https://doi.org/10.51483/IJTH.3.2.2023.23-33 ISSN: 2709-9768

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International Journal of Tourism and Hospitality

Publisher's Home Page: https://www.svedbergopen.com/

Research Paper Open Access

Assessment of Augmented Reality Technology in Sablayan Occidental Mindoro Tourism and Its Effect on Travel Intention Among Potential Visitors

Ronald C. Catapang[1,4*], Crystelle Joy C. Terrano[2] and John Arthur N. Melendez[3]

[1]College of Management and Accountancy, PHINMA Saint Jude College, Don Quijote St, Sampaloc, 1008 Manila, Philippines. E-mail: ronaldcatapangmba@gmail.com

[2]College of Management and Accountancy, PHINMA Saint Jude College, Don Quijote St, Sampaloc, 1008 Manila, Philippines. E-mail: crco.terrano.sjc@phinmaed.com

[3]College of Management and Accountancy, PHINMA Saint Jude College, Don Quijote St, Sampaloc, 1008 Manila, Philippines. E-mail: john.melendez.sjc@phinmaed.com

[4]Graduate School, PHINMA Saint Jude College, Dimasalang cor, Don Quijote St, Sampaloc, 1008 Manila, Philippines.

Article Info

Volume 3, Issue 2, July 2023
Received : 23 January 2023
Accepted : 19 May 2023
Published : 05 July 2023
doi: 10.51483/IJTH.3.2.2023.23-33

Abstract

Sablayan is a coastal municipality located in the province of Occidental Mindoro, Philippines. This municipality is made up of 22 barangays. Sablayan offers a variety of activities and attractions for locals and tourists alike, from its beautiful beaches, lush rainforests, and captivating mountain views. The study was conducted to determine how the technology of augmented reality affect travel intentions (accessibility, features, and convenience) among tourists in Occidental Mindoro. The researchers used a stratified random sampling and was conducted among 386 tourists and residents in Sablayan, Oriental Mindoro. The findings indicate that augmented reality affects travel intention among tourist in Occidental Mindoro. Additionally, accessibility, features, convenience positively affects travel intentions among respondents. Features possess a strong positive relationship towards travel intention. Differences were found among sex towards features and convenience, residency towards accessibility. The study recommends that local government of occidental Mindoro should prioritize and take into consideration innovations on its tourism such as maximization and utilization of technological features such as augmented reality to provide increase in tourist interest and idea about the occidental Mindoro as a travel destination.

Keywords: *Augmented reality, Convenience, Features, Accessibility, Travel intention*

1. Introduction

Smart tourism gives travelers additional information about their destinations. Augmented reality, one of the best instances of smart tourism, would boost visitors' desire to travel and their pleasure of it. Augmented reality's usage in tourism is showing promise in studies. Augmented reality, on the other hand, lets users interact with the real environment to enhance travelers' experiences, whereas virtual reality only threatens the travel and tourism business theoretically.

Modern technology enables potential passenger's physical immersion and psychological presence by using augmented reality and other technologies to gaze at the site they choose, such as phones, apps, or films. Virtual tours, which utilize augmented reality to imitate real-world surroundings, may raise interest in a location and the chance of a visit.

* *Corresponding author: Ronald C. Catapang, College of Management and Accountancy, PHINMA Saint Jude College, Don Quijote St, Sampaloc, 1008 Manila, Philippines; Graduate School, PHINMA Saint Jude College, Dimasalang cor, Don Quijote St, Sampaloc, 1008 Manila, Philippines. E-mail: ronaldcatapangmba@gmail.com*

Augmented reality technology is used in tourism planning, management, marketing, information exchange, entertainment, education, accessibility, and historical preservation. Augmented reality experiences improve visitors' flow, satisfaction, well-being, and connection to the location, as well as their likelihood to return. Since it may evoke favorable thoughts and attitudes about a location, amusement parks, museums, cultural heritage institutions, and art galleries employ augmented reality for pre-experience destination marketing.

One of the main objectives is to determine how augmented reality technology affect travel intention (accessibility, features, and convenience) among potential visitors in Occidental Mindoro. The factors that affect their travel intention are convenience/navigation, features, accessibility, and strategy. To provide awareness on the importance of augmented reality and technological innovation in tourism sector in Occidental Mindoro and in the Philippines and lastly to recommend areas of focus in terms of application and usage of augmented reality in Occidental Mindoro

2. Theoretical Framework

According to Zeng *et al.* (2022), the supposition of augmented reality effect on the travel intention of the visitors may recommend the factors that may influence the tourist/visitors who wants to travel and relax on their desired destination in the near future. This present insight how the aspect of augmented reality is relevant in terms of tourism research.

According to Zeng *et al.* (2022) virtual reality in tourism is increasing. Cultural collectivism reduces virtual reality accomplishments and individual pride. The study provided both theoretical and actual implications for virtual reality technology design and tourist attraction advertisement to enhance the entertainment-based Virtual tourist perception (Figure 1).

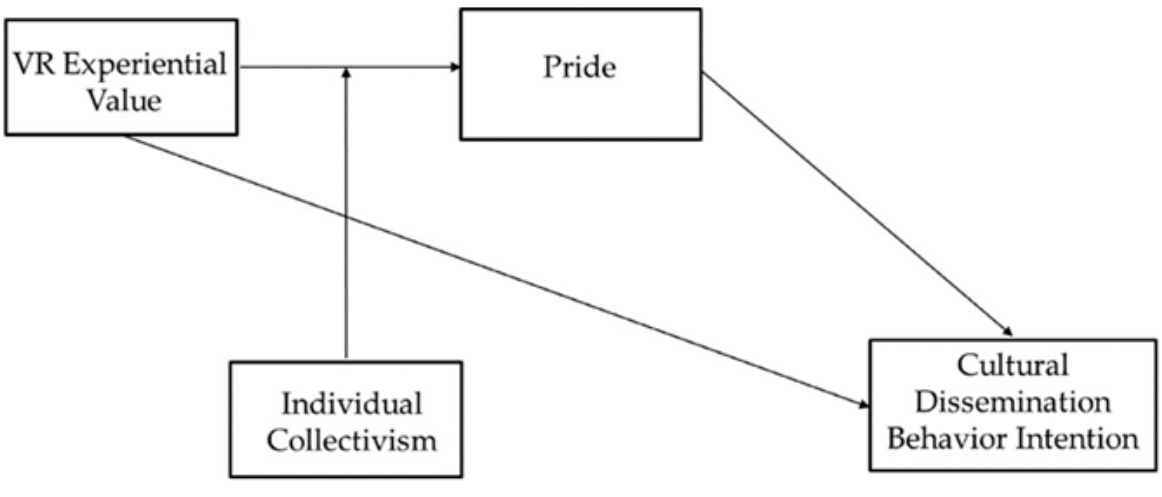

Figure 1: The Effects of a Virtual Reality Tourism Experience on Tourist's Cultural Dissemination Behavior

Source: Zeng et al. (2022)

3. Literature Review

3.1. 21st Century Tourism

According to Arena *et al.* (2022) in today's modern civilization, parallel realities to the one we live in are becoming more and more prevalent. Both our day-to-day routines and many of the activities that we partake in during the day now incorporate what is known as virtual reality. The idea of augmented reality is connected in some way to the concept of virtual reality (VR), in turn (AR). It is symbolic of a technological field that is actively expanding, even though it was conceived of and developed some decades ago. The main objective of their research paper is to offer a summary of augmented reality, beginning with its inception and progressing through its primary uses, as well as presenting information that is necessary. The components of augmented reality systems, including hardware and software, will get some attention in this section of the essay.

According to Kargas *et al.* (2020) because of modern technology, museums have become isolated due to the worldwide public's access to the digital world, the World Wide Web and wide pages since the 1990s. Additionally it is beneficial to gather digital object in order to build different forms and museum around the globe because they may use

this platform to set up their social media profiles and instantly share information. The world is gradually changing thanks to additional platform and application for virtual reality and augmented reality museum.

According to Schrier (2020) Because it is simple for players to visualize what they are playing augmented reality in games is very helpful. As a result, many young people want to play games with augmented reality features because they teach you how to control analyze and communicate in augmented reality games.

According to Heinzel *et al.* (2017) With this digital platform, it is simple to see the building because the significant advancement of augmented reality technology has made it possible to include 3D models created for the project in to the actual environments. The Building Information Modeling (BIM) model is to see the construction of that business construct and visualize the project and design of architecture through augmented reality.

According to Papadopoulos *et al.* (2019) augmented reality has been proceeding to transform in to the medical education and training industry with their many computer based virtual and simulations and instructional aids examine the use of virtual labs, anatomy courses and virtual learning environment for the lectures and other surgical procedures and this chapters is the advance use of virtual reality and augmented reality in the medical education as a novel , efficient and cost-effective substitute for the delivery of better and more rapid practical training in terms of fundamental principles and recommendations that helps students to develop the potential of virtual learning environments

4. Tourism Philippines

According to Bhatt *et al.* (2020) economic and social growth in cities today are in large part due to the tourist sector. It is essential that tourists, both domestic and international, have access to information regarding the most popular tourist destinations and the means by which they can get there. If it is possible to access this information in a timely manner and in an up-to-date state, this will considerably boost the level of satisfaction experienced by the tourists. The scope of applications for the innovation-driven use of technology based on augmented reality in day-to-day living is expanding. This invention is also being implemented in the realm of the travel sector at the moment. The model of a portable mobile application that makes greater use of technology in the travel sector has been created today by utilizing enlarged augmented reality innovation.. This application may be used on mobile devices. The essentials, the skills, and the gaps in the tactics are all brought into focus here. This application anticipates providing the user with interactive features once the item has been identified, making it possible to examine additional data. In order to apply augmented reality technology, the Unity 3D software with the Vuforia Engine will be used. Moreover, Android application development tools such as Android Studio will be used in order to construct the mobile application.

According to Maestro and Dumlao (2019) one of the most significant shifts in architecture and construction occurred as a direct result of augmented reality. The ability of augmented reality to design and to construct apart from visualization through a finished model, the researchers want to maintain the reminiscence behind war-torn buildings that not been restored and left as they are, after the war as respect for the Filipino and American soldiers who fought in the war. Tourists visiting Corregidor can make their trip more participatory, enjoyable, and fascinating by using this application—like Android Studio, Unity, Vofuria, Lumion 8, and Sketch-up. During the development of the application, the rational unified process, a software engineering tool, served as a guide. Visitors to the island of Corregidor and information technology specialists tested and reviewed the application using the evaluation tool. Under the circumstances under which the level of satisfaction, usefulness, and ease of use among visitors to Corregidor Island has been review worth of as “excellent,” it can conclude that the mobile applications that have been expanding are more immersive and engaging, giving rise to a more thrilling experience for visitors while on the island of Corregidor.

According to Barrado-Timón and Hidalgo-Giralt (2019) the purpose of their research is to investigate the effect of Augmented reality and virtual reality have on how we conceive of, value, and interact with urban heritage sites. According to them, thinking sees these new technologies as being linked to past theoretical assumptions about legacy in terms of what we value, how we want it, and for what reasons. To compare these two points of view, they have selected and reviewed scholarly research that evaluates the application of augmented and virtual reality technologies in urban heritage spaces. A qualitative methodology that ATLAS encouraged. They stated that this methodology makes it possible to define the thematic lines addressed in the research between them.

According to Desai (2018), history plays a significant part in the cultural depiction of any given location; heritage sites and monuments, for example, reflect the tradition, art, and culture of bygone eras of greatness. Historically significant places have been deteriorating alarmingly due to pollution, a lack of upkeep, and excessive tourism. He states that using various technology allows for the essential preservation and interpretation of those priceless glimpses into the past. There is a museum meant to preserve history, but it does not provide an insightful view interactively; it just reflects a

particular location's history. So, he thought there was a requirement for an in-depth representation of that preceding eminent progress. That can be accomplished through the rapid advancement of technologies in recent years, such as virtual reality, augmented reality, and mobile computing. These technologies allow transmitting historic architecture into multi-dimensional models used in natural environments.

5. Tourism Digital

According to IIhan and Celtek (2016), travel services are now available on devices such as smart phone iOS is any technology It helps to make the travel process faster using technology. It is like augmented reality. It makes it faster or easier to use because it is easy for you to book hotels, restaurants, museums, accommodation and finally transportation once you have traveled to different places using augmented reality technology.

According to Paliokas *et al.* (2020) the augmented reality technology has many numerous industries and knowledge sectors, it is employed by those who use augmented reality technologies and gain a lot of knowledge from it as well as various benefits such as improving museum destinations/attractions, the users and those who use augmented reality technologies are very satisfied.

According to Shen *et al.* (2022), both augmented reality and virtual reality are recognized as examples of cutting edge techno that have already made significant influence in a variety of fields and contexts. In other words, we can use the technology augmented reality and virtual reality more because of the pandemic of 2020 because there are many restrictions like not being able to go out, so the Chinese university is thinking of making an application where even if you are at home, you can travel using augmented reality and virtual reality in that way Tourism sectors cannot be neglected when it comes to the travel intentions of tourists.

According to Gaberli (2019) augmented reality should be adapted to the tourism industry because it helps to boost the various attractions in the Philippines with the help of this technology, traveling among visitors has become easier. They will no longer have difficulty traveling because they have augmented reality. Nowadays technology is more useful because it makes booking and finding hotels etc. easier.

According to Cranmer *et al.* (2020), although, in the travel and tourism sector, augmented reality is becoming a popular marketing information channel among travelers because the information it provides is accurate when it comes to the travelers need to go to destination. And there are also many findings that can help because there are some countries that are also using augmented reality so that it is easy for their departments of tourism to find other destinations for travelers.

6. Augmented Reality Factors

According to Masood and Egger (2019) the implementation of augmented reality in manufacturing is crucial to the concepts of Industry. Augmented reality can be implemented in the industry to provide individuals with the ability to access digital information by concatenating that content onto their immediate environments. Although augmented reality is not extensively established in certain sectors, the demand for industrial augmented reality is projected to expand at a remarkable rate over the next several generations. As such, it is necessary to be cognizant of the challenges generally associated with implementing augmented reality technology in industry.

According to Dalim *et al.* (2017) their research evaluates consumer expectations of Augmented Reality and its suitability for innovation education and teaching. "Augmented reality" technology overlays a digital image over the user's view of the actual world. Advertising, military, entertainment, and other businesses use this technology. Augmented Reality (AR) technology may improve learning and teaching, but more research is needed to see whether it is widely used as a teaching medium and how educators expect to profit from it. A good understanding of people's perceptions of augmented reality systems and apps is needed to improve and expand their use. This research analyzes prior studies on user expectation and instructional acceptance of augmented reality to solve this challenge.

According to Alam *et al.* (2021) using computer-generated visual images, audio, and other components, users of AR technology might virtually improve their product-use experiences. Their research sought to broaden the concept of technology acceptance in a bid to better comprehend what variables influence the acceptance of augmented reality technology in the hospitality market. Aside from external assistance and resistance from trading partners, the empirical findings confirmed the importance of factors like perceived usefulness, attitude, competitive pressure, customer pressure, perceived cost, and technological knowledge in shaping the intent to use augmented reality technology in retail settings. The attitude mediates the link underlying consciousness and behavioral change intent along with the link connecting user satisfaction and modification intent. It also advised actions retailers might take to build an open business strategy

if they used augmented reality technology.

According to Ronaghi and Ronaghi (2021), it is very important to have a discussion about the factors that impact the spread of innovative technology to poor regions. When emerging nations do not adopt current technology, especially in agriculture, it lowers product quality and quantity and hinders worldwide competition. This study examines the elements impacting augmented reality adoption in Iran's agriculture industry. Augmented reality factor values were generated using the conceptual method utilized in this research. They also found that public engagement and education strongly influence farmers' adoption of augmented reality. According to their study, councils can increase public involvement and communicate citizen demands to the government. This study findings inspired policy recommendations. To succeed, they must learn how to engage the public. Farmers may be educated and made more aware via workshops.

According to Arowoiya *et al*. (2021) the developing congruence between both the reality and digital world may be ascribed to improve in modeling techniques made possible through technological development. Particularly, authors examine about what circumstances enhance or undermine augmented reality's viability in the construction field. They also found that for augmented reality to gather momentum in the building and construction industry, stakeholders need to be open to the use of novel technologies. For this purpose, it is suggested that the government establish measure that arouse, enforce, and enforce the latest technological advancements in the building industry.

7. Travel Intention

According to Chung *et al.* (2018) augmented reality can become a tool that can help improve the tourist or the visitors travel experiences while visiting our cultural heritage sites as this can maintain the authenticity of the place. However, there has not been a lot of study done to look into how augmented reality affects customer views and behavior intentions in regard to the sites. Using the combination of the post-acceptance model of information, balance theory, and the concept of reasoned action, the authors examine the lack of interest of the augmented reality the mechanism with regard to the underlying consumers' beliefs and satisfaction, along with their views and decisions toward the destination. Findings suggested that appearances along with the perceived advantages of augmented reality play a role in users' general fulfilment with the technology. Through the indirect impact on a person's feelings toward a place of historical significance as a result of augmented reality, an individual's level of fulfilment with augmented reality could affect one's decision-making process with regard to the destination. They discussed both philosophical and practical repercussions of these outcomes, as well as recommendations for further research.

According to Zhu *et al*. (2023) augmented reality has more significant and improved quality characteristics when it comes to the travel experience of the tourist. The study shows the presence theory and the post-modernist point of view by focusing on an immersive UNESCO Cultural Historic Site in Mount Tai, China, this paper reassesses the influence of contemporary realism on two unique sorts of existence and hence on the visitor's pleasure and satisfaction. The results of this study showed that postmodern authenticity had a more profound influence on the experience of being present, as well as being a favorable determinant of existence, contentment, and onward travel intentions. A favorable experience of either form of presence is also an indicator of fulfilment and, by implication, future travel plans, with the latter having the greater influence. The managerial as well as theoretical ramifications are discussed.

According to Zhu *et al.* (2022), because of the growth of the augmented reality tourism participation and destination, managers are now paying attention to the details such as its essential role that engage in the market of tourism. On the other hand , the demand among tourists for legitimacy in augmented reality is also growing. The purpose of their study is to first identify the links towards the augmented reality cultural heritage site tourism experience and as a result to the tourist intention to visit. On the other hand, there is no discernible effect that Objective Authenticity has on the level of satisfaction that tourists have with the AR tourism experience. There is discussion of both the theoretical and managerial implications.

According to Lacka (2020) the use of geographic-based augmented reality games in the tourism industry is still in its early stages, despite its ground-breaking possibilities. In contrast, individuals have an affinity to and enjoy geographic-based augmented reality applications in their finalized forms. These games could motivate individuals to visit urban places since they make it simpler to gather details about the numerous sites of interest there, even though they were not developed with tourists in mind. This research uses a qualitative method to determine the factors influencing the widespread use of full-featured geographically based augmented reality roles, the significance of details obtained during entertainment, and the impact of making use of these games on leisure plans. Their findings indicate that an individual's willingness to provide private data during activities has an immediate effect on how likely they are to return. Hedonic motivation alone, nevertheless, has been established to have an impact on users' desires to play augmented

reality activities, whereas both internal and external objectives have been showed to positively boost cognitive accumulation.

According to Jiang *et al.* (2023) the cultural, historical, and geographical circumstances of the places we visit can have a more significant effect on the perceptions generated by the use of augmented reality. As part of their research paper, they show how augmented reality has the potential to improve the services for cultural tourists. The aim of their research is to figure out the effectiveness of augmented reality has been at enhancing the unforgettable experience of travel experiences, considering consideration for both the app or configure and visitors themselves. As opposed to rely just on the app or scheme, augmented reality can additionally make use of the visitor themselves. The study also aimed to determine whether or not the use of augmented reality improved or lowered visitors' overall satisfaction while exploring the natural historical attraction

8. Hypotheses

H_{01}: *There is no significant difference on travel intention among potential visitors of Sablayan, Occidental Mindoro when grouped according to demographic profile.*

H_{02}: *Augmented reality does not affect the travel intention among potential visitors of Sablayan, Occidental Mindoro.*

9. Conceptual Framework

Figure 2 illustrates the research paradigm that will govern this study. The purpose of the study is to know if the application of augmented reality can affect the intention of the tourist to travel in Sablayan, Occidental Mindoro through the following factors. Therefore, the independent variable includes the demographic profile in terms of Age, Sex, Residency, Educational Attainment and Marital Status and the factors affecting the travel intention of the tourist, Accessibility, Convenience and Features. The dependent variable is Travel Intention.

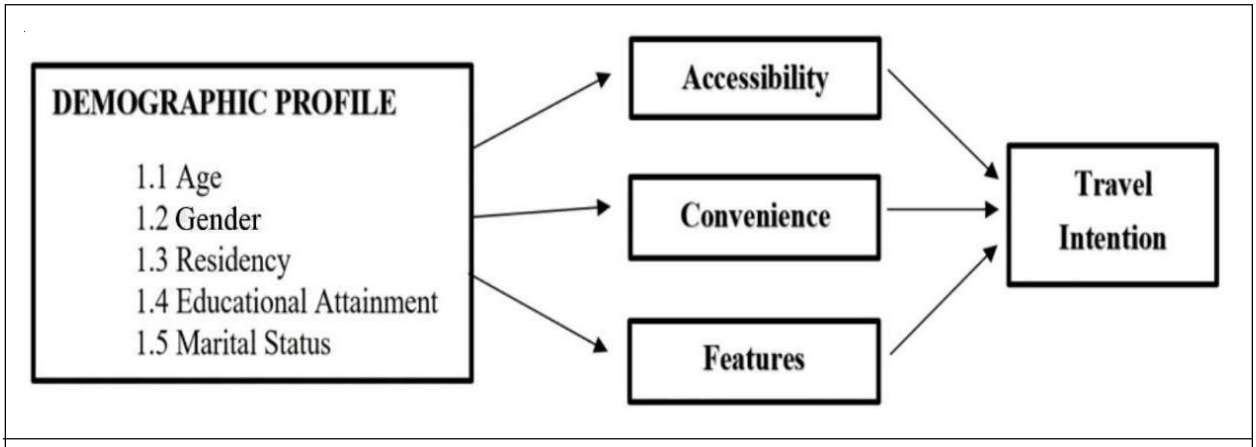

Figure 2: The Paradigm of the Study

10. Methodology

10.1. Research Design

For this study, a descriptive correlation design will be used. Qualitative research design is a great procedure to finalize result and prove or disapprove a concept. This research design was utilized to acquire people's information and perception. In addition, the information acquired may be associated with the frequency, the dispersion, and/or interrelationships between variables within the tourist/residents in Sablayan Occidental Mindoro. The researchers provide summaries and other important information about the study's samples measurement.

10.2. Subject and Study Site

As the questionnaire will serve as the instrument to gather information, the researchers used a selected random sampling method to select the participants from the local residents of Sablayan, Occidental Mindoro, and some random people here in Metro Manila. The researchers created a questionnaire that consists of 6 parts with a total number of 26 questions. The survey form was given directly to the 386 respondents through the use of the internet.

Sablayan-Occidental Mindoro is formerly known as Lumangbayan, one of the municipality that can be found in the province of Occidental Mindoro. It has a population of 92,598 people that represented 9.42% of the total population of the municipality while the Metro Manila is heavily populated and home of a sizeable share of the country's population. This population clustering the result of constant migration from rural to urban. The demand on municipal services has negative impact on urban quality of life.

Furthermore, the researchers selected three hundred eight-six (386) respondents from Metro Manila and Sablayan Occidental Mindoro to participate in the study. These respondents can actively cooperate in this study and can have enough knowledge about augmented reality's effect on the travel intention of the tourist/traveler/s as they have some experience while traveling to different places.

10.3. Research Instrument

The researchers created a self-made questionnaire that will be used in the study which will show the willingness of tourists to travel in Sablayan, Occidental Mindoro in terms of its convenience, features, and accessibility. The research instrument that was used is a five-point Likert scale online survey questionnaire (Table 1). It is used to measure someone's intention to travel with the used of augmented reality. This research study will undergo content validity and reliability test (Table 2).

Table 1: Table of Correlation Interpretation

Range of Coefficient		Rating	Verbal Interpretation
±0.81	±1.00	**Strongly Agree**	**Very Important**
±0.61	±0.80	Agree	Important
±0.41	±0.60	Neutral	Neutral
±0.21	±0.40	Disagree	Least Important
±0.00	±0.20	Strongly Disagree	Not Important at all

Source: Salkind (2015) Excel statistics

Table 2: Table of Content Validity and Reliability Test

Variables	No. of Items	Cronbach's Alpha
Convenience/ Navigation	5	.708
Features	5	.641
Accessibility	5	.713

11. Data Gathering Procedure and Ethical Consideration

For this study, the researcher used an online survey method to assess the use of augmented reality in Sablayan, Occidental Mindoro tourism and its effect on travel intention among travelers. The study employed an online survey method via Google Forms by using of close-ended question because it is more convenient for both parties because less time will be allocated, and contact will be limited due to the remote location. Our survey aims to determine whether the augmented reality application is easily accessible and whether it aids travelers' desire to visit Sablayan.

12. Data Analysis

The data collected were treated and analyzed using the SPSS software, frequency, and percentage, mean and standard deviation and *t*-test, Pearson *r* Correlation.

13. Findings

13.1. Demographic Profile of the Respondents

Majority of the respondents participated in the study are ages 21-30 years old (220 or 57%), single individuals (354 or 91.7%), tourist (235 or 60.9%), Male (205 or 53.1%), and obtained a college level (297 or 76.9%).

To determine the assessment towards augmented reality on travel intention among respondents, respondents' perception towards augmented reality were determine (Table 3).

Table 3: Augmented Reality on Travel Intention (Mean and Standard Deviation)

Factors	Mean	Std. Dev.	Interpretation
Convenience	4.78	.437	Very Important
Features	4.73	.451	Very Important
Accessibility	4.72	.459	Very Important

All assessment factors of augmented reality obtained a rating of "strongly agree" which indicates importance of augmented reality towards travel intention among respondents. Convenience obtained the highest mean score of 4.78 (SD=.437) a "strongly agree" rating. Additionally, respondents highlighted that they prefer augmented as it can be easily accessed without the use of internet (M=4.80, SD=.480). The respondents perceived convenience of augmented reality as a very important factor that support their travel intention.

Features obtained a mean score of 4.73 (SD=.451) a "strongly agree" rating. The respondents perceived features of augmented reality as a very important factor that support their travel intention. Additionally, respondents highlighted that one of the importance of features in augmented reality is that respondents were able to get an in-depth idea / knowledge about a place (M=4.77, SD=.482).

Accessibility obtained a mean score of 4.72 (SD=.459) a "strongly agree" rating. The respondents perceived accessibility of augmented reality as a very important factor that support their travel intention. Additionally, respondents highlighted that one of the importance of accessibility in augmented reality is its ability to navigate possible accommodations (M=4.72,SD=545).

The Independent samples t-test or an analysis of variance (ANOVA) will be utilized to test for the difference between the augmented reality factors mean scores of groups based on respondent's demographic profile. Significance was found on features (F=4.128, p=.007). Male and female (p=0.047) were significantly different in assessing of augmented reality features. Convenience (F=3.088, p=.027) were found significantly different when grouped according to gender of the respondents; wherein, male and LGBTQ (p=.041), and LGBTQ and respondents who do not disclose their sex (p= .038) were significantly different in assessing of augmented reality convenience. Therefore, the study rejects the null hypothesis.

Similarly, significance was found on accessibility (F=12.188, p=0.001) when grouped according to residency. Tourist and residents of occidental Mindoro have different assessment towards augmented reality accessibility (Table 4).

Table 4: Test of Difference on the Assessment Towards Augmented Reality When Grouped According to the Demographic Profile

Augmented Reality	ANOVA								*t*-Test	
	Age		Marital Status		Gender		Educ. Attain.		Residency	
	F	*p*-value	*F*	*p*-value	*F*	*p*-value	*F*	*p*-value	*F*	*p*-value
Accessibility	.853	.427	.611	.608	2.433	.065	1.966	.099	12.188	.001*
Features	.954	.386	.466	.706	4.128	.007*	1.196	.312	3.632	.057
Convenience	.051	.951	.163	.921	3.088	.027*	0.376	.826	.304	.058

Note: *Significant at $p < .05$.

Table 5 presents the effect of augmented reality towards travel intention among travelers. Augmented reality shows a strong positive relationship towards travel intention among respondents. Features (r=. 677) obtained the strongest effect towards travel intention. Accessibility (r=.663) and convenience (r=.614) obtained a positive relationship towards travel intention.

Table 5: Augment Reality Effect on Travel Intention

Augmented Reality Factors	Pearson Correlation Coefficient (r)	p-value	Interpretation	Decision
Accessibility	0.663	<0.000	Significant	Reject Ho
Features	0.677	<0.000	Significant	Reject Ho
Convenience	0.614	<0.000	Significant	Reject Ho

14. Discussion

14.1. Correlation of Daily Activity, Expenses, and Mental Health towards Consumer Behavior

The result of the study supports Egger *et al.* (2020) "digital free tourism–an exploratory study of tourist motivations", it indicates that augmented reality has benefits that improve travelers' physical comfort, mental health, and social connections while they are on the road. In addition, DFT is useful for the tourism industry because it may be viewed as an alternative strategy and can be used and have effect towards the travel intention of the travelers.

According to Masood and Egger (2019) augmented reality enables workers to access digital information and superimpose it on the actual environment, making it a key component of industry in AR. The market for industrial AR is expected to expand rapidly, despite not being widely adopted in some applications of technology. This paper supports our paper because it demonstrates the benefits of augmented reality to travelers and local governments. Those interested in visiting the Sablayan Occidental Mindoro will become more familiar with the area.

15. Conclusion

Augmented reality was perceived to be beneficial and supports local tourism across the province of Occidental Mindoro. Particularly, factors of this software such as accessibility, features, and convenience positively affect the travel intention among travelers visiting occidental Mindoro. Age, marital status, and educational attainment does not possess difference on the importance of augmented reality towards travel intention. Additionally, features and convenience towards sex and accessibility towards residence differ on the importance of augmented reality, In relation to the theory of AR system of Hassan Ahmad, Zeng and Xu, augmented reality provides a new experience to its users, in relation to the study, among potential visitors in occidental Mindoro.

16. Recommendation

Traveler/Tourist: This study paper will demonstrate the benefits that augmented reality can enhance their traveling experience.

The National and Local Government Units: Should take into consideration development and innovation towards local tourism, particularly the introduction on augmented reality to support tourism activities in occidental Mindoro. Features of the software should be taken into consideration in the development of the software.

To the Department of Tourism (DOT) and Tourism Promotion Board (TPB): They should act units in promoting and establishing policies in development of augmented reality and other software that can maximize and enhance visitors travel experience. Its support should focus also on funding (budget), education, and sustainability of this program to benefit the province of Occidental Mindoro and apply it to other regions across the country.

To the Future Researchers: They will be able to conceptualize how augmented reality functions. They will have the ability to know some of the variables that augmented reality possesses and be able to recognize the influence that those aspects have on the intention of a tourist or traveler to go there.

References

Alam, S.S., Susmit, S., Lin, C.Y., Masukujjaman, M. and Ho, Y. H. (2021). Factors Affecting Augmented Reality Adoption in the Retail Industry. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(2), 142.

Arena, F., Collotta, M., Pau, G. and Termine, F. (2022). An Overview of Augmented Reality. *Computers*, 11(2), 28.

Arowoiya, V.A., Oke, A.E., Akanni, P.O., Kwofie, T.E. and Enih, P.I. (2021). Augmented Reality for Construction Revolution–Analysis of Critical Success Factors. *International Journal of Construction Management*, 23(11), 1867-1874.

Barrado-Timón, D.A. and Hidalgo-Giralt, C. (2019). The Historic City, Its Transmission and Perception Via Augmented Reality and Virtual Reality and the Use of the Past as a Resource for the Present: A New Era for Urban Cultural Heritage and Tourism?. *Sustainability*, 11(10), 2835.

Bhatt, P., Panchal, K., Patel, H. and Rote, U. (2020). Tourism Application using Augmented Reality. In Proceedings of the 3rd International Conference on Advances in Science & Technology (ICAST), April.

Chung, N., Lee, H., Kim, J.Y. and Koo, C. (2018). The Role of Augmented Reality for Experience-influenced Environments: The Case of Cultural Heritage Tourism in Korea. *Journal of Travel Research*, 57(5), 627-643.

Cranmer, E.E., tom Dieck, M.C. and Fountoulaki, P. (2020). Exploring the Value of Augmented Reality for Tourism. *Tourism Management Perspectives*, 35, 100672.

Dalim, C.S.C., Kolivand, H., Kadhim, H., Sunar, M.S. and Billinghurst, M. (2017). Factors Influencing the Acceptance of Augmented Reality in Education: A Review of the Literature. *Journal of Computer Science*, 13(11), 581-589.

Desai, N. (2018). Recreation of History using Augmented Reality. *ACCENTS Transactions on Image Processing and Computer Vision*, 4(10), 1.

GABERLÝ, Ü. (2019). Tourism in Digital Age: An Explanation for the Impacts of Virtual, Augmented and Mixed Reality Technologies on Tourist Experiences. *Journal of Tourism Intelligence and Smartness*, 2(2), 61-69.

Heinzel, A., Azhar, S. and Nadeem, A. (2017). Uses of Augmented Reality Technology During Construction Phase. In *The Ninth International Conference on Construction in the 21st Century* (CITC-9), 5-7.

Ýlhan, Ý. and Çeltek, E. (2016). Mobile Marketing: Usage of Augmented Reality in Tourism. *Gaziantep University Journal of Social Sciences*, 15(2), 581-599.

Jiang, S., Moyle, B., Yung, R., Tao, L. and Scott, N. (2023). Augmented Reality and the Enhancement of Memorable Tourism Experiences at Heritage Sites. *Current Issues in Tourism*, 26(2), 242-257.

Kargas, A., Karitsioti, N. and Loumos, G. (2020). Reinventing Museums in 21st Century: Implementing Augmented Reality and Virtual Reality Technologies Alongside Social Media's Logics. In *Virtual and Augmented Reality in Education, Art, and Museums*, 117-138, IGI Global.

Lacka, E. (2020). Assessing the Impact of Full-fledged Location-based Augmented Reality Games on Tourism Destination Visits. *Current Issues in Tourism*, 23(3), 345-357.

Maestro, N.B. and Dumlao, M.F. (2019). Romblon Islands Into a Smart Tourism Destination Through Point Of Interest Recommender, Augmented Reality and Near Field Communication: A Proposal. *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, 8(2), 242-248.

Masood, T. and Egger, J. (2019). Augmented Reality in Support of Industry 4.0—Implementation Challenges and Success Factors. Robotics and Computer-Integrated Manufacturing, 58, 181-195.

Paliokas, I., Patenidis, A.T., Mitsopoulou, E.E., Tsita, C., Pehlivanides, G., Karyati, E., ... and Tzovaras, D. (2020). A Gamified Augmented Reality Application for Digital Heritage and Tourism. *Applied Sciences*, 10(21), 7868.

Papadopoulou, P., Chui, KT., Daniela, L. and Lytras, M.D. (2019). Virtual and Augmented Reality in Medical Education and Training: Innovative Ways for Transforming Medical Education In The 21st Century. In *Cognitive Computing in Technology-Enhanced Learning*, 109-150, IGI Global.

Ronaghi, M. and Ronaghi, M.H. (2021). Investigating the Impact of Economic, Political, and Social Factors on Augmented Reality Technology Acceptance in Agriculture (Livestock Farming) Sector in a Developing Country. *Technology in Society*, 67, 101739.

Salkind, N.J. (2015). *Excel Statistics: A Quick Guide*. Sage Publications.

Schrier, K. (2006). Using Augmented Reality Games to Teach 21st Century Skills. In *ACM SIGGRAPH 2006 Educators Program*, 15-es.

Shen, S., Xu, K., Sotiriadis, M. and Wang, Y. (2022). Exploring the Factors Influencing the Adoption and Usage of Augmented Reality and Virtual Reality Applications in Tourism Education Within the Context of COVID-19 Pandemic. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 30, 100373.

Yin, C.Z.Y., Jung, T., Tom Dieck, M.C. and Lee, M.Y. (2021). Mobile Augmented Reality Heritage Applications: Meeting the Needs of Heritage Tourists. *Sustainability*, 13(5), 2523.

Zeng, Y., Liu, L. and Xu, R. (2022). The Effects of a Virtual Reality Tourism Experience on Tourist's Cultural Dissemination Behavior. *Tourism and Hospitality*, 3(1), 314-329.

Zhu, C., Fong, L.H.N. and Gan, M. (2023). Rethinking the Consequences of Postmodern Authenticity: The Case of a World Cultural Heritage in Augmented Reality. *Current Issues in Tourism*, 26(4), 617-631.

Zhu, C., Io, M.U., Ngan, H.F.B. and Peralta, R.L. (2022). Understanding Augmented Reality Marketing in World Cultural Heritage Site, The Lens of Authenticity Perspective. *Journal of Vacation Marketing*, 13567667221090990.

Cite this article as: Ronald C. Catapang, Crystelle Joy C. Terrano and John Arthur N. Melendez (2023). Assessment of Augmented Reality Technology in Sablayan Occidental Mindoro Tourism and Its Effect on Travel Intention Among Potential Visitors. *International Journal of Tourism and Hospitality*. 3(2), 23-33. doi: 10.51483/IJTH.3.2.2023.23-33.