondents who are completely unfamiliar (rating 1).
   VR has the most respondents in the higher familiarity range (4 and 5).
3. *Least Familiar: Mixed Reality (MR)*
   Only 9.1% rated themselves as very familiar (5), the lowest among the three technologies.
   The majority of respondents are not familiar (1 or 2 = 53.4%) with MR.
   This suggests MR is less widely known compared to VR and AR.
4. *Most Familiar: Virtual Reality (VR)*
   More people rated VR as 4 or 5 (36.9%) than AR (30.1%) and MR (23.3%) technology.
5. *Augmented Reality (AR) is in the middle*
   More respondents are unfamiliar with AR than VR but less than MR.

22.7% rated AR as neutral (3), slightly less than VR (27.3%).
AR's familiarity distribution suggests it is known but not as widely adopted as VR

Though, the participants are from various domains of design like visual arts, interior design, graphics, 3d animation, game design etc and also from non animation like engineering, sports, administration etc. We have finally categorized them into two main categories for the calculation of awareness and application of immersive technologies among them. One is animation design profile which includes from visual art, Interior design, graphics, 2D animation etc. and other is Non Animation design .

6. RELATIONSHIP BETWEEN PROFILE AND AWARENESS WITH IMMERSIVE TECHNOLOGIES.

For analyzing the Relationship between profile and awareness of immersive technologies we calculate the **Chi-Square Value and p-value using SPSS software;**

- **Null hypothesis is applied as:** There is no significant relationship between Profile domain and Awareness of Immersive Technologies.
- **Expected Frequencies and Chi-Square Test and p-value is calculated**

Calculations:

If **p-value < significance level (e.g., 0.05)**, reject H0H_0H0 (there is a significant relationship).

If **p-value ≥ significance level**, fail to reject H0H_0H0 (no significant relationship)

χ2=∑(O−E)2E\chi^2 = \sum \frac*{(O - E)^2}{E}*

χ2=∑E(O−E)2 (1)

- O = Observed frequency (actual counts from the data)
- E = Expected frequency (counts expected under the assumption that the two variables are independent)

6.1 Observed Data

Table 3 clearly shows the difference in the number of participants who are familiar with innovative technologies in both the categories.

Table 3. Awareness Comparison
Among Animation Design Vs Non Animation Design

Profile	Awareness to Immersive Technology: No	Awareness to Immersive Technology: Yes
Animation	88	148
Non Animation	72	41

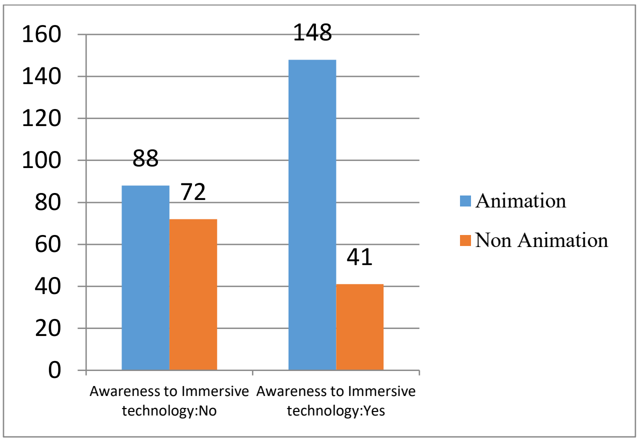

Figure 9. Awareness Comparison

6.2 Awareness Comparison within Domains

It clearly shows from the figure 10 and figure 11 that the percentage of participants, who are aware of innovative technologies are more in animation design domain, than in that of Non animation design domain.

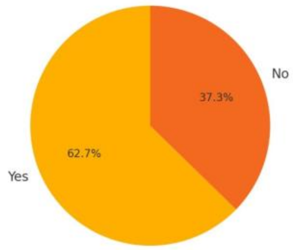

Figure 10. Animation Design and Awareness of immersive technology

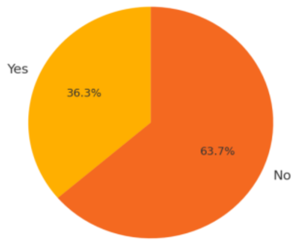

Figure 11. Non Animation Design and Awareness of immersive technology

But we are also checking it mathematically by Chi square value

Table4. Comparison between observed & expected values for two main Categories (Animation Vs Non Animation & Design)

Profile	yes (O)	YES (E)	NO(O)	NO€
Animation D	148	127.78	88	108.22
Non Animation D	41	61.22	72	51.78

Here is the formulae :

$$X^2 = \sum(O-E)^2/E \qquad (1)$$

$$X^2= (148-127.78)^2/127.78 +(88-108.22)^2/108.22 +(41-61.22)^2/61.22 +(72-51.78)^2/51.78 \qquad (2)$$

$$= 3.23+3.82+6.92+7.49 \qquad (3)$$

$$X^2 = 20.45 \qquad (4)$$

Chi- square test value = 20.45

p-Value Calculation

The p-value in chi-square test is calculated using chi-square cumulative distribution function**(CDF)**

$$p=1-P(x^2,df) \qquad (5)$$

Where

X^2 = is the calculated chi-square statistic
df = degree of freedom, given by:

$$p(x^2,df)$$

is the probability from the chi- square distribution for the given degree of freedom.

$$df=(rows-1)*(columns-1)$$

$$df=(2-1)*(2-1)=1$$

$$p =1-P\ (x2=20.45,df=1) \qquad (6)$$

$$p = 6.13*10^{-6} \quad (7)$$

p value is 6,13e-06, is very low

$$p < 0.05 \quad (8)$$

This means **Null hypothesis is rejected** and we accept the alternate hypothesis, which conclude that **awareness of immersive technologies is significantly associated with the profile type.**

6. DISCUSSION

The finding highlights the varying levels of awareness of immersive technologies, with VR leading due to its well-established presence in gaming, simulations, and design visualization. AR is moderately familiar, likely due to its increasing use in mobile applications and real-world integration. MR, being the least familiar, is still an emerging technology that requires further educational exposure and industry recognition.

The study emphasizes those individuals within the Animation Design domain exhibit higher awareness levels compared to those in Non-Animation Design fields. This suggests that direct industry involvement and educational Institutes and strategies and curriculum plays a crucial role in fostering familiarity with immersive technologies. The lack of significant statistical differences in awareness levels across domains suggests that immersive technology education needs broader accessibility and targeted outreach to different academic disciplines

7. CONCLUSION

The study underscores that VR is the most recognized immersive technology, followed by AR, while MR remains relatively obscure. Industry exposure plays a significant role in shaping familiarity levels, with professionals in animation design exhibiting greater awareness. To facilitate broader adoption, educational institutions, industry leaders, and researchers must collaborate in promoting immersive technology integration. Future initiatives should focus on accessibility, training, and awareness programs to ensure that all sectors can benefit from immersive innovations.

8. FUTURE PROSPECTS

Enhanced Educational Integration: Incorporating immersive technologies into academic curricula can enhance familiarity and practical exposure among students. Workshops and Training Programs: Conducting specialized training on VR, AR, and MR can address knowledge gaps, particularly for MR.

Industry Collaboration: Strengthening partnerships between academia and industry can promote hands-on applications and research in immersive technologies.

Further Research: Exploring the factors influencing MR adoption and its potential applications can help bridge awareness gaps. Technological Accessibility: Ensuring immersive technology tools are more affordable and accessible can drive wider adoption in academic and creative domains.

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