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THE USE OF VIRTUAL REALITY AND ITS IMPACTION REGARDING LEARNING ATTITUDE AMONG YOUNG ADULTS IN BANGI, SELANGOR, MALAYSIA

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Abstract:

Virtual Reality (VR) technology is a computer-based simulation system designed to create novel learning experiences within a virtual realm. VR establishes a simulated environment that has significant impact one's attitude toward learning. This new environment enables interaction with three-dimensional, dynamic views, thereby influencing physical learning behaviour. Virtual reality is a crucial component of the innovation process, facilitating real-time interaction within simulations and representing cutting-edge technology for enhanced comprehension of products. In contrast, traditional learning methods tend to be monotonous, whereas current educational approaches prioritise interactivity, saving time, fostering positive learning attitudes among young individuals, and enabling learning at any location and time. The primary objective of this study is to investigate the acceptance and utilisation of virtual reality among young adults and its effect on learning attitudes. One of the notable advancements in VR technology is its integration into educational institutions, with universities and schools emphasising alternative learning methods. This observation highlights the significance of embracing VR in a world increasingly focused on digitalisation. The study employs a quantitative methodology, utilising face-to-face surveys involving questionnaire distribution to a sample of 200 young adults within the Bangi, Selangor, Malaysia. The research findings reveal that Virtual Reality Hedonic Motivation plays a significant role in shaping the Behavioural Intention to use virtual learning (as indicated by a Pearson correlation of r=.726 and Regression R2 = .527). This result indicates that, VR is accepted as an alternative learning method, especially within the context of Malaysia, where online digitalisation

is gaining prominence within the education sector. This discussion on existing literature provide valuable insights for future researchers seeking to enhance the learning attitudes of young adults through the integration of VR technology.

Keywords:

Virtual Reality, Learning Attitude, Young Adults, Digitalisation, Bangi

Introduction

Virtual Reality (VR) is a computer-generated environment with scenes that appear to be real, making the user feel they are immersed in their surroundings which are similar to or completely different from the real world. VR environments often create entirely new worlds that differ from the physical world (Jailani & Nurbatra, 2019). According to Godovykh et al., (2022), virtual reality typically utilises computer technology to generate a three-dimensional and interactive environment, providing users with an immersive experience and allowing them to explore and interact within a virtual world. VR technology is used in various fields, including tourism, entertainment, education, medical and property planning. Wang (2022), states that by donning a dedicated VR headset, users are fully immersed in a virtual world that effectively stimulates their senses of vision, touch, hearing and even smell and taste. Implementing VR in training has a significant impact on student motivation, knowledge retention and transformation of the learning environment (Alsaffar, 2021) to a more engaging and interactive one (Rashid et al., 2021). VR has emerged as a promising tool for enhancing students' learning experiences and helping them develop soft and social skills. Virtual reality technology has rapidly advanced in recent years, opening up new possibilities and applications across various industries. As an example, architecture and designing sector have benefited through the implementation of VR. By creating virtual walkthroughs, professionals present their designs to clients in an immersive and interactive manner. According to Gómez et al., (2021), design training significantly improved orientation, rotation and visualisation of architectural spaces realistically modelled in immersive virtual reality environments allows for the same sensations that the designer initially sought to convey. VR enables stakeholders to experience and evaluate spatial designs before construction begins, reducing errors and costly modifications. Furthermore, VR assists in urban planning, allowing policymakers to visualise and analyse proposed changes to the urban landscape and fostering informed decision-making (Kim & Kim, 2022). The immersive nature of VR has proven to be transformative, benefiting a wide range of users and it's a new learning method (Rashid et al., 2021).

Learning is a development that change and improves present knowledge as a result of experience and it increases the possibility for better performance and future learning. The process of learning requires knowledge, skills and attitude which lead towards improving current knowledge and skills *(Thammasitboon, 2022).* In order to learn, a good communication must be performed for the sender and receiver to understand the subject matter. Learning is being taught through various channel such as education in school, moral values by parents, role model and engaging in a situation. Learning through technology is a common method in today's globalisation world. Technology has developed tremendously over the years and the implication of it has increased in every part of life. Now, VR is an example of technology which is used to grow a simulated environment which has been derived from computer technology (Abich et al., 2021). VR places the user or the reality world into a three-dimensional experience, which is also known as 3D world. The top rated quickly recognisable part of the

virtual reality is HMD or Head-mounted display (Samadbeik et al., 2018), but in the process of virtual reality, users are immersed to interact with the three-dimensional world, instead of viewing a screen in front of them. Virtual reality is part of innovation process where the user interacts with real-time simulation and remarkable is the most advance technology tools to understand better on products or VR are used to "travel" to a destination (Atsiz, 2021). According to the World Economic Forum (2017), consumer spending on VR is expected to reach $200 billion by 2027.

The use of virtual reality technology in educating young adults is not an idea of the present days. The VR topic has been researched and analysed since the year of 1990, especially the implication of this idea being used in the Anglo-Saxon countries. Using VR in training impacts young adult's knowledge retention and motivation while transforming the learning environment (Shamuratov & Alimbaev, 2022). Nowadays, technology has spread its arms over each and every sector of life and the biggest spectator of the technology is the educational institution (Akman & Çakır, 2020) and medical education (Erolin et al., 2019). A study done by Maresky et al., (2018), tested the effectiveness of a VR simulation in medical teaching particularly in the heart area. These researchers show that, VR has the possibilities to improve student engagement and learning outcome with this alternative learning in education sector. Over the years, technology has improved tremendously and costing has reduced thus VR is being used in various field and it is a new way of learning. VR environments are usually closed to the physical world in the sense that the environment they create is entirely new (Virca et al., 2021). Commercial VR devices are starting to provide sufficient quality and affordability for informative and entertainment use, which make educational VR experiences more widely available in the future (Ni et al., 2021; Shamsudin & Yunus, 2022). Learning through technology creates flexible learning infrastructure (Nuryatin et al., 2023) where students are able to learn and communicate at the same time even their locations vary and various online learning methods ensure the continuity of information delivery to students (Hanafi & Kamal, 2022). Young adult learning facilitated by VR creates student excitement, interactive and engagement.

Currently, learning in Malaysia starts from territory level to Higher Education Institutions (HEI) where the teachers have whole domination of their student and the student must obey all the instruction given by them. They creativity part of student exploring new method of education is not developing as these students are not giving the opportunity. HEI in Malaysia seek to produce graduates who are knowledgeable with critical thinking, decision making and problem-solving skills (Hasnor et al., 2013). The VR for interactive learning in Malaysian education is a new method and it is developing (Bistaman et al., 2018). The traditional learning method is monotonous (Lui, 2021) and the current study is an interactive learning process that saved time, enhanced young people' learning attitudes and gave them the ability to learn anywhere at any time (Juřík et al., 2021; Kaliyaperumal et al., 2020). Nowadays, the learning methods in HEI are one-way interaction where educators speak and the student listen. The fundamentals of cognitive is being applied in VR through interaction with the three-dimensional world and young adults are eager to learn more through the help of the technology and the updated tools (Yan et al., 2019). The study aims to identify virtual reality technology acceptance and use among young adults and its impact towards learning attitude.

Learning in classroom by adapting to the games is an exciting way of gaining knowledge in encouraging the intellectual, emotional and character development of a young adult (Tyas et

al., 2021; Masturoh & Ridlo, 2020). VR creates a comprehensive way to facilitate alternative learning experiences by enhancing self-learning concept and preparing young adults for future value add knowledge. Virtual reality has become more accessible to young adults in university because of online digitalisation and they should be able to use them easily if they are explanation on the using method. VR is a combination of advance image processing, interactive human computer communication and tracking devices where all these combination leads towards experiential medium (Bistaman et al., 2018). To develop the learning attitude using this approach, VR facilities must be provided by HEI. In the history of virtual reality education, there are some sorts of transformations of VR such as fully immersive, semi-immersive and non-immersive simulations. At first, virtual reality education was in the non-immersive stages when there were a few students. Then comes the semi-immersive and fully immersive with the progress of technology and the increasing number of students in virtual reality education all over the world (Jean et al., 2021). Virtual reality education opens up the probabilities of alternative learning and teaching through a dedicated device and platform. This method is still growing for more advancement so that the students be more engaged with their interactive learning and absorb more information effectively.

In order to identify virtual reality acceptance and use among young adults and its impact towards learning attitude, this study underline three (3) main objectives: -

i. To identify VR factors influencing Virtual Learning Behavioural Intention (VLBI)
ii. To identify Virtual Learning Behavioural Intention (VLBI) and its impact towards Virtual Learning Use Behaviour (VLUB)
iii. To study the acceptance and use of Virtual Learning Use Behaviour (VLUB) and its impact towards Learning Attitude (LA)

This study employs the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) (Venkatesh et al., 2012) which is a theoretical model that examines the factors influencing the acceptance and use of VR technology among young adult for learning purposes and its impact on their attitude. Venkatesh et al., (2003) previously used UTAUT, which considers Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI) and Facilitating Conditions (FC) as the key factors influencing technology acceptance. UTAUT is widely regarded as one of the most suitable models for technology acceptance and many researchers have engaged this model in acceptance and use-related studies. These constructs are moderated by factors such as age, gender and experience. UTAUT aims to provide a comprehensive framework for explaining and predicting technology acceptance (Azalan et al., (2022; Dwiyanto et al.,2020), offering stronger predictive power compared to other models. It has been tested in various contexts and has shown wide application and generalisability. UTAUT has also been extended and refined over the years with enhancement of three additional constructs, namely Hedonic Motivation (HM), Price Value (PV) and Habit (H) in order to explain behavioural intention and usage behaviour in the UTAUT2 framework. In this VR study, UTAUT2 is adapted to explain and predict the behavioural intention and usage behaviour of young adults towards VR in the context of learning. Figure 1 illustrates the VR theoretical framework, comprising two main dimensions: Virtual Reality Acceptance & Use and learning attitude. This theoretical framework integrates UTAUT2 (Venkatesh et al., 2012) to evaluate the acceptance of a new technology in learning (Gagne, 1985) among young adults. The following hypotheses obtain from research theoretical framework in Figure 1.
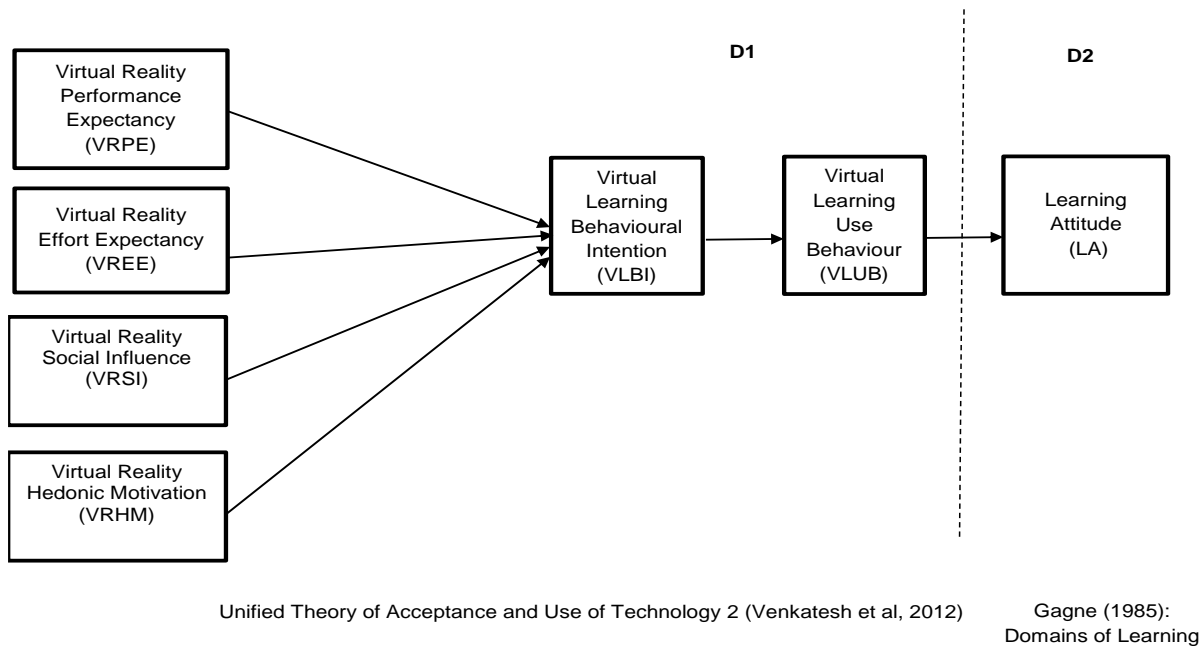
Unified Theory of Acceptance and Use of Technology 2 (Venkatesh et al, 2012)   Gagne (1985):
Domains of Learning

Figure 1: Research Theoretical Framework

The following hypotheses obtain from research theoretical framework in Figure 1.

H₁ There is a significant relationship between Virtual Reality Performance Expectancy (VRPE) and Virtual Learning Behavioural Intention (VLBI) among young adults
H₂ There is a significant relationship between Virtual Reality Effort Expectancy (VREE) and Virtual Learning Behavioural Intention (VLBI) among young adults
H₃ There is a significant relationship between Virtual Reality Social Influence (VRSI) and Virtual Learning Behavioural Intention (VLBI) among young adults
H₄ There is a significant relationship between Virtual Reality Hedonic Motivation (VRHM) and Virtual Learning Behavioural Intention (VLBI) among young adults
H₅ There is a significant relationship between Virtual Learning Behavioural Intention (VLBI) among and Virtual Learning Use Behaviour (VLUB) among young adults
H₆ There is a significant relationship between Virtual Learning Use Behaviour (VLUB) and Learning Attitude (LA) among young adults

Literature Review

The Development of Virtual Reality Technology
Technology is progressively being used in learning, training and development field where this sector provides broad range for education sector (Suh & Prophet, 2018). In the twenty-first century, technology upsurge in popularity for the educational area such as mobile learning (m-learning) on smartphones, online teaching through Google Meet and assignment are done through various online platform. VR technologies are being integrated into educational learning programs, especially in dynamic environments, to train student in a structured environment without impacting the wear and tear of expensive simulators (Fussell & Truong,

2021). Major VR evolutions took place in the 1980s, although its origins go back to Ivan Sutherland's 1965 paper 'The Ultimate Display' (Dodge & Kitchin, 2003). In year 1968, Sutherland created the first computer-aided HMD in with internal sensors that traced the user's head movements. In 1990's, VR gained mainstream attention with commercial products like Nintendo's Virtual Boy and early arcade VR experiences. Companies like VPL Research, introduced rudimentary VR systems that utilised headsets, gloves and body suits to enable user interaction in a virtual environment (Jailani & Nurbatra, 2019). However, during this time of development, VR was expensive, limiting its accessibility to wealthy individuals only. Then, the helmet design combined two miniature monitors placed directly in front of the eyes to create binocular 3D vision and certain features have been updated over the decades to suit different human development as well as imminent sorts of physical and cognitive reliability, impressiveness and eyes tracking technology (Juřík et al.,2021; Mat Zain et al., 2011). Virtual reality technology has developed over the years and this development benefits all end users. During the world pandemic COVID-19 crisis, online learning and online activities is vital and development of VR plays an important role in teaching (Chansaengsee, 2023).

Virtual Reality as New Media

VR as a new media is a new concept of digital environment where the user metaphorically stepping inside a reality world in exploring interactive media, games, online festival, conferences and enjoying performance (Weijdom, 2022). Virtual reality has evolved through various stages, providing students with immersive and unforgettable experiences. VR technologies, particularly those involving Head-Mounted Displays (HMDs), hold the potential to transcend geographical and temporal boundaries, offering limitless possibilities for content creation and increasing students' interest in the subject matter (Juřík et al., 2021). VR applications are being employed in diverse fields such as medical training, property management, tourism, and urban planning. This approach to communication offers an alternative method for sharing knowledge (Lamb & Etopio, 2020). It enhances students' memorisation abilities, making it a popular choice among students who benefit from virtual reality education. The strength of VR lies in its ability to convey information through vivid imagery, clear descriptions, and videos, promoting a deeper understanding of the content. Furthermore, it sparks enthusiasm for learning in students, thereby boosting their engagement and creativity (Yulie et al., 2021). Lamb and Etopio (2020) conducted a study to assess the claim that virtual reality environments contribute to a more positive learning attitude. This suggests that if virtual reality technology is embraced by young adults, it indeed enhances the learning experience for the end user.

Implementing Virtual Reality in Malaysia Education

Wong et al., (2020) conducted a research regarding implementing VR in Malaysia tertiary education in studying the acceptance of implementing this technology. The result shows that 76% students accept level of implementation of virtual reality as a learning media. On the same research, 83% of respondents agreed that VR is capable in helping students to understand better compares to conventional method. 93% responded positively that VR provide better experience in subject related to experiment and practical subject. VR encourage young adult to participate actively during learning is also being analysis in this research and the outcome of it was 73% respondents agree to the particular statement. On the same research, 88% of respondents from various university, decided that VR assist students in visualisation and reification difficult content. This research indicates that virtual reality is accepted as a new learning interactive method in Malaysia and adaptation of conventional learning would enhance the young adult's

knowledge and have an impact towards their learning attitude. Education is an important part of the life and brings reputation to a country and by having excellent education, it will produce the next generation who are expected to have a compassion like the ideology adopted by a country (Mahanani et al., 2022). Investment in education is expensive based on the belief that the quality of education brings differences careers and achievement for its citizens (Syukri, 2019). Ministry of Education in Malaysia has developed Malaysia Education Blueprint 2013 – 2025 to focus on Malaysian education system where students must be imbued with values, attitude and moral values. In this blueprint, leveraging on digitalisation technology is part of the transformation shift in Malaysia education system. According to Dwivedi et al., (2020), the learning method improved the student's personality attributes. This shows that the findings on learning attitude towards VR technology is vital for the Malaysian policy maker to execute a new strategy on education system.

Young Adult Learning Attitude
The young adult's attitude of learning depends on the learning method such as conventional learning, on-line learning or group discussion. Young adulthood between ages of 18 to 25 years old is a crucial development period where these adults are engaging themselves to participate in identity formation and self-exploration (Higley, 2019). Recently, VR have arisen as enablers of reality-enhanced communication, where physical service experiences and digitalisation are combined in one platform and seamlessly blended (Hilken et al., 2021; de Keyser et al., 2019). For example, by using virtual reality, young adult's visualise tourism education through VR and decide the best place to visit by having 'a look' first before actually visiting (Shen et al., 2022). This shows that, if the young adults are always excited using VR to improve knowledge, it leads towards happiness attitude when using VR. Young adult's level of exposure and the quality of the information accessibility and communications technology is a major consideration that influence their readiness to adapt new learning method (Ismaili, 2021). The relationship between young adult and lecturer in university is essential because both plays a significant role of the successful realisation of the learning processes (Delos & Torio, 2020). Therefore, they must work together to build trust and motivation and by having those, it leads towards learning attitude. Young adults learning attitude should respect different opinions and communicate clearly with good articulation. Communication skills are important skills for developing great interpersonal skills among students (Febrianita & Hardjati, 2019). Learning outcomes must be well-structured and the instructions provided to them need to be respectful to their vocabulary. According to Claro et al., (2018), the academic technological performance of the students holds an important criterion that is communication which is engaging digital efficiency in education today. Not only sharing knowledge but gaining subject-based ideology from the mentors is a productive factor on school premises. The importance of giving priority to digital communication skills has a significant in young adult learning attitude.

Methodology
This research uses cross-sectional survey where questionnaire was distributed to young adults, ages 18 to 25 years old (Adams et al., 2021; Higley, 2019) in Bangi, Selangor, Malaysia. The researcher chooses this age category because this age is a development period where young adults emotional changes and substantial cognitive have an impact on brain development and this age group have behavioural adjustments associated with basic psychosocial age-related developmental tasks (Richard at al., 2015). Besides that, this age category consider as emerging adulthood is a critical period for human physical, cognitive, emotional and social development (Lee et al., 2022). This survey applied convenience sampling in Bangi as the respondent meet

the age criteria as they are universities in the area. They were 52% of female and 48% of male took part in this questionnaire. Table 1 indicate the age demographic participated for this cross-sectional survey.

Table 1: Demographic for Participant ($n = 200$)

Age Group (years)	Frequency (n)	Percentage (%)
18 – 20 years old	77	38.5
21 – 23 years old	66	33
24 – 25 years old	57	28.5

The instrument developed is structured in which all questionnaire is straight forward related to VR acceptance among young adults and instrument developed, answers the objective of the research. All items are being divided into 2 section which are A: Demographic, B: Acceptance and Use of Technology. All question in section B are asked using a 5-Point Likert Scale with "1" being Strongly Disagree. "2" being Almost Disagree, "3" being Neutral, "4" being Agree and "5" being Strongly Agree. They are 42 closed-ended questions including demographic section. The objective of the survey is to describe whether relationship exists between virtual reality technology and learning attitude toward young adults in Bangi. This study emphasis on non-probability sampling design as part of the sampling strategy. Non-probability sampling is use in this study because randomisation is impossible for young adults as the population is very large and time limitation to conduct the study (Pace, 2021, Etikan et al., 2016). The result of the research is not being targeted to produce findings that will be used to create generalisations pertaining to the whole population. Therefore, convenience sampling was done where participants of the target population meet age criteria, easy geographical access and willing to participate in the research was given a set of questionnaires. Each respondent answered the same set of survey that was being distributed to 200 young adults in Bangi. Before the data was collected, reliability and normality test were done. Cronbach's Alpha reliability test was run in order to crisscross the reliability of the research instrument (Field, 2009). The acceptable value of this test is 0.70 (Nunnally & Bernstein, 1994). Table 2 shows all Cronbach's Alpha values are more than 0.70 thus it's being accepted.

Table 2: Summary Results of Reliability Analysis ($n = 200$)

Variable	Number of items	Cronbach's alpha
VRPE	5	.833
VREE	5	.713
VRSI	4	.807
VRHM	5	.924
VLBI	5	.856
VLUB	6	.786
LA	5	.833

Normality test, namely, Skewness test and Kurtosis was performed to test the data normality. Table 3 shows the test of normality for 7 variables applied to this questionnaire. Skewness and Kurtosis index was being used to identify the normality of the collected data with SPSS (Pallant, 2013, 2005). The data considered being normal for the range of skewness from -3 to +3 and kurtosis -10 +10 (Brown, 2006). The skewness index range was from -1.204 to -.110 and the kurtosis index range was from -.948 to 2.444. Therefore, this conclude that the data

collection was normal distributed as both the skewness and kurtosis index of 7 variable presented are within the normal distribution range.

Table 3: Test of Normality (*n* = 200)

Variable	N Statistic	Skewness Statistic	Std. Error	Kurtosis Statistic	Std. Error
VRPE	200	-.297	.172	-.948	.342
VREE	200	-.431	.172	-.224	.342
VRSI	200	-.110	.172	-.764	.342
VRHM	200	-1.016	.172	.316	.342
VLBI	200	-.928	.172	-.035	.342
VLUB	200	-.658	.172	673	.342
LA	200	-1.204	.172	2.444	.342

The Kaiser-Meyer-Olkin (KMO) test was conducted to validate whether the data is appropriate for further analysis through factor analysis.The KMO analysis was carried out to assess the magnitude of partial correlations between the variables. KMO values closer to 1.0 are consider ideal while values less than 0.5 are unacceptable (Napitupulu et al.,2017). The Bartlett's test of Sphericity are being used to test the null hypothesis that the correlation matrix is an identity matrix, that mean, variables are unrelated and not ideal for factor analysis (Rojas et al., 2015). Table 4 shows the result for KMO & Bartlett's Test with result .718 which is close value to 1.0 and this result is acceptable.

Table 4: Test of KMO & Bartlett's Test

Kaiser–Meyer–Olkin Measure of Sampling Adequacy		.718
Bartlett's Test of Sphericity	Approx. Chi-Square	1834.845
	df	21
	Sig	.000

Result and Discussion

To Identify VR Factors Influencing Virtual Learning Behavioural Intention (VLBI)
An assessment using one tailed test was done to review the likelihood of the relationship in single direction and completely disregarding the possibility of a relationship in the other direction. Table 5 indicates that the results of factor influencing VLBI by using Pearson Correlation and Regression. Based on the result relating to Pearson Correlation, the researcher finds out that VRHM (*r* = .726) is main factor that influence the relationship between VLBI in the first dimension. Previous research done by Putranto (2020), Bower & Lai (2020) and Kim & Hall (2019) indicate similar results where hedonic motivation predicts behavioral intention in accepting new technology. The next result of Pearson Correlation follows by VREE (*r* = .694) and VRPE (*r* = .683). The least factor that influence the relationship between VLBI is VRSI (*r* = .573), however this factor is still significant towards the study because young adults perceive the expectations of using VR through of their peers, family members and lecturer. However, based on the result, it shows that young adults in Bangi are willing to learn without having strong influences by the society. This is supported by study conducted by He & Li, (2019). The researcher generated the result of Regression for the study using VR towards factors influence VLBI. It shows that, in the first dimension, VRHM relationship towards VLBI (R^2 = .527). Thus, this is the main factor influenced the intention among young adults on using

VR. Second highest result for regression was VREE (R^2 = .508), followed by VRPE (R^2 = .466) and lastly VRSI (R^2 = .232). The construct of VRPE, VREE, VRSI, VRHM does have significant relationship between VLBI among young adults thus hypothesis H_1, H_2, H_3 and H_4 has been answered. Several studies confirmed that PE, EE, SI and HM have a significant influence on BI to accept new technology, such as VR games for chemical education (Chioma et al., 2021), e-scooter VR service (Huang, 2020), VR intention in chemical industry (Toyoda et al., 2021), and head-mounted VR displays in learning (Shen et al., 2019). Since this study focused on acceptance and use of VR and its impact on learning attitude, the constructs play a significant role in young adult acceptance and use of VR technology. This technology has matured to the point where it is practically used in different market segmentation especially gaming and this alternative learning has enhanced learning process methods and has improve the traditional way of teaching (Bistaman et al., 2018).

Table 5: Summary Results of Pearson Correlation (n = 200, a=0.05)

Variable	Pearson Correlation (r)	Regression (R^2)
VRPE > VLBI	.683	.466
VREE > VLBI	.694	.508
SVRSI > VLBI	.573	.232
VRHM > VLBI	.726	.527

To Identify Virtual Learning Behavioural Intention (VLBI) and Its Impact Towards Virtual Learning Use Behaviour (VLUB)
VLBI has an impact on VLUB where the Pearson Correlation result of the study indicated that (r = .814) and the result of Regression for the study is (R^2 = .656). This result shows that VLBI has significant values on VLUB thus H_5 has been answered. The globalisation world with the innovation of technology has transform education to digitalisation platform such as virtual learning, online learning and Google Meet in delivering their learning program (Adnan & Bahar, 2019). It's a new norm in education field especially for university where learning with digital technology has grown popular in recent years. Virtual learning has become more necessary during year 2020 when the world was attack by COVID-19. During this pandemic outbreak, all sectors were badly hit including education. Individuals are forced to stay home and encourage social distancing to stop the spreading of the deadly virus. Therefore, worldwide students turned their learning approach from the physical classroom to digital learning education (Marban et al., 2021). As this respondent are young adults ages 18-25 years old, they are excited and happy exploring and using new technology as an alternative learning. VLBI has strong impact on VLUB because VR for learning may be used anytime comparing to conventional learning where they are time limitation for a subject. This is proven when 62% of the respondent strongly agree that "learning using VR in university is interesting". This shows that young adults could certainly retrieve the knowledge and learn something, anytime and anywhere, as long the VR device is working. 64% young adults strongly agree that studying using VR is their priority and will continue using this device for learning.

To Study the Acceptance and Use of Virtual Learning Use Behaviour (VLUB) and Its Impact Towards Learning Attitude (LA)
On the second dimension, where LA is the dependent variable, researcher find out that VLUB influence LA with Pearson Correlation result (r = .718) and the result of Regression for the study is (R^2 = .511). This result shows that H_6, there is a significant relationship between VLUB

and LA among young adults. The incorporation of visually oriented graphics has brought huge change in user behavior, which in turn influences their approach to learning. The application of virtual elements in education such as animated images attracts young adults in helping them to understand and remember the substance (Bistaman et al., 2018). The object oriented created in VR technology features improve understanding compare with the complex explanation and it facilitates young adults to learn easier and faster. The analysis shows that 51.5 % young adults strongly agree in using VR as a learning tool and 30 % agree on this particular matter. Mathematically, 81.5 % young adult are interested in learning using VR as this alternative learning support of seamless interaction between real and virtual environments. VR technology improve since the ability of virtual reality provide non-accessible learning environment because it' s too hazardous or too costly like learning in construction site, activity at active volcanoes or even experience real space shuttle (Shamsudin & Yunus, 2022). This advantage of VR is impossible to be provided in conventional learning therefore VR bring the real experience to the classroom (Kaser, 2023). Virtual technology has grown and more range of education application domains are benefiting from this and it is valuable (Bistaman et al., 2018). Due to rapid growth in online digitalisation (e-sports and e-property) where it affects use behaviour towards learning attitude, VR is initially growing in popularity due to its potential and the advantages that provide good benefits to the education sector. Ministry of Education in Malaysia must emphasis on collaboration with school and university on digitalisation policy. This new method of learning is part of Malaysia Education Blueprint, Shift 7 (System Structure), where its emphasis on leveraging information technology on self-paced learning (Ministry of Education, 2012).

Conclusion and Recommendation

One of the significant contributions of VR is the use of virtual technology in the education sector where university are emphasising on alternative way of learning. The use of VR in the learning environment is gaining significant attention due to its ability to create immersive and interactive experiences that transcend traditional classroom boundaries (Alsaffar, 2021). This technology enables students to engage with subjects in ways that were previously impossible, allowing them to explore complex concepts, historical events, scientific phenomena and much more through simulated environments. As a result, students are not only passively absorbing information but actively participating in their own learning journey, fostering deeper comprehension and retention of knowledge. VR offers a unique and immersive learning experience that engage students and enhance their understanding of complex concepts (Dwipayana et al., 2019). By allowing young adult to explore virtual environments and interact with digital objects, VR promotes active plus interactive learning and enables students to have a hands-on experience that goes beyond what is possible in a traditional classroom setting (Weissblueth & Nissim, 2018). Additionally, VR in education provides a safe and controlled environment for young adult to practice skills and scenarios that may be difficult or impossible to replicate in real life. A good example would be science subject students where they are able to use VR to see the possibilities outcome if two or more chemical are being mix together. According to Weissblueth & Nissim (2018), VR stimulate young adults interest and motivation by providing them with the opportunity to engage in otherwise impossible-to-experience situations and by offering a range of experimental tools delivered directly to students as virtual objects. The emergence of the COVID-19 pandemic has had profound effects on various aspects of society, including the education sector. Prior to the pandemic, traditional methods of learning in physical classrooms were the norm. However, the COVID-19 pandemic has forced educational institutions to swiftly adapt to online education as a means of continuing

learning in a safe and effective manner. Technology accelerate because of the COVID-19 and this disease has been regarded as one of the most important events of the twenty-first century (Morgan et al., 2021). The impact of modern communication technologies on online education has been significant. These technologies, such as Zoom meetings, Google Meet, 360-degree videos and Google Classroom have revolutionised the way education is delivered.

Accepting a new technology is challenging based on many factors such as age, locality, infrastructure, time and many more factors. This was an important factor in accepting new technology and this study adapts Unified Theory of Acceptance and Use of Technology 2 by Venkatesh et al., (2012) to evaluate young adult's acceptance in using virtual reality towards learning and its impact towards attitude. Four main constructs were used to evaluate the acceptance of technology which are PE, EE, SI HM. The UTAUT2 was used to forecast behavioural intention and use behaviour of young adult in Bangi towards VR in dynamic learning environment and evaluate influences that are relevant to the technology acceptance. The results of the study have few theoretical implications. First, the study value adds current knowledge surrounding VR as an alternative learning method. The acceptance validated that established construct in UTAUT2 may be broadened and used to different virtual technology such as Hologram or Augmented Reality. This different method should be act as an alternative learning method in education sector. The validated acceptance and use could be further adapted to assess user cognitive or intellectual skills related towards students behavioural on online education and training environments. Second, the framework further validated factors that may be relevant to understand young adult objective toward using VR for learning purposes. USVRHM was validated as the most important factors acceptance and use of technology toward behavioural intention to used VR in learning. All hypothesis showed that there is a significant relationship between independent and dependent variable. Furthermore, this study established that the framework is a useful instrument to understand how young adult perceive using VR and its impact towards learning attitude. This validated acceptance and use may be adapted with different moderating variable by future researchers in different market segmentation such as tourism, property management or sports training. This would allow for more understanding of how these factors explain user behaviour and cognitive skills with similar technologies.

There are three primary constraints associated with this study. First, the representation of this study is limited. Although the findings are based on data collected from young adults in Bangi, the results may not generalise to all young adults because the data collection was only based in Bangi vicinity. However, this result may be used to inform future researcher regarding acceptance and use of VR technology among young adults towards learning attitude. The next limitation is the construct used in the UTAUT2 model. The scale of the study has limitation towards the construct used in evaluating the behavioural intention of using VR. Other construct such as Facilitating Condition, Price Value or Habit or different demographic variable may have a different outcome towards the framework and may provide different outcomes towards the study. Future research could possibility look into the factors of the validated acceptance and use and revise them appropriately according to their subject matter. The last limitation is the survey instrument used in this research. The survey instrument on this study focuses on acceptance and use of VR towards learning attitude. However future researcher could value add the instrument based on their focus area such as property management, tourism or aviation. The dependent variable may be change towards their studied subject. Moving forward, the future researcher should value add current survey instrument to other immersive simulation

technologies, such as artificial intelligence, augmented reality or holograms. By incorporating value added instrument, different results will be generated for various target groups. Proper revision, future researcher may use the validated survey instrument to value-add research contexts, populations and technologies. In conclusion, this study presented recommendations for VR acceptance and use towards learning attitude among young adults in Bangi, Selangor, Malaysia.

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