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**VIRTUAL REALITY AS A PROMOTIONAL TOOL IN
NATURE TOURISM**

**LOODUSTURISMI TURUNDAMINE LÄBI
VIRTUAALREAALSUSE**

Bachelor's Thesis
Nature Tourism specialty

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<p>With Virtual Reality (VR) gaining popularity in tourism, particularly in the context of the COVID-19 pandemic, it becomes increasingly important to examine the impact that VR technology can make in promoting different types of tourism. This study investigates the effectiveness of VR as a promotional tool in the context of nature tourism and explore its effect on consumers attitude toward destination, and visitation intention compared to a more traditional media.</p> <p>An experimental method was used, where 40 participants were divided into two groups and were proposed to view VR or a guidebook. Each participant had to fill a questionnaire both before and after the experiment.</p> <p>The results of the experiment demonstrated that VR evokes stronger positive emotions and improve consumers attitude towards the destination, which as a result leads to a higher level of visitation intention. Additionally, findings demonstrated that VR, compared to a guidebook, is a more useful and trustworthy a tool when choosing a future travel destination. As such, VR can be seen as an effective promotional tool within the nature tourism context.</p> <p>The results of this study add to a VR marketing literature and work toward encouraging nature tourism businesses to understand the potential of VR as a promotional tool.</p>			
Keywords: marketing, nature tourism, VR, promotion			

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<p>Virtuaalreaalsus (VR) kogub populaarsust kui uuenduslik tehnoloogia turismi turundamisel ning arvestades COVID-19 laastavat mõju turismitööstusele muutub VR-i uurimine ja tema mõju tuvastamine üha olulisemaks erinevates turismi valdkondades. Käesoleva uurimistöö peamine eesmärk on hinnata VR-i efektiivsust loodusturismi müügiesenduse kontekstis ning uurida VR mõju tarbija suhtumisele sihtkohta ja tema kavatsust antud sihtkohta tulevikus külastada.</p> <p>Uurimustöö käigus viidi läbi eksperimentaalne uuring 40 osalejaga, kes jagati kahte gruppi, millest ühes testiti VR-materjali tõhusust ja teises reisijuhendit (RJ). Iga osaleja täitis küsimustiku enne ja pärast materjaliga tutvumist.</p> <p>Uuringu tulemused kinnitasid, et VR tekitab inimestes positiivseid emotsioone ning parendab nende suhtumist sihtkohta, suurendades ühtlasi nende kavatsust antud sihtkohta tulevikus külastada. Samuti leidis tõestust, et VR-tehnoloogial põhinev materjal pakkus edukamat ja usaldusväärsemat müügituge tulevase reisisihtkoha valikul kui RJ. Uuring kinnitas, et loodusturismi edendamisel pakub VR efektiivsemat müügitoeatust kui RJ.</p> <p>Käesoleva uurimistöö tulemused täiendavad VR-põhise turunduse teemalist kirjandust ja julgustavad loodusturismi ettevõtteid kasutama VR-tehnoloogiat oma teenuste turundamisel.</p>			
Märksõnad: VR, loodusturism, turundus, reklaam			

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ABBREVIATIONS

GB – Guidebook

Gen Y – Generation Y, Millennials

M – Mean

NT – Nature Tourism

SD – Standard deviation

VR – Virtual reality

INTRODUCTION

The impact of COVID-19 pandemic on the tourism industry in 2020 has been devastating. Traveling restrictions and lockdowns all over the world has put tourism sector on pause. According to Statista global revenue of the travel and tourism industry in 2020 has decreased by 42,1 percent comparing to the previous year (Statista 2020). When the situation in the world is unstable it is crucial for the tourism businesses to research new and more effective ways to attract clients.

Virtual reality (VR) is an innovative technology, which can also be used within the tourism industry (Guttentag 2009) and can help to increase post-COVID-19 tourism's sustainability (Novotny 2020). VR is growing in popularity as a destination marketing tool, because it allows consumers to pre-experience the destination from anywhere before actually travelling there (Voronkova 2018). Yet, there are still many gaps in the literature on VR in marketing (Wedel *et al.* 2020). Particular study aims to investigate VR effectiveness as promotional tool within the nature tourism context and to explore what affect VR has on consumer's attitude change and visitation intention.

To investigate the effectiveness of VR as promotional tool the following research questions (RQ) were addressed in this study:

RQ1: How does viewing the VR promotion affect consumer's attitude toward destination within the nature tourism context?

RQ2: How does viewing the VR promotion affect consumer's visitation intentions within the nature tourism context?

RQ3: Which material is more effective as promotional tool within the nature tourism context – VR or guidebook (GB)?

This paper provides an overview of literature on VR in marketing and describes the research methodology. The findings of the experiment are described in the results section and interpreted in the discussion section.

1. THEORETICAL BACKGROUND

1.1. Virtual reality and tourism

Virtual reality (VR) is a fast-developing technology, which is already widely used in tourism industry and can be valuable in planning, marketing, entertainment, education and heritage preservation (Guttentag 2009). VR popularity has especially increased after the beginning of COVID-19 pandemic, because businesses all over the world were forced to find new innovative ways to communicate with the clients.

Nowadays, there is a wide variety of VR companies and apps related to tourism. For example, according to Digital Trends one of the best VR applications for 2021 is Google Expeditions (Nicol, Revilla 2021) – an app, which helps to explore the world through VR tours (Google 2021). Although, at the moment, VR technology can't fully replace a real visit, it is still drawing consumer's attention to a destination (Akhtar *et al.* 2021).

For instance, Voronkova's (2018) findings suggest that, within the tourism context, VR is most popular in product marketing, as it can provide the "try before you buy" experience. Akhtar *et al.* (2021) described VR as "demonstration tool for destination marketing". Specifically, virtual tours have a great potential in tourism destination and product marketing (Voronkova 2018).

There are companies who specialize on using VR in travel destination marketing in particular. For example, Travel World VR – virtual reality video sales, marketing, and production company, whose main goal is to help tourism businesses to promote and sell their products (Travel World VR 2021).

1.2. Virtual reality and nature tourism

In this study, the term "Nature Tourism" is used in a wider sense, which includes any type of tourism related to nature. Martins and Silva (2018) described it as activities performed

in natural environments, with some kind of motivation and environmental or social impact. Typically, nature tourism is about experiencing nature through outdoor activities, which can vary from passive to active, such as adventure, wildlife, or sustainable tourism experiences (Defining ‘Nature Tourism’: meaning, value and boundaries 2013).

Using VR technology in the context of nature tourism is less researched. Recently, several national parks have started to apply VR technology in their marketing strategies (Dieck *et al.* 2018). In late 2016 Google created an interactive exhibition called “Hidden Worlds of the National Parks”, which is a collection of VR tours and videos of five National Parks (Carbonaro 2016).

Dieck *et al.* (2018) findings suggested that VR application used in the context of national parks, influence consumers to visit the destination in the future and spread the information about their experience and destination to other people. Another example, Lights over Lapland – a nature tourism company from Sweden, who integrated VR technology into their work, so those who can’t travel during COVID-19 pandemic, could explore nature and activities of Abisko National Park from their home (Lights over Lapland 2021).

1.3. Virtual reality influence on attitude and visitation intention

As VR is gaining prominence in marketing, its’ impact on consumers attitude and visitation intention has been the subject of numerous studies (Tussyadiah *et al.* 2018; Rainoldi *et al.* 2018; Bogicevic *et al.* 2019; Willems *et al.* 2019). VR video used as a marketing tool gives consumers more realistic expectations than other representational media, positively affecting consumer attitude towards the destination and the decision whether to visit it (Rainoldi *et al.* 2018).

Willems *et al.* (2019) suggested that the use of a more engaging and interactive technology, such as VR, has greater impact on purchase or visitation intention. In particular, VR experience has a higher level of engagement than traditional media and evokes stronger emotions, which as a result has positive influence on attitude towards the destination (Yung *et al.* 2021). Tussyadiah *et al.* (2018) investigated the relationship

between enjoyment of the experience, attitude change and visit intention and based on the findings concluded that VR can be an effective tool in tourism marketing.

Some studies aimed to examine what specifically influences change in attitude and intention to visit. Comparing to photographs and 360° video, VR generated the highest sense of presence and engagement (Bogicevic *et al.* 2019; Willems *et al.* 2019), positively affecting costumers' attitude towards the destination and as the result leading to higher level of visitation intention (Tussyadiah *et al.* 2018; Yung *et al.* 2021).

2. METHODOLOGY

2.1. Design

An experimental study was conducted to research the effectiveness of an innovative promotional tool - VR within the context of nature tourism, where two different types of destination promotional materials were tested. The study took place in Tallinn, Estonia in March-April 2021.

Based on major criteria – promotional purpose and focus on nature tourism the VR video “Hong Kong: Great Outdoors”, created by Hong Kong Tourism Board in 2020, was chosen for the experiment. The VR video was found through the Travel World VR application. The content of the video included natural sounds, some promotional text, people at different natural locations engaged in outdoor activities, such as camping, hiking, bicycling, stargazing etc (Hong Kong 2020). The particular VR video was also professionally developed and used high resolution footage.

For the purpose of this campaign another promotional material “Hiking & Cycling Guidebook” (GB) had also been developed (Hong Kong Tourism Board 2020) and for the purpose of this study the two materials, VR and GB, were compared for effectiveness. Although these two promotional materials are dissimilar in methods and information is presented in different ways, they were designed to promote the same destination and the same campaign, which gave an opportunity to examine a real case and research whether VR is more effective. To view the above VR video an Oculus Rift headset was used.

2.2. Sample and procedure

The target group of current research was set at Millennials (Gen Y), which in 2020 were the largest age group of the population (MSCI 2020). There are different opinions among researchers about the birth years of Generation Y. For the purpose of this study the birthyears of 1980 to 1999 are used to define the Millennial cohort. Millennials were

chosen, because according to Nielsen (Nielsen 2017) they travel more than any other generation and, traveling is one of the highest priorities in their life (Airbnb 2021). Additionally, Millennials have been behind the creation of a fully digital tourism micro-trend, as they use digital technologies throughout all travel stages (Ketter 2020).

An invitation to participate in this study was distributed through different social media channels. Requirements to the sample respondents were that they were born from 1980 to 1999, have never travelled to Hong Kong, like to travel and currently live in Tallinn, Estonia. To avoid prejudgment, respondents were asked if they held a strong opinion towards China, which might stop them travelling there.

Participants were divided randomly into VR (Virtual Reality) group and GB (Guidebook) group in order to compare the two groups. All the participants were briefed about study procedure and asked to complete a questionnaire about destination attitude and visitation intention before observing promotional material. In addition, the included pre-questionnaire consisted of demographical questions such as age, gender, employment status and prior experience with VR in order to create the profile of the participants. Afterwards, they were asked to view the promotional material (VR or Guidebook) and complete a post-questionnaire.

GB group was proposed to look through the guidebook, which had 33 pages and was presented in digital form. Participants were invited to use their own devices, be it a computer, a smartphone, or a tablet. Because of the lockdown due to COVID-19 pandemic at the time of this study, GB group experiment sessions were performed digitally via zoom meetings.

The VR group participants were asked to watch the promotional VR video using a VR headset. "Hong Kong: Great Outdoors" VR video is 2 minutes and 6 seconds long. Experiment sessions were performed individually, because of limited number of VR headsets and restrictions due to COVID-19 pandemic.

Beforehand, each member of the VR group was instructed how to wear and use VR headset. As the VR experience can cause motion sickness, all the participants were

recommended to stop the experiment at any time if they feel any uncomfortable symptoms during watching the video. Because, the study took place at the time of COVID-19 pandemic, all the safety measures during the experiment were applied and the VR device was disinfected after each individual.

2.3. Measurement

All measures were selected based on existing literature. Measurement items, such as consumer experience (Yung *et al.* 2021) attitude towards destination (Tussyadiah *et al.* 2018; Rainoldi *et al.* 2018) and visitation intention (Dieck *et al.* 2018; Tussyadiah *et al.* 2018) were adopted from previous studies that had investigated VR efficiency in tourism marketing.

Both pre- and post-questionnaire included items about attitude towards destination and visitation intention to compare the results and evaluate the effectiveness of VR as promotional tool. Additionally, post-questionnaire included items adopted from Rainoldi *et al.* (2018) about the quality of the information presented by promotional materials to assess its usefulness for choosing a potential travel destination.

The items for the questionnaire were created in the form of statements expressing consumer's attitude towards the destination and promotional material. The 5-point Likert scale, where 1 = «Strongly Disagree» and 5 = «Strongly Agree», is used to measure attitudes. Data was collected with Google Forms and extracted to Microsoft Excel for detailed analysis.

Consecutively, the mean (M) and standard deviation (SD) were calculated to help compare the results of pre- and post-questionnaire in both groups. The mean is used to show the average value for each of the item, while standard deviation demonstrates the variability of the data (LUMEN Learning 2021). For example, the smaller standard deviation is, the closer the data points are to the mean, which demonstrates a higher level of agreement with the subject among the respondents.

3. RESULTS

3.1. Participant profile

In sum, 47 people responded to invitation letter to participate in the research, out of whom 40 respondents met the requirements and were invited to join the experiment. Those respondents, who were excluded from the study, had either been to Hong Kong beforehand or held strong opinions toward China, which could stop them from travelling there. Table 1 demonstrates demographical profile of the participants.

Table 1. Profile of participants

	N	Percentage	
Gender			
Female	23	57,50	
Male	17	42,50	
Occupation			
Student	14	35,00	
Employed Full-Time	16	40,00	
Employed Part-Time	3	7,50	
Entrepreneur/Self-employed	6	15,00	
Unemployed	1	2,50	
Prior VR usage			
Yes	22	55,00	
No	18	45,00	
	Mean	Median	Range
Age	26,7	26	21-35

The average age was 26.7 (median=26; range: 21-35). In total, 57.5% of the participants were female and 42.5% male. In terms of employment, the majority of participants were in full-time employment (40%) or students (35%), followed by entrepreneurs (15%), part-time employed (7.5%) and one respondent was unemployed. Out of 40 participants, 55% have used VR technology before.

3.2. Results of the experiment

In total, 40 experiment sessions were conducted, of which 20 with the VR group and 20 with the GB group. In general, the results of pre-questionnaire showed that, even though the participants were assigned into groups randomly, those from the GB group had slightly less knowledge and interest in Hong Kong, which needs to be taken into account when comparing post-questionnaire results of two groups. Table 2 presents the results for mean (M) and standard deviation (SD) of each of the items used to investigate the attitude towards the destination and visitation intention before viewing the promotional material.

Table 2. Attitude and visitation intention before viewing the promotional material (1=Totally Disagree; 5=Totally Agree)

	GB MEAN	GB SD	VR MEAN	VR SD
I have thought of Hong Kong as a nature tourism destination	2,35	1,04	2,95	1,19
I have a positive opinion of Hong Kong and its nature.	2,85	0,75	3,1	1,07
I think, I have realistic expectations of Hong Kong and its nature.	2,95	0,76	3	1,08
I can visualize Hong Kong and its nature.	2,5	1,15	2,95	1,05
I am interested in visiting Hong Kong in the future.	3,85	0,99	3,95	1,00

Pre-questionnaire was conducted to evaluate the change in attitude and an intention to visit. The GB group result for the item “I have thought of Hong Kong as a nature tourism destination” was M=2,35 (SD=1,04) and VR group M=2,95 (SD=1,19). For the item “I have a positive opinion of Hong Kong and its nature” the results were GB M=2,85 (SD=0,75), VR group M=3,1 (SD=1,07) and for the item “I think, I have realistic expectations of Hong Kong and its nature” GB M=2,95 (SD=0,76), VR group M=3 (SD=1,08). The results of item “I can visualize Hong Kong and its nature” were GB M=2,5 (SD=1,15) and VR M=2,95 (SD=1,05). In terms of interest of visiting Hong Kong in the future, both groups had similar mean results - GB M=3,85; SD=0,99 and VR M=3,95; SD=1,00.

Table 3 shows both the mean and standard deviations for each item on the experience and the quality of information provided by the promotional material. The questionnaire included two items about consumer experience “Viewing the promotional material was

easy” – GB M=4,35 (SD=0,67); VR M=4,65 (SD=0,59) and “The experience of viewing the promotional material was exciting” – GB M=3,50 (SD=1,15); VR M=4,60 (SD=0,60). The results for the quality of the information were evaluated with four items. The mean for item “The content was interesting” in GB group was lower (M=4,00; SD=1,17) than in VR group (M=4,70 SD=0,47). For the item “The content was motivating” the mean for GB was also lower (M=3,50; SD=0,83) than for VR (M=4,35; SD=0,88). When participants were asked to evaluate their agreement or disagreement with the statement “The content helped decide whether to visit Hong Kong or not” the result in GB group was M=3,50 (SD=1,05) and VR group M=4,40 (SD=0,50). Lastly, for the item “The information seemed reliable” the results were GB M=3,80 (SD=0,95); VR M=4,60 (SD=0,60).

Table 3. Experience and quality of the information (1=Totally Disagree; 5=Totally Agree)

	GB MEAN	GB SD	VR MEAN	VR SD
Viewing the promotional material was easy.	4,35	0,67	4,65	0,59
The experience of viewing the promotional material was exciting.	3,50	1,15	4,60	0,60
The content was interesting.	4,00	1,17	4,70	0,47
The content was motivating.	3,50	0,83	4,35	0,88
The content helped decide whether to visit Hong Kong or not.	3,50	1,05	4,40	0,50
The information seemed reliable.	3,80	0,95	4,60	0,60

The results of attitude and visitation intention after viewing the promotional material are demonstrated in Table 4. The mean in the GB group for the item “After having viewed the promotional material, I can now think about Hong Kong as a nature tourism destination” was lower (M=4; SD=0,97) than in VR group (M=4,40; SD=0,68) and the results for the item “After viewing the promotional material, my opinion about the destination has changed in a positive way” were similar in both groups - GB M=4 (SD=0,92); VR M=4,15 (SD=0,59). In terms of realistic expectations of Hong Kong and its’ nature the result in GB group was M=3,50 (SD=1,05) and in VR group M=4,15 (SD=0,81). For the item “After viewing the promotional material, I can visualize Hong Kong and its nature better” the mean of GB group was lower (M=3,95; SD=0,89) than of VR group (M=4,45; SD=0,51). The GB group result for the item “I would recommend Hong Kong as a nature tourism

destination to my friends and family” was also lower ($M=3,15$; $SD=1,18$) than the result of VR group ($M=4,10$; $SD=0,79$). Speaking of interest in visiting Hong Kong in the future, the result of GB group was $M=3,85$ ($SD=1,09$) and VR group $M=4,30$ ($SD=0,66$).

Table 4. Attitude and visitation intention after viewing the promotional material (1=Totally Disagree; 5=Totally Agree)

	GB MEAN	GB SD	VR MEAN	VR SD
After having viewed the promotional material, I can now think about Hong Kong as a nature tourism destination.	4,00	0,97	4,40	0,68
After viewing the promotional material, my opinion about the destination has changed in a positive way.	4,00	0,92	4,15	0,59
After viewing the promotional material, I have realistic expectations of Hong Kong and its nature.	3,50	1,05	4,15	0,81
After viewing the promotional material, I can visualize Hong Kong and its nature better.	3,95	0,89	4,45	0,51
I would recommend Hong Kong as a nature tourism destination to my friends and family.	3,15	1,18	4,10	0,79
After viewing the promotional material, I am more interested in visiting Hong Kong in the future.	3,85	1,09	4,30	0,66

Additionally, the VR group was asked to evaluate two additional statements regarding their attitude towards VR technology in destination marketing (Table 5). The mean result for the item “I would use VR promotional content for choosing a travel destination in the future” was $M=4,50$ ($SD=0,69$) and for the item “I would recommend using VR promotional content to my friends and family when choosing a travel destination” – $M=4,65$ ($SD=0,59$).

Table 5. Attitude towards VR.

	VR MEAN	VR SD
I would use VR promotional content for choosing a travel destination in the future.	4,50	0,69
I would recommend using VR promotional content to my friends and family when choosing a travel destination.	4,65	0,59

4. DISCUSSION

For the scope of this study, two promotional materials of the Hong Kong were compared – a Guidebook and a Virtual Reality, in order to find the answers to research questions and evaluate effectiveness of VR in nature tourism marketing.

Before viewing the promotional material both groups had not thought about Hong Kong as a nature tourism destination and their opinion of the region and its' nature was rather negative (GB M=2,95; VR M=2,95), approaching neutral. Also, participants from both groups were not sure if they can visualize the destination and if their expectations of Hong Kong and its' nature were realistic. It is important to mention, that even before viewing the promotional material participants of both groups stated that they are interested in traveling to Hong Kong (GB M=3,85; VR M=3,95).

Based on the results of this study it can be confirmed that VR experience evokes stronger positive emotions toward the destination. This is consistent with the findings of Yung *et al.* (2021). The results also showed that even though viewing both promotional materials was easy, viewing the VR promotion was considered more exciting. This could positively influence the participants' attitude towards the destination (Yung *et al.* 2021) and according to Tussyadiah *et al.* (2018) lead to a higher visitation intention.

To evaluate the usefulness of the promotional material for choosing future travel destination, quality of the information was investigated. The results indicate a following difference between GB and VR: the VR content was considered to be more interesting and motivating. Furthermore, the VR was deemed as more helpful when deciding whether to visit Hong Kong or not. Additionally, the information provided by VR was perceived as more reliable than the information provided by GB. Moreover, the results of this research also confirm the finding of Rainoldi *et al.* (2018), that VR is more useful a tool than the traditional media when choosing a future travel destination.

Taking into account the participants' attitude towards the destination before viewing the promotional material, both VR and GB were equally able to change participants' opinion of Hong Kong in a positive direction and make the participants think of Hong Kong as a nature tourism destination. However, according to participant's opinion, VR was also able to create more realistic expectations of the destination than GB, which is in line with Rainoldi *et al.* (2018) findings. In terms of visualisation of Hong Kong and its nature both promotional materials demonstrated similarly positive results.

The results of the experiment showed that participants who had viewed the VR would recommend Hong Kong as a nature tourism destination to their friends and family, and in general would recommend using VR promotional content for choosing future travel destinations, which goes to prove that the information provided through VR was seen as trustworthy, a result also matching the findings of Dieck *et al.* (2018). Additionally, it might be important to notice that the results showed lower standard deviation (SD) within the VR group, which demonstrates a stronger agreement among the participants on each of the statements.

It can therefore be deduced that VR positively affects the attitude towards a destination within the nature tourism context. It is important to mention that the GB did not affect visitation intention of the participants, whereas VR group expressed higher intention to visit Hong Kong in the future, after viewing the VR promotion session. Thus, it is verified that VR has a positive effect on visitation intention, which is in line with Tussyadiah *et al.* (2018). Based on all the findings, it can be stated that VR is more effective than GB within the nature tourism context.

CONCLUSION

VR is an innovative technology, which is widely used in many different industries including tourism. Specifically, VR is a popular tool in destination marketing, as it can provide a “try before you buy” experience. Previous studies have shown that VR has a positive effect on the attitude towards the destination and visitation intention.

The main goal of this study was to investigate if VR is effective as a promotional tool within the nature tourism context. An experimental study was conducted, where two different types of promotional materials about the same nature tourism destination were tested – a VR and a Guidebook. The target group chosen for the current research was Millennials. Measurement items used to investigate VR efficiency were consumer experience, quality of the information, attitude towards the destination and visitation intention.

The results of the experiment demonstrated that VR evokes stronger positive emotions towards the experience, leading to a positive change in attitude towards the destination. In addition to that, VR was proven to be a more useful and trustworthy promotional material when choosing a future travel destination. Comparing to a guidebook, VR had a stronger positive effect on visitation intention within the nature tourism context. Addressing the third research question, VR was proven to be more effective as promotional tool than Guidebook within the nature tourism context.

The results of this study add to a VR marketing literature and might help encourage nature tourism businesses to incorporate VR-based materials into their marketing plans by demonstrating their superior impact in changing the attitudes towards the destination and the visitation intention.

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ÜLDKOKKUVÕTE

LOODUSTURISMI TURUNDAMINE LÄBI VIRTUAALREAALSUSE

COVID-19 mõju turismitööstusele on olnud laastav. Ainuüksi 2020. aastal kukkus turismitööstuse globaalne maht 42,1% võrreldes 2019. aastaga. Selline üleilmselt ebastabiilne olukord muudab uute ja tõhusate klientide ligimeelitamise meetodite uurimise ja tuvastamise turismiettevõtetele ülioluliseks.

Virtuaalreaalsus (VR) on uuenduslik tehnoloogia, mida kasutatakse laialdaselt erinevates valdkondades, sealhulgas ka turismimajanduses. VR on eriti populaarne sihtkoha turunduses, kuna võimaldab 'proovi enne ostmist' kogemust. Eelnevad uurimused on näidanud VR-i positiivset mõju sihtkoha külastuskavatsuste kasvule.

VR-tehnoloogia kasutamise mõju loodusturismis on vähem uuritud. Käesoleva uurimistöö peamine eesmärk on hinnata VR-i efektiivsust loodusturismi müügiedenduse kontekstis.

VR-tehnoloogia efektiivsuse väljaselgitamiseks loodusturismi edendamisel püstitati järgnevad uurimusküsimused (UK):

UK1: Kuidas mõjutab VR-tehnoloogial põhineva müügiedendusmaterjaliga tutvumine tarbija suhtumist sihtkohta loodusturismi kontekstis?

UK2: Kuidas mõjutab VR-tehnoloogial põhineva müügiedendusmaterjaliga tutvumine tarbija külastuskavatsust loodusturismi kontekstis?

UK3: Milline müügiedendusmaterjal on loodusturismi kontekstis tõhusam – VR või reisijuht (RJ)?

Käesoleva uuringu sihtrühmaks valiti *millennial*-id ehk põlvkond, mis on sündinud vahemikus 1980–1999. Uurimustöö käigus viidi läbi eksperimentaalne uuring kahes 20 osalejaga grupis, millest ühes testiti VR-materjali tõhusust ja teises reisijuhendit. Mõlemad materjalid käsitlesid sama loodusturismi sihtkoha.

Iga osaleja täitis küsimustiku, millega uuriti sihtkohta suhtumist ja külastuskavatsust enne materjaliga tutvumist. Materjali läbimise järel täitis iga osaleja uue küsimustiku, millega mõõdeti elamuskogemust, hinnangut saadud teabe kvaliteedile, suhtumise muutust sihtkohta ja külastuskavatsuse muutust.

Küsimustiku koostamisel kasutati väiteid, mis väljendavad tarbija suhtumist sihtkohta ja müügiesendusematerjali. Suhtumist mõõdeti viiepunktilise Likert-skaala abil, mille puhul 1 = «üldse ei nõustu» ja 5 = «nõustun täiesti». Järgnevalt arvutati välja aritmeetiline keskmine ja standardhälve, mida kasutati esmase küsimustiku ja järelküsimustiku tulemuste võrdlemisel mõlemas grupis.

Uuringu tulemus kinnitas, et VR tekitab inimestes positiivsemaid emotsioone ning parandab nende suhtumist sihtkohta. Tõestamist leidis ka see, et kui RJ ei mõjutanud eksperimendis osalejate külastuskavatsust, siis VR-i kogemusega katsegrupis osalejad väljendasid pärast VR-materjaliga tutvumist märksa kindlamat kavatsust antud sihtkohta tulevikus külastada. Lisaks leiti, et VR-materjal on huvitavam ja motiveerivam.

Kokkuvõtteks võib kinnitada, et loodusturismi edendamisel pakub VR efektiivsemat müügitõetust kui RJ. Samuti leidis tõestust, et VR-tehnoloogial põhinev materjal pakkus edukamat ja usaldusväärsemat müügituge tulevase reisisihtkoha valikul kui RJ.

Käesoleva uurimistöö tulemused täiendavad VR-põhise turunduse teemalist kirjandust ja julgustavad loodusturismi ettevõtteid kasutama VR-tehnoloogiat oma teenuste turundamisel.

APPENDIXES

Appendix 1. Pre-questionnaire

HONG KONG: GREAT OUTDOORS

The purpose of this experiment is to find out what you think of Hong Kong as a Nature Tourism destination and its promotional material. The experiment is divided into three parts: filling the pre-questionnaire, viewing the promotional material and filling the post-questionnaire.

Answering this pre-questionnaire should take less than 5 minutes. Do not spend too much time on any question. Please remember that there are no correct or incorrect answers – I am only interested in your thoughts and feelings about the object of this study.

Your responses will be anonymous and will never be linked to you personally. Thank you for your cooperation!

BACKGROUND INFORMATION

What is your age?

What gender do you identify as?

- Male
 Female

Which of the following best describes your current employment status?

- Student Employed Full-Time Unemployed
 Entrepreneur/Self-employed Employed Part-Time Prefer not to say

Have you ever used VR technology?

- Yes
 No

ATTITUDE AND VISITATION INTENTION

Please indicate HOW MUCH YOU AGREE OR DISAGREE with each of the following statements by selecting just ONE of the numbers using the 5-point scale below.

I have thought of Hong Kong as a Nature Tourism destination

Strongly Disagree 1 2 3 4 5 Strongly Agree

I have a positive opinion of Hong Kong and its nature

Strongly Disagree 1 2 3 4 5 Strongly Agree

I think, I have realistic expectations of Hong Kong and its nature

Strongly Disagree 1 2 3 4 5 Strongly Agree

I can visualise Hong Kong and its nature

Strongly Disagree 1 2 3 4 5 Strongly Agree

I am interested in visiting Hong Kong in the future

Strongly Disagree 1 2 3 4 5 Strongly Agree

Appendix 2. Post-questionnaire

HONG KONG: GREAT OUTDOORS

The purpose of post-questionnaire is to investigate your attitude towards the subject of the study after you have viewed the promotional material.

Some of the statements refer to the “CONTENT” of the promotional material, which means visual and textual information, story, scenes, events and everything else that you can see in the promo material.

Answering post-questionnaire should take approximately 5 minutes. Do not spend too much time on any question. Please remember that there are no correct or incorrect answers – I am only interested in your thoughts and feelings about the object of this study.

Your responses will be anonymous and will never be linked to you personally. Thank you for your cooperation!

EXPERIENCE AND QUALITY

Please indicate HOW MUCH YOU AGREE OR DISAGREE with each of the following statements by selecting just ONE of the numbers using the 5-point scale below.

Viewing the promotional material was easy.

Strongly Disagree 1 2 3 4 5 Strongly Agree

The experience of viewing the promotional material was exciting.

Strongly Disagree 1 2 3 4 5 Strongly Agree

The content was interesting.

Strongly Disagree 1 2 3 4 5 Strongly Agree

The content was motivating.

Strongly Disagree 1 2 3 4 5 Strongly Agree

The content helped decide whether to visit Hong Kong or not.

Strongly Disagree 1 2 3 4 5 Strongly Agree

The information seemed reliable.

Strongly Disagree 1 2 3 4 5 Strongly Agree

HONG KONG: GREAT OUTDOORS

ATTITUDE AND VISITATION INTENTION

Please indicate HOW MUCH YOU AGREE OR DISAGREE with each of the following statements by selecting just ONE of the numbers using the 5-point scale below.

After having viewed the promotional material, I can now think about Hong Kong as a Nature Tourism destination.

Strongly Disagree 1 2 3 4 5 Strongly Agree

After viewing the promotional material, my opinion about the destination has changed in a positive way.

Strongly Disagree 1 2 3 4 5 Strongly Agree

After viewing the promotional material, I have realistic expectations of Hong Kong and its nature.

Strongly Disagree 1 2 3 4 5 Strongly Agree

After viewing the promotional material, I can visualise Hong Kong and its nature better.

Strongly Disagree 1 2 3 4 5 Strongly Agree

I would recommend Hong Kong as a Nature Tourism destination to my friends and family.

Strongly Disagree 1 2 3 4 5 Strongly Agree

After viewing the promotional material, I am more interested in visiting Hong Kong in the future.

Strongly Disagree 1 2 3 4 5 Strongly Agree

+ 2 questions to VR group only!

I would use VR promotional content for choosing a travel destination in the future.

Strongly Disagree 1 2 3 4 5 Strongly Agree

I would recommend using VR promotional content to my friends and family when choosing a travel destination.

Strongly Disagree 1 2 3 4 5 Strongly Agree

**Lihtlitsents lõputöö salvestamiseks ja üldsusele kättesaadavaks tegemiseks
ning juhendaja(te) kinnitus lõputöö kaitsmisele lubamise kohta**

Mina, Irina Kajdakowska,
(12/06/98)

1. annan Eesti Maaülikoolile tasuta loa (lihtlitsentsi) enda loodud lõputöö
VIRTUAL REALITY AS A PROMOTIONAL TOOL IN NATURE TOURISM,
mille juhendajad on Sergey Kask ja Tiiu Kull,
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 - 1.2. digiarhiivi DSpace lisamiseks ja
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Lõputöö autor

allkiri

Tartu, 25.05.2021

Juhendaja(te) kinnitus lõputöö kaitsmisele lubamise kohta

Luban lõputöö kaitsmisele.

(juhendaja nimi ja allkiri)

(kuupäev)

(juhendaja nimi ja allkiri)

(kuupäev)