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University-to-Society Innomediaries in Albania: Co-Production of Knowledge and Research That Matters

Promotional campaign for a library with Virtual Reality

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EXECUTIVE SUMMARY

Virtual Reality (VR) is no more a product of fantasy in science fiction, it is now a reality and is spreading at a rapid pace. In 2021, this technology generated revenues of more than 21 billion dollars in the world market, and today virtual reality is expanding at a steady pace and is expected to have an annual growth of 15% within 10 years (2022 to 2030) [1]. While virtual reality is not new, its use is expected to grow over the last few years along with other digital technologies such as augmented reality. PricewaterhouseCoopers (PwC) predicts that by 2030, VR and AR could reach a global revenue value of 1.5 trillion dollars [2].

Seeing this increase in the use of VR technology, it is being used more and more in different fields of everyday life. Virtual reality marketing is becoming increasingly important, as it enables businesses to offer customers the best experience they can get from a product, service or place without being physically present. This level of engagement and awareness affects consumers more than traditional media because it creates strong emotions and memories that have been linked to real behaviour change.

The use of marketing campaigns with VR, especially in the field of books, is also an innovation in our country. Seeing the inability of small businesses to carry out professional and high-cost promotion campaigns, it was thought that by using this technology we could reach as many readers as possible and allow these businesses to be as competitive as possible in the market.

For the above-mentioned reasons, we have chosen to use technological trends like VR and AR for providing solutions to local businesses like the “Dyrrahu” library.

But how can a successful marketing campaign be realized through virtual reality?

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PROJECT SNAPSHOT

Project Title	University-to-Society Innomediaries in Albania: Co-Production of Knowledge and Research That Matters
Project's acronym	U-SIA
Webpage	www.usia.al
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Agreement number	618997-EPP-1-2020-1-AL-EPPKA2-CBHE-JP
Project Timeline	15/01/2021- 15/01/2023
Project Coordinator	Qendra Mesdheu - Mediterranean University of Albania
Countries involved	Albania; Serbia; Italy; Germany
Project partners	1. Mediterranean University of Albania (UMSH) 2. Chamber of Commerce and Industry of Tirana (CCIT) 3. Professional College of Tirana (KPT) 4. Luigj Gurakuqi University of Shkodra (ULGSH) 5. European University of Tirana (EUT) 6. Aleksandër Moisiu University of Durres (UAMD) 7. National Agency for Science, Research, and Innovation (AKSHKI) 8. Center for Comparative and International Studies (CCIS) 9. Science and Innovation for Development Center (SCIDev) 10. University of Belgrade (UB) 11. University Degli Studi di Marconi (USM) 12. Accreditation Council for Entrepreneurial & Engaged Universities (ACEEU)
Aim and objective	The overall objective is to foster effective and sustainable university-to-society collaboration in Albania with impact on the development and European integration process of the country. Specifically, the project intends to: SO1 – enhance the capacities of universities in Albania to co-produce knowledge and research with impact through establishment of knowledge transfer and innovation brokerage unit (USIA). SO2 – introduce and expand co-production of knowledge that is academically insightful and practically actionable in Albanian context through establishment of network of partners in Quadruple Helix model (QH).
Results	By the end of the project, universities in Albania will have enhanced and developed capacities to co-produce knowledge and research with impact and more effective and sustainable collaboration in place between Albanian universities and public institutions, business, civil society, and media in the Quadruple Helix Model.

ABBREVIATIONS

AI	Artificial Intelligence
EU	European Union
EC	European Commission
ERA	European Research Area
GoA	Government of Albania
HE	Higher Education
HEI	Higher Education Institution
ICTs	Information and Communication Technologies
KT	Knowledge Transfer
MoESY	Ministry of Education, Sport and Youth
NASRI	National Agency for Scientific Research and Innovation
OECD	Organization for Economic Cooperation and Development
UIIN	University Industry Innovation Network
R&D	Research and Development
R&I	Research and Innovation
SDGs	Sustainable Development Goals
USC	University-to-Society Collaborations
UBC	University-Business Collaborations
VR	Virtual Reality
AR	Augmented Reality
MR	Mixed Reality
XR	Extended Reality
VEM	Virtual Experience in Marketing

LIST OF FIGURES

I. INTRODUCTION

Work Package 5 (WP5) is part of the USIA project's "Knowledge transfer partnership" between universities and businesses. Its goal is to enable a company to bring new skills and the most recent academic thinking to bear on a specific, strategic innovation project. So, in order to solve and/or address an issue or problem that the business may present, the HEI will offer a solution through the expertise that the staff has / offers, while it is also strongly suggested and highly recommended that students from the respective HEI participate in this Work Package.

In the framework of this work package, UAMD had to offer solutions for different needs of local businesses. In the first place, it was necessary to meet with the Head of the Chamber of Commerce and Industry in Durrës, to have a clear situation regarding the local market needs. In this context, we had a meeting with local businesses such as Crystal Systems and the “Dyrrahu” library, where they discussed their current problems and needs. Crystal Systems proposed their needs regarding the financial solution and Dyrrahu Library needed support regarding the marketing campaign. This served as the starting point of the work toward the goals for this WP, to provide the solution for the problems proposed by the businesses.

The team of UAMD made a meeting to further discuss the possible solutions and decided to help the “Dyrrahu” library to design a promotional campaign with Virtual Reality technology. It is important to notice that we were interested to invest our expertise in a business related to students, studying and reading, so our choice was one of the oldest bookstores in Durres. To provide this solution we designed a questionnaire in order to better understand the expertise of the academic staff for the needed solutions. The questionnaire has 10 questions oriented to the use of ICT and was distributed to all the academic staff. In total, we have gathered 104 responses. The most prominent areas for expertise, according to the questionnaire addressed to the university academic staff were: Digital Marketing, ICT, Innovation and E-commerce offered in turn to the business/industry. Academic staff at UAMD showed that they had the expertise to use ICT tools and VR/AR technology. 9 out of 104 had expertise regarding the use and development of 3D content creation and VR/AR. In collaboration with the Faculty of Information Technology (FIT), we started working on the design of the promotional campaign with VR.

Our motivation was to increase the reader's interest, and to offer a new way of presentation for the bookstore, making it as close as possible to digitalization. We didn't want to offer this bookstore regular digital marketing that included the presence of the business on different social media platforms. We offered completely virtual marketing, a showroom where new books could be presented through virtual reality. Virtual reality is the technology that creates a simulation of reality and allows users to engage in an environment that involves multiple senses by using VR applications. Virtual reality is the technology that creates a simulation of reality and allows users to engage in an environment that involves multiple senses by using VR applications.

But first, let's define the basic concepts of virtual reality technology.

- ✓ ***Virtual Reality (VR):*** This is the general term for any kind of experience that essentially places the user "in" another world or dimension. [3]
- ✓ ***Augmented Reality (AR):*** This is the term that describes placing content "into" the real world using technological devices such as smartphones or tablets.
- ✓ ***Mixed Reality (MR):*** This is a combination of real and digital content that interact with each other.

Devices that enable the user to experience the virtual 3D environment are the VR headset. Meanwhile, VR headsets allow users to immerse into a 3D virtual environment, enhancing simulation training. VR headsets are designed to allow users to better interact with the virtual environment (possibly in 360 degrees). With the advent of more sophisticated technologies such as Extended Reality (XR) technologies (XRs) that enable high-fidelity reproduction of environments, objects, and persons very promising technological tools, can produce satisfactory consumer experiences resembling those experienced in physical stores. Virtual Reality (VR) is considered to be one of the most promising technological innovations in business [4]. As it has become more accessible to consumers at affordable prices it has caught the attention of marketers as a new way to advertise products and brands [5].

It is worth emphasizing that there is an increasing interest in XR in the marketing area; due to the positive benefits. This tendency can be a motivating factor for the development of a useful framework for classifying the use of XRs in marketing. The concept of virtual experience in marketing (VEM); supports the development of the different frameworks for the use of VEMs in marketing. Through analyzing previous works related to the v-commerce concept, it has been possible both to understand how VEM has evolved and to revisit the concept in the light of the recent technical advances in XR technologies; this leads us to propose a new definition of VEM [6].

Since the latest statistics in Albania show a significant decrease in the number of book readers, it is necessary to help businesses that sell books create promotional campaigns using modern technologies such as virtual reality. This innovative technology for a library will provide the fastest way to attract more readers and rise society's awareness that reading books only provide benefits.

II. METHODOLOGY

To better understand the virtual experience in marketing (VEM) it is necessary to create a virtual reality application. For the case we have considered, the reader must experience an immersion in the virtual environment. To attract more readers to the book, the implementation of the marketing campaign for this business was carried out in several stages illustrated in Figure II-1.

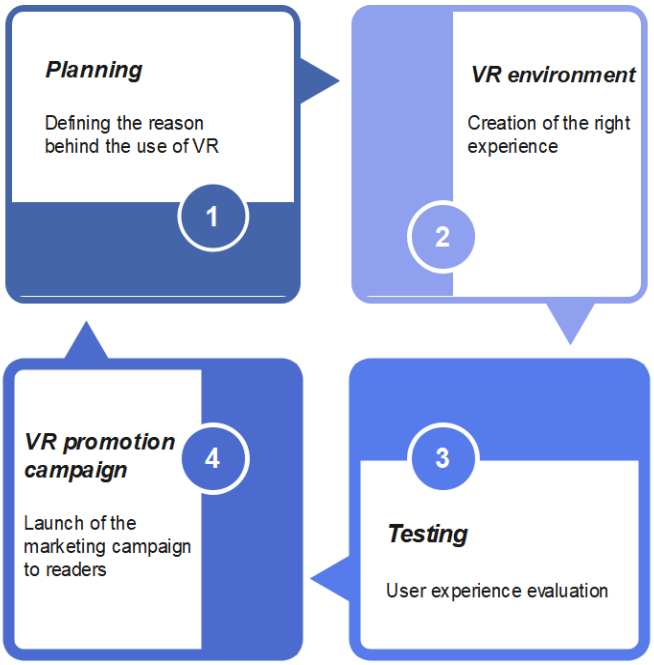

Figure II-1 *Design phases of the VR application*

- **Phase 1 – Planning**

Virtual reality allows businesses to reach out and connect to their potential customers beyond traditional media like TV and magazine ads, presenting limitless opportunities for promotion. Compared to this traditional media, VR takes storytelling capabilities a step further. Through this multimedia experience, users can interact with a digital library created in a virtual showroom. In this case, we have defined the 2 scenes that are to be used for the VR application. The first scene will provide short information about the application and the second scene provide the showroom with new books. In this showroom, the books are clickable to provide interaction with readers and at the same time provide a short description of the selected book. In this way, the promotional campaign is provided to the readers to increase the number of possible buyers.

- **Phase 2 – VR environment**

Virtual reality helps consumers better visualize the products/services. The VR environment (3D worlds) that was planned during the first phase, was implemented using Unity software and its assets. The 3D modelling and the design of the VR environment are done using free tools in order not to increase the cost of the final product. With VR, we have built an immersive world that provides the readers with a memorable experience, to transform them into loyal customers.

Figure II-2 *Scene 1 created in Unity*

Figure II-3 *Scene 2 created in Unity*

- **Phase 3 - Testing**

After the design of the application, we tested the final product by using Meta Quest 2 VR headset. The application can be installed into the headset or can be connected to the computer and played in Unity. This phase is very important to define bugs or technical issues during the application design and implementation.

- **Phase 4 – VR promotional campaign**

In this phase, it is necessary to promote the newly arrived books in the library to all interested audiences. For this reason, the library has to use a VR headset to provide the readers with the tools and the environment for the VEM. By becoming early VR adopters, businesses can stay relevant in light of recent technological developments.

III. ANALYSIS

Virtual reality marketing can help businesses to engage in successful promotional campaigns to communicate their brand and what can offer. Through VR, each business can showcase existing products that allow consumers to get an interactive approach to each product. In our case, the usage of virtual experience marketing can help drive the advent of improved content marketing strategies, emotional engagement and immersive content. With VR, marketers can reinvent how they deliver experiences by allowing consumers to virtually try on products before purchasing them.

On the other side, influencers are making a huge impact on current marketing strategies and trends. As VR continues to gain, it will undoubtedly affect digital marketing strategies. With the rise of AI-powered virtual influencers, which are digital avatars or 3D models that can be found on various social media platforms, virtual influencers will help more and more brands to stay on top of the latest innovations and reach the interests of younger audiences. This will drive influencers to change their content, considering VR and AR technologies or creating 360-degree live content that still allows their followers to interact with them compared to simple live streaming.

Virtual reality connects brands and consumers on a whole new level. It allows businesses to create high-impact product presentations that are tailored for their target market. Brands can incorporate VR into their campaigns to showcase their research and development processes to potential customers. Furthermore, VR allows consumers to actively participate in a brand's marketing campaign, which can improve brand awareness and recall through deeper engagement on both a mental and emotional level.

In our case, the realization of the promotional campaign with VR, especially for a library shows that there is an interest in embracing new innovative technologies. There is a must to design and implement marketing strategies, especially in vulnerable markets. Using the above-mentioned strategies, not only will support new businesses but also will rise awareness of society into reading books. Especially, VR can be used to target the young generation.

IV. CONCLUSIONS

Virtual reality technology cannot be used not only for entertainment reasons or games but is a powerful and interactive tool that has found a good position in the marketing industry. It is for sure that early adopters of virtual reality technology may deliver new ways of promoting content, allowing them to create engaging and memorable content for their audiences. While we have yet to see its full potential, how virtual reality is currently being used by different brands and industries can give us a preview of what this emerging technology is capable of. The impact that XRs are going to have on many aspects of our lives is almost in every aspect related to the consumer.

To support small local businesses, we managed to create a promotional campaign with the most innovative technology at a low cost in a way that can be afforded by them. What is worth noting here is that the solution offered by us was not only efficient but also will help the new generation mainly to turn their attention to book reading. Every reader interested in books can experience virtual reality on the library premises using just a simple VR headset.

This solution offered by the academic staff of “Aleksander Moisiu” University, showed the potential of universities not only in learning but also in providing practical solutions for businesses. This approach illustrates an example of a great collaboration between universities and businesses to help raise awareness of society through the use of technology.

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ANNEX 1 ACADEMIC STAFF QUESTIONNAIRE

The questionnaire distributed to the academic staff at "Aleksander Moisiu" University is composed of 10 questions. The questionnaire was designed in the Albanian language and aimed to better understand the level of capacities and human resources to offer solutions to different businesses.

1. How many years have you been teaching?

_____

2. What is your actual knowledge regarding virtual/digital technologies?

1- No knowledge *2* *3* *4* *5- Fully knowledgeable*

3. How much have you tested the use of virtual reality or augmented reality in order to supplement current classroom teaching?

1- Never *2* *3* *4* *5- On a daily basis*

4. Rate the impact of virtual technologies in your specific field of education

1- Low impact *2* *3* *4* *5- High impact*

5. Please specify the subject you teach

_____

6. Thinking about the adoption of this new technology into education, how soon do you see virtual reality making it into your school?

1- Within a few months *2* *3* *4* *5- Within 10 years*

7. Please rate the current level of the hardware present in your university.

1- No equipment *2* *3* *4* *5- Fully equipped*

8. How confident do you feel when integrating digital technologies in your classroom?

1- Not confident at all *2* *3* *4* *5- Fully confident*

9. How often do you use the dedicated laboratories in your university?

1- Never *2* *3* *4* *5- On a daily basis*

10. Give some examples of where, during your daily work, you would find the implementation of VR technologies useful (classes, topics, lab work, etc.).