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The 9th International Conference on Marketing and Retailing**THE VIRTUAL TOUR GUIDES ON TOURISTS' SATISFACTION:
ROLE OF SENSE OF PRESENCE**

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Abstract

The key to foster tourism industry during the pandemic would be the adaptation of virtual tours using digital technologies. The virtual tour aims to encourage tourists to participate virtually in the safety and comfort of their home. Hence, this study aims to explore virtual guides and tourists' satisfaction on virtual tours: mediating role of virtual presence, more specifically to determine the demographic profile of the respondents, assess virtual tour guide qualities, level of satisfaction, level of sense of presence of tourists, how the virtual tour guide qualities affect sense of presence and sense of presence affect the satisfaction of tourists and how the 3 variables mediate. The study is quantitative research since it used statistics to compute the data. As a result, pertaining to the level of sense of presence of tourists during virtual tour, respondents agreed that it is a crucial element which means, sense of presence must be acquired by the tourist to improve their unique experience. The researchers concluded that mediation occurred within the three major variables. This means that to satisfy the virtual tourist, tour guide qualities and sense of presence must be presented throughout the tour. A sense of presence acts as the mediator between the virtual tour guide qualities and tourist satisfaction which means sense of presence plays a vital role in attaining tourist satisfaction.

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Keywords: Level of satisfaction, sense of presence, virtual tour guide qualities

1. Introduction

The hospitality industry is the primary sources of income of every country's economy. However, it was the most affected sectors globally by the pandemic that resulted to decrease number of tourist arrivals, revenue, and career opportunities. To cope up amidst the pandemic, as stated by Pahlevi et al. (2021) The government introduced a new design of technology and developed procedures for adapting the new normal way of promoting the tourism industry. The key to promote the tourism industry amidst pandemic would be the adaptation of virtual tours using digital technologies. Based on the study of Yang et al. (2021), virtual tour is the simulated demonstration of the real-world attractions and destinations by utilizing digital generated technologies. The virtual tour aims to encourage tourists to participate virtually in the safety and comfort of their home. Stakeholders of the tourism industry are utilizing new methods such as the virtual tour to retain the destinations and attractions in the presence of potential tourists. (El-Said & Aziz, 2022). Virtual tours will not be completed without the help of a virtual tour guide. The virtual tour guide provides tour information and gives adaptive assistance to perform engaging entertainment and encourages the tourist to participate in the virtual tour. VR have been used to in planned, managed, educate, promote, and to create or enhance tourist experiences (Loureiro et al., 2020). Virtual tour guiding has transformed the tourism industry by making it more accessible to people. During a pandemic, one of the strategies to keep tourists interested in a destination is virtual tourism wherein it can produce revenue for the sector, such as tour guides (Aminy, 2020).

Indicated in the study of Tsai et al. (2016) Tour guide attributes can be measured by sense of humor, physically well-groomed, and enough experienced. These skills are essential for every virtual tour guide to deliver a high-quality service experience for tourists, especially during this time of pandemic, when tourists can only experience the tour through virtual. Shatnawi et al. (2019) pointed out that a skilled tour guide is fluent in the language that will be used throughout the tour to deliver the topic effectively. A tour guide must also have strong interpersonal skills and organizational skills to have seamless communication with tourists. In order to build a rapport with the tourists, a tour guide must have professional skills and an attitude that will lead to tourist satisfaction (Hwang & Lee, 2019).

Customer satisfaction is the crucial elements of the field of tourism industry. Based on the study of Showkat et al. (2021) in the tourism industry, satisfaction means pleasure that the tourist experience in the attraction or destination they visit. Moreover, service quality has an essential impact on delivering tourist satisfaction. Stated on the journal of Han et al. (2021) Service quality has been demonstrated in numerous prior research to influence a variety of aspects, namely satisfaction, loyalty, risk perception and trust. In virtual industry, customer satisfaction plays a vital role since the tour is conducted virtually, the virtual guide must ensure that every tourist has a positive experience.

Presence is commonly recognized as the most important factor to address in any study involving human interaction with Virtual Reality (VR). Since its origin, the concept of presence has evolved over the last decade, with many experts now considering it to be the essence of any virtual experience. Wu and Lai (2021) mentioned virtual tourists view the image of the destination fictionally and acquire feelings by attending virtual tours.

Based on the literature that the researchers gathered, there is no existing study about virtual tour guides. This motivates the researchers to produce a study about exploring virtual guides and tourists'

satisfaction on virtual tours: mediating role of virtual presence. In addition, the field of tourism was the major affected by the pandemic. Further, Department of Tourism promulgate that the revenue decreased to its usual status. In order to adapt with the new normal, the Philippine government come up with the virtual tours to promote the tourism industry amidst pandemic and generate income revenue for the economy. Moreover, the researchers' experience attending virtual tours serves as the primary reason in conducting this study.

The pandemic was the driving force of the researchers to find new ways for the tourist to feel what it is like to travel again, particularly in the status of the world. The pandemic turns everything upside down and has a significant impact on many industries, particularly the hospitality industry. To adapt with the new normal, virtual tour guide is a new trend to provide new experience with the tourist through online by offering glimpse of the destination without being there, for the tourist to feel what it is like to travel again despite of the pandemic. Furthermore, the researchers aim to perceive the satisfaction of tourists in virtual setup. Lastly, this study will serve as additional knowledge in the virtual industry.

The researchers will benefit from the study since it will expand their knowledge and improve critical thinking, analytical, and problem-solving skills. In terms of virtual industry, the study will aid the industry as it will act as a reference for tourism practitioners. Furthermore, this study will help virtual guides learn how to satisfy tourists virtually. Moreover, the Department of Tourism will benefit from the study since it will serve as the foundation of data needed in their department. For the institution, the study is beneficial since it will act as a reference for future University researchers. Lastly, the community can benefit from the study since the virtual tour can help to promote the tourist destination amidst the pandemic.

This paper sought to explore virtual guides and tourists' satisfaction on virtual tours: mediating role of virtual presence, more specifically to determine the demographic respondents profile in terms of age, sex, year level, institution. Next, to assess the qualities of the virtual tour guides in terms of communicative motivation, communicative skills, perceptions of competence, communicative knowledge. Third, to determine the level of satisfaction of tourists on virtual tour guides. Fourth, to identify the level of sense of presence of tourists in the destination during the virtual tours. Fifth, to determine how virtual tour guides affect the sense of presence. Sixth, to determine how the sense of presence affects the satisfaction of tourists. Lastly, to identify how the sense of presence mediates the relationship between virtual tour guides' qualities and their level of satisfaction.

2. Methods

In this study, the researchers used descriptive design that will depict the demographic profile of the chosen respondents. Siedlecki (2020) pointed out the purpose of the descriptive design is it allows the researchers to characterize individuals by examining them in an actual setting. As stated by Aggarwal and Ranganathan (2019), the descriptive researcher is most fundamental method to use since it allows researchers to examine and allocate multiple variables without consideration for hypothesis. The researcher obtained a set of variables. Tour Guide Attributes, Tourist Satisfaction, and Sense of Presence that enables to distinguish the level of tourist satisfaction on a virtual set-up. By utilizing this research design, it gives the researcher a comprehensive knowledge of the virtual tour guides on tourist

satisfaction. The researchers focused the study on Laguna, Philippines. There are universities in Laguna that provide tourism management courses. The researchers chose the area of Laguna to conduct the study since it is more convenient to connect with other universities in Laguna and thereby it is easier for researchers to find the potential respondents that will be participating in the study.

The respondents of the paper are the tourism students at top-performing universities in Laguna who had experience attending a virtual tour. Furthermore, the researchers coordinate with the deans and program chair of the department of each university. Moreover, the researchers utilize a purposive sampling technique, in which it will select respondents based on a set of criteria. The group of respondents was chosen by the researchers since they had prior experience with Virtual Tours and are qualified to determine the virtual tour guides on tourist satisfaction. The researchers determined the sample size of 111 using the statistical power analysis of G* power. This is a statistical tool for the sample size where the alpha error is 0.05, the effect size is 0.30, and power is 0.95.

The researchers conducted a survey through Microsoft forms that was sent to the respondents. To ensure the privacy information of the respondents, the researchers indicated the data privacy act on the first page of the questionnaire to assure that the data collected will remain confidential. Furthermore, the researchers complied with R.A. no 10173 which states all the information acquired shall be kept private and utilized solely for academic purposes.

The researchers have determined the primary objective of the research, which is the demographic respondent's profile. The frequency distribution was utilized to identify the total number of male and female respondents. The second to fourth objectives of the study utilized weighted mean and composite mean. For data collecting, weighted mean, and measuring respondent answers, a four-point Likert scale was utilized. Furthermore, the fifth and sixth objectives used the Structural Equation Modelling (SEM) to determine the relationship between the virtual tour guide and sense of presence, as well as the sense of presence and tourist satisfaction. The researchers also used the Structural Equation Modelling (SEM) in the last objective of the study to determine the relationship between the sense of presence, virtual tour guide qualities, and tourist satisfaction.

3. Results and Discussion

Table 1 reveals the demographic respondent's profile. Among 111 respondents, 66 of them are 20-21 years old that represents 59%, followed by the respondents who are 22-23 years old representing 27%, third that represents 10% are aged 24-25 and 4% of the respondents are 18-19 years old.

Table 1. Demographic Profile of the Respondents in terms of Age

Age	Frequency	Percent
18-19	4	4
20-21	66	59
22-23	30	27
24-25	11	10
Total	111	100

In the study of Casteranita et al. (2020) virtual tours were utilized to provide information to the audiences, particularly the young adults. Furthermore, young individuals are more likely to participate in attending virtual tours to broaden knowledge and learn in a unique way. In supported with the study of Skinner et al. (2018) young professionals appear to engage more with the new trend as this group seeks digital development such as virtual tours.

Table 2 shows that 77% of the respondents are female and 23% of them are male. The table clearly display that of the 111 respondents, majority of them are female with 86 respondents.

Table 2. Demographic Profile of the Respondents in terms of Sex

Sex	Frequency	Percent
Female	86	77
Male	25	23
Total	111	100

Among the respondent's female has the highest population. The table depicts that the top five universities have more female students. Indicated in the article of Philippines' Universities and Colleges Guide (n.d.), *Malayan College of Laguna, Lyceum of the Philippines University Laguna, Colegio de San Juan de Letran Calamba, Laguna State Polytechnic University, University of Perpetual Help System Dalta – Calamba* are the top performing universities that offers tourism management course. Female leads the population of tourism management course since female are more likely interested in hospitality activities than males. In supported with the study of Kobra et al. (2019) women are hospitable in nature as they are passionate, dedicated, and caring. These qualities are the fundamentals in the tourism and hospitality industry.

In terms engaging in virtual tour guide, females are more active than males as they more active to participate and make friends even though it is through virtual. This is supported in the study of Sun et al. (2020), females actively socialize in the technological community because of their principle to maintain the interpersonal and social harmony. In addition, Dirin et al. (2019) stated females were more passionate in using a new technology compared to males. Therefore, a higher population of female in the top performing universities are fonder in participating virtual tour due to curiosity about what the virtual tour will convey to them.

Table 3 shows the demographic respondents profile in terms of year level. 66 out of 111 respondents are from 3rd year level that has a percentage of 59%, followed by 26% who are in 4th year level, next by the respondents that are in 2nd year level with a percentage of 12%, and 3% that are from the 1st year level.

Table 3. Demographic Profile of the Respondents in terms of Year Level

Year Level	Frequency	Percent
1 st year	3	3
2 nd year	13	12
3 rd year	66	59
4 th year	29	26
Total	111	100

As it was shown on the Table 3, most of the respondents come from the 3rd year level, where back in 2019 this are the student who encountered the new system to study. And as stated by Abbas et al. (2021) everyone is all aware of the COVID-19 cost, the resulted economic issues, healthcare crises, and overall effects on global industries, including field of tourism, which are crucial contributors to the global economy. This is also the where virtual tours has been introduced, but according to Zhang et al. (2022) there are several debates on the tourists and scenic site administrators toward virtual tourism. However, understanding the tourist’s attitude toward virtual tourism in a crisis remains challenging.

Table 4 depicts the demographic profile of the respondents in terms of institution. It can be gleaned in the table that *Lyceum of the Philippines University – Laguna* has a total of 23 respondents (20.72%), *Malayan College of Laguna, Colegio de San Juan de Letran Calamba, Laguna State Polytechnic University, University of Perpetual Help System Dalta – Calamba* has a total of 22 respondents (19.82%).

Table 4. Demographic Profile of the Respondents in terms of Institution

Year Level	Frequency	Percent
School A	22	19.82
School B	23	20.72
School C	22	19.82
School D	22	19.82
School E	22	19.82
Total	111	100

The respondents that the researcher's choses were the top performing universities in Laguna that offer Tourism management course. Indicated in the article of Philippines’ Universities and Colleges Guide (n.d.), the five universities were chosen by the researchers since they have prior experience with Virtual Tours and are qualified to explore virtual tour guides on tourist satisfaction. Furthermore, the respondent's total number of 111 was equally distributed.

Table 5 reveals the qualities of virtual tour guides in terms of Communicative Motivation as agreeableness (3.33). Most of the respondents agreed to the virtual tour guide enjoyed presenting information to us (3.41), followed by I felt that the material presented was appropriate (3.36). Furthermore, it can be gleaned in table 5 that the respondents agreed in the virtual tour guide relayed the information to us (3.35). Moreover, table 5 indicates the virtual tour guide made an effort to get to know us (3.31) and everyone listened to our virtual tour guide (3.20).

Table 5. Assessment of the Qualities of Virtual Tour Guides in terms of Communicative Motivation

	Weighted Mean	Interpretation
The virtual tour guide enjoyed presenting information to us.	3.41	Agree
I felt that the material presented was appropriate.	3.36	Agree
The virtual tour guide relayed the information to us.	3.35	Agree
The virtual tour guide tried to get to know us.	3.31	Agree
Everyone listened to our virtual tour guide.	3.20	Agree
Composite Mean	3.33	Agree

Legend: 3.50-4.00 Strongly Agree; 2.50-3.49 Agree; 1.50-2.49 Disagree; 1.00-1.49 Strongly Disagree

It seems that respondents are more likely to agree when the virtual tour guides enjoyed presenting information to the virtual tourist since it will make the virtual tourist more satisfied and more interested in listening throughout the tour. In supported in the study of Arslanturk and Altunoz (2012), it is important that the tour guides display enjoyment for the tourist to have a good experience throughout the virtual tour. Moreover, virtual tourists become more interested in participating in virtual tours when the material used was appropriate as it will serve as a medium to provide tourist satisfaction. In relation to the study of Zorn (1993), having appropriate material can help in improving tourist satisfaction. Furthermore, virtual tourists seem to be more interested in attending virtual tours when the virtual tour guide relates information to them effectively as the tour guide's primary duty is to share the knowledge in that particular destination. It is supported by the study of Arslanturk and Altunoz (2012) states that tourists tend to be more interested in joining the virtual tour when the tour guide is articulate enough to relate information to them. In addition, the tourist appears to be more satisfied when the virtual tour guide extends effort to build connections in them since establishing rapport is essential in a virtual setup. Alongside the study of Zorn (1993), it would lessen the feeling of discomfort of the tourist towards the virtual guides if the guides reached out positively. Further, the virtual tourist listens to the virtual tour guide attentively if the guides are presentable and professionally well-groomed Campiolo (2016). It makes a strong impression on the tourist as it demonstrates an excellent appearance (Camron, 2017).

Table 6 encompasses the qualities of the virtual tour guides in terms of Communicative Skills agreeableness (3.28). The virtual tour guide ensured that everyone could hear him/her dominates the result of communicative skills (3.36), followed by the virtual tour guide spoke with an appropriate pace (3.27), and lastly, the virtual tour guide ensured that he/she made eye contact with the tourist (3.20).

Table 6. Assessment of the Qualities of Virtual Tour Guides in terms of Communicative Skills

	Weighted Mean	Interpretation
The virtual tour guide ensured that everyone could hear him/her.	3.36	Agree
The virtual tour guide spoke with an appropriate pace.	3.27	Agree
The virtual tour guide ensured that he/she made eye contact with the tourist.	3.20	Agree
Composite Mean	3.28	Agree

Legend: 3.50-4.00 Strongly Agree; 2.50-3.49 Agree; 1.50-2.49 Disagree; 1.00-1.49 Strongly Disagree

With regards to communicative skills, virtual tourists seem to be more likely satisfied when the virtual guide ensured that everyone could hear him/her as the virtual tour has a lot of barriers and unforeseen situations. Hence, virtual tour guides must ensure that his/her equipment is properly working. Arslanturk and Altunoz (2012) stated the tour guide must demonstrate effective communication skills wherein the tourist can properly hear what the tour guides are saying. In relation to the study of Keršić (2021) excellent communication skills are the most crucial qualities of a successful tour guide. Furthermore, it would be easy for the virtual tourist to acquire knowledge throughout the tour if the virtual tour guide spoke with an appropriate tone. Through speaking in a clear and formulating the voices in an appropriate volume, tour guides can prevent any confusion from the tour tourists. This is supported by the article of Pfeiffer (2019) that virtual tour guide must possess adequate tone to speak in a large

audience as it is crucial tour guide qualities. To provide the best experience for a virtual tourist, tour guides must establish a strong rapport with the tourists. Indeed, eye contact is a component of body language that is very crucial when communicating and interacting with the tourist. Oftentimes, gestures and eye contact speak louder than words. Hence, maintaining eye contact with the tourist throughout the virtual tour demonstrates respect and interest of the tour guides to them. Making meaningful eye contact with the audience is the one simple path that the tour guide can do to improve the effectiveness of their presentation and encourage people to cooperate and help people understand what they are discussing (Barnard, 2017). In the same article, it is indicated that looking directly in the eye of a person portrays that they are more likely interested in the guides.

Table 7 depicts qualities of the virtual tour guides in terms of Perceptions of Competence agreeableness (3.32). Majority of respondents agreed with The virtual tour guide had a good command of English language (3.37), followed by The virtual tour guide was expressive (3.34). In addition, Table 5 shows that the respondents agreed in the virtual tour guide seemed relaxed (3.31). Moreover, table 5 denotes the virtual tour guide was enthusiastic (3.28).

Tourist satisfaction is vital in the tourism industry. When it comes to tour guiding, tourists should be satisfied with how the tour guide manages the entire journey. According to Arslanturk and Altunoz (2012) the ability to be a tour guide may be rated based on whether or not the guide was expressive during the trip. A tour guide should be expressive enough for the tourist to completely experience their excursion. According to Hwang and Lee (2019) good command of foreign languages can be an advantage because tour guide qualities are essential in developing relationships with visitors building rapport with tourists is the most important aspect of being a tour guide since it requires a great deal of skill and talents to engage with them successfully. Moreover, the ability of a tour guide may be judged by how engaging they were during the tour. For the visitors to enjoy the trip more, the tour guide should be eloquent enough. Additionally, if the tour guide appears at ease, the tourist will pay closer attention to what she or he is saying; in this way the tourist will learn more about the destination and enjoy the tour. Another tour guide skill that exudes excitement while on the trip is enthusiastic in this way the tour can be more fun because of the interaction between the tourist and the tour guide, that is been stated by (Arslanturk & Altunoz, 2012).

Table 7. Assessment of the Qualities of Virtual Tour Guides in terms of Perceptions of Competence

	Weighted Mean	Interpretation
The virtual tour guide ensured that everyone could hear him/her.	3.36	Agree
The virtual tour guide spoke with an appropriate pace.	3.27	Agree
The virtual tour guide ensured that he/she made eye contact with the tourist.	3.20	Agree
Composite Mean	3.28	Agree

Legend: 3.50-4.00 Strongly Agree; 2.50-3.49 Agree; 1.50-2.49 Disagree; 1.00-1.49 Strongly Disagree

In table 8 shows the qualities of the virtual tour guides in terms of Communicative Knowledge & agreeableness (3.39). The It appears that the virtual tour guide is experienced in talking with large groups and The virtual tour guide used language that I could understand (3.40) is where the respondents agreed

when it comes to how the virtual tour guides can effectively deliver themselves towards the tourist and followed by The virtual tour guide is well trained (3.39).

Table 8. Assessment of the Qualities of Virtual Tour Guides in terms of Perceptions of Communicative Knowledge

	Weighted Mean	Interpretation
It appears that the virtual tour guide is experienced in talking with large groups.	3.40	Agree
The virtual tour guide used language that I could understand.	3.40	Agree
The virtual tour guide is well trained.	3.39	Agree
Composite Mean	3.39	Agree

Legend: 3.50-4.00 Strongly Agree; 2.50-3.49 Agree; 1.50-2.49 Disagree; 1.00-1.49 Strongly Disagree

Conveys the impression that the tourist enjoys the virtual tour when a tour guide is skilled at managing a large group on a tour as well as speaks in a way that is both understandable and acceptable for the entire tour. Indicated in the study of Shatnawi et al. (2019) It is crucial that the tour guide understand how to captivate a group of travelers and satisfy each one of them by offering a decent flow of itineraries. Tour guides must ensure that itineraries and the entertaining manner are met to every tourist that is part of a certain group. Furthermore, the tour guide needs to be proficient in speaking clearly while leading the group on the tour as communication is vital on establishing a rapport towards virtual tourists. As eloquently stated in the study of Stanciu et al. (2016) As they convey important information to the travelers, tour guides utilize communication as one of their most crucial qualities. Additionally, it's vital for the tour guides to be able to easily communicate with the group in a clear and concise manner since the virtual tour guide will serve as medium to deliver important information about certain attractions. Moreover, to deliver a smooth flow of tours, tour guides should be well-trained and skilled in virtual tour guiding. In accordance with Keršić (2021) Being well-trained in the field will enable the tour guide to accommodate the tourists in a very effective manner.

Table 9 reveals the level of satisfaction of tourists on virtual tour guide agreeableness (3.34). I am satisfied with the unique experience from the virtual tour dominates the result of the table (3.34). Followed by the statements of I am satisfied with the authentic experience from the virtual tour, and I am satisfied with the genuine experience from the virtual tour (3.33).

Table 9. Level of Satisfaction of Tourists on Virtual Tour Guide

	Weighted Mean	Interpretation
I am satisfied with the unique experience from the virtual tour.	3.34	Agree
I am satisfied with the authentic experience from the virtual tour.	3.33	Agree
I am satisfied with the genuine experience from the virtual tour.	3.33	Agree
Composite Mean	3.34	Agree

Legend: 3.50-4.00 Strongly Agree; 2.50-3.49 Agree; 1.50-2.49 Disagree; 1.00-1.49 Strongly Disagree

Table 10 shows and determines the level of sense of presence of tourists in the destination during the virtual tour's agreeableness (3.22). My interest in visiting the specific destination grew even stronger after experiencing the virtual tour dominates the result of the table (3.32). Followed by the statements of During experiencing the virtual tour, I often thought to myself that I was actually in the destination attraction (3.23) and during experiencing the virtual tour, I felt the normal experience of being in a tourist destination. (3.18). last but not least During the virtual tour, I felt as if I were in the destinations shown in the visuals that I had previously visited (3.14).

Table 10. Level of Sense of Presence of Tourists during Virtual Tours

	Weighted Mean	Interpretation
My interest to visit the specific destination grew even stronger after experiencing the virtual tour.	3.32	Agree
During the virtual tour, I often thought to myself that I was actually in the destination attraction.	3.23	Agree
During experiencing the virtual tour, I felt the normal experience of being in a tourist destination.	3.18	Agree
During the virtual tour, I felt as if I were in the destinations shown in the visuals that I had previously visited.	3.14	Agree
Composite Mean	3.22	Agree

Legend: 3.50-4.00 Strongly Agree; 2.50-3.49 Agree; 1.50-2.49 Disagree; 1.00-1.49 Strongly Disagree

As we were all trapped inside our homes and cut off from the outside world due to the pandemic, tourists' interest in visiting that specific destination grew even stronger. As per the study of Erickson-Davis et al. (2021), the sense of presence is the perception of being entirely absorbed in a particular site, as if the tourists are physically present there. Furthermore, sensation of presence is decided as a result of illusion. Furthermore, as mentioned by Velichkovsky et al. (2016) that a sensation of presence, or the illusion of being in a virtual environment, may accompany interaction with a virtual reality system, tourists felt as if they were in the places represented in the visuals during the virtual tour. Furthermore, a feeling of presence can improve a tourist's capacity to feel precisely what they are about to encounter in a particular location or to see the same thing digitally as a unique experience.

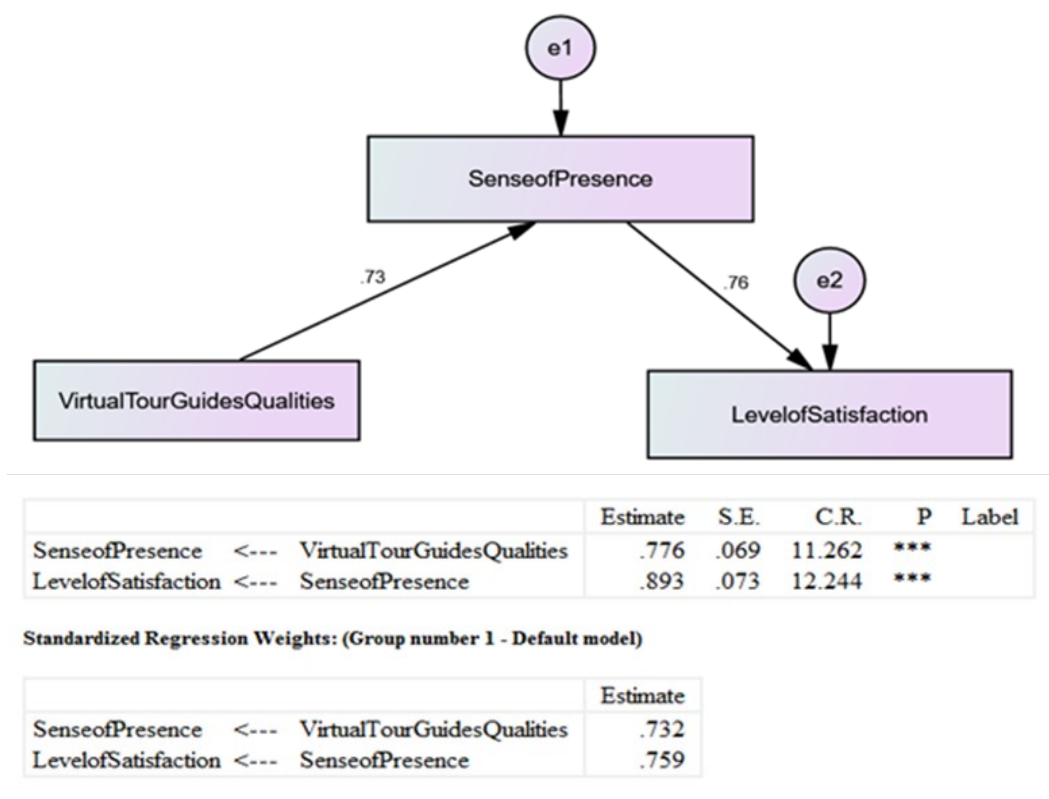


Figure 1. Structural Equation Model (SEM) on how the Virtual Tour Guides Affect the Sense of Presence during the Virtual Tour and how the Sense of Presence Affects the Satisfaction of Tourists

Figure 1 shows that the virtual tour guides' qualities affect the sense of presence, and the sense of presence affects the level of satisfaction. This means that to satisfy the virtual tourist, tour guide qualities and sense of presence play a vital role. Table 11 depicts that virtual tour guide qualities are significant and have an effect towards sense of presence. Furthermore, the results reveal that sense of presence is significant and has an effect towards level of satisfaction.

Virtual tour guide qualities are crucial elements when conducting a virtual tour. It affects the entire experience of a virtual tourist. The qualities of a virtual tour guide are an essential skill that needs to be delivered during the tour to provide virtual tourists with an exceptional experience. As eloquently stated by Tsai et al. (2016), virtual tour guide qualities can be determined based on excellent sense of humor, pleasant personal appearance, and enough experience. On the other hand, a sense of presence is another vital component during the virtual tour. It is classified as a mental imaginary and cognitive image of virtual tourist. In the study of Wu and Lai (2021), sense of presence pertains to a feeling acquired by the tourist and destination fictionality through attending virtual tours. Moreover, tourist satisfaction is the most important aspect of virtual industry. Showkat et al. (2021) pointed out that the tourist's satisfaction refers to the amount of pleasure that tourists experience when attending virtual tours.

In terms of virtual tours, tour guide qualities affect the sense of presence by demonstrating the skills that will make the tourist experience a certain destination by attending virtually. Shatnawi et al. (2019) defines that a skilled virtual tour guide could deliver the topic effectively that will lead to the feeling of sense of presence. Furthermore, a sense of presence affects the satisfaction of tourists by

effectively demonstrating communicative motivation, communicative skills, perception of competence, and communicative knowledge that a virtual tour guide must possess and proper utilization of visuals. Wu and Lai (2021) mentioned that sense of presence is the feeling that a virtual tourist can acquire through attending virtual tours that will lead to tourist satisfaction.

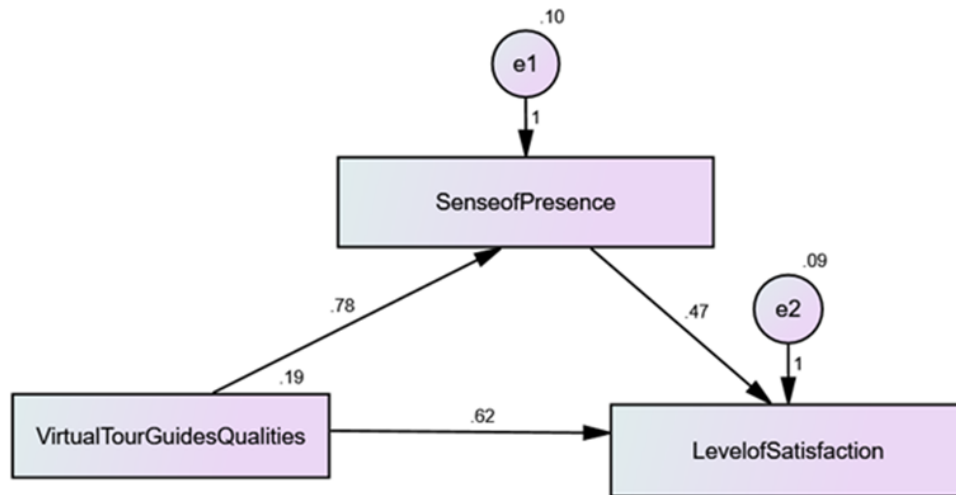


Figure 2. Structural Equation Model (SEM) on sense of presence mediates the relationship between the virtual tour guides' qualities and their level of satisfaction

The researcher evaluated the model based on multiple indices. These are chi-square, chi-square/df, Goodness of Fit Index (GFI), Normal Fit Index (NFI), and Comparative Fit Index (CFI), The result of the model fit is shown in Table 11.

Table 11. Summary of the Model Fit Indices

	Values	Standard Values	Interpretation
Chi-square/degrees of freedom	0.000	< 5	Good fit
Goodness of Fit Index (GFI)	1.000	> 0.80	Good fit
Normal Fit Index (NFI)	1.000	> 0.90	Good fit
Comparative Fit Index (CFI)	1.000	> 0.90	Good fit

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Sense of Presence <--- Virtual Tour Guides Qualities	.776	.069	11.262	***	
Level of Satisfaction <--- Sense of Presence	.467	.092	5.106	***	
Level of Satisfaction <--- Virtual Tour Guides Qualities	.617	.097	6.356	***	

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
Sense of Presence <--- Virtual Tour Guides Qualities	.732
Level of Satisfaction <--- Sense of Presence	.397
Level of Satisfaction <--- Virtual Tour Guides Qualities	.495

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Virtual Tour Guides Qualities	.194	.026	7.416	***	
e1	.101	.014	7.416	***	
e2	.093	.013	7.416	***	

Based on the indices used in the model in Figure 2, sense of presence mediates the relationship between the virtual tour guides' qualities and their level of satisfaction. This means that the sense of presence contributes to or act as a significant role in the relationship between the virtual tour guides' qualities and their level of satisfaction. The summary of the model fit indices reveals the good fit interpretation. Furthermore, a good fit means that a mediation happened between the virtual tour qualities and the level of tourist satisfaction with the mediator of sense of presence.

Sense of presence serves as the bridge or the mediating variable wherein it mediates the relationship between the two variables which are the tour guide qualities and tourist satisfaction. To determine this, Structural Equation Model or (SEM) was used to determine the correlation between the two variables. In the study of Erickson-Davis et al. (2021) mentioned that sense of presence is the perception of being entirely immersed in an attraction, as if tourists were physically present there. A sense of presence helps to achieve tourist satisfaction by proper applying of tour guide qualities. As eloquently stated by Tsai (2022) sense of presence generates impressions towards the destination that influences the tourist satisfaction. In accordance with virtual tour guides' qualities, sense of presence will not be felt by the tourist without the proper application of tour guide qualities. A skilled tour guide will lead to the feeling of a sense of presence within a certain destination Shatnawi et al. (2019) It further implies that sense of presence is a crucial element in virtual tours. Therefore, a sense of presence serves as the mediator between the virtual tour guide qualities and tourist satisfaction.

4. Conclusion

People are all aware that the tourism sector is always evolving to find out how the virtual tour guide will please the tourists, especially in this time of pandemic, and must learn how to adapt to the new set up. Specifically, the virtual platform tours, wherein it is initially challenging because the typical tour is done in a virtual set up. The researchers determined the demographic profile of the respondents. In terms of age, most of the respondents are from age 20 to 21 that has 59%. When it comes to sex, females dominate the total number of the entire respondents. While in the year level, the respondents coming from third year students lead the result that has a total of 66 response (59%). Furthermore, in terms of Institution, the respondents in the top five performing universities in Laguna were equally distributed.

In the survey that the researchers conducted, tourism students from five top performing universities agreed that the four sub-variables are crucial qualities that the virtual tour guide must possess to meet the satisfaction of the tourists. In terms of qualities of a virtual tour guide, the respondents agreed with the statements that were indicated on the questionnaire pertaining to attributes of a virtual tour guide. Based on the findings about the level of satisfaction, the respondents agreed that having a unique, authentic, and genuine experience resulted in meeting the satisfaction of the tourists throughout the virtual tour, this means that the virtual tourist tends to be more satisfied when the virtual tour guide executes the skills during the tour in an authentic manner. In addition, the result of data pertaining to the level of sense of presence of tourists in the destination during virtual tour, the respondents agreed that the sense of presence is a crucial element in the virtual tour which means, sense of presence must be acquired by the tourist to improve their unique experience. The researchers determined that virtual tour guides affect the sense of presence and the sense of presence affect the tourist satisfaction. This means that to satisfy the virtual tourist, tour guide qualities and sense of presence must be presented throughout the tour. Therefore, the researchers concluded that mediation occurred within the three major variables. A sense of presence acts as the mediator between the virtual tour guide qualities and tourist satisfaction which means sense of presence plays a vital role in attaining tourist satisfaction. This section presents suggestions for further improvement of the results. This contains the limitations of the present study and provides an avenue for further studies in similar fields. For the virtual industry, the result of this study will serve as the basis in improving virtual tourist experiences since all of the respondents agreed on all the indicators. This implies that the data interpretation results as agreed, that can be improved to strongly agree by enhancing the experience of the virtual tourist during the tour. For the Department of Tourism, the findings of the study will serve as the foundation wherein the treated data can be used in their department to promote destinations amidst the pandemic and focus more on enhancing the virtual tour. For the virtual tour guide, the statement “everyone listened to our virtual tour guide” got the least result on data gathered by the researchers, this means that virtual tour guide must focus more on how to get the attention of the virtual tourist during the tour. Furthermore, the indicator “the virtual tour guide ensured that he/she made eye contact with the tourist” obtain the lowest result among of the indicators, this further implies that the tour guide must improve non-verbal communication to build rapport toward the virtual tourist. Moreover, “the virtual tour guide was enthusiastic” acquired the least result which means that the virtual tour guide must discuss in a lively manner so that the virtual tourist will be more interested in listening throughout the tour. Therefore, with this result, virtual tour guides can consider attending trainings and seminars to improve their skills. For the institution, the result of the study is beneficial since it will act as a reference for future University researchers. Lastly, for future researchers, they may consider focusing more on the study of the materials such as AVP’s, PowerPoint presentation, google maps and audios that a virtual tour guide will use during the tour.

References

- Abbas, J., Mubeen, R., Iorember, P. T., Raza, S., & Mamirkulova, G. (2021). Exploring the impact of COVID-19 on tourism: transformational potential and implications for a sustainable recovery of the travel and leisure industry. *Current Research in Behavioral Sciences*, 2, 100033. <https://doi.org/10.1016/j.crbeha.2021.100033>
- Aggarwal, R., & Ranganathan, P. (2019). Study designs: Part 2 - Descriptive studies. *Perspectives in Clinical Research*, 10(1), 34. https://doi.org/10.4103/picr.picr_154_18
- Aminy, M. M. (2020). Can virtual tourism save local businesses in tourist destinations. The Conversation. Retrieved from <https://theconversation.com/can-virtual-tourism-save-local-businesses-in-tourist-destinations-149537>
- Arslanturk, Y., & Altunoz, O. (2012). Antecedents of Satisfaction in Guided Tours: An Introduction. *Procedia - Social and Behavioral Sciences*, 62, 891-895. <https://doi.org/10.1016/j.sbspro.2012.09.150>
- Barnard, D. (2017, October 24). *Importance of Eye Contact during a Presentation*. <https://virtualspeech.com/blog/importance-of-eye-contact-during-a-presentation>
- Campio, M. R. F. (2016). Professional Image and Client Perception. *Medical Office Management*, 137-145. https://doi.org/10.1007/978-3-319-13887-9_10
- Camron, B. (2017). [PDF] the tour guide s organized work - Free Download PDF. <https://silo.tips/download/the-tour-guide-s-organized-work>
- Casteranita, V., Septanto, H., & Djati, I. D. (2020). Design of Social Media-based Virtual Tour Through Personas. *2020 6th International Conference on Interactive Digital Media (ICIDM)*. <https://doi.org/10.1109/icidm51048.2020.9339666>
- Dirin, A., Alamäki, A., & Suomala, J. (2019). Gender Differences in Perceptions of Conventional Video, Virtual Reality and Augmented Reality. *International Journal of Interactive Mobile Technologies (iJIM)*, 13(06), 93. <https://doi.org/10.3991/ijim.v13i06.10487>
- El-Said, O., & Aziz, H. (2022). Virtual Tours a Means to an End: An Analysis of Virtual Tours' Role in Tourism Recovery Post COVID-19. *Journal of Travel Research*, 61(3), 528-548. <https://doi.org/10.1177/0047287521997567>
- Erickson-Davis, C., Luhrmann, T. M., Kurina, L. M., Weisman, K., Cornman, N., Corwin, A., & Bailenson, J. (2021). The sense of presence: lessons from virtual reality. *Religion, Brain & Behavior*, 11(3), 335-351. <https://doi.org/10.1080/2153599x.2021.1953573>
- Han, J., Zuo, Y., Law, R., Chen, S., & Zhang, M. (2021). Service Quality in Tourism Public Health: Trust, Satisfaction, and Loyalty. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.731279>
- Hwang, J., & Lee, J. J. (2019). Relationships among Senior Tourists' Perceptions of Tour Guides' Professional Competencies, Rapport, Satisfaction with the Guide Service, Tour Satisfaction, and Word of Mouth. *Journal of Travel Research*, 58(8), 1331-1346. <https://doi.org/10.1177/0047287518803199>
- Keršič, D. (2021). *Top Qualities of a Good Tour Guide for Amazing Experiences | Orioly*. <https://www.orioly.com/qualities-of-a-good-tour-guide/>
- Kobra, M. K., Khalil, M. I., Rubi, M. A., Kulsum, U., & Zayed, N. M. (2019). Factors and strategies to drive the choice of women graduates to enter into tourism and hospitality sector: A perceptual strategic study. *Academy of Strategic Management Journal*, 18(6), 1-7.
- Loureiro, S. M. C., Guerreiro, J., & Ali, F. (2020). 20 years of research on virtual reality and augmented reality in tourism context: A text-mining approach. *Tourism Management*, 77, 104028. <https://doi.org/10.1016/j.tourman.2019.104028>
- Pahlevi, A. S., Sayono, J., & Hermanto, Y. A. L. (2021). Design of a Virtual Tour as a Solution for Promoting the Tourism Sector in the Pandemic Period. *KnE Social Sciences*, 368-374. <https://doi.org/10.18502/kss.v5i6.9226>
- Pfeiffer, K. (2019). *Top Qualities Every Tour Guide Should Have - We Travel Academy*. <https://www.wetravel.com/academy/top-tour-guide-qualities/>

- Philippines' Universities and Colleges Guide. (n.d.). Find Colleges and Universities in the Philippines! Retrieved on April 8, 2022, from <https://www.finduniversity.ph/>
- Shatnawi, H. S., Al Najdawi, B. M., Kassawneh, M. S., & Al-makhadmah, I. (2019). *The impact of behaviors and skills of tour guides in guiding tourist groups*. https://www.researchgate.net/publication/331163062_The_impact_of_behaviors_and_skills_of_tour_guides_in_guiding_tourist_groups
- Showkat, S., Mehraj, D., & Qureshi, R. A. (2021). *Analysing the Effect of Tourist Satisfaction on Tourist Revisit Intentions*. https://www.researchgate.net/publication/352038366_Analysing_the_Effect_of_Tourist_Satisfaction_on_Tourist_Revisit_Intentions
- Siedlecki, S. L. (2020). Understanding Descriptive Research Designs and Methods. *Clinical Nurse Specialist*, 34(1), 8-12. <https://doi.org/10.1097/nur.0000000000000493>
- Skinner, H., Sarpong, D., & White, G. R. T. (2018). Meeting the needs of the Millennials and Generation Z: gamification in tourism through geocaching. *Journal of Tourism Futures*, 4(1), 93-104. <https://doi.org/10.1108/jtf-12-2017-0060>
- Stanciu, A. C., Condrea, E., & Zamfir, C. (2016). The importance of communication in quality management. *Ovidius University Annals, Economic Sciences Series*, 16(2), 393-396.
- Sun, B., Mao, H., & Yin, C. (2020). Male and Female Users' Differences in Online Technology Community Based on Text Mining. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.00806>
- Tsai, C.-Y., Wang, M.-T., & Tseng, H.-T. (2016). The Impact of Tour Guides' Physical Attractiveness, Sense of Humor, and Seniority on Guide Attention and Efficiency. *Journal of Travel & Tourism Marketing*, 33(6), 824-836. <https://doi.org/10.1080/10548408.2015.1068264>
- Tsai, L.-L. (2022). Factors That Influence Virtual Tourism Holistic Image: The Moderating Role of Sense of Presence. *Sustainability*, 14(1), 467. <https://doi.org/10.3390/su14010467>
- Velichkovsky, B. B., Gusev, A. N., Vinogradova, V. F., & Arbekova, O. A. (2016). Cognitive control and a sense of presence in virtual environments. *Experimental Psychology (Russia)*, 9(1), 5-20. <https://doi.org/10.17759/exppsy.2016090102>
- Wu, X., & Lai, I. K. W. (2021). Identifying the response factors in the formation of a sense of presence and a destination image from a 360-degree virtual tour. *Journal of Destination Marketing & Management*, 21, 100640. <https://doi.org/10.1016/j.jdmm.2021.100640>
- Yang, T., Lai, I. K. W., Fan, Z. B., & Mo, Q. M. (2021). The impact of a 360° virtual tour on the reduction of psychological stress caused by COVID-19. *Technology in Society*, 64, 101514. <https://doi.org/10.1016/j.techsoc.2020.101514>
- Zhang, S.-N., Li, Y.-Q., Ruan, W.-Q., & Liu, C.-H. (2022). Would you enjoy virtual travel? The characteristics and causes of virtual tourists' sentiment under the influence of the COVID-19 pandemic. *Tourism Management*, 88, 104429. <https://doi.org/10.1016/j.tourman.2021.104429>
- Zorn, T. E. (1993). Motivation to Communicate: A Critical Review with Suggested Alternatives. *Annals of the International Communication Association*, 16(1), 515-549. <https://doi.org/10.1080/23808985.1993.11678867>