



A STUDY ON MALAYSIAN YOUNG ADULTS' PERCEPTION TOWARDS
VIRTUAL REALITY IN FILM INDUSTRY

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ABSTRACT

In the era of advanced technology nowadays, young adults have to adopt new technologies early to keep up with the current pace. Furthermore, more and more film industries are using Virtual Reality (VR) to present better visual effects. However, not every young person knows the convenience and usefulness of VR. The objective of this research is to understand Malaysian young adults' perception towards virtual reality usage in film industry. The study is also to identify how easily young adults in Malaysia can access VR technology for watching films, considering factors like cost and availability. Besides that, this study will also explore Malaysian young adults opinion on VR usage in enhancing filmmaking. This research will be conducted with quantitative research. In this study, the target population was 50 young adults aged 18-25 in Malaysia, and the sampling method employed is convenience sampling. To collect quantitative data, a structured survey questionnaire is developed, focusing on exploring participants' experiences with Virtual Reality (VR) films, their preferences in film consumption, and the perceived impact of VR on traditional viewing habits. The questionnaire incorporates Likert scales to measure attitudes, preferences, and satisfaction levels regarding VR films. Participants will be asked to rate statements on a scale, providing a quantitative measure of their sentiments. For data analysis, the collected survey data will undergo quantitative analysis using statistical tools such as SPSS, enabling the identification of patterns and correlations in participants' responses.

Keywords: *Virtual reality, young adults, impact, technology, filmmakers*

Subject Area: T173.2-174.5 Technological change

Chapter I: Introduction

1.0 Introduction

This chapter introduces the research on a study on Malaysian young adults' perceptions towards virtual reality in the film industry. By investigating this topic, the purpose of this study is to understand Malaysian young adults' perception towards virtual reality usage in the film industry. This study also identifies how easily young adults in Malaysia can access VR technology for watching films, considering costs and availability. Besides that, this study will also explore Malaysian young adults' opinions on VR usage in enhancing filmmaking. In this chapter, the background of the study, the research gap, research objectives and questions, and key concepts and definitions would be covered.

1.1 Background of Study

In the era of advanced technology nowadays, young adults have to adopt new technologies early to keep up with the current pace. Furthermore, more and more film industries are using Virtual Reality (VR) to present better visual effects. However, not every young person knows the convenience and usefulness of VR. Virtual Reality (VR) is an immersive technology that creates a simulated environment through the use of computer-generated graphics. Users can interact with this environment in a seemingly real or physical way using special electronic equipment, such as a headset with a screen inside or gloves fitted with sensors. The historical development of Virtual Reality (VR) technology began in the 1960s with pioneering devices like the Sensorama, created in 1962, and the first head-mounted display (HMD) system developed by Ivan Sutherland in 1968 (Virtual Reality Society, 2020). Moving on to 1990s, VR started gaining mainstream attention through

products like the Sega VR and Nintendo Virtual Boy, although these early systems did not achieve commercial success. The 2000s saw a renewed interest in VR as advancements in computing power and graphics technology enabled more sophisticated experiences. A significant milestone occurred in 2012 with the launch of the Oculus Rift, which spurred increased investment and innovation within the industry. Since then, VR technology has continued to evolve, leading to the development of advanced HMDs, input devices, and diverse applications across various fields.

Current virtual reality (VR) technologies include a variety of advanced hardware and software intended to produce immersive user experiences. Head-Mounted Displays (HMDs): To improve the sense of presence in virtual environments, companies like Oculus Rift, HTC Vive, and PlayStation VR offer high-resolution images and advanced positional tracking. Users can engage with the virtual world in a natural way through the addition of different input devices like gloves, controllers, and haptic systems. On the software side, VR applications are developed using powerful engines like Unity and Unreal Engine, enabling the creation of diverse content spanning gaming, education, healthcare, real estate, and social communication. With the advancements aimed at enhancing user experience, cutting down on latency, and raising the realism of virtual interactions, this ecosystem of hardware and software is continuing to expand.

Moreover, Virtual Reality (VR) offers exciting leisure time opportunities for young adults, transforming how they engage in recreational activities. Virtual reality (VR) offers immersive experiences that enable users to engage in interactive games, explore virtual worlds, and experience a variety of scenarios that exceed the limitations of the real world. Whether it's adventuring through fantasy landscapes, attending virtual concerts, or collaborating in virtual workspaces, VR provides a unique and engaging platform for entertainment and social interaction. This technology not only delivers innovative ways to

relax and have fun but also promotes creativity, learning, and connection with others. For young adults, VR opens up a world of possibilities, enhancing their leisure time with rich, immersive experiences.

Nowadays, Virtual Reality (VR) is transforming filmmaking by offering new ways to create, experience, and engage with films. It would enable immersive storytelling, allowing viewers to experience stories from within the scene. VR allows filmmakers to experiment with camera angles, lighting, and compositions in virtual sets, which helps with pre-visualization and planning. It creates virtual environments, reducing the need for physical sets and enabling fantastical locations. VR supports interactive and non-linear narratives, offering personalized experiences. In post-production, it helps review and edit scenes in 360 degrees, enhancing visual effects. VR also trains actors and crew in simulated environments, improves marketing with interactive promotional content, and offers virtual cinemas for film distribution. These innovations expand creative possibilities and enhance the viewer experience, pushing the boundaries of traditional filmmaking.

1.2 Research Gap

Virtual reality, or VR, has become increasingly popular in the film business worldwide, but not much research has been done on how young adults in Malaysia view and feel about this technology. There is little information about how Malaysian adolescents view and interact with VR in filmmaking since the majority of studies currently in publication focus primarily on VR adoption and its effects in Western and other Asian contexts. In particular, less is known about their understanding of, acceptance of, and enthusiasm for virtual reality films, as well as the variables influencing their willingness to use this technology. Additionally, research is required to determine whether there are particular obstacles or motivators specific to this group and how Malaysian cultural and socioeconomic factors influence these perspectives. For marketers, politicians, and filmmakers hoping to use virtual reality (VR) in the Malaysian film business and satisfy the tastes of younger viewers, closing this gap is essential. Therefore, there are few areas of the research gap about the Virtual Reality in filmmaking.

i. The Untapped Potential of VR in Malaysian Filmmaking

Despite VR's growing popularity globally, there is a significant gap in research when it comes to understanding how Malaysian youth perceive and engage with this technology. The film industry in Malaysia, known for its rich cultural diversity and vibrant storytelling traditions, stands at the cusp of a technological revolution with the advent of VR. Yet, the extent to which young Malaysians are ready to embrace this change is still unclear. Are they enthusiastic about the immersive experiences that VR offers, or do they prefer traditional forms of cinema? Understanding their perceptions is crucial for filmmakers who wish to

cater to the tastes of this demographic, which represents a significant portion of the country's population.

ii. Youth Perspectives on VR: A Critical Research Gap

The existing literature on VR in filmmaking has largely focused on Western contexts, where the technology is more widely adopted. These studies often highlight the challenges and opportunities that VR presents, such as the need for new storytelling techniques and the potential for greater audience engagement. However, these findings may not be entirely applicable to the Malaysian context, where cultural and socioeconomic factors play a significant role in shaping consumer behavior. For instance, young adults in Malaysia might have different expectations and concerns about VR, influenced by factors such as access to technology, cultural values, and economic constraints.

iii. Barriers and Motivators for VR Adoption Among Malaysian Youth

Identifying the barriers and motivators for VR adoption among Malaysian adolescents is essential for stakeholders in the film industry. Factors such as the cost of VR equipment, the availability of VR content, and the level of technological literacy could all influence their willingness to engage with VR films. Moreover, cultural factors such as the preference for local content and the role of traditional storytelling methods might also play a significant role in shaping their attitudes towards this new technology.

1.3 Research objectives and questions

1.3.1 The research objectives of this study are:

RO1: To understand Malaysian young adults' perception towards virtual reality usage in film industry.

RO2: To identify how easily young adults in Malaysia can access VR technology for watching films, considering factors like cost and availability.

RO3: To explore Malaysian young adults opinion on VR usage in enhancing filmmaking.

1.3.2 The research questions in this study are:

RQ1: What are the primary factors influencing Malaysian young adults' awareness and understanding of virtual reality (VR) technology in the film industry?

This question explores the general knowledge level and familiarity of young adults with VR, identifying key sources of information and the extent of their exposure to this technology in a film context.

RQ2: To what extent do Malaysian young adults prefer VR films over traditional films, and what factors contribute to their preferences?

This question seeks to understand the comparative appeal of VR films versus traditional films, identifying the reasons behind any preference or resistance.

RQ3: What are the key motivators and barriers for the adoption of VR technology in the Malaysian film industry as perceived by young adults?

This question aims to pinpoint the drivers that encourage or discourage young adults from adopting VR, such as technological innovation, cost, availability of content, or cultural relevance.

1.4 Key concepts and definitions

1.4.1 Key concepts

There are some key concepts related to virtual reality (VR) in filmmaking as it pertains to young adults:

i. **Virtual Reality (VR) technology**

VR technology refers to the use of computer-generated simulations that allow users to experience and interact with a three-dimensional environment (Yasar & Sheldon, 2024). In filmmaking, VR enables the creation of immersive cinematic experiences where viewers can feel as though they are part of the story. Understanding VR technology is central to exploring how it differs from traditional filmmaking techniques and how it impacts the viewer's experience.

ii. **Immersion**

The feeling of being completely immersed in a virtual world is called immersion. Immersion is a crucial component of VR filmmaking that increases the audience's emotional and sensory engagement. According to Yasar & Sheldon (2024), Virtual reality aims to create a sense of immersion by immersing people in a realistic-looking and feeling computer-generated environment. Depending on the kind of VR system and the quality of the content, the degree of immersion can change. Viewers can completely immerse themselves in the virtual world by adopting and utilizing wearable technological interactive gear. This concept is crucial in assessing how young adults perceive and respond to the immersive qualities of VR films compared to traditional films.

iii. **Technology adoption**

Technology adoption refers to the process by which individuals start using and integrating a new technology into their daily lives. This process typically involves several stages, including awareness of the technology, interest in its potential, the decision to try it out, and continued use if the technology meets their needs and expectations. This stage involves how young adults first learn about VR technology in filmmaking. It could come from various sources such as social media, news outlets, educational institutions, or through word of mouth. Understanding the technology adoption process helps in identifying where young adults stand in their engagement with VR in filmmaking. It also clarifies potential barriers that may prevent broad implementation and might direct strategies to promote VR adoption in the Malaysian film industry.

iv. **Content engagement**

Content engagement refers to the degree to which young adults are interested in and interact with VR film content. It involves the level of attention, emotional involvement, and participation elicited by VR films. Virtual reality (VR) has the potential to revolutionize content marketing by creating a more immersive and engaging experience for consumers (AIContentfy, 2023). By using VR technology, filmmakers can create interactive and personalized experiences that allow customers to explore products or services in a more meaningful way. Engagement is a critical factor in determining the success of VR films among young adults, influencing their willingness to seek out and watch VR content regularly.

1.4.2 Definitions of terms

The definitions below are provided to understand some of the concepts used in this study:

i. **Virtual**

According to Awati (2022), the term "virtual" refers to something that exists or occurs in a digital or simulated environment, rather than in the physical world. It often describes experiences, objects, or environments that are created by computer software and can be interacted with through technology, such as a computer, smartphone, or virtual reality headset.

ii. **Reality**

Oxford reference defined reality as the state of things as they actually exist, as opposed to an idealistic or notional idea of them. It is an actual happening, thing, or situation where his desire came true (Merriam-Webster, 2024). It includes everything that is actual and true, including both material and immaterial aspects of what is encountered in the physical world.

iii. **Virtual Reality**

Virtual Reality is a computer-generated environment that gives users the impression that they are fully immersed in their surroundings by simulating real-world scenes and objects (Iberdrola, 2024). This is typically achieved through the use of VR headsets or goggles that cover the eyes, blocking out the real world and displaying a 3D environment that can be explored from different angles. In the context of filmmaking, VR allows viewers to step into the scenes of a film and experience it as

if they were part of the story, offering a level of immersion and interactivity that traditional films cannot provide. This can lead to a more engaging and personalized viewing experience, as users are not just passive observers but active participants in the narrative.

Chapter II: Literature Review

2.0 Introduction

The fast progress of virtual reality (VR) technology has resulted in substantial changes in several sectors, including cinema. As a transformational medium, VR provides immersive experiences that conventional films cannot match, with the potential to revolutionise cinema production and consumption. However, adoption and perceptions of VR in the film business vary by demography. This research seeks to investigate Malaysian young persons' attitudes about the usage of VR in the film business. The literature study is divided into three sections: understanding of VR technology in the film industry, preference and comparison of VR films to traditional films, and motivators and barriers to the adoption of VR technology in the film industry

2.1 Understanding of Virtual Reality Technology in the Film Industry

The rise of Virtual Reality (VR) technology is transforming the film industry, offering new ways to produce and consume media. However, the level of understanding of VR among young adults is still low.

2.1.1 Definition of Virtual Reality

Virtual reality (VR) has garnered significant attention in recent years as a cutting-edge technology in various fields, including film and television. Despite its popularity in concept, VR is still not extensively used in mainstream cinema and

television, with limited formal releases in theatres, particularly in the United States. VR films, which are created entirely using virtual reality technology, present both opportunities and challenges for filmmakers. The primary advantage of VR lies in its ability to offer diverse viewing experiences, allowing audiences to immerse themselves in the narrative in ways traditional films cannot. VR differs significantly from augmented reality (AR); while VR immerses users completely in a simulated environment, AR overlays virtual elements onto the real world, enhancing the user's perception of their physical surroundings. VR technology uses computer simulations to create immersive three-dimensional environments that engage the user's senses—visual, auditory, and tactile—through interactive devices, creating a strong sense of presence and immersion. This full immersion contrasts sharply with traditional media, which typically presents content through fixed, non-interactive screens (Du & Yu, 2020).

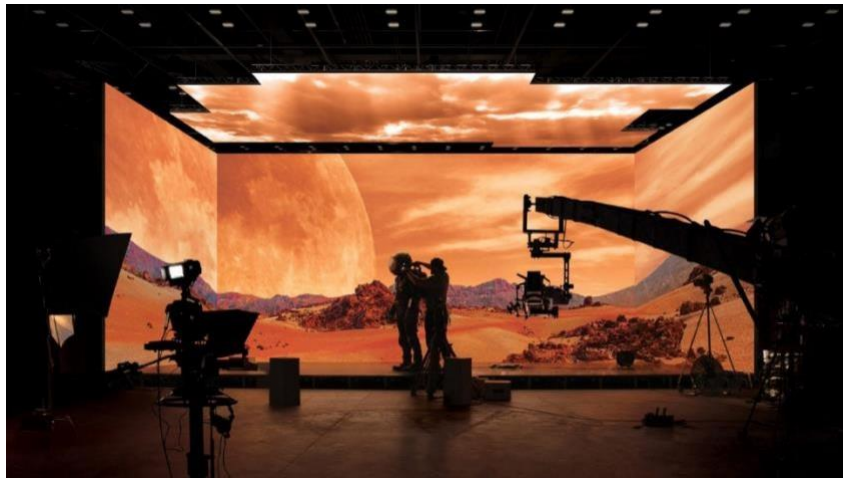


Figure 2.0: Example of VR in film set (Cowee, 2023)

2.1.2 Technical Requirements for VR Development

The creation of high-end VR content requires specialized technical skills and experience. Key tools in VR development include design and prototyping software, game engines, and software development kits (SDKs) tailored to specific platforms. For

instance, the WebXR Device API is often used to post VR content on the web. The primary platforms for distributing VR experiences include popular marketplaces like Steam, which hosts content for devices such as HTC Vive, Oculus, Valve Index, and Windows Mixed Reality, among others. Developers typically begin with design and prototyping tools, followed by game engines, which are essential for building the interactive and immersive aspects of VR experiences. These engines, like Unity and Unreal, support extensive customization through APIs and integration with platform-specific SDKs, enabling developers to tailor VR experiences to specific devices (He & Zhu, 2022).



Figure 2.1: Example of using high end technology VR in film set (Epstein & Watercutter, 2015)

2.1.3 Phases of VR Development

2.1.3.1 Design, Prototyping and 3D Modelling

The initial phase of VR development involves conceptualizing and planning the virtual environment and experiences. This phase includes the creation of blueprints, storyboards, and mock-ups that define the look, feel, and functionality of the VR application. Design and prototyping are essential for visualizing the project before it

enters full-scale development. Tools like Sketch, Figma, and Blender can be used for early design work, while specialized VR design tools such as Gravity Sketch allow designers to create 3D models directly in a VR environment (He & Zhu, 2022).

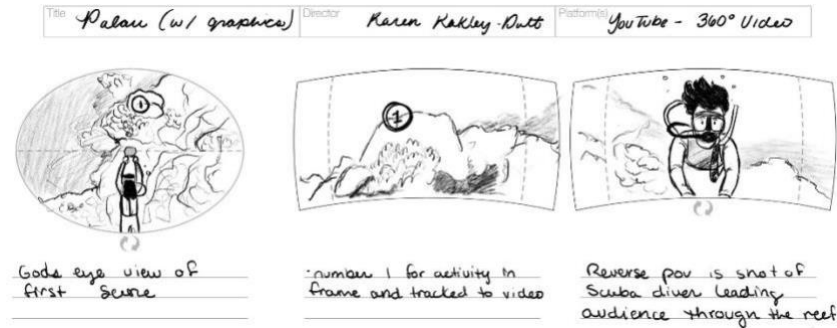


Figure 2.2: Example of VR storyboards (PennState, n.d.)

3D modelling is a critical component in this phase, as it involves creating the detailed virtual assets that populate the VR environment. These assets can include characters, objects, landscapes, and architectural elements, all of which must be meticulously designed to provide a realistic and immersive experience. Programs like Autodesk Maya, Blender, and 3ds Max are commonly used for 3D modeling. These tools allow developers to sculpt, texture, and animate models, which are then imported into game engines for further development. This stage can sometimes be bypassed for educational or prototyping purposes, where developers might use pre-existing models from community libraries to quickly assemble the virtual world (He & Zhu, 2022).

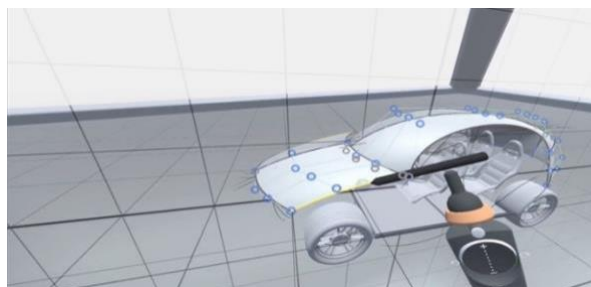


Figure 2.3: VR modelling sketching (Antunes, 2019)

2.1.3.2 Virtual Production with Game Engines in VR Filmmaking

In VR filmmaking, game engines like Unity and Unreal Engine are repurposed as powerful virtual production tools to create immersive cinematic experiences. These engines facilitate the creation of virtual sets and environments where filmmakers can visualize scenes in real-time, plan complex shots, and experiment with various elements such as lighting, camera angles, and character movements. Unlike traditional film production, VR filmmaking requires a 360-degree approach to scene composition, where the entire environment must be designed and rendered in detail, allowing the audience to explore every angle (He & Zhu, 2022).



Figure 2.4: Unreal Engine tool (Eldad, 2021)

Moreover, game engines enable virtual cinematography, where filmmakers can use digital cameras within the virtual environment to plan and execute shots. This includes setting up camera paths, adjusting focal lengths, and experimenting with various lenses—all within the digital space. Real-time rendering capabilities of game engines allow filmmakers to see immediate results of their creative choices, making it easier to adjust elements on the fly without waiting for lengthy render times. This is particularly valuable in VR filmmaking, where the interactive nature of the medium demands a high level of visual fidelity and responsiveness (He & Zhu, 2022).

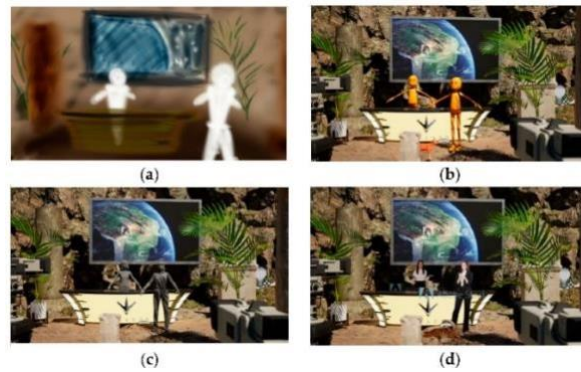


Figure 2.5: VR filmmaking real-time rendering (Silva Jasau et al., 2024)

Furthermore, in VR filmmaking, game engines also support the integration of visual effects and motion capture data. Actors' performances can be captured using motion capture technology and then applied to digital characters within the virtual environment, enhancing realism and emotional connection. The engines' ability to blend live-action footage with computer-generated imagery allows for seamless integration of practical and digital elements, creating a cohesive and immersive experience that transports viewers directly into the story (He & Zhu, 2022).



Figure 2.6: Motion capture VR filmmaking visual effects (Ha et al., 2022)

2.1.3.3 Platforms and SDKs for VR Filmmaking

In VR filmmaking, choosing the right distribution platform is crucial for reaching the target audience and ensuring the film performs well on the intended hardware. VR films can be distributed on platforms such as Oculus, HTC Viveport, PlayStation VR, and others that support 360-degree video and interactive VR experiences. Each platform has its own set of technical requirements and audience demographics, influencing decisions on the film's design, resolution, and interactivity levels (He & Zhu, 2022).



Figure 2.7: VR film distribution platforms (Sharp, 2024)

SDKs (Software Development Kits) provided by each VR platform play a critical role in optimizing the film for the specific hardware. These SDKs include tools and APIs that allow filmmakers to fine-tune their VR experiences for the best performance on a given platform. For example, the Oculus SDK provides features like head and hand tracking, spatial audio, and performance optimizations that ensure the VR film runs smoothly and delivers a high-quality viewing experience. By integrating these SDKs during the production process, filmmakers can tailor the content to take full advantage of each platform's capabilities, such as improved resolution, field of view, and user interaction methods. SDKs also help ensure that VR films are compatible with the latest hardware updates and software patches from the platform providers. This includes adapting the film's interactivity elements, such as gaze-based navigation or

controller inputs, to suit the platform's specific input methods. Additionally, SDKs support enhancements like spatial audio, which is crucial in VR filmmaking for creating an immersive soundscape that matches the 360-degree visual experience. Proper use of SDKs ensures that viewers receive a consistent and engaging experience, regardless of the device they use to watch the VR film (He & Zhu, 2022).

2.1.4 Conclusion

In summary, the development of VR technology involves a multi-phase approach that starts with careful planning and design, followed by the creation of interactive environments using game engines, and concludes with platform-specific optimization using SDKs. Each phase is critical to building a compelling and immersive VR experience that can engage and captivate users across various platforms.

2.2 Preference and Comparison Between VR Films and Traditional Films

This section will delve into the preferences of Malaysian young adults regarding VR films versus traditional films. It will investigate the factors that contribute to these preferences, such as the immersive experience offered by VR, the storytelling potential, and the current limitations of VR films. The goal is to identify whether VR films are viewed as a superior or complementary medium compared to traditional films.

2.2.1 Comparative Experience of VR and Traditional Films

The research conducted by Szita et al. (2024) examines the potential of Virtual Reality (VR) cinemas as alternatives to traditional in-person movie viewing. The study

highlights that VR cinemas can create an equally enjoyable and emotionally engaging experience compared to physical cinemas. Participants reported similar levels of narrative empathy, emotional engagement, and presence in VR environments. Notably, the study found that VR viewing, especially in individual settings, resulted in fewer distractions compared to social viewing in physical cinemas.

Interestingly, even though VR viewing produced higher evaluative ratings for presence and social experience, those with prior VR exposure reported discomfort, contradicting the assumption that familiarity improves comfort. The study also revealed that technological acceptance plays a significant role in enhancing VR cinema experiences. Participants who were more fascinated by technology and early adopters of VR reported greater enjoyment, narrative engagement, and acceptance of the virtual environment.

However, the study acknowledges some limitations, such as the differences in physical versus virtual environments and the short duration of the film sequences used. The authors suggest that future research should involve longer films and more controlled environments to fully understand the potential of VR cinemas as a sustainable alternative to traditional movie theatres. This research opens the door to new possibilities in how films are experienced, especially in contexts where physical co-viewing may not be feasible.

2.2.2 Impact of Presentation Formats on Decision-Making

Furthermore, Mokaš et al. (2021) conducted an analysis to explore how different presentation formats—text, video, and virtual reality (VR)—affect respondents'

certainty and willingness to pay (WTP) in discrete choice experiments. The findings, as summarized in Tables 6 and 7, indicate that preferences significantly differ across the three presentation formats. VR led to higher certainty and more consistent WTP estimates, suggesting that the immersive nature of VR aids in reducing randomness and enhancing evaluability of complex environmental scenarios.

Table 2.1 below reveals that the likelihood ratio (LR) tests reject the null hypothesis of parameter equality ($\beta_A = \beta_B$) across all format comparisons, indicating that different presentation methods significantly influence respondents' choices. Table 2.2 further shows that respondents in the VR group exhibited the highest mean WTP (mWTP) for various urban green attributes, such as high-canopy trees, compared to the text and video groups. This suggests that VR's immersive experience provides respondents with a more concrete understanding of the scenarios, leading to higher and more consistent valuations.

These results align with previous research, which found that visual and interactive formats, particularly VR, enhance respondents' ability to process and evaluate information, ultimately leading to more reliable decision-making. However, Mokus et al. caution that these findings should be interpreted with care due to potential biases, such as sample selection bias, and the overrepresentation of highly educated individuals in the study. Future research should aim to replicate these findings in more diverse and real-world settings to further validate VR's potential in environmental valuation.

LL test shows that preferences are different across the three split samples.

Subset combinations(A)-(B)	LL _A	LL _B	LL _{A&B} ($\lambda_A \neq \lambda_B$)	LR-test	p-value	Reject H ₀ : $\beta_A = \beta_B$
(Text) - (Video)	-424	-381	-837	63	0	yes
(Text) - (VR)	-424	-303	-763	72	0	yes
(Video) - (VR)	-381	-303	-702	36	0	yes

Table 2.1: Log-Likelihood (LL) Test Results Comparing Preferences Across Presentation Formats in Discrete Choice Experiments (Mokas et al., 2021)

Average mWTP in €/month across respondents for the different sub-groups.

Variable	Text		Video		VR	
	WTP space Correlation		WTP space Correlation		WTP space Correlation	
	mWTP	t-ratio	mWTP	t-ratio	mWTP	t-ratio
ASC_1	6.12***	4.07	4.48*	2.00	3.39*	2.24
ASC_2	6.1***	4.15	4.59	1.98	3.88*	2.41
many high canopy	3.7**	2.88	6.55***	3.79	9.9***	6.75
few high canopy	2.64**	3.13	7.07***	4.31	7.39***	7.94
many low canopy	10.69***	6.76	6.51***	3.66	5.57***	3.86
many planters	1.38	1.47	3.25***	3.39	3.35***	3.38
both sides	12.7***	12.14	11.45**	2.68	15.87***	7.70
Price(ln)	-1.58***	7.89	1.47***	5.58	0.8**	3.03
S.D						
ASC_1	2.57***	3.69	0.15	0.19	1.75	1.87
ASC_2	0.17	0.66	0.16	0.54	0.36	1.31
many high canopy	11.7***	12.45	9.89***	3.37	13.4***	8.07
few high canopy	1.51	1.91	0.75	0.44	7.07***	6.08
many low canopy	0.51	0.33	3.35**	2.63	4.26**	2.92
many planters	0.67	0.68	3.98**	2.75	3.9***	5.28
both sides	2.505***	4.73	6.85***	3.42	4.11***	5.14
Price(ln)	1.187***	5.87	0.34*	2.50	0.26**	2.59
Model fit						
LL	-435		-387		-314	
Adj- ρ^2	0.3949		0.455		0.5472	
AIC	957.29		862.14		716.37	
BIC	1158.78		1063.63		917.86	

AIC – Akaike Information Criterion; BIC – Bayesian Information Criterion

Table 2.2: Mean Willingness to Pay (mWTP) in €/Month Across Respondents for Different Urban Green Attributes by Presentation Format (Text, Video, and VR)

2.2.3 Conclusion

The findings from both Szita et al. (2024) and Mokas et al. (2021) underscore the transformative potential of Virtual Reality (VR) as a medium that significantly enhances user engagement and decision-making compared to traditional formats. Szita et al. highlight VR cinemas as a viable alternative to traditional movie viewing, offering comparable levels of narrative empathy, emotional engagement, and presence, though

also pointing out challenges such as discomfort for those already familiar with VR and the need for more comprehensive research on longer film formats. Similarly, Mokas et al. found that VR presentation formats lead to higher certainty and willingness to pay in decision-making contexts, suggesting that VR's immersive nature provides a clearer and more evaluative experience for users. Both studies emphasize the importance of immersion and interactivity in VR, which not only enrich the viewing experience but also enhance users' ability to make informed decisions. This relationship between the studies highlights VR's potential to serve as both a superior and complementary medium to traditional formats, though its full adoption hinges on addressing technical limitations and further exploring its broader applications in diverse contexts.

2.3 Motivators and Barriers to the Adoption of VR Technology in the Film Industry

The adoption of Virtual Reality (VR) technology in the film industry presents both significant opportunities and challenges. As a transformative tool, VR enhances user engagement and satisfaction by offering immersive and interactive experiences that traditional films cannot match. However, the integration of VR into filmmaking also introduces unique challenges, such as the need for advanced technology, high production costs, and evolving narrative techniques. Additionally, the level of awareness and perception of VR among young adults, who are key drivers of new media consumption, plays a crucial role in the technology's acceptance and growth. This section explores the impact of VR on user engagement and satisfaction, the challenges and opportunities it presents in filmmaking, and the importance of educating young audiences to foster a positive perception of VR in the film industry.

2.3.1 Impact of VR on User Engagement and Satisfaction

Furthermore, Reddy & M (2024) highlight the transformative role of Virtual Reality (VR) technology across multiple sectors, particularly in education and the film industry. According to Reddy, VR's immersive qualities significantly enhance user engagement and learning outcomes. They argue that by appealing to multiple senses — visual, auditory, and even tactile — VR provides a richer, more interactive experience compared to traditional methods. This multisensory engagement is not only beneficial in educational settings but also in film, where it enables a deeper connection between the audience and the narrative as shown in Figure 2.8.

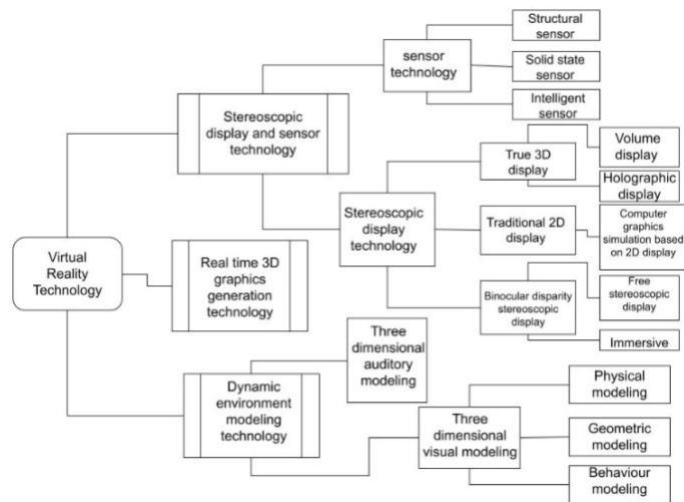


Figure 2.8: The Fundamentals of Virtual Reality Technology (Reddy & M, 2024)

Reddy & M emphasize that VR technology is revolutionizing the film industry by shifting from passive to interactive storytelling. This transition allows audiences to experience a greater sense of presence and agency within the narrative. They discuss how the integration of VR and Artificial Intelligence (AI) in animation has led to the creation of lifelike characters and dynamic environments, pushing the boundaries of traditional filmmaking. They explore the practical benefits of VR in film production, noting its ability to improve efficiency, reduce costs, and enhance visual outcomes. By mitigating the influence of external factors like weather and lighting, VR enables more

consistent and controlled production environments. This has significant implications for both the quality and efficiency of film production.

2.3.2 Challenges and Opportunities in VR-Driven Filmmaking

Moreover, Zhang et al. (2024) explore the emerging role of Virtual Reality (VR) technology in film, emphasizing how it redefines audience engagement through immersive and interactive experiences. They highlight the shift from traditional, passive viewing to a 360-degree panoramic approach, where viewers can control their perspective, creating a new aesthetic experience. The integration of VR necessitates advanced filming equipment, like 360-degree cameras and motion capture systems, to produce high-quality, immersive environments. However, challenges such as device limitations and content file sizes persist. VR may alter the role of directors, as they must adapt to new constraints where traditional filmmaking techniques are replaced by actor-driven performance within a VR environment. The narrative structure and perspective also change, with VR allowing for multiple viewpoints, demanding a more intricate story design. This shift presents both opportunities and challenges for filmmakers, requiring a balance between innovation and narrative coherence. VR has gained popularity, but its use remains limited in full-length feature films. Current applications focus on short films, landscape productions, and VR-enhanced experiences, with potential for growth in genres like horror, where immersion can heighten the viewer's experience.

Based on Table 2.3 below, reflect audience perceptions of VR films, indicating that a significant majority of viewers have a positive response to this emerging medium. Specifically, 52.08% rated VR films as "Very good," and 37.61% found them to be a

"Very fresh form." These results underscore the article's emphasis on the innovative and immersive qualities of VR technology in film. However, a small percentage of viewers remain indifferent or critical, with 8.23% rating it as "general" and 2.11% as "Very rubbish." This suggests that while VR is largely well-received, there is still room for improvement in addressing the preferences of a broader audience.

AUDIENCE STATISTICS ON VR FILM AND TELEVISION	
Audience evaluation	ratio
Very rubbish	2.11%
general	8.23%
Very fresh form	37.61%
Very good	52.08%

Table 2.3: Audience Evaluation Statistics on Virtual Reality (VR) Film and Television (Zhang et al., 2024)

2.3.3 Awareness and Perception of VR Among Young Adults

The integration of Virtual Reality (VR) technology in the film and television industry has significantly transformed content creation and consumption (Bao, 2022). VR's ability to create immersive experiences has been particularly impactful in educational settings, enhancing student engagement and comprehension. These benefits extend to the film industry, where VR allows audiences to experience stories in more interactive and emotionally engaging ways. Understanding these advantages is essential for recognizing VR's potential in modern filmmaking. Research highlights VR's capacity to improve learning outcomes by creating more interactive and engaging environments. In education, VR has been shown to help students grasp complex concepts, especially in fields like animation and film production. Similarly, in the film industry, VR's immersive nature enables innovative storytelling techniques that can offer richer viewer experiences. As young adults are major consumers of new media,

their awareness and understanding of VR are crucial for its successful adoption in the film industry.

The application of VR in education also shows its potential to enhance user satisfaction and learning efficiency (Bao, 2022). In the film industry, VR can similarly improve viewer satisfaction by offering more realistic and engaging content. The ability to explore and interact with virtual environments introduces a new form of storytelling that traditional films cannot provide. Therefore, educating young adults about VR's capabilities is essential, as their perceptions will influence the technology's future role in mainstream media.

The study shows that VR technology can significantly improve learning outcomes and satisfaction levels. According to the Figure 2.9 and 2.10, in a comparative analysis, students in the experimental group (Group B) who were taught using VR technology displayed significantly higher satisfaction with classroom atmosphere, teaching methods, and teaching facilities compared to the control group (Group A). Specifically, 75% of Group B students were satisfied with the classroom atmosphere, 61% with teaching methods, and 81% with teaching facilities, compared to 29%, 6%, and 30% in Group A, respectively. These results highlight the impact of VR on enhancing educational experiences, suggesting similar benefits could be expected in the film industry, where immersive experiences are key to audience engagement. Moreover, the comprehensive quality evaluation further supports VR's effectiveness. Group B students showed improved performance across various metrics, including learning interest and participation in social practice, when compared to Group A. This finding underscores the importance of integrating VR technology not only in educational

settings but also in the film industry, where engaging viewers and enhancing their experiences are crucial.

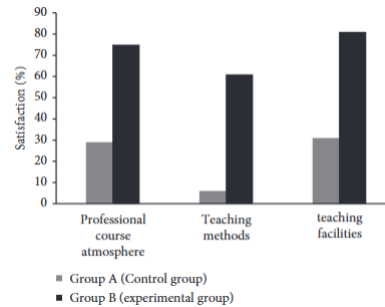


Figure 2.9: Course Satisfaction (Bao, 2022).

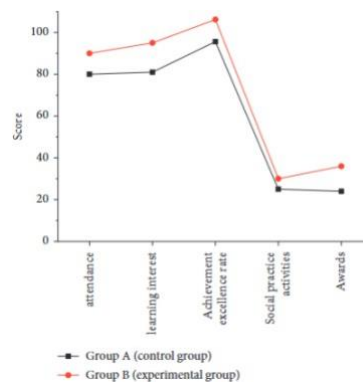


Figure 2.10: Comprehensive quality evaluation (Bao, 2022).

2.3.4 Conclusion

The findings collectively highlight the transformative potential of Virtual Reality (VR) technology in the film industry, driven by its ability to enhance user engagement, satisfaction, and storytelling techniques. Reddy & M (2024) emphasize how VR's multisensory engagement improves user interaction and production efficiency, making it a powerful tool for creating immersive and controlled film environments. Zhang et al. (2024) further explore the shift from traditional viewing to

a 360-degree, interactive approach, noting both opportunities and challenges such as the need for advanced equipment and the reimagining of narrative structures. Bao (2022) underscores the importance of awareness among young adults, whose perceptions and familiarity with VR will influence its adoption in mainstream media. Together, these studies reveal that while VR offers significant advantages over traditional methods, such as deeper audience engagement and innovative storytelling, the technology's broader adoption in the film industry depends on overcoming barriers like high production costs, device limitations, and the need for targeted education on VR's capabilities. Therefore, the successful integration of VR into filmmaking hinges on balancing technological innovation with addressing practical challenges, ultimately redefining how films are produced and consumed.

2.4 Conclusion

The literature review explored the role and impact of Virtual Reality (VR) technology in the film industry, focusing on three key areas: understanding of VR technology, the comparison between VR films and traditional films, and the motivators and barriers to adopting VR in filmmaking. VR technology offers immersive and interactive experiences that enhance storytelling and audience engagement, setting it apart from traditional films. Despite its potential, the adoption of VR in the film industry is influenced by factors such as technological innovation, content availability, cost, and cultural relevance. While VR is gaining popularity, particularly among young adults who are more receptive to new media, challenges like high production costs, technical limitations, and the need for broader awareness remain. Balancing these motivators and barriers will be crucial for VR's successful integration and growth in the film industry, potentially redefining how films are created and experienced.

Chapter III: Methodology

3.0 Introduction

The research methodology that will be applied in this study is covered in this chapter. A key step in the research process that includes gathering and analyzing data is the research method. It describes the procedures used to analyze the gathered information in light of the theories covered in Chapter II. There will be coverage of the quantitative and qualitative approach, sampling design, research design, measurement, and procedure.

3.1 Quantitative and qualitative approach

The purpose of this study is to understand Malaysian young adults' perception towards virtual reality usage in the film industry. It also aims to identify how easily young adults in Malaysia can access VR technology for watching films, considering factors like cost and availability. This study was conducted in order to explore Malaysian young adults' opinions on VR usage in enhancing filmmaking. Hence, a quantitative approach is adopted in this study.

3.1.1 Quantitative research

The process of gathering and evaluating numerical data is known as quantitative research. It is useful for determining averages and patterns, formulating hypotheses, examining causality, and applying findings to larger populations (Bhandari, 2020). According to Sreekumar (2023), this kind of study aids in prediction-making, examining the causal links between variables, and expanding findings to larger populations. Quantitative research aims to test a theory or hypothesis and, depending on the findings, either accept or reject it. When scientists want to comprehend data sets across time and

spot trends, they utilize quantitative data analysis. Quantitative research methods often involve the use of surveys, where researchers ask questions to a group of people either in person, over the phone, or online. For example, a researcher might distribute questionnaires with rating scales to University Tunku Abdul Rahman (U-TAR) students to investigate their knowledge or experiences of using Virtual Reality (VR). This method allows for the collection of measurable data that can be analyzed statistically to understand patterns and trends within the targeted group. The process of gathering and evaluating numerical data in order to characterize, forecast, or control relevant factors is known as quantitative research (Sreekumar, 2023).

Quantitative research methods

Research method	How to use	Example
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<u>Survey</u>	Ask questions of a group of people in-person, over-the-phone, or online.	You distribute <u>questionnaires</u> with rating scales to first-year international college students to investigate their experiences of culture shock.
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3.1.2 Data Collection Method

The process of gathering and analyzing information or data from many sources in order to assess results, foresee trends and probability, and identify solutions to research problems is known as data collection. It is a crucial stage in all kinds of analysis,

investigation, and decision-making (Simplilearn, 2024). Although the idea of gathering data is not new, times have evolved. Today, there is a lot more data available. The technique of gathering data has had to adapt and develop over time to keep up with technological advancements.

Data collecting is necessary to support your decision-making, whether you work in the commercial sector, seeking to promote a new product, or in academia trying to do research. There are several advantages to gathering data, including gaining of insightful knowledge that can support well-informed, fact-based decision-making. It supports problem-solving and confirmation processes as well as outcome evaluation and assessment. Gathering data is essential for identifying patterns and formulating forecasts that might direct future course of action. Additionally, it encourages research and development activities that result in improved quality and innovation. Data also makes customisation and targeting possible, which raises the relevance of goods and services. Lastly, it promotes cooperation and knowledge exchange, which advances the success and growth of the group as a whole. There are different method of data collection, primary data is used to evaluate the hypothesis of this study.

Primary data – Survey and questionnaire

According to Simplilearn (2024), gathering original data straight from the source or by speaking with respondents face-to-face is known as primary data collection. Researchers can obtain primary data directly from primary sources by means of surveys, experiments, interviews, and other methods (Longe, 2020). They can get first-hand knowledge precisely suited to their research goals with this strategy. The techniques used in this study for primary data collection are surveys and questionnaires. In order to

gather information from individuals or groups, I create organized surveys or questionnaires. These can be carried out by phone, mail, or online platforms. Utilizing surveys has several benefits, one of which is that participants have enough time to provide meaningful and precise answers. Furthermore, surveys are a more objective means of gathering data because they are not influenced by the interviewer's bias. In comparison to interviews, they are also typically less expensive to administer. Nevertheless, employing surveys has several disadvantages. They frequently have a significant non-response bias rate, which might distort the findings. Additionally, surveys are inflexible since they cannot be changed after they have been distributed. Moreover, gathering and evaluating survey data can be a time-consuming procedure.

3.2 Sampling

It is not always possible to get information from every member of a group of people you are studying. Sampling is a subset of people drawn from a broader population. It is the process of choosing the population from which your research will actually collect data (McCombes, 2019). For instance, the researcher may survey a sample of 100 students to learn more about the perspectives of the university's students. The target population, sampling frame and sampling location, sampling size and sampling elements, and sampling technique are all presented in this section. The following are the details of the sampling design:

3.2.1 Target population

The group of people that this measure aims to study and make conclusions from is known as the target population (Saurabh & Prasad, 2021). A target audience, often known as a target population, is a subset of individuals who fit a certain description that may be used to set them apart from the broader population. In order to market a certain product or service or to investigate a particular characteristic that regularly shows up in their behavior, such behavior patterns, the target audience is intended to be understood and evaluated in terms of their preferences and behaviors (Akman, 2023). This idea relates to corporate market segmentation strategies. The primary target population for this study is young people in Malaysia who are between the ages of 18 and 25. There are no limitations according to employment, gender, race, or degree of education. Thus, researcher may finish this research study more precisely by drawing on their knowledge and information about the Virtual Reality in Film Industry.

3.2.2 Sampling Frame and Sampling Location

According to Goodman (2012), the list from which units are selected for the sample is known as the sampling frame. The term "list" might refer to an actual record of units, like a phone book from which phone numbers would be drawn, or it could refer to some other depiction of the population, like a map from which regions will be selected. The selection ensures that the participants represent the target demographic, focusing on their perceptions of virtual reality in the film industry. The sample frame for this research is based on the criteria of persons who often watch films.

Furthermore, Malaysia is the location of the sample location. It will concentrate on young adults living in Kuala Lumpur and Selangor, two regions of the Klang Valley. This is because Kuala Lumpur is the largest and capital city in Malaysia. In order to represent the population, it is desirable to collect data from the most populated place given the time restrictions of this study.

3.2.3 Sampling Size and Sampling Elements

According to Institute for Work & Health (2008), the quantity of participants or observations in research is referred to as the sample size. This number is usually represented by n . Two statistical features are influenced by sample size: 1) The accuracy of our calculations, and 2) The study's capacity for making inferences. In this research, the sample size has been set at 50 respondents. In order to strike a balance between statistical significance and practical possibility, this sample size was used. A sample of 50 respondents allows for sufficient variability in the data, which is crucial for making reliable inferences about the larger population. Additionally, this size is manageable in terms of resources, such as time and cost, while still being large enough to capture meaningful insights into the study's focus. The results can be generalized to a larger

audience within the target market because this sample size is expected to have a respectable limit of error.

Given the research objectives, which include understanding perceptions, accessibility, and opinions on VR usage in filmmaking, it was crucial to select respondents who are familiar with digital media and likely to have encountered VR content. Hence, the sampling elements of this study is targeted at Malaysian young adults aged between 18 to 25 years old. The respondents were chosen based on their active engagement with media platforms, without restrictions on gender, race, or occupation. This approach ensures a more diverse and representative sample that reflects the broader population of Malaysian young adults.

3.2.4 Sampling Technique

In research, sampling techniques, also known as sampling methods, are statistical procedures used to choose a sample that is typical of the entire population in order to examine its features (Bisht, 2023). Sampling technique refers to the method of selecting a subset of individuals from a larger population to participate in a study. These techniques can be broadly classified into two categories: probability sampling and non-probability sampling. The primary difference between these methods lies in the role of randomization. In probability sampling, every individual in the population has an equal opportunity to be chosen, ensuring randomness. In contrast, non-probability sampling does not guarantee that every individual has an equal chance of selection. For this study, non-probability sampling has been employed.

Within non-probability sampling, there are several approaches, including quota sampling, purposive sampling, snowball sampling, convenience sampling, and self-selection sampling. Given the constraints of time and resources, this study utilizes

convenience sampling. According to McCombas (2023), convenience sampling, also known as availability sampling, involves selecting participants based on their accessibility and availability at the time of the study. While convenience sampling is efficient and cost-effective, it may introduce selection bias, as it may not represent the broader population. Nevertheless, this research, it provides a practical means to gather the necessary data and insights from Malaysian young adults aged 18 to 25, focusing on their perceptions and preferences regarding virtual reality in the film industry.

3.3 Research design

3.3.1 Research Design

Research design can be viewed as the fundamental framework of a research project, acting as the "glue" that binds all elements together, effectively serving as the blueprint for the proposed study. Various social scientists have defined research design differently. According to Jahoda, Deutch, and Cook, it is "the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy and procedure." It is described as the plan, structure, and strategy of investigation conceived to address research questions while managing variables. Henry Manheim emphasizes that research design not only anticipates and specifies the numerous decisions involved in data collection, processing, and analysis but also provides a logical foundation for these decisions. Zikmund defines it as "a master plan specifying the methods and procedures for collecting and analyzing the necessary information."

The purpose of this study is to explore Malaysian young adults' perceptions of virtual reality (VR) in the film industry. It also seeks to examine the relationship between independent variables, such as the quality of VR content, the immersive experience it provides, and its impact on storytelling, with the dependent variables of young adults' attitudes toward VR in films and their intention to engage with VR content. Consequently, quantitative and descriptive research methods are adopted in this study to thoroughly investigate these dynamics.

3.3.2 Questionnaire Survey

The questionnaire is the list of inquiries provided to research project participants. It may be included in a larger survey. Nevertheless, completing a questionnaire by itself won't provide you with the answers you need (SmartSurvey, 2024). A questionnaire is designed to collect information from a certain audience. On the other hand, a survey is a set of inquiries, procedures, and techniques used to analyze information about other people. Questionnaires are always used in surveys. A survey is usually designed with scholarly or professional objectives in mind, and its creation can be laborious and precise (SmartSurvey, 2024). These are strategic research techniques that may produce some quite insightful results. Finding out more information about a certain group of individuals is the ultimate goal of a survey. Numerous factors motivate this action. For this study, respondents who have seen and are familiar with visual technology are eligible to participate in this study and complete the questionnaire.

The questionnaire for this study will be administered as an online survey using Google Forms, a widely accessible and user-friendly platform. To ensure broad reach and engagement, the questionnaire will be distributed through various social media channels, leveraging platforms to attract a diverse respondent pool. The survey is carefully structured into four distinct sections, each focusing on different aspects of the study, with questions presented in a closed-ended format to facilitate straightforward responses. Each section is displayed on a separate page within the form, allowing respondents to focus on one set of questions at a time. This step-by-step format is designed to make the survey more manageable and less overwhelming, encouraging thoughtful and accurate responses. Participants will be required to read through and answer all the questions within each section before moving on to the next, ensuring

comprehensive data collection across all areas of interest. This method not only enhances the user experience but also increases the likelihood of obtaining high-quality, complete responses.

3.3.3 Questionnaire design

The questionnaire starts by introducing the academic context of the study, indicating that the research is part of our final year project at Universiti Tunku Abdul Rahman (UTAR). The purpose of the questionnaire is clearly stated as shown in Figure 3.0, focusing on participants' perceptions of Virtual Reality (VR) in the film industry. The cover explains that the participation of respondents is highly valued and emphasizes that the questionnaire is meant to gather individual perceptions without any right or wrong answers. This approach helps in encouraging honest and thoughtful responses from participants. The questionnaire is designed to be concise, requiring only 5-10 minutes of the participant's time, which is an important detail to manage expectations and encourage participation. The questionnaire is divided into 4 sections, which are Section A – (Respondents' demographic), Section B – (Malaysian young adults feel about virtual reality movies), Section C – (How young adults in Malaysia can access VR technology for watching films), Section D – (Potential of virtual reality (VR) technology in enhancing filmmaking).

Section 1 of 4

Malaysian Young Adults' Perception towards Virtual Reality in Film Industry.

B I U

Hi there! I am Kang Shen Ni, a Y3S2 Broadcasting student from Universiti Tunku Abdul Rahman (UTAR). I'm currently conducting Final Year Project research entitled "Malaysian Young Adults' Perception towards Virtual Reality in Film Industry". This questionnaire will focus on your perception of Virtual Reality (VR) in the film industry. 📧

📌 In order to make this study successful, your participation in this research is greatly appreciated. There is no right or wrong answers to the questionnaire as the study is on individual perceptions. This questionnaire would take a 5-10 minutes of your valuable time to complete answering all the questions. The data collected is only used for the purpose of this academic research. Once again, thank you very much for your participation. 📧

Email *

Valid email

This form is collecting emails. [Change settings](#)

Figure 3.0: Questionnaire Cover – Brief explanation

The main aim of Section A of the study questionnaire is to collect respondent demographic data. Basic but necessary questions on the respondents' gender, age, and ethnicity are included in this section. Through the collection of gender, age, and racial data, the study can investigate possible differences in beliefs or actions between different demographic groups.

Section A: Demographic questions

Please respond to the questions by selecting the most appropriate choice from each item described below or by filling in the blanks.

1. Gender *

Male

Female

2. Age *

18-20

21-25

26-30

31 and above

3. Race *

Figure 3.1: Section A Questionnaire – Demographic

Section B of the research questionnaire is designed to explore one of the key objectives of the study, which is to understand how Malaysian young adults feel about virtual reality (VR) movies. This section contains 7 questions that are structured using a Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), allowing respondents to express their level of agreement or disagreement with various statements related to VR in the film industry.

Section 2 of 4

Section B: Malaysian young adults feel about virtual reality movies.

Below you will read through a list of statements. Please rate the truth of each statement as it applies to you.

The following rating scale to make your choices where

1 = Strongly Disagree
 2 = Disagree
 3 = Neutral
 4 = Agree
 5 = Strongly Agree

1. I am really interested in the VR (virtual reality) movies. *

1 2 3 4 5

2. I would like to choose a VR (virtual reality) movie over a traditional movie for my entertainment. *

1 2 3 4 5

Figure 3.2: Section B Questionnaire – Malaysian young adults feel about virtual reality (VR) movies

2. I would like to choose a VR (virtual reality) movie over a traditional movie for my entertainment. *

1 2 3 4 5

3. I believe VR (virtual reality) movies provide a more immersive cinematic experience compared to traditional movies. *

1 2 3 4 5

4. I think VR (virtual reality) movies enhance the storytelling experience compared to traditional movies. *

1 2 3 4 5

Figure 3.3: Section B Questionnaire – Malaysian young adults feel about virtual reality (VR) movies

5. I enjoy and feel comfortable wearing VR (virtual reality) headsets for an extended period while watching a movie. *

1 2 3 4 5

6. I am concern about the potential negative effects such as motion sickness or eye strain while experiencing VR (virtual reality) movies. *

1 2 3 4 5

7. I will recommend VR (virtual reality) movies to my friends and family. *

1 2 3 4 5

Figure 3.4: Section B Questionnaire – Malaysian young adults feel about virtual reality (VR) movies

The research questionnaire's Section C focuses on examining how young adults in Malaysia utilize virtual reality (VR) technology to view movies, which is another important study goal. 10 questions in this part also use the Likert scale approach. Respondents are asked to score how much they agree or disagree with statements that evaluate multiple aspects of accessibility, including the accessibility of VR equipment, their price, simplicity of use, and degree of connection with movies.

The screenshot shows a digital questionnaire interface. At the top, it says 'Section 3 of 4'. Below that is the title 'Section C: How young adults in Malaysia can access VR technology for watching films.' followed by instructions: 'Below you will read through a list of statements. Please rate the truth of each statement as it applies to you.' and 'The following rating scale to make your choices where'. A legend defines the scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. Two questions are visible, each with a 5-point Likert scale represented by radio buttons. Question 1 is '1. I am aware of the availability of VR movies in Malaysia. *' and question 2 is '2. I feel very easy to find access information about VR movie events or promotions in Malaysia. *'. The asterisks indicate required questions.

Figure 3.5: Section C Questionnaire – How young adults in Malaysia can access VR technology for watching films

2. I feel very easy to find access information about VR movie events or promotions in Malaysia. *

1 2 3 4 5

3. I find it easy to find VR movie-related accessories and peripherals in local stores or online markets in Malaysia. *

1 2 3 4 5

4. I could troubleshoot technical issues related to VR equipment for movie watching. *

1 2 3 4 5

Figure 3.6: Section C Questionnaire – How young adults in Malaysia can access VR technology for watching films

5. I would like to participate in VR movie-related workshops or training sessions to enhance my knowledge and skills. *

1 2 3 4 5

6. I perceive VR technology is accessible to young adults in Malaysia. *

1 2 3 4 5

7. I feel the availability of VR movie content serves diverse tastes and preferences in Malaysia. *

1 2 3 4 5

Figure 3.7: Section C Questionnaire – How young adults in Malaysia can access VR technology for watching films

The image shows a screenshot of a questionnaire section with a light purple border. It contains three questions, each with a 5-point Likert scale. The questions are:

- 8. I can afford the virtual reality equipment, such as VR headsets for watching films. *
- 9. I am concerned about the cost of VR movies compared to traditional cinema tickets. *
- 10. I would recommend affordable VR movies to my friends. *

Each question has five radio button options labeled 1 through 5. At the bottom of the section, there is a navigation bar with the text "After section 3 Continue to next section" and a small downward-pointing arrow.

Figure 3.8: Section C Questionnaire – How young adults in Malaysia can access VR technology for watching films

The questionnaire's Section D dedicates itself to understanding how virtual reality technology may improve the filmmaking process. The purpose of the 7 questions in this section is to assess the respondents' opinions and ideas on how virtual reality (VR) can affect many areas of filmmaking, including audience participation, storytelling, visual effects, and the overall cinematic experience. Similar to the earlier parts, respondents can indicate how much they agree or disagree with the assertions by answering questions using a Likert scale.

Section 4 of 4

Section D: Potential of virtual reality (VR) technology in enhancing filmmaking.

Below you will read through a list of statements. Please rate the truth of each statement as it applies to you.

The following rating scale to make your choices where

1 = Strongly Disagree
 2 = Disagree
 3 = Neutral
 4 = Agree
 5 = Strongly Agree

1. I am satisfied with the current level of creativity through VR filmmaking. *

1 2 3 4 5

2. I believe that VR technology can offer new and innovative storytelling techniques in filmmaking. *

1 2 3 4 5

Figure 3.9: Section D Questionnaire – Potential of virtual reality (VR) technology in enhancing filmmaking

<p>2. I believe that VR technology can offer new and innovative storytelling techniques in filmmaking. *</p> <p>1 2 3 4 5</p> <p><input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p>
<p>3. I think VR can enhance audience engagement and immersion in film narrative. *</p> <p>1 2 3 4 5</p> <p><input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p>
<p>4. I think VR technology has the high ability to revolutionize the traditional filmmaking process. *</p> <p>1 2 3 4 5</p> <p><input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p>

Figure 3.10: Section D Questionnaire – Potential of virtual reality (VR) technology in enhancing filmmaking

<p>5. It is important for the film industry to invest in research and development of VR technologies to advance filmmaking capabilities. *</p> <p>1 2 3 4 5</p> <p><input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p>
<p>6. I think it is important for filmmakers to receive training and education on VR technologies to stay competitive in the industry. *</p> <p>1 2 3 4 5</p> <p><input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p>
<p>7. I believe VR can provide a more immersive experience for filmmakers in visualizing and planning their scenes. *</p> <p>1 2 3 4 5</p> <p><input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p>

Figure 3.11: Section D Questionnaire – Potential of virtual reality (VR) technology in enhancing filmmaking

3.4 Measurement

The act of observing and recording the data gathered as part of a research project is called measurement (Deivanai, n.d.). There are 2 types of measurement scales, which are nominal scale and Likert scale.

3.4.1 Nominal Scale

According to Unsw (2023), the characteristic of identity of data is defined by the nominal scale of measurement. Although this scale has some qualities, it lacks any numerical significance. Although the data cannot be split, multiplied, added, or removed from one another, it may be categorized. Furthermore, measuring the variation between data points is impossible. With the nominal scale included in Section A of the questionnaire, the researcher may determine the respondents' demographic profile. For instance, "male or female", "Malay, Chinese, Indian, others," and "student, unemployed, employed, self-employed" are examples of these categories.

3.4.2 Likert Scale

A rating system known as a Likert scale is employed to evaluate beliefs, attitudes, or actions (Bhandari & Nikolopoulou, 2020). Likert scales often have five or seven alternatives on them. Positive and negative choices can be found on each side of the midway, which is often a neutral location. A number between 1 and 5 or 1 and 7 is assigned to each component. The choice that most closely reflects the respondent's attitude toward the statement or question is selected. Likert scales are excellent for more nuancedly expressing respondents' emotions or level of agreement with an issue since they provide a variety of alternative responses. For each variable statement in Sections

C and D, for instance, the responders must select the best response from the options marked "strongly disagree, disagree, neutral, agree, or strongly agree."

3.5 Procedure

According to Santana (2024), procedure covers the circumstances under which the data was gathered, the guidelines provided to the participants, and the techniques used for data analysis. The data collection process for this study was conducted through a structured, web-based questionnaire distributed via Google Forms. The questionnaire was disseminated across various social media platforms, including Facebook, Instagram, and WhatsApp, to reach a broad and diverse group of respondents fitting the study's target demographic — young adults in Malaysia aged between 18 to 30 years old. It was required of the respondents to answer the questions in order, finishing each area before going on to the next. Likert-scale questions were included in each section, and respondents were asked to rate how much they agreed or disagreed with each statement on a scale of 1 (strongly disagree) to 5 (strongly agree).

Once completion the survey questionnaire, the data was immediately entered into a protected Google Sheet as it was finished, guaranteeing accuracy and instant access for analysis. Four weeks were dedicated to the collecting of data, following which 50 valid responses was exported for data analysis.

3.5.1 Data Processing

In research, data processing refers to gathering and converting a set of data into meaningful, actionable knowledge. In this process, raw data is transformed, either manually or automatically, by a researcher, data engineer, or data scientist into a more legible format, such a graph, report, or chart (*What Is Data Processing in Research? - Cint, 2021*). I conducted a preliminary analysis of the data using Google Forms' built-in analytical capabilities when the number of replies reached the desired sample size. An easy-to-use interface on Google Forms allows you to create charts and summary data straight from the replies. I was able to immediately see important patterns and

trends among the replies via this tool. For instance, it would be simple for me to create pie charts, bar graphs, and line charts to analyze the replies to various questions about the distribution of the sample's demographics or the degree of agreement or disagreement with statements related to the goals of the study.

The data from the respondents was instantly and easily understood due to these visuals, which also helped us spot any possible abnormalities or areas that needed more research. This first examination provided the foundation for the later, with specialist software-assisted, more in-depth statistical analysis. The deeper analysis's path was also guided by the charts and summaries generated by Google Forms, which helped to highlight particular factors or links that were important during the preliminary assessment.

3.6 Conclusion

In summary, this chapter has provided a comprehensive overview of the key components of the research methodology employed in this study. A quantitative approach was chosen, underpinned by a systematic data collection method, and a carefully designed sampling strategy. The research design was meticulously crafted to align with the study's objectives, ensuring that the measurement tools were both reliable and valid. Data processing procedures were also discussed, highlighting the steps taken to ensure the integrity and accuracy of the data. A total of 50 respondents participated in the study, contributing valuable data that forms the basis of the analysis. The insights gathered from these respondents will be critically analyzed in the following chapter, where the results will be presented and discussed in detail to address the research questions and objectives. This analysis will offer deeper insights into the perceptions and behaviors of the target population, providing a solid foundation for the study's conclusions.

Chapter IV: Research Findings

4.0 Introduction

This chapter presents the findings from the data collected during the research. The analysis is based on responses from the questionnaires distributed to participants. By examining the data, key insights and patterns are identified, providing a deeper understanding of the research questions. The results are presented in a structured manner, with charts and graphs used to illustrate the main points and trends observed in the study.

4.1 Research data output (quantitative / qualitative)

In this study, quantitative data was collected and analyzed to explore the research questions. The data, gathered through a structured questionnaire, was processed using Google Forms' charting features. This method allowed for a straightforward and visual representation of the responses, enabling clear identification of trends, patterns, and key insights. The charts provided by Google Forms facilitated an efficient analysis of the data, highlighting significant findings that contribute to a deeper understanding of the subject matter.

Section A of the questionnaire has collected 50 demographic profiles in total. Gender, age, ethnicity, and employment are all included. The 3 research objectives are shown in Section B which include "Malaysian young adults feel about virtual reality movies", "How young adults in Malaysia can access VR technology for watching films", and "Potential of virtual reality (VR) technology in enhancing filmmaking".

4.2 Analysis and interpretation of data output

4.2.1 Demographic (Section A)

4.2.1.1 Gender

1. Gender
50 responses

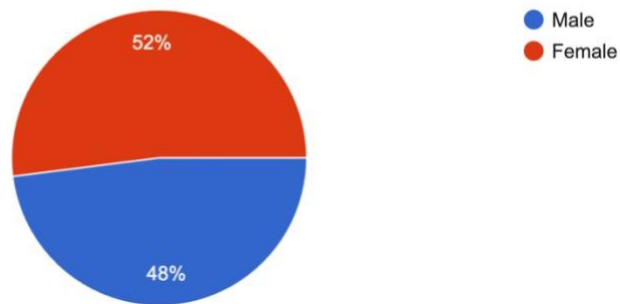


Figure 4.0: Gender

The survey participants' gender is displayed in Figure 4.0. There are more female respondents than male responders in this sample. There were fifty responders in all, including twenty-six women (52%) and twenty-four men (48%).

4.2.1.2 Age

2. Age
50 responses

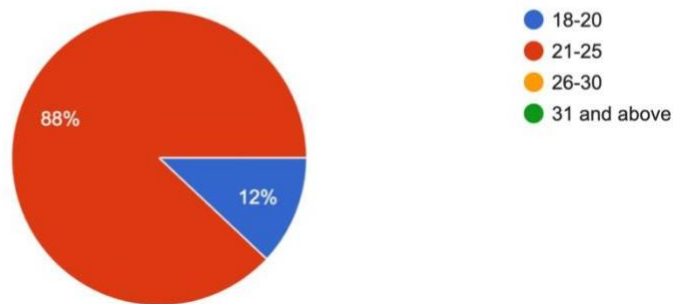


Figure 4.1: Age

The age distribution of survey respondents, which corresponds with the study's target audience of 18 to 25-year-olds, is highlighted by the data in Figure 4.1. Notably, 88% and 12% of the respondents, respectively, are in the age ranges of 18–20 and 21–25 years old, which predominate the sample. That means that most of the participants are inside the target age range. The lack of responses from the 26–30 or 31 and older age categories, on the other hand, supports the study's emphasis on younger populations. The fact that no elder age category is included highlights how accurate and pertinent the data is for the intended audience.

4.2.1.3 Race

3. Race
50 responses

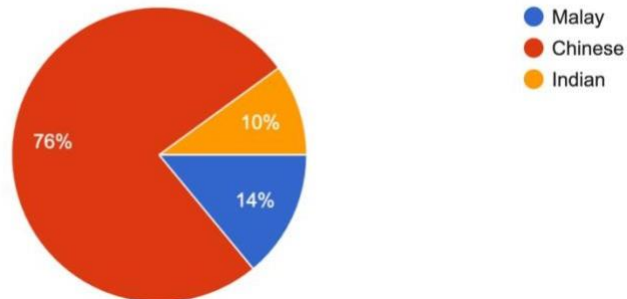


Figure 4.2: Race

Figure 4.2 presents the respondents' ethnicity in this research. The ethnic groups were divided into three categories: Chinese, Malay, and Indian. With 38 replies, or 76% of the total, the bulk of the respondents are Chinese. Next, out of 7 respondents, 14% identified as Malay. The group of Indian respondents accounted for the fewest number of responses (10%) to this question.

4.2.1.4 Are you a university student?

4. Are you a university student?

50 responses

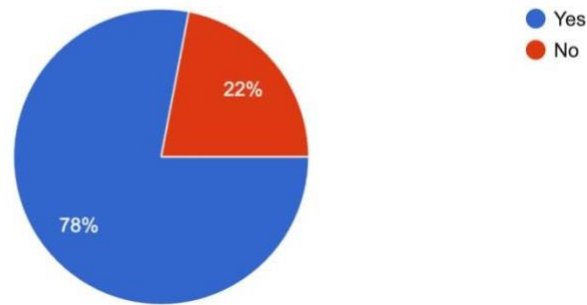


Figure 4.3: Are you a university student?

Figure 4.3 represents the responses to the question, "Are you a university student?" from a sample of 50 participants. The chart shows that the majority of respondents, 78%, answered "Yes," indicating that they are university students. In contrast, 22% of the respondents answered "No," meaning they are not university students.

This distribution may indicate that the majority of the sample is made up of people who are presently enrolled in college, which may have an impact on the study's emphasis and the applicability of its conclusions to student groups. Even if their number is fewer, non-university students' perspectives are still more varied in the data set.

4.2.1.5 Do you know Virtual Reality?

5. Do you know Virtual Reality (VR)?

50 responses

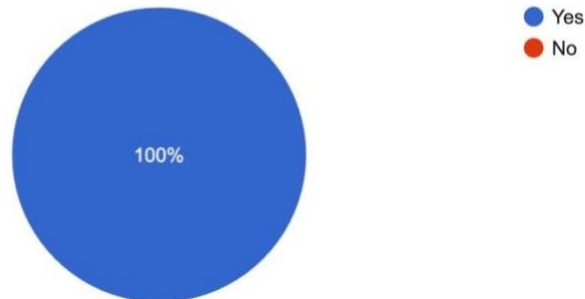


Figure 4.4: Do you know Virtual Reality?

The answers to the question "Do you know Virtual Reality (VR)?" from 50 participants are shown in Figure 4.4. As can be seen from the chart, all participants are familiar with virtual reality (VR), as indicated by the 100% of respondents who selected "Yes."

The poll respondents appear to have a high degree of awareness or knowledge of virtual reality, based on the unanimous outcome. It could suggest that the intended audience is familiar with or has been exposed to recent technology developments, especially virtual reality. Given that all participants have a basic grasp of VR technology, this finding is crucial since it lays the foundation for future questions or conversations in your study that might involve more comprehensive components of the technology.

4.2.1.6 How do you know Virtual Reality?

6. How do you know VR?
50 responses

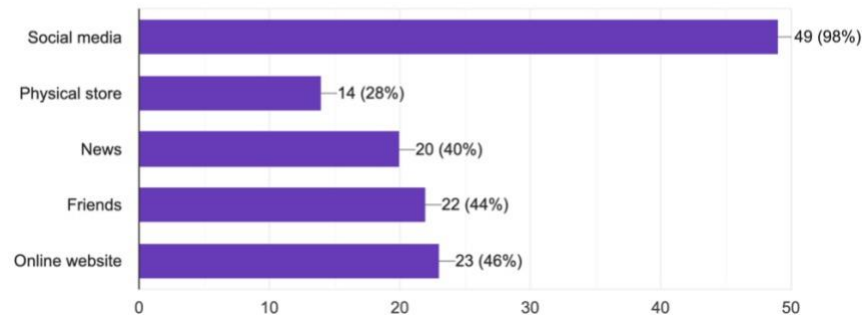


Figure 4.5: How do you know VR?

The chart illustrates how respondents are familiar with virtual reality (VR), based on a sample of 50 individuals. Social media stands out as the dominant source, with 98% of respondents (49 out of 50) reporting that they know about VR through this platform. Other significant sources include online websites and friends, with 46% (23 respondents) and 44% (22 respondents) respectively, mentioning them as how they learned about VR. News was also a notable source, cited by 40% (20 respondents). In contrast, physical stores had the least impact, with only 28% (14 respondents) indicating that they learned about VR through in-person retail experiences. Overall, the data suggests that digital platforms, particularly social media, are the primary means by which people are introduced to VR.

4.2.1.7 Do you feel interested if VR is involved in the film production?

7. Do you feel interested if VR is involved in the film production?
50 responses

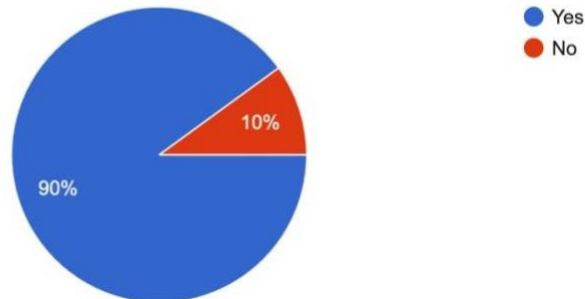


Figure 4.6: Do you feel interested if VR is involved in the film production?

This pie chart displays the responses to the question, "Do you feel interested if VR is involved in the film production?" from 50 participants. The chart reveals that a vast majority of respondents, **90%**, expressed interest in VR being involved in film production. Meanwhile, **10%** of respondents indicated that they are not interested.

In summary, the data suggests that the inclusion of virtual reality in film production is highly appealing to most of the respondents, with only a small fraction showing disinterest.

4.2.2 Malaysian young adults feel about virtual reality movies (Section B)

4.2.2.1 I am interested in the VR (virtual reality) movies.

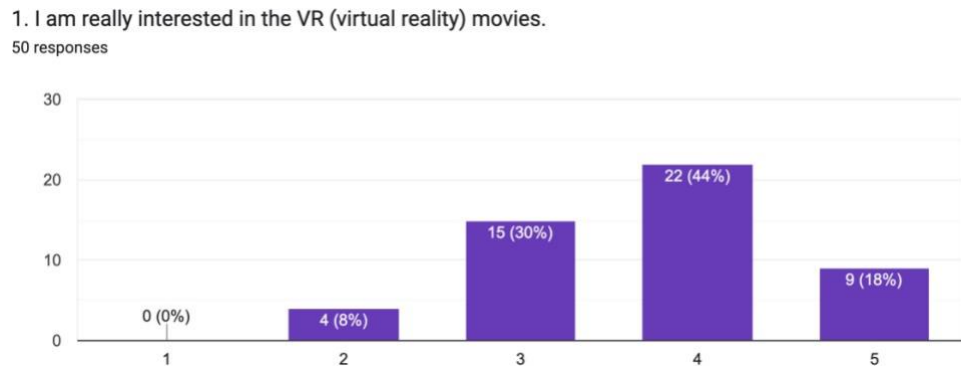


Figure 4.7: I am interested in the VR (virtual reality) movies

The bar chart reflects the level of interest in VR (virtual reality) movies among 50 respondents, rated on a scale of 1 to 5. A significant portion, 44% (22 respondents), indicated a strong interest by selecting 4 on the scale, while 18% (9 respondents) expressed very high interest by choosing 5. Another 30% (15 respondents) demonstrated moderate interest with a rating of 3. Only 8% (4 respondents) rated their interest at a low level, with none selecting 1, indicating no respondents were completely disinterested. Overall, the data shows a clear trend toward interest in VR movies, with the majority showing strong or moderate engagement.

4.2.2.2 I would like to choose a VR (virtual reality) movie over a traditional movie for my entertainment

2. I would like to choose a VR (virtual reality) movie over a traditional movie for my entertainment.

50 responses

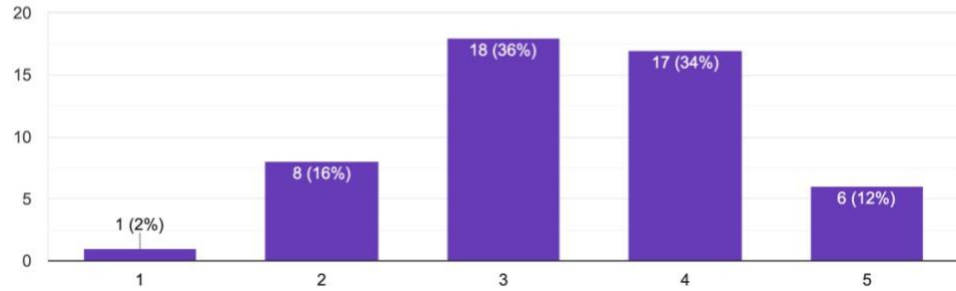


Figure 4.8: I would like to choose a VR (virtual reality) movie over a traditional movie for my entertainment

This graphic illustrates a survey question that inquires about respondents' preference for virtual reality (VR) movies over regular ones when it comes to enjoyment. 13 out of the 50 responders, or 36 %, chose a neutral three on a scale of one to five. A sizable portion, 34% (17 individuals), is inclined toward selecting virtual reality, while 12% (6 individuals) firmly support it. Conversely, 16% (8 individuals) are neutral about virtual reality, and just 2% (1 person) firmly believe in traditional film. Overall, the responses show a varied but mostly neutral to positive interest in VR movies.

4.2.2.3 I believe VR (virtual reality) movies provide a more immersive cinematic experience compared to traditional movies.

3. I believe VR (virtual reality) movies provide a more immersive cinematic experience compared to traditional movies.

50 responses

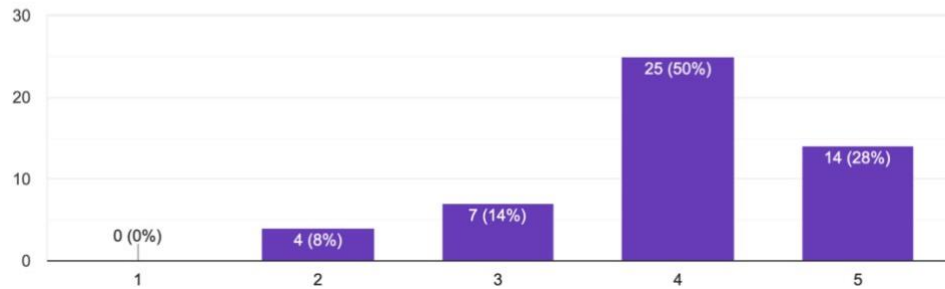


Figure 4.9: I believe VR (virtual reality) movies provide a more immersive cinematic experience compared to traditional movies.

This graph displays the responses to a survey question concerning how immersive virtual reality films are in comparison to traditional motion pictures. Of the 50 replies, 25% of the participants strongly agreed, scoring a 4 out of 5. This suggests that they strongly believed that VR had an immersive quality. A additional 28%, or 14 individuals, awarded this opinion the highest grade of 5. A lesser percentage (8%), who rated a 2 out of 2, agreed and 14% disapproved. No one gave it a zero, indicating a generally favorable opinion.

4.2.2.4 I think VR (virtual reality) movies enhance the storytelling experience compared to traditional movies.

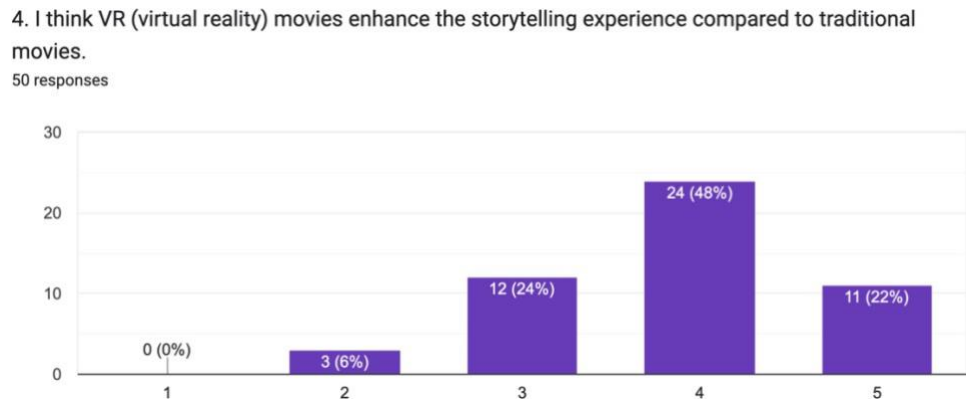


Figure 4.10: I think VR (virtual reality) movies enhance the storytelling experience compared to traditional movies.

The responses given to a survey question about whether VR films improve the narrative experience over regular films are displayed in this chart. Nearly half (48%) of the 50 respondents, or 24 individuals, evaluated their agreement as 4, suggesting a strong belief that virtual reality improves narrative. A additional 22% of respondents (11 individuals) gave this opinion the maximum possible score of 5. In the meanwhile, 6% (3 individuals) disagreed with a grade of 2, while 24% (12 people) gave it a neutral 3. The general consensus about VR's narrative potential was good, with no one expressing objection.

4.2.2.5 I enjoy and feel comfortable wearing VR (virtual reality) headsets for an extended period while watching a movie.

5. I enjoy and feel comfortable wearing VR (virtual reality) headsets for an extended period while watching a movie.

50 responses

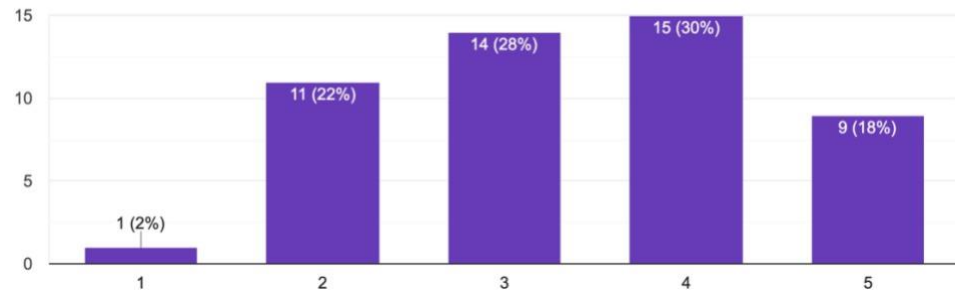


Figure 4.11: I enjoy and feel comfortable wearing VR (virtual reality) headsets for an extended period while watching a movie.

The replies of fifty people to the statement, "I enjoy and feel comfortable wearing VR (virtual reality) headsets for an extended period of time while watching a movie," are displayed in a bar chart. 58% of participants reported having a good experience using VR headsets; 28% chose option number 3, 30% chose option number 4, and 18% chose option number 5. By contrast, 22% of respondents selected option 2, and just 2% strongly disagreed (1). This indicates that although the majority of individuals find VR to be pleasant for prolonged viewing, quite a few did not feel comfortable.

4.2.2.6 I enjoy and feel comfortable wearing VR (virtual reality) headsets for an extended period while watching a movie.

6. I am concern about the potential negative effects such as motion sickness or eye strain while experiencing VR (virtual reality) movies.
50 responses

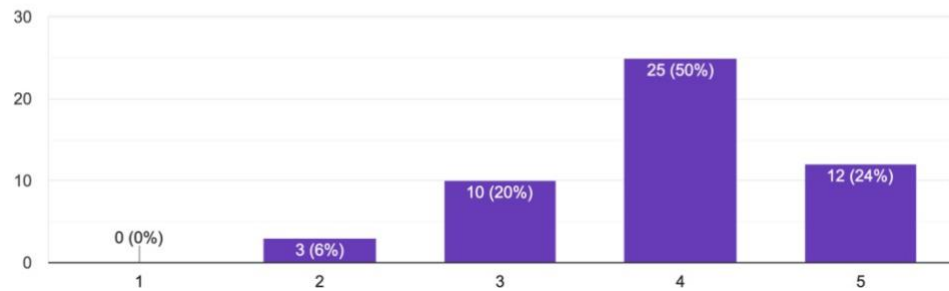


Figure 4.12: I am concern about the potential negative effects such as motion sickness or eye strain while experiencing VR (virtual reality) movies.

The bar graph shows the participants' concerns about possible side effects, including motion sickness or eye strain, when watching virtual reality (VR) movies. 74% of respondents said they were concerned, with 50% choosing option 4 and 24% choosing option 5, which indicates serious concern. A smaller percentage (20%) chose 3, indicating a considerable level of worry. Just 6% of participants chose option 2, indicating that no one strongly disagreed with the remark. This implies that the majority of people are wary of any potential drawbacks that may result from prolonged VR use while watching a movie.

4.2.2.7 I will recommend VR (virtual reality) movies to my friends and family.

7. I will recommend VR (virtual reality) movies to my friends and family.
50 responses

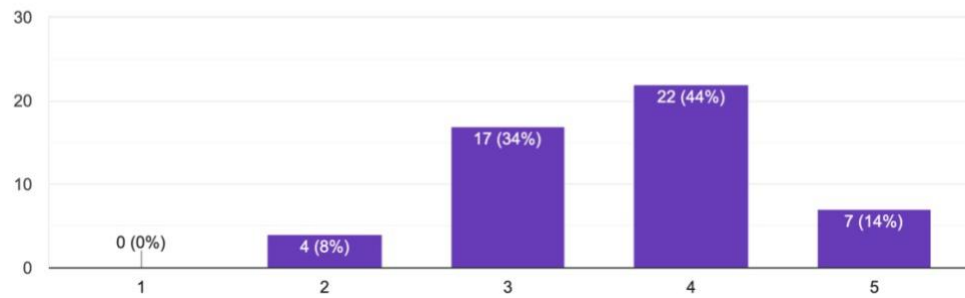


Figure 4.13: I will recommend VR (virtual reality) movies to my friends and family.

The replies of fifty participants to the statement, "I will recommend VR (virtual reality) movies to my friends and family," are displayed in a bar chart. While 34% of respondents chose 3, suggesting a neutral view, the majority of respondents, 44%, selected 4, indicating they are likely to promote VR movies. Furthermore, 14% of responders selected 5 in strong agreement. Conversely, 8% chose option 2, indicating considerable hesitation, while 0% disagreed strongly with option 1. While a smaller number express less enthusiasm, overall, most respondents appear likely to suggest VR movies.

4.2.3 How young adults in Malaysia can access VR technology for watching films.

(Section C)

4.2.3.1 I am aware of the availability of VR movies in Malaysia.

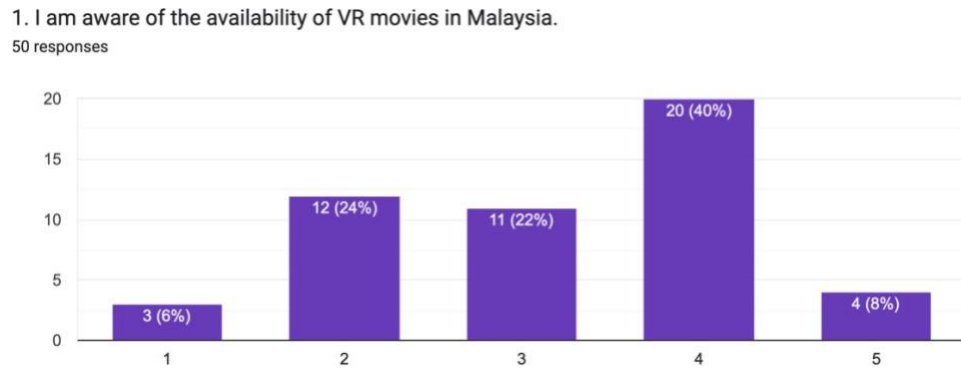


Figure 4.14: I am aware of the availability of VR movies in Malaysia

The graph shows the findings of a study conducted among 50 respondents in Malaysia about respondents' awareness of virtual reality (VR) films. Based on their ranking of 4 on the scale, it demonstrates that a sizable fraction of participants, 40% (20 respondents), are fairly aware that VR movies are available. After that, 22% (11 respondents) ranked their awareness as 3, indicating a moderate amount of understanding regarding VR movies, while 24% (12 respondents) rated their awareness as 2, indicating just minimal awareness. At the other end of the spectrum, just 6% (3 respondents) ranked it as 1, indicating minimum awareness, and 8% (4 respondents) rated it as 5, indicating considerable awareness of VR movies available in the nation.

4.2.3.2 I feel very easy to find access information about VR movie events or promotions in Malaysia.

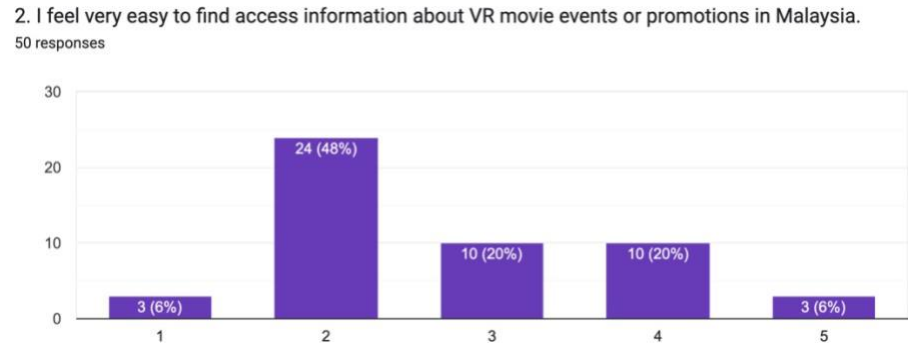


Figure 4.15: I feel very easy to find access information about VR movie events or promotions in Malaysia.

The graph displays the answers of fifty people when asked how simple it is for them to find out about VR cinema events or promotions in Malaysia. On a scale of 1 to 5, 24 respondents, or over half of the sample, gave their experience a 2—indicating that they had some trouble locating this kind of information. Only 10% of respondents, or 20% of the sample, gave it a score of 3, denoting a neutral to moderate degree of easiness. Ten more respondents, or 20% of the sample, said that they found it to be reasonably straightforward to get information with a grade of 4. In contrast, another 6% (3 individuals) evaluated their experience as 5, indicating that they find it extremely easy to access this information. At the extremes, 6% (3 people) ranked their experience as 1, indicating severe difficulties.

4.2.3.3 I find it easy to find VR movie-related accessories and peripherals in local stores or online markets in Malaysia.

3. I find it easy to find VR movie-related accessories and peripherals in local stores or online markets in Malaysia.

50 responses

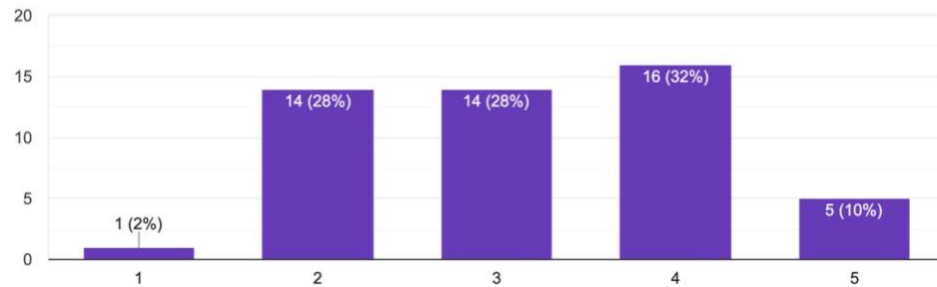


Figure 4.16: I find it easy to find VR movie-related accessories and peripherals in local stores or online markets in Malaysia.

The graph shows how simple it was for 50 respondents to locate VR movie-related equipment and accessories in Malaysian local shops and internet marketplaces. Most of the respondents (16 in total), or 32% of them, gave their experience a rating of 4, meaning that they usually have no trouble finding these goods. But 28% of respondents — 14 people rated it a 2, indicating that a sizable portion had some trouble locating these items. In a similar vein, 28% of the respondents, or 14 people, scored their easiness as 3, indicating a middling or indifferent experience. 10% of the respondents, or 5 people, provided the highest grade of 5, indicating that they had no trouble obtaining these things. However, just 2% (1 respondent) gave it a 1, suggesting that they have a difficult time locating accessories for virtual reality. Overall, the graphic indicates that while a significant part of respondents still have challenges, the majority of respondents believe it to be reasonably straightforward to obtain VR equipment.

4.2.3.4 I could troubleshoot technical issues related to VR equipment for movie watching.

4. I could troubleshoot technical issues related to VR equipment for movie watching.

50 responses

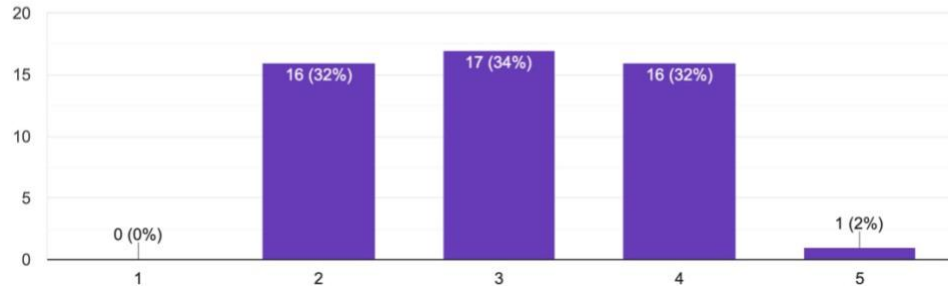


Figure 4.17: I could troubleshoot technical issues related to VR equipment for movie watching.

The graph shows the level of confidence that 50 respondents had in their ability to handle technical problems pertaining to VR movie-watching equipment. The majority of respondents, or 34% (17 people), gave their abilities a score of 3, indicating a moderate degree of confidence in their ability to handle technical issues. An additional 32% (16 respondents) gave their ability a score of 2, meaning that they are not very good at troubleshooting VR equipment or have some difficulties. Comparably, 32% (16 respondents) gave their abilities a rating of 4, indicating a quite high degree of confidence in their capacity to resolve these problems. Merely 2% of the participants gave their ability a 5-star rating, indicating a high level of confidence in their troubleshooting abilities. Remarkably, none of the respondents gave their abilities a score of 1, suggesting that all of them believe they are at least somewhat capable of solving technical issues.

4.2.3.5 I would like to participate in VR movie-related workshops or training sessions to enhance my knowledge and skills.

5. I would like to participate in VR movie-related workshops or training sessions to enhance my knowledge and skills.

50 responses

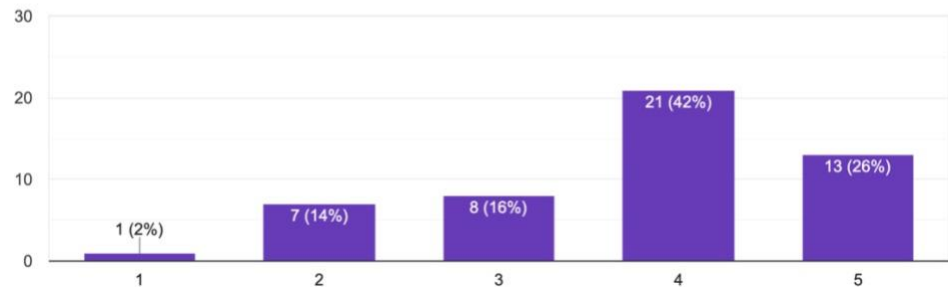


Figure 4.18: I would like to participate in VR movie-related workshops or training sessions to enhance my knowledge and skills.

The replies to a question regarding interest in attending workshops or training sessions centered around VR movies with the goal of improving knowledge and abilities are displayed in this bar chart. 42% of respondents said they would be very interested in joining (rating of 4), while 26% said they were very enthusiastic (ranking of 5). When taken as a whole, these indicate that 68% of participants have a strong inclination to attend such courses. Comparably, 14% expressed modest curiosity (rating of 2) and 16% had a neutral response (rating of 3). Just 2% of respondents gave the proposal a very low interest rating (of 1), indicating very little participation. Overall, the data points to a high level of interest in learning possibilities associated to VR movies.

4.2.3.6 I perceive VR technology is accessible to young adults in Malaysia.

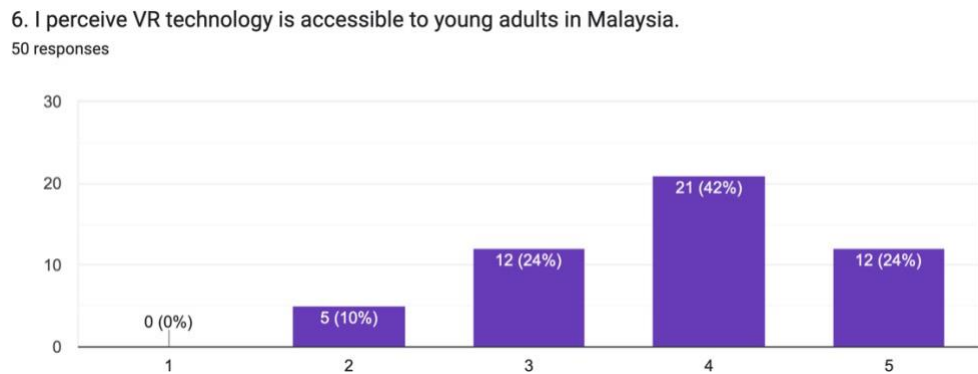


Figure 4.19: I perceive VR technology is accessible to young adults in Malaysia.

The respondents' opinions on how accessible VR technology is to young adults in Malaysia are depicted in this bar chart. On a scale of 1 to 5, 42% of respondents gave VR technology accessibility a rating of 4, reflecting a generally good opinion of the technology's accessibility. An further 24% of respondents rated VR with a perfect score of 5, confirming the idea that young adults in Malaysia can easily access VR. This indicates that 66% of participants think VR accessibility is good. Conversely, 10% of respondents offered a lower rating of 2, indicating some skepticism or restricted access, while 24% of respondents selected a neutral response (rating of 3). The fact that no one chose the lowest grade (1) suggests that there isn't a widespread belief that VR technology is unaffordable. In conclusion, the majority of respondents think that young adults in Malaysia may fairly use virtual reality technology, with a smaller percentage expressing neutrality or mild disagreement.

4.2.3.7 I feel the availability of VR movie content serves diverse tastes and preferences in Malaysia.

7. I feel the availability of VR movie content serves diverse tastes and preferences in Malaysia.

50 responses

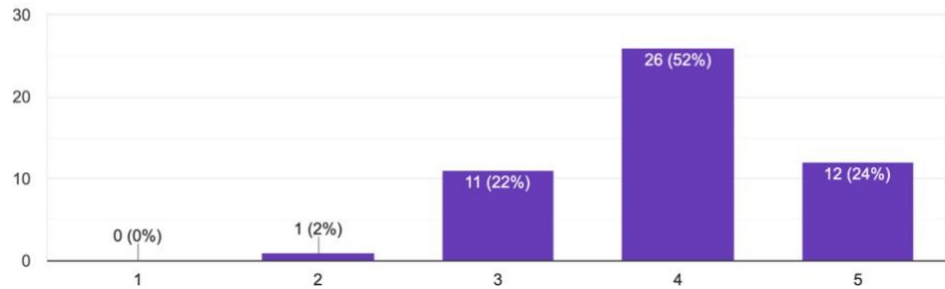


Figure 4.20: I feel the availability of VR movie content serves diverse tastes and preferences in Malaysia.

The replies to a statement about the availability of VR movie material and how well it suits different interests and preferences in Malaysia are shown in this bar chart. The majority of respondents, or 52%, gave the availability of VR material a rating of 4, meaning that over half think it does a good job of accommodating a variety of tastes in VR movie content. Furthermore, 24% of respondents rated VR material as highly as 5, indicating a solid agreement that it is sufficiently variety to appeal to a wide range of preferences. All all, 76% of respondents have nice things to say about the variety of VR film material available in Malaysia. A smaller subset of 22% gave the statement a neutral 3 rating, indicating that they had a moderate opinion about the variety of VR material. Few respondents gave it a score of 2, and none of them selected the lowest score of 1, suggesting that there is no dispute that VR material appeals to

a variety of tastes. In conclusion, the graph shows that the majority of respondents believe Malaysian VR movie material is adequately diversified, with a minor percentage expressing slight disagreement or being indifferent.

4.2.3.8 I can afford the virtual reality equipment, such as VR headsets for watching films.

8. I can afford the virtual reality equipment, such as VR headsets for watching films.
50 responses

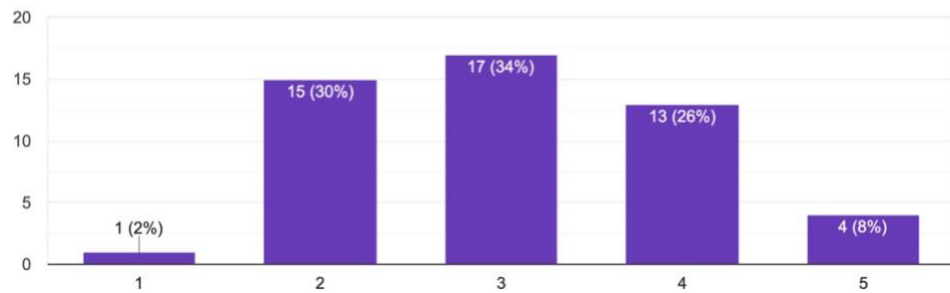


Figure 4.21: I can afford the virtual reality equipment, such as VR headsets for watching films.

With regard to the statement, "I can afford the virtual reality equipment, such as VR headsets for watching films," this bar chart shows the distribution of answers based on 50 participants. great disagreement is represented by a score of 1, and great agreement is represented by a score of 5. Most responders are in the range of neutral to moderate agreement. In particular, 34% of respondents gave it a 3, denoting indifference. After that, 26% selected 4, indicating moderate agreement, while 30% selected 2, indicating moderate dissent. Only

2% strongly disagreed (1), while a smaller percentage, 8%, firmly agreed (5). This indicates that the majority of respondents still have concerns about the cost of VR headsets, with a sizable fraction expressing no opinion or being unable to purchase them.

4.2.3.9 I am concerned about the cost of VR movies compared to traditional cinema tickets.

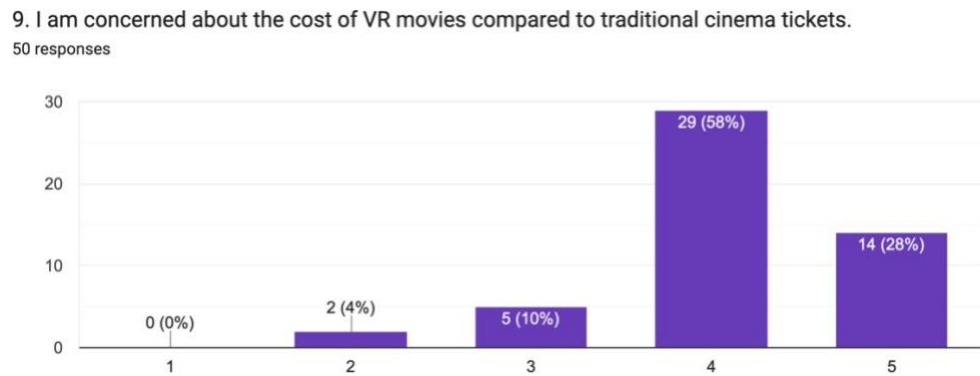


Figure 4.22: I am concerned about the cost of VR movies compared to traditional cinema tickets.

The answers to the statement, "I am concerned about the cost of VR movies compared to traditional cinema tickets," from 50 participants are displayed in this bar chart. With 58% choosing option 4 and 28% selecting option 5, the majority of respondents show strong worry over the cost disparity. 10%, a lesser percentage, had a rating of 3 and stayed indifferent. Merely 4% of individuals expressed a minor disagreement (rating 2), and 0% strongly disagreed (rating 1). This shows that a sizable portion of respondents are, in fact,

concerned about the greater price of VR movie tickets in comparison to regular movie tickets.

4.2.3.10 I would recommend affordable VR movies to my friends.

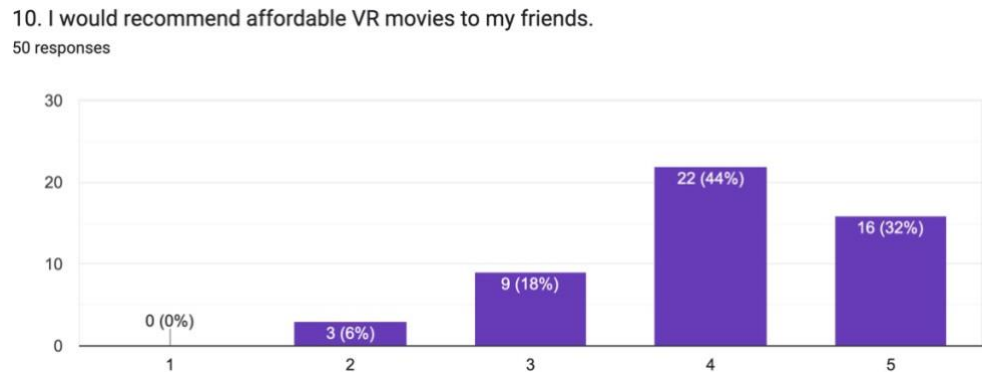


Figure 4.23: I would recommend affordable VR movies to my friends.

The replies of fifty participants to the statement, "I would recommend affordable VR movies to my friends," are displayed in this bar chart. There is broad consensus among participants that they would suggest inexpensive VR movies to their friends; 44% selected option 4 and 32% selected option 5. A smaller percentage, 6%, somewhat disagreed with a rating of 2, while 18% of respondents were indifferent with a rating of 3. None of the responders disagreed strongly (1). In general, most participants are willing to suggest to their friends VR movies that are within their budget.

4.2.4 Potential of virtual reality (VR) technology in enhancing filmmaking. (Section D)

4.2.4.1 I am satisfied with the current level of creativity through VR filmmaking.

1. I am satisfied with the current level of creativity through VR filmmaking.
50 responses

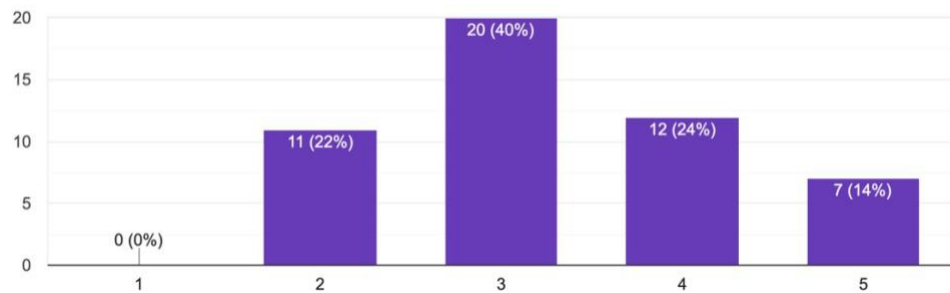


Figure 4.24: I am satisfied with the current level of creativity through VR filmmaking.

Responses to the statement, "I am satisfied with the current level of creativity through VR filmmaking," from 50 participants are displayed in this bar chart. 40% of respondents, or most respondents, chose option 3. A smaller but noteworthy portion of respondents, 24%, agree moderately (4), and 14% strongly agree (5), demonstrating satisfaction with the inventiveness of VR filmmaking. Conversely, no one participated in severe disagreement (1), and 22% of respondents disagreed a little (2). This shows that while a sizable percentage of respondents express pleasure with the level of originality in VR filmmaking, a large number either remain neutral or express moderate discontent.

4.2.4.2 I believe that VR technology can offer new and innovative storytelling techniques in filmmaking.

2. I believe that VR technology can offer new and innovative storytelling techniques in filmmaking.

50 responses

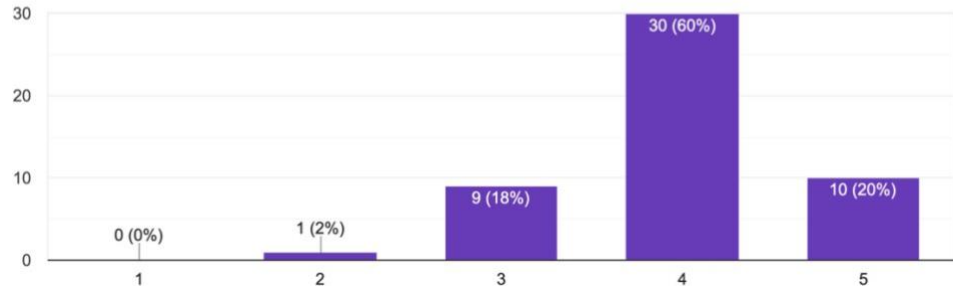


Figure 4.25: I believe that VR technology can offer new and innovative storytelling techniques in filmmaking.

The answers to the statement, "I believe that VR technology can offer new and innovative storytelling techniques in filmmaking," as reported by 50 participants are shown in this bar chart. With 60% of respondents choosing option 4 and 20% selecting option 5, the majority of respondents strongly believe that virtual reality has the capacity to create creative stories. Merely 18% of the sample expressed neutrality (3), and just 2% disagreed slightly (2). None of the participants disagreed strongly (1). This suggests that the majority of respondents had high hopes for VR technology's potential to innovate and inspire new approaches to narrative in the film industry.

4.2.4.3 I think VR can enhance audience engagement and immersion in film narrative.

3. I think VR can enhance audience engagement and immersion in film narrative.

50 responses

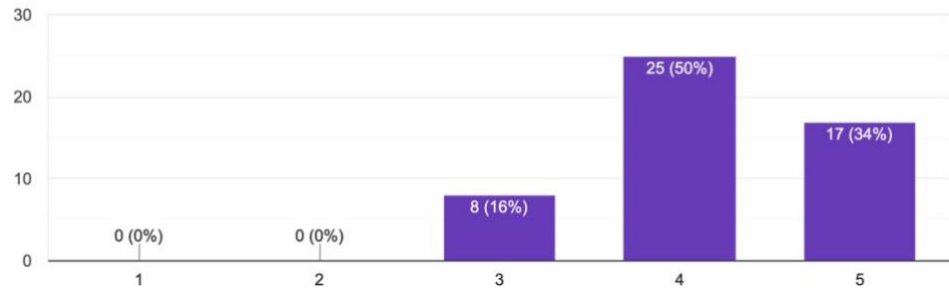


Figure 4.26: I think VR can enhance audience engagement and immersion in film narrative.

Responses to the statement, "I think VR can enhance audience engagement and immersion in film narrative," from 50 participants are displayed in this bar chart. With 50% choosing option 4 and 34% choosing option 5, which indicates high agreement, the majority of respondents strongly feel that VR has the potential to increase engagement. A lesser percentage, 16%, gave a rating of 3 and stayed indifferent. No one who rated the statement as either 1 or 2 disagreed with it. This suggests that most respondents had high hopes for VR's potential to increase audience immersion in movies and increase audience participation.

4.2.4.4 I think VR technology has the high ability to revolutionize the traditional filmmaking process.

4. I think VR technology has the high ability to revolutionize the traditional filmmaking process.
50 responses

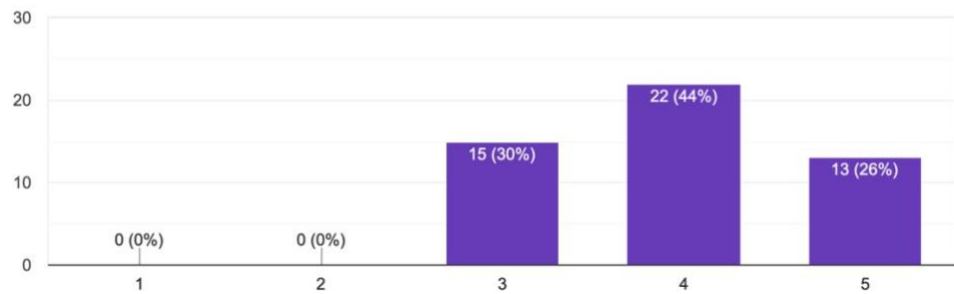


Figure 4.27: I think VR technology has the high ability to revolutionize the traditional filmmaking process.

The responses of 50 participants to the statement, "I think VR technology has the high ability to revolutionize the traditional filmmaking process," are shown in this bar chart. With 44% choosing option 4 and 26% choosing option 5, the majority of respondents strongly believe that virtual reality has revolutionary potential for the filmmaking industry. Furthermore, 30% of respondents gave the statement a grade of 3, remaining neutral, and 0% of participants disagreed (ratings of 1 or 2). According to the data as a whole, the majority of participants appear to be upbeat about VR's potential to change the conventional filmmaking process.

4.2.4.5 It is important for the film industry to invest in research and development of VR technologies to advance filmmaking capabilities.

5. It is important for the film industry to invest in research and development of VR technologies to advance filmmaking capabilities.

50 responses

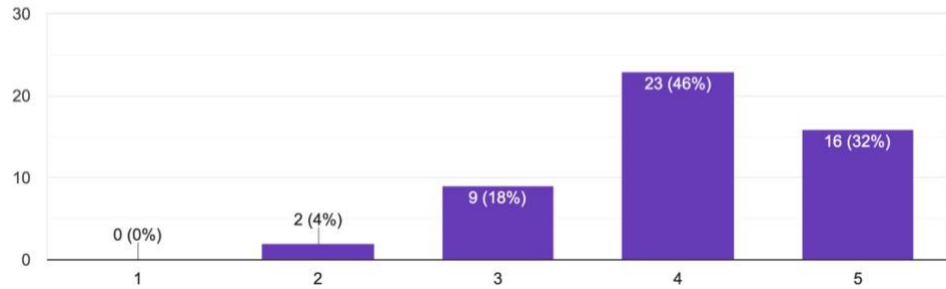


Figure 4.28: It is important for the film industry to invest in research and development of VR technologies to advance filmmaking capabilities.

Answers to the question, "It is important for the film industry to invest in research and development of VR technologies to advance filmmaking capabilities," from 50 participants are shown in this bar chart. With 46% of respondents choosing option 4 and 32% choosing option 5, the majority of respondents strongly believe that investing in VR technology is important for filmmaking. With a rating of 3, a smaller percentage, 18%, stays neutral, while 4% of respondents disagree slightly (2). None of the participants disagreed strongly (1). This suggests that the majority of respondents understand the value of investing in VR R&D to improve their ability to make films.

4.2.4.6 I think it is important for filmmakers to receive training and education on VR technologies to stay competitive in the industry.

6. I think it is important for filmmakers to receive training and education on VR technologies to stay competitive in the industry.

50 responses

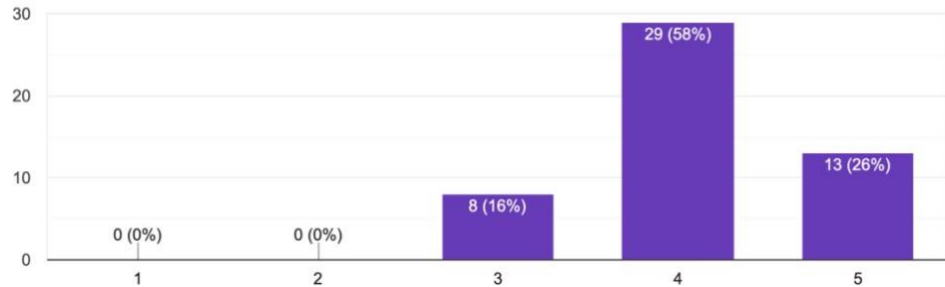


Figure 4.29: I think it is important for filmmakers to receive training and education on VR technologies to stay competitive in the industry.

The replies of 50 participants to the statement, "I think it is important for filmmakers to receive training and education on VR technologies to stay competitive in the industry," are displayed in this bar chart. The majority of respondents—58% choosing option 4 and 26% choosing option 5—strongly agree with this viewpoint. Furthermore, 16% gave a grade of 3, remaining neutral, while none of the participants disagreed (1 or 2). This suggests that in order for filmmakers to stay competitive in the business, the majority of respondents think that education and training in virtual reality technologies are essential.

4.2.4.7 I believe VR can provide a more immersive experience for filmmakers in visualizing and planning their scenes.

7. I believe VR can provide a more immersive experience for filmmakers in visualizing and planning their scenes.

50 responses

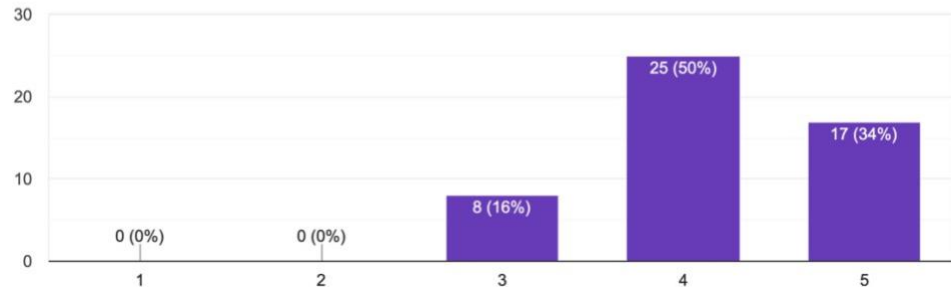


Figure 4.30: I believe VR can provide a more immersive experience for filmmakers in visualizing and planning their scenes.

The replies of 50 participants to the statement, "I believe VR can provide a more immersive experience for filmmakers in visualizing and planning their scenes," are shown in this bar chart. With 50% of respondents choosing option 4 and 34% choosing option 5, the majority of respondents strongly favor VR's immersive filming potential. Furthermore, 16% of participants chose 3 in a neutral manner, and neither 1 nor 2 respondents disagreed. This indicates that the majority of participants think VR, by offering a more immersive experience, will greatly improve the visualisation and planning process for filmmakers.

Chapter V: Discussion and Conclusion

5.0 Introduction

The study's findings are covered in this chapter, which is an overview of the statistical analysis done using the data gathered in Chapter 4. The chapter also discusses the major conclusion of the study, a discussion of related findings to research aims and previous studies, the limitations, and suggestions for further research.

5.1 Discuss and relate findings to research objectives and past studies

5.1.1 Understanding Malaysian Young Adults' Perception Towards Virtual Reality (VR) Usage in the Film Industry

The findings highlight that Malaysian young adults are highly aware of VR technology, with 100% of respondents indicating familiarity with VR. This awareness is primarily driven by social media, which served as the primary source of information for 98% of participants, followed by websites and friends. The high level of interest in VR's integration into film production is demonstrated by 90% of respondents expressing interest in such developments. Furthermore, the interest in VR movies is substantial, with 44% of respondents rating their interest level at 4, and 18% at the highest level of 5.

Despite this enthusiasm, a portion of respondents remains neutral or moderately supportive of VR films over traditional films. While 34% expressed a slight preference for VR films, a significant 36% remained neutral, indicating that while interest exists, the complete shift toward VR films has yet to occur. This trend may be influenced by factors like personal preferences or potential limitations of VR technology in its current form. The findings align with the research objective, showing a generally positive perception towards VR in filmmaking, yet hinting at the cautious curiosity among young adults about fully embracing VR films.

In conclusion, Malaysian young adults have a generally positive perception of VR in the film industry, recognizing its potential for enhancing film experiences. However, while awareness and interest are high, there remains some hesitation regarding the full transition to VR films. This suggests that while VR is viewed as innovative, its widespread adoption may depend on further developments in VR content and technology that address these neutral attitudes and enhance its appeal compared to traditional film formats.

5.1.2 Identifying How Easily Young Adults in Malaysia Can Access VR Technology for Watching Films, Considering Cost and Availability

The accessibility of VR technology and content in Malaysia is a critical factor, with 66% of respondents acknowledging that VR technology is relatively accessible, rating it 4 or 5 on a 5-point scale. However, challenges remain; 42% of respondents had difficulty finding information about VR cinema events and promotions, scoring it a 2, and 28% had trouble locating VR equipment and accessories in both local and online marketplaces.

Cost remains a concern for young adults, with 30% of respondents showing moderate disagreement on being able to afford VR headsets. Additionally, the cost of VR movies compared to traditional cinema tickets was a major worry, with 58% and 28% selecting the highest levels of concern. The study suggests that while VR technology is somewhat accessible, financial constraints and the availability of resources still limit wider adoption. This reflects the findings for RO2, showing that while VR technology is within reach, concerns about cost and availability remain a barrier for Malaysian young adults.

In conclusion, the accessibility of VR technology and content in Malaysia is mixed. While the technology itself is moderately available, young adults face significant barriers in accessing information about VR films and purchasing necessary equipment. Additionally, the high cost of VR hardware and movie tickets presents a substantial obstacle. Thus, even though

VR is somewhat accessible, financial constraints and limited availability of resources are hindering broader adoption among young adults in Malaysia.

5.1.3 Exploring Malaysian Young Adults' Opinion on VR Usage in Enhancing Filmmaking

The findings show a strong belief in VR's potential to enhance filmmaking. A significant portion of respondents (60% rated it 4, and 20% rated it 5) believe that VR can offer innovative storytelling techniques in filmmaking. Additionally, 50% of respondents agree that VR can enhance engagement and immersion in the narrative, supporting the notion that VR can provide a deeper emotional connection to films.

Moreover, 58% of respondents believe it is essential for filmmakers to receive VR training to stay competitive, which indicates the potential long-term impact of VR on the industry. This is further supported by 50% of respondents expressing a strong belief in VR's immersive potential for filmmakers in planning and visualizing scenes, showing that young adults see VR as a valuable tool not only for audiences but for creators as well.

In conclusion, Malaysian young adults have a strong conviction that VR can significantly enhance the filmmaking process by providing more immersive and innovative storytelling techniques. They view VR as not only a tool for enhancing audience engagement but also for empowering filmmakers to push creative boundaries. The emphasis on the need for VR training and development further underscores the belief that VR is poised to play a transformative role in the future of filmmaking. However, the full realization of VR's potential in filmmaking will require continued investment and education to ensure filmmakers can fully leverage its capabilities.

5.2 Research Limitation

One of the primary limitations of this research is the geographical focus. Due to constraints in time, resources, and accessibility, the study primarily surveyed individuals from Kuala Lumpur (KL) and Selangor. This limited geographical scope may not fully represent the perspectives of young adults across the entire country. Different regions in Malaysia might have varying levels of exposure to VR technology, diverse socioeconomic factors, or distinct preferences and attitudes towards VR in filmmaking. As such, the findings of this research should be interpreted with caution when generalized beyond the KL and Selangor regions.

Another limitation stems from the random selection of participants. While this method aimed to capture a wide range of opinions, it may have introduced inconsistencies. The random sampling may have resulted in overrepresentation or underrepresentation of specific demographic groups, such as university students or individuals with higher exposure to digital platforms. Consequently, this variability in participant background could influence the consistency of the data, potentially leading to skewed interpretations, especially in areas where VR awareness or access might differ significantly across various subgroups.

Additionally, the sample size of 50 participants may limit the statistical robustness of the findings. Although it provides initial insights into young adults' perceptions, a larger sample size would offer more comprehensive and reliable data, allowing for a more nuanced understanding of the trends and patterns in the Malaysian context.

Lastly, the research relied heavily on self-reported data, which can be subject to biases such as social desirability or recall bias. Participants may have provided responses they felt

were socially acceptable or may not have accurately recalled their experiences with VR technology. This reliance on subjective responses could affect the overall reliability of the data.

In conclusion, while this research offers valuable insights into Malaysian young adults' perceptions of VR in the film industry, the limitations regarding geographical focus, sampling methodology, sample size, and reliance on self-reported data should be acknowledged. Future research with a more expansive participant base and refined sampling techniques may address these limitations and provide a more comprehensive understanding of the topic.

5.3 Recommend for future research.

For future research on Malaysian young adults' perceptions towards virtual reality (VR) in the film industry, several key recommendations can be made. First, expanding the geographical scope to include participants from a wider range of regions across Malaysia, including rural and less urbanized areas, would provide more comprehensive insights. This broader reach would help capture diverse attitudes toward VR that may vary based on location, socioeconomic factors, and access to technology, leading to more generalizable findings across the country.

Additionally, future studies should consider increasing the sample size to improve the statistical reliability of the results. A larger and more diverse participant base would reduce the risk of skewed outcomes caused by overrepresentation of certain demographics, such as university students or individuals highly exposed to digital platforms. Using a stratified sampling approach could further refine the research by ensuring representation across different age groups, educational backgrounds, and levels of VR exposure, providing more consistent and reliable data.

Incorporating qualitative research methods, such as in-depth interviews or focus group discussions, is another recommendation. This approach would allow for deeper exploration of participants' perceptions and experiences with VR, providing more nuanced insights that may not emerge from quantitative surveys alone. Such qualitative data would enrich the understanding of young adults' motivations, preferences, and barriers to adopting VR technology in filmmaking.

Longitudinal studies could also offer valuable contributions by tracking changes in perceptions over time as VR technology evolves and becomes more accessible. Monitoring shifts in attitudes and behaviors as new VR content and advancements emerge would provide insight into long-term trends and adoption patterns. Furthermore, future research could examine the perspectives of filmmakers and industry professionals to explore the practical challenges and opportunities of integrating VR into filmmaking, providing a more balanced view that includes both audience and industry insights.

Finally, it would be beneficial for future studies to evaluate the availability and variety of VR content in Malaysia. Investigating whether the current offerings meet the diverse interests of young adults could shed light on how content development impacts VR adoption and engagement. Exploring these areas would deepen the understanding of VR's role in the film industry and help guide future technological and content developments to better align with audience expectations.

5.4 Conclusion

In summary, this research found that Malaysian young adults are highly aware of and interested in virtual reality (VR) technology, particularly in its application within the film

industry. While respondents recognize VR's potential to enhance storytelling and create immersive experiences, significant barriers to adoption exist. These include the high cost of VR equipment and movie tickets, as well as challenges in accessing VR content and resources. Despite these obstacles, young adults are open to the idea of VR transforming the film industry, though its widespread adoption will depend on improving affordability and accessibility.

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APPENDICES A – QUESTIONNAIRE

Malaysian Young Adult’s Perception towards Virtual Reality in Film Industry

Hi there! I am Kang Shen Ni, a Y3S2 Broadcasting student from Universiti Tunku Abdul Rahman (UTAR). I’m currently conducting Final Year Project research entitled “Malaysian Young Adults’ Perception towards Virtual Reality in Film Industry”. This questionnaire will focus on your perception of Virtual Reality (VR) in the film industry. 📄

📖 In order to make this study successful, your participation in this research is greatly appreciated. There is no right or wrong answers to the questionnaire as the study is on individual perceptions. This questionnaire would take a 5-10 minutes of your valuable time to complete answering all the questions. The data collected is only used for the purpose of this academic research. Once again, thank you very much for your participation. 📷

Section A: Demographic

Please respond to the questions by selecting the most appropriate choice from each item described below or by filling in the blanks.

1. Gender

- i. Male
- ii. Female

2. Age

- i. 18-20
- ii. 21-25
- iii. 26-30
- iv. 31 and above

3. Race

- i. Malay
- ii. Chinese
- iii. Indian
- iv. Other

4. Are you a university student?

- i. Yes
- ii. No

5. Do you know Virtual Reality (VR)?

- i. Yes
- ii. No

6. How do you know VR?

- i. Social Media
- ii. Physical Store
- iii. News
- iv. Friends
- v. Online website

7. Do you feel interested if VR is involved in the film production?

- i. Yes
- ii. No

Section B: Malaysian young adults feel about virtual reality movies.

Below you will read through a list of statements. Please rate the truth of each statement as it applies to you.

The following rating scale to make your choices where

1= Strongly Disagree

2= Disagree

3= Neutral

4= Agree

5= Strongly Agree

1. I am really interested in the VR (virtual reality) movies.
2. I would like to choose a VR (virtual reality) movie over a traditional movie for my entertainment.
3. I believe VR (virtual reality) movies provide a more immersive cinematic experience compared to traditional movies.
4. I think VR (virtual reality) movies enhance the storytelling experience compared to traditional movies.
5. I enjoy and feel comfortable wearing VR (virtual reality) headsets for an extended period while watching a movie.
6. I am concern about the potential negative effects such as motion sickness or eye strain while experiencing VR (virtual reality) movies.
7. I will recommend VR (virtual reality) movies to my friends and family.

Section C: How young adults in Malaysia can access VR technology for watching films.

Below you will read through a list of statements. Please rate the truth of each statement as it applies to you.

The following rating scale to make your choices where

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

1. I am aware of the availability of VR movies in Malaysia.
2. I feel very easy to find access information about VR movie events or promotions in Malaysia.
3. I find it easy to find VR movie-related accessories and peripherals in local stores or online markets in Malaysia.
4. I could troubleshoot technical issues related to VR equipment for movie watching.
5. I would like to participate in VR movie-related workshops or training sessions to enhance my knowledge and skills.
6. I perceive VR technology is accessible to young adults in Malaysia.
7. I feel the availability of VR movie content serves diverse tastes and preferences in Malaysia.
8. I can afford the virtual reality equipment, such as VR headsets for watching films.
9. I am concerned about the cost of VR movies compared to traditional cinema tickets.
10. I would recommend affordable VR movies to my friends.

Section D: Potential of virtual reality (VR) technology in enhancing filmmaking.

Below you will read through a list of statements. Please rate the truth of each statement as it applies to you.

The following rating scale to make your choices where

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

1. I am satisfied with the current level of creativity through VR filmmaking.
2. I believe that VR technology can offer new and innovative storytelling techniques in filmmaking.
3. I think VR can enhance audience engagement and immersion in film narrative.
4. I think VR technology has the high ability to revolutionize the traditional filmmaking process.
5. It is important for the film industry to invest in research and development of VR technologies to advance filmmaking capabilities.
6. I think it is important for filmmakers to receive training and education on VR technologies to stay competitive in the industry.
7. I believe VR can provide a more immersive experience for filmmakers in visualizing and planning their scenes.

