

**BACHELOR OF ARTS IN MULTIMEDIA STUDIES**  
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**UNIVERSITY OF THE PHILIPPINES  
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**BACHELOR OF ARTS IN MULTIMEDIA STUDIES**

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**ENHANCING THE UPOU VIRTUAL CAMPUS TOUR WITH IMMERSIVE VIDEOS**

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24 August 2024

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## Acceptance Page

This paper prepared by **PESIMO, CHRISTINE FAYE L.**, with the title: “**ENHANCING THE UPOU VIRTUAL CAMPUS TOUR WITH IMMERSIVE VIDEOS**” is hereby accepted by the Faculty of Information and Communication Studies, U.P. Open University, in partial fulfillment of the requirements for the Bachelor of Arts in Multimedia Studies.

**ROBERTO B. FIGUEROA JR., Ph.D.**  
Adviser

November 13, 2024  
(Date)

**EMELY M. AMOLOZA, Ph.D.**  
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(Date)

## **Biographical Sketch**

Christine Faye L. Pesimo is a Bachelor of Arts in Multimedia Studies student at the University of the Philippines Open University (UPOU). Born on December 19, 1999, in Calamba City, Laguna, and raised in Los Baños, Laguna, Christine completed her junior and senior high school education at Christian School International, graduating with honors in the Academic Track of Accountancy, Business, and Management (ABM).

Christine initially pursued a Bachelor of Science in Business Administration with a major in Marketing and Advertising at National University – Laguna before transferring to UPOU. At UPOU, she immersed herself in multimedia studies, taking a variety of courses that expanded her knowledge and skills in multimedia and technology.

Christine also worked as a Student Assistant at UPOU for nearly four years, where she further honed her expertise in multimedia. She gained valuable insights into immersive technologies, which she applied to her creative project by incorporating immersive videos into the recent UPOU Virtual Tour. Through this experience, Christine successfully integrated the knowledge she acquired during her studies at UPOU into practical applications.

## **Acknowledgment**

First and foremost, I would like to thank the Lord God for granting me the wisdom, knowledge, and patience needed to complete this project. I know that none of this would have been possible without His guidance. All the highest glory and praise belong to Him, and everything has been accomplished in His perfect timing. “And when the time is right, I, the Lord, will make it happen.” - Isaiah 60:22.

I would also like to express my deepest gratitude to my parents, Jun and Sally Pesimo for their unfailing support, motivation, and continuous prayers, which helped me complete this project on time. Their moral support has been one of the driving forces behind my perseverance. This milestone is dedicated to them, as well as to my entire family, who have always shown how proud they are of me.

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To my Familia Kanal/Familia Guimaras/Lot Lot & Friends/Team Pa-Japan (Ate Yvonne, Ate Jenn, Ate Love, Amhari, Ella, Zy, and Dianne), I am forever grateful for your unwavering support from start to finish.

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**TO GOD BE ALL THE GLORY!**

## TABLE OF CONTENTS

Title Page	i
University Permission Page	ii
Acceptance Page	iii
Biographical Sketch	iv
Acknowledgment	v
Table of Contents	vii
ABSTRACT	viii
I. INTRODUCTION	1
Background of the Study	1
Objectives of the Study	2
Significance of the Study	3
II. REVIEW OF RELATED LITERATURE	5
III. METHODOLOGY	11
Research Design	11
Pre-Production	19
Production	19
Post-Production	28
Posting	31
IV. RESULTS AND DISCUSSION	32
V. CONCLUSION AND RECOMMENDATIONS	45
REFERENCES	47
APPENDICES	53

## **Abstract**

As part of fulfilling UPOU's vision and mission to promote an effective learning environment for its students and faculty, the institution recently launched its first virtual campus tour. This creative project correlates with the university's mission to incorporate immersive technologies; this is an effective presentation of the main features of the campus, programs, and services offered by the university. This creative project aims to improve the UPOU Virtual Campus Tour with the help of immersive videos. The purpose is to improve the usability and effectiveness of the users and thus contribute to a better and more positive user experience. By integrating such attributes, this project aims to improve the experience when it comes to the exploration of the UPOU campus in cyberspace.

*Keywords: Virtual campus tour, VR technology, Immersive videos*

# I. INTRODUCTION

## Background of the Study

The University of the Philippines Open University (UPOU) has participated in online education in the Philippines since it was established in 1995. UPOU is a forerunner in distance learning and is continually looking for opportunities to improve the educational experience of its students. A particularly interesting initiative is the establishment of a virtual campus tour intended for students, alumni, and individuals from anywhere in the world to visit the UPOU campus interactively.

The use of videos in campus tours has shown to be a great topic of interest to improve user engagement and experience. The use of realism (VR) and 360° video is growing in education to create remarkable and realistic settings for potential students and distance learners. Research conducted by Marougkas et al. (2024) indicates that a VR-guided tour can amplify presence and facilitate user perceptions of the campus. This is a very important aspect of distance learning institutions, such as UPOU (Figueroa, 2022).

Every student who is unable to visit face-to-face higher education institutions has found the virtual campus tours to be quite beneficial. According to Drozda (2023), virtual reality has various advantages for potential learners. Those who live a long distance away from campus can virtually visit the college, saving time and money while also minimizing the impact they have on the environment.

In the United States, several Ivy League institutions have started to adopt virtual campus tours for their students. YouVisit, a firm that specializes in virtual tours, has collaborated with 150 universities since its start in 2008 (Creamer, 2012, as cited in The Los Angeles Times, n.d.).

In alignment with its mission of creating immersive learning environments and its goal of integrating immersive technology to engage and showcase the campus, programs, and services in an innovative, modern, and engaging way, the UPOU created its first virtual campus tour. While it was an engaging and useful tour, there was still room for improvement, especially in the aspect of visual realism.

Thus, the creative project described in this document adds immersive videos to the existing virtual tour of UP Open University and is aimed at improving engagement and effectiveness, as well as promoting a more positive user experience.

## **Objectives**

This creative project aims to achieve the following:

1. Improve UP Open University's existing virtual campus tour by integrating immersive videos.
2. Improve user engagement and effectiveness in the UPOU virtual campus tour.
3. Contribute to a more positive user experience for users of the tour.

## **Significance of the Study**

The goal of this creative project is to expand on the work of the UPOU Virtual Campus Tour by producing immersive videos. This project hopes to create a richer and more participatory experience of the exploration of UPOU in the virtual environment through the use of immersive videos. Thus, the creative project is significant for the following:

### **UPOU Students**

This creative project has the potential to greatly benefit UPOU students. As an online institution, all students, whether local or international, learn from the comfort of their own homes, and on-site campus visits are limited. Considering UPOU is an open and distance e-learning (ODEL) institution, many of its students are unfamiliar with the physical appearance of its campus or headquarters.

### **University Faculties**

This creative project allows faculty members to travel and get familiar with the institution's surroundings. The campus tour is particularly helpful for the faculty members who may be located in different areas or at the other UP constituent for they can engage with the campus despite their physical absence.

## **Future Students**

Through the creation of this creative project, future university students, especially those who will be undertaking their university studies through an open-distance e-learning degree, will be able to familiarize themselves with the campus. It is particularly helpful to such people who may not be physically able to go on a campus tour and who may need to get to campus for one reason or personal or school-related.

## **Visitors**

The virtual tour described in this document is handy for visitors who have no prior information about the University of the Philippines Open University (UPOU) but wish to gain more information about the university. This experience allows them to gain a better understanding of the facilities, culture, and environment of UPOU for those who cannot physically tour the campus.

## II. REVIEW OF RELATED LITERATURE

Campus facilities are an important factor in the decision-making process while selecting a university, especially for students looking for ideal pathways to get their undergraduate or graduate degrees. They can either provide a fresh and warm welcome or instill doubt and concern in the minds of both incoming students and staff members. As a result, in-person campus tours are frequently scheduled as part of the university's orientation process. However, these well-organized in-person campus tours require both human resources and time (Figueroa, 2022). As mentioned by Kant & Das (2021), currently, virtual reality is widely used in a variety of fields. One interesting aspect is the promotion of universities. Virtual reality has been used to promote university buildings, services, and other information to users in a variety of ways.

### **UPOU Background**

The University of the Philippines Open University (UPOU) was established on 23 February 1995, pioneered online teaching and learning, and continues to play a leading role in the study and practice of open learning and distance education in the Philippines (UPOU, 2023). As an online institution, all of its students study remotely, whether locally or abroad, making the opportunity for an on-site campus visit exceedingly rare. A significant number of UPOU students are unfamiliar with the physical appearance of its campus or headquarters, primarily because it operates as an open and distance e-learning (ODEL) institution.

The University of the Philippines Open University (UPOU) uses the open and distance e-learning (ODeL) approach, which is a combination of open learning, distance learning, and eLearning technologies that offer flexibility and self-learning. Students interact with courses and professors through the open-source learning management system MyPortal and other collaboration tools. These are taken online or at designated centers (UPOU Helpdesk, n. d.).

More recently, UPOU launched its first virtual campus tour, AlphaVR. This initiative is in line with the university's strategic plan for developing learning spaces that are experiential and integrate technology. AlphaVR creates an exciting and interactive tour of the campus, programs, and services offered, thus allowing prospective students to get a feel for the campus.

As mentioned by Cañas-Llamas (2023), the said initiative offers a 3D tour of the complete UPOU campus with offices and facilities. The project aims to make the students and the general public feel the experience of the UPOU campus even if they are not physically there.

### **Virtual Reality in Campus Tour**

Virtual reality (VR) technology has emerged and grown in popularity and has brought into the lives of users computer-generated 3D simulated environments that can be interacted with through the senses (Yasar & Sheldon, 2024).

Originally developed for the gaming industry, the technology has spread into, if not all, almost all areas of human activity, such as healthcare, real estate, recruitment, and education. Of its educational applications, virtual campus tours are a prevalent use of the technology for institutions looking for a means to reach prospective students across the world (Thompson, 2022).

Every student who is unable to visit face-to-face colleges has found the virtual campus tours to be quite beneficial. According to Salah et al. (2023), going on a campus tour can be challenging owing to adverse weather or a lack of time or financial resources; virtual tours are the most feasible approach.

### **Virtual Campus Tour**

The idea of virtual tours debuted in 1994 when Queen Elizabeth II of the United Kingdom attended one at Dudley Castle. Virtual tours have evolved into vital tools for promoting archeological and tourist sites, museums, and educational aims. According to Lee (2004), as mentioned in Demir et al. (2019), 54 million Americans and over 1 million educators and learners have taken virtual tours of museums, tourist attractions, colleges, and schools.

The rapid progress of the Internet has increased the popularity of virtual tours, and designers are constantly improving user experiences. At first, virtual tours were only used for recreational purposes in higher education, but they have gone through a range of technological developments into experiences abound with images and

information about university campuses. Educators and students are much more willing these days to use virtual tours for educational purposes to help them visualize and experience locations like university campuses. Virtual tours, which provide an immersive experience, can significantly affect prospective students' decision-making processes when selecting a campus for further study (Vergara, Rubio, and Lorenzo, 2017, as cited in Suwarno & Murnaka, 2020).

When the pandemic struck in 2020, many schools had to adapt their conventional physical tours to the online version because of the situation. Bamforth (2021) stated that there was a sharp rise in virtual college tours, where high school seniors' engagements increased by 258%, as indicated by the educational technology company EAB in April. As the physical campuses shut down and student tour guides disappeared, universities were keen on developing the best virtual tours to stay in touch with prospective students.

For numerous high school students, personally touring college campuses is a customary practice. However, for some, it is practically unfeasible. Even with the resumption of in-person classes and experiences, many higher education institutions are opting to maintain their virtual tour options online for students. These virtual visits enhance access, especially for minority students who may not afford the time or money to travel or students who are in an online set-up education, as noted by Torchia (2023).

Furthermore, these virtual tours expand students' school options since they can visit institutions they might not be aware of in their regions. The proposed VR photo-based tours with the use of immersion capabilities are an effective approach to delivering context-based learning that can be not restricted by geographical and political limitations. This is in sync with the learning needs of distance education students, which require a diverse, effective, engaging, and interactive teaching and learning environment that cannot be provided by traditional teaching and learning methods (Figuroa, 2023).

### **Immersive videos**

360-degree and virtual reality videos, also known as immersive videos, are more engaging and immersive than normal media. They improve a better level of realistic and active interaction with the virtual environments, which leads to a better feeling of presence within the organization (Radianti et al., 2020).

According to Pirker and Dengel (2020), 360° videos allow users to have an all-rounded media experience. Therefore, the production of 360° videos is less complicated and less costly than building the simulated environments. The videos contain decision points that the users can make and, as such, engage with the content of the video. Also, they allow the audience to watch live performances, such as sporting activities or music concerts, virtually.

Blair et al. (2021) also point out that while in immersive 360° videos, learners control the video, the environment is fixed. This is also in agreement with Petersen et al. (2020), who found that the narrated immersive 360° videos can enhance students' self-efficiency, interest, and content knowledge in support of the earlier studies.

360° video has qualities and features that make it differ from the majority of formats in linear virtual reality and interactive VR media. It has several advantages and, of course, some disadvantages, unknown to visual production before the use of these technologies. It is the 360° video feature that is most engaging for content creators, although the type of material or experience that may be created using cinematic VR does not necessarily have to be 360° in nature (Tubio-Tamayo, Gertrudix, & Barro, 2022).

In this regard, 360-degree or immersive videos can be visualized on any display device and wearable technologies, including head-mounted displays (HMDs). Suh, Wang, Gu, and Wagner (2018) noted that HMDs are advantageous for navigation because they enable a natural engagement mode, allowing viewers to adjust the camera's orientation by tilting their heads to explore the surroundings (as cited in Magnus, 2017).

### **III. METHODOLOGY**

This creative project is to improve and consolidate the use of immersive videos by modifying the current media related to UPOU's present virtual tour. The emphasis is made on identifying the changes that are required in the case of reshooting, replacing the old content with the new appearance of the campus. This includes shooting the new look of historical places, the administration building, offices, and other facilities within the campus. Further, text, hotspot, and navigation will also be slightly changed to make the experience better.

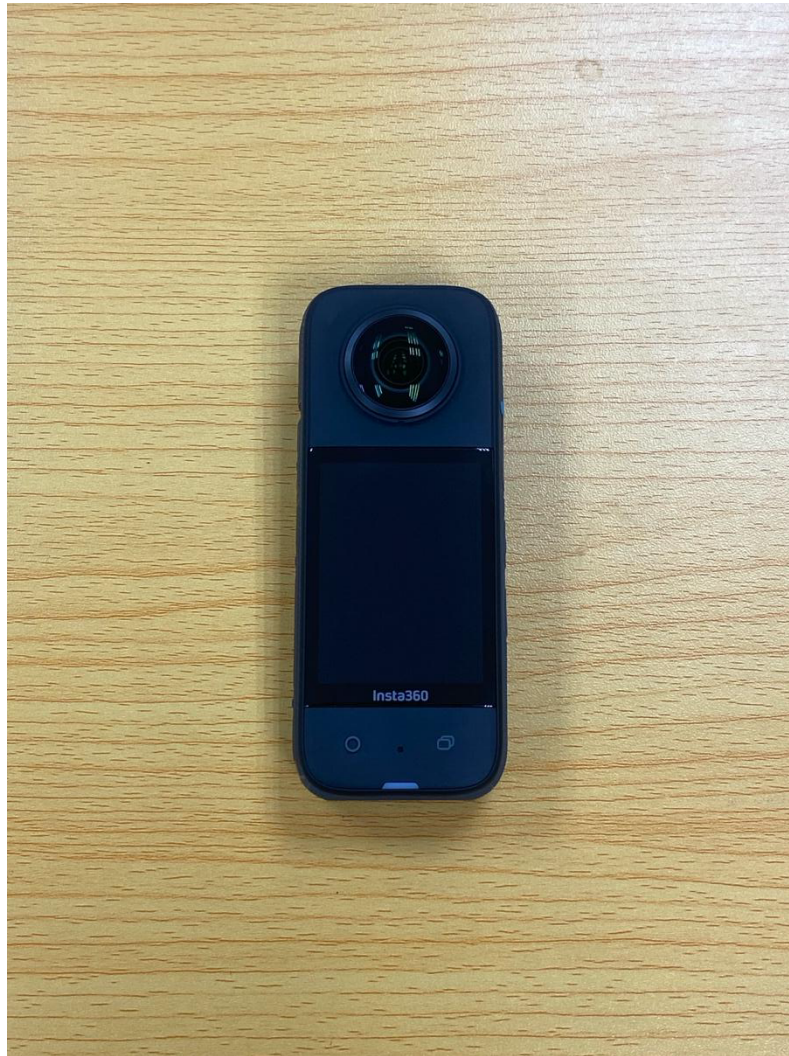
The primary goal of this creative project is to turn the virtual campus tour into a dynamic experience by using immersive features like 360-degree photos, 360-degree videos, and other engaging features that will attract users' attention.

To effectively perform this investigation, the developer used two essential tools: the Insta360 X3 camera and the 3DVista software program.

#### **Insta360 X3 Camera**

Due to the better 360° video and photo capturing feature, the Insta360 X3 was used for reshooting the tour. This camera allowed the developer to take panoramic shots of UPOU's many campuses with clear and crisp images.

Some of the features that were incorporated in the film included stabilization and high resolution, which made the film very presentable.



**Figure 1.** Insta360 X3 Camera

Its function is also good for the developer; according to Williams (2023), this is a great all-in-one action camera. Its biggest strength is a 360-degree video shooter but it can shoot amazing 4K footage with a normal action camera view.

Coleman (2024) noted that while using the Insta 360 X3 camera, the performance of the camera is better in a well-lit environment, with the video quality being better than that of the photos. He also mentioned that recording that 5.7K

resolution is also a suitable feature for 360-degree video since it can input into a linear shot yet output a Full HD frame. Also, the Insta 360 X3 can capture 4K/30 with an FOV of 170 degrees, among others.

The Insta360 X3 provided an added advantage in this aspect since the developer was able to conveniently edit and export the 360-degree photos and videos to be used in the virtual tour through the studio feature. See Figure 11 for an example.

Lastly, the Insta360 X3 camera is a highly portable device that anyone can easily learn to operate and use smoothly, which the developer liked most about.

### **3DVista Software**

3DVista software was used to edit and integrate taken videos into the virtual tour. 3DVista is an advanced application that includes a variety of capabilities for generating interactive virtual tours.

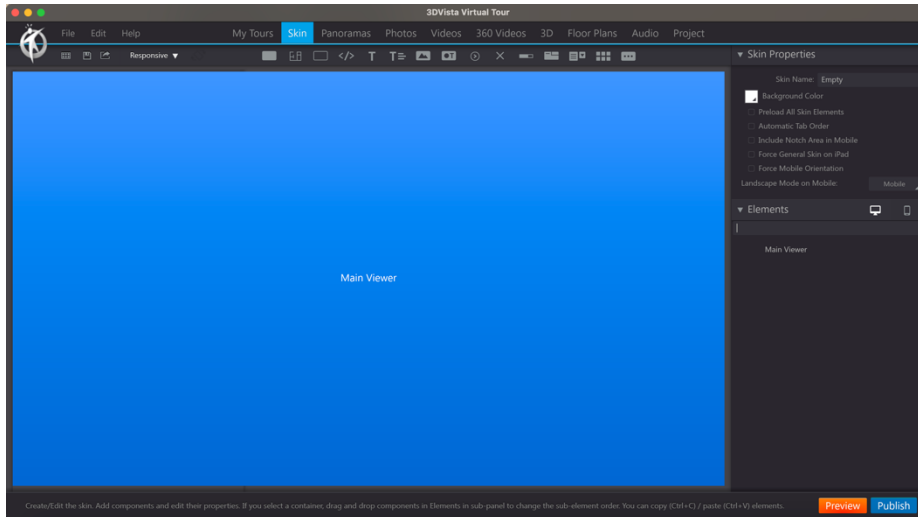
3DVista blends and overlays a variety of elements and video formats to create immersive virtual settings. Blended outputs can greatly convey what the real world might look, feel, and sound like. 360° photos (panoramas), 360° videos, embedded sounds, videos, photographs, floor plans, and clickable hotspots enable students to explore the virtual location and engage in interactive learning while immersed in the environment. (University of Melbourne, n.d)



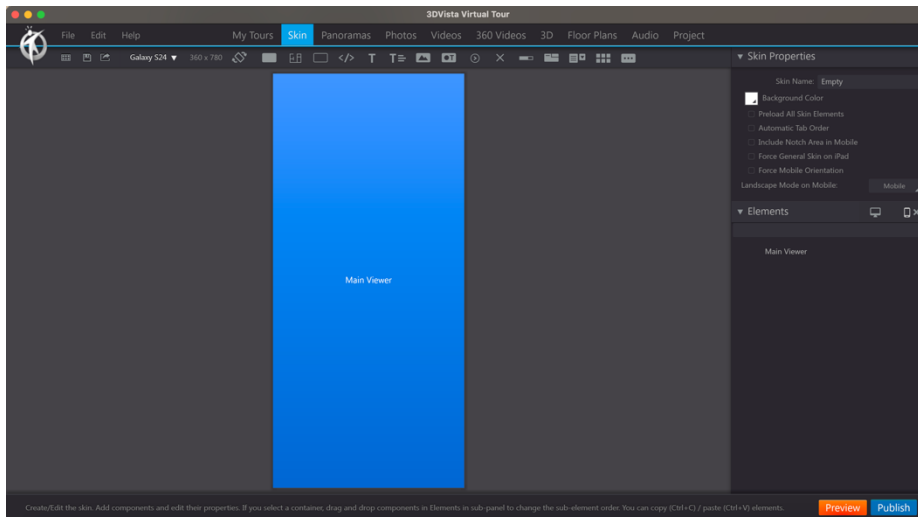
**Figure 2.** 3DVista Software

3DVista Pro is a software application that is designed and used to create excellent virtual tours. There were numerous choices when it came to developing the virtual tour, and the producer selected 3D Vista because of how effective and easy to use it was. 3DVista might not be nearly as well-known as other virtual tour software out there at the moment, what with how simple the application is to utilize.

Due to its flexibility, it can create virtual tours that are compatible with mobile devices, and even new technologies like HMDs for the advanced virtual tours. It is worth mentioning that the software is capable of supporting many kinds of interactive features, which is particularly interesting for the developer.

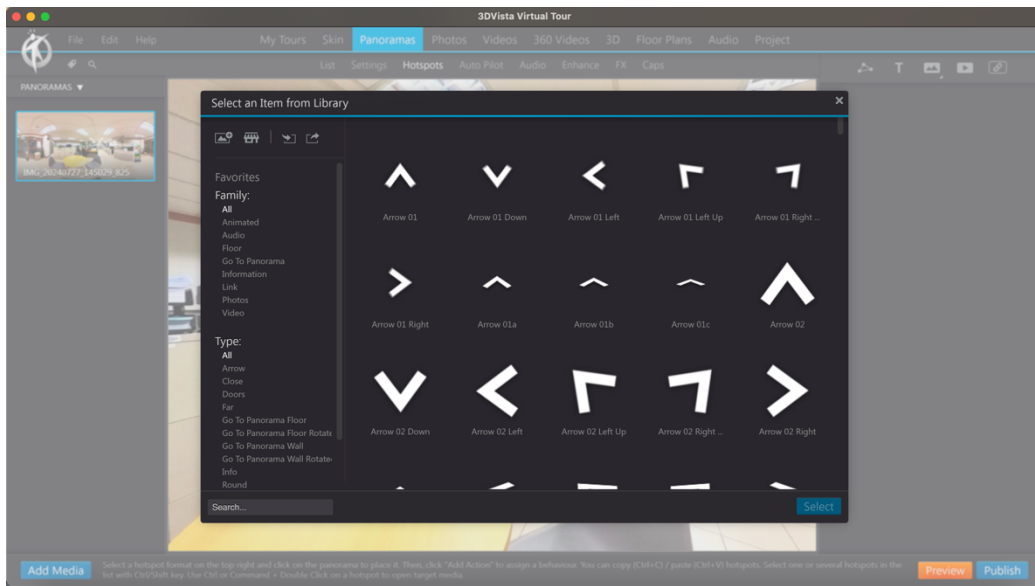


**Figure 3. Desktop/Laptop Viewer Skin**

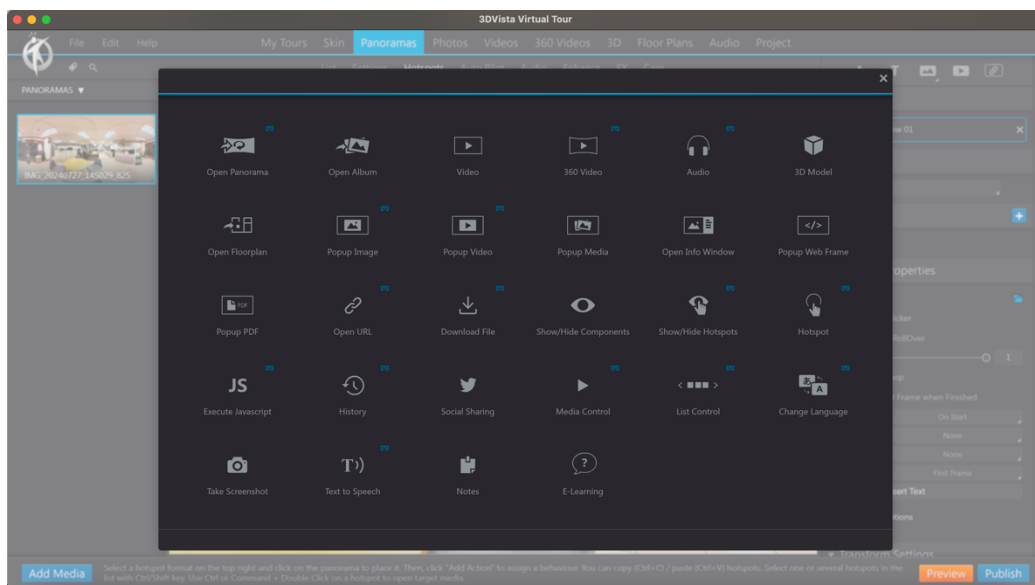


**Figure 4. Mobile Viewer Skin**

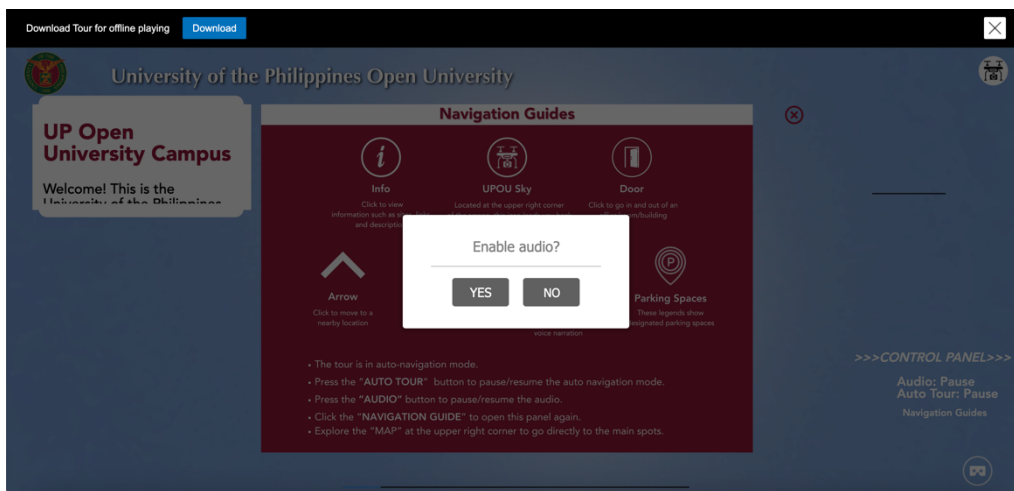
Furthermore, there is an offline version for 3DVista too, and users can download the virtual tour. The software also has other aspects that help in project development, including hotspots that make tours more engaging and interesting tools.



**Figure 5. Interactive Hotspots**



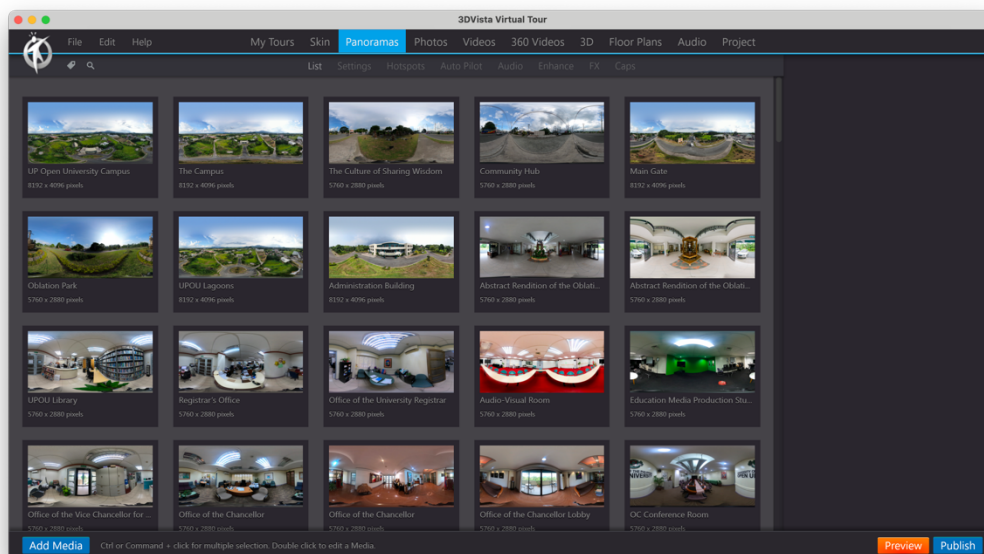
**Figure 6. Interactive Hotspot Actions**



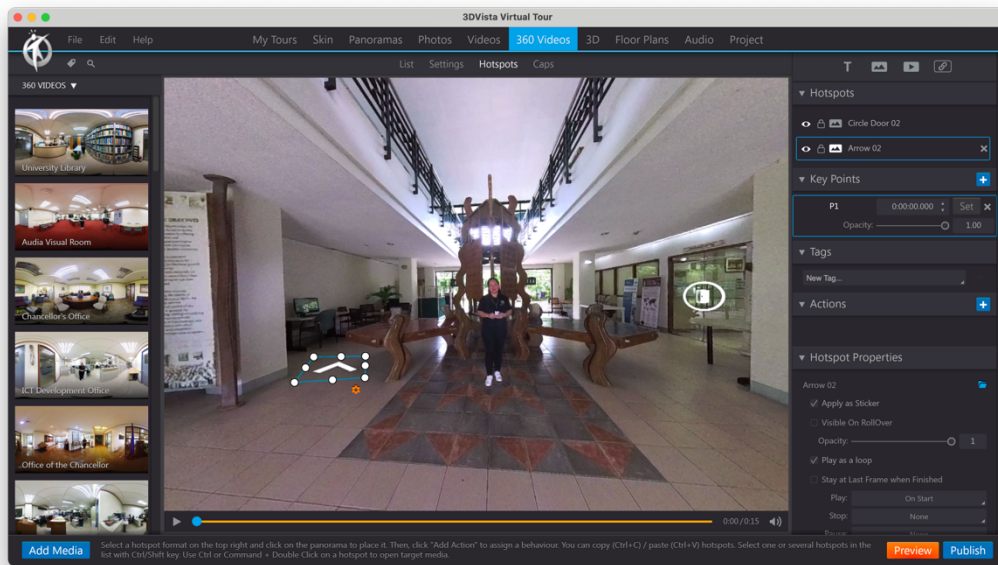
**Figure 7. Download Offline Feature**

Using this software, the developer was able to:

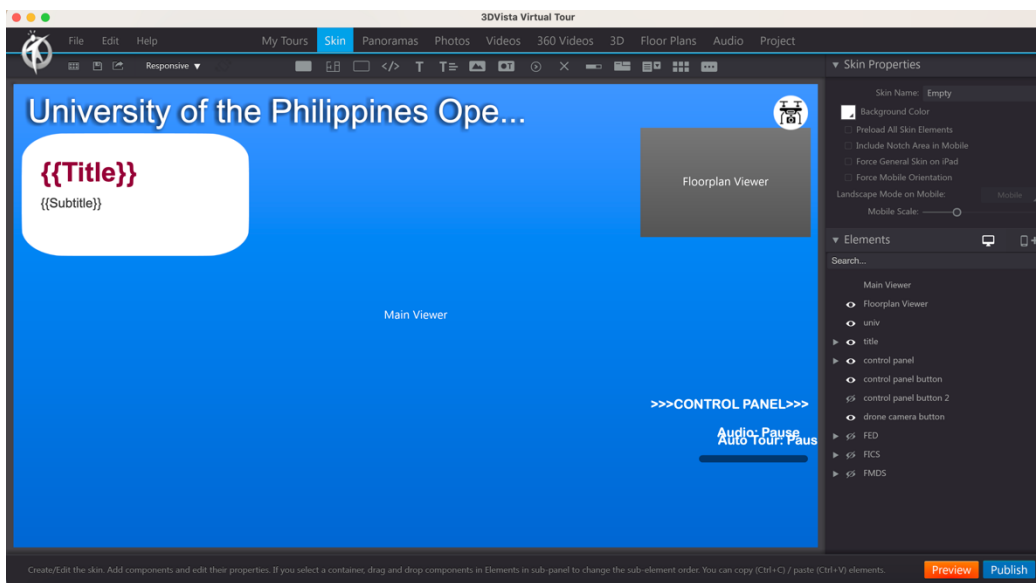
- Stitch together the 360° photos and videos flawlessly.
- Include interactive components like clickable hotspots and instructive popups.
- Include accessibility elements such as subtitles and alternative text.



**Figure 8. Compilation of 360° photos**



**Figure 9.** Integration of Interactive and clickable hotspots



**Figure 10.** Elements such as subtitles and alternative text

## **Pre-Production**

In August 2023, the developer enrolled for her MMS 200 class, which is a major subject that is taken by a senior-standing student in his or her special project or capstone. Other topics that were covered in the proposal included the UPOU Virtual Tour or AlphaVR, which was unveiled to the public for the first time on October 25, 2023.

While waiting for the project to continue, the developer tried to figure out the tools to be used for this project. The insta360 X3 camera was tested and studied to learn how to do it correctly. In addition, the developer asked for help from the Office of Public Affairs (OPA) on how to navigate and use the 3DVista software, where the virtual tour would be edited, as the first UPOU virtual tour was also developed by some OPA staff.

## **Production**

The project was slightly delayed at first because of the lack of equipment that could only be requested by the developer with the help of the Immersive Open Pedagogies (IOP) Research Program. Namely, an all-purpose tripod mount was required for the Insta360 X3 action camera, as well as for outdoor shooting and free-standing stability. Additionally, the Insta360 Microphone Adapter for the X3 and the Insta360 ONE X2/X3 Invisible Mic Cold Shoe were required for the wireless microphone to be used during the reshooting process.

While waiting for the equipment, the developer consulted with the administrative staff of the Office of Public Affairs (OPA) to see if she could serve as the virtual tour guide for the proposed enhanced UPOU virtual tour. The developer believed that she was well-suited for the role due to her extensive knowledge of UPOU landmarks and offices. With the assistance of the IOP staff, schedules for the reshooting will be sent through email using the account of Immersive Open Pedagogies.

When the required types of equipment were received, the reshooting began on June 7, 2024. The developer began reshooting the administration building that day. The following are the areas:

### **Welcome Message**

The shooting occurred in front of the UPOU administration building on June 7, 2024, with a brief description of UPOU. See Appendix K for the script.

### **Abstract Rendition of the Oblation by Jerusalino Araos**

The shooting occurred in the lobby area of the UPOU administration building; a brief description of what it's made of was mentioned in the 360-degree video. See Appendix K for the script.

On June 14, 2024, the developer and the team decided to reshoot the remaining offices that are located on the first floor of the administration building. Below are the locations used for the reshoot:

### **Office of the University Registrar**

The reshooting occurred on the first floor of the UPOU Administration building on the left side, where people often walk through to get to the stairs on the left wing of the building. In the 360-degree video, services offered by the OUR were mentioned. See Appendix L for the script.

### **Quality Assurance Office**

The reshooting was done on the first floor of the UPOU Administration building in the area where people walk past to get to the stairs going up to the right wing of the building. In the 360-degree video, QAO was described for its use in the organization. See Appendix L for the script.

### **University Library**

The reshooting took place on the first floor of the UPOU Administration building, on the right side of the lobby, facing the Abstract Rendition. In the 360-degree video, it was mentioned where it is located and the type of resources that are available in the UPOU Library. See Appendix L for the script.

A week later, on June 21, 2024, the developer and the team reshot the remaining offices and areas in the administration building, primarily on the second and third floors. The following offices and areas included the Office of the Vice-Chancellor for Finance and Administration, the Audio-Visual Room, the EMP Studio, the Office of the Vice-Chancellor for Academic Affairs, the Chancellor's Office, the OC Conference Room, and the ICT Development Office.

### **Office of the Vice Chancellor for Finance and Administration (OVCFA)**

The reshooting took place on the 2nd floor of the UPOU Administration Building; in the 360-degree video, the following offices under the OVCFA were mentioned. See Appendix M for the script.

### **Audio-Visual Room (AVR)**

The reshooting took place on the 2nd floor of the UPOU Administration building; in the 360-degree video, it was mentioned the function of AVR and where it is located. See Appendix M for the script.

### **Educational Media Production (EMP) Studio**

The reshooting took place on the 2nd floor of the UPOU Administration building behind the Audio Visual Room. In the 360-degree video, it was mentioned the function of EMP Studio and where it is located. See Appendix M for the script.

### **Vice Chancellor for Academic Affairs Office (OVCAA)**

The reshooting took place on the 3rd floor of the UPOU Administration. See Appendix N for the script.

### **Office of the Chancellor (OC)**

The reshooting took place on the 3rd floor of the UPOU Administration. In the 360-degree video, it was mentioned that you can see and meet the current UPOU Chancellor. See Appendix N for the script.

## **OC Conference Room**

The reshooting took place on the 3rd floor of the UPOU Administration inside the Office of the Chancellor. In the 360-degree video, the function of the OC Conference Room was mentioned too. See Appendix N for the script.

## **ICT Development Office (ICTDO)**

The reshooting took place on the 3rd floor of the UPOU Administration. See Appendix N for the script.

On June 24, 2024, the developer, together with her adviser, suggested that the directors of each office/chancellor/vice chancellor should provide the information in the virtual tour instead of the virtual tour guide.

The developer drafted an email about the idea with the help of the IOP staff. The email would be sent to the directors, vice chancellors, and Chancellor. The first shoot was planned for June 26, 2024.

The developer and team had a shoot on the morning of June 26, 2024, with the UPOU Chancellor at her office on the third floor. See Appendix O for the script.

The next day, June 27, 2024, was to commence the reshooting for the other offices, but this was postponed due to some other prior arrangements. However, the shoot with the OGC Director, proceeded as planned, using the following script prepared by the OGC Director. See Appendix P for the script.

The reshooting continued on July 3, 2024, at the Teaching and Learning Hub, TLH, where the faculty offices are situated. TLH is located on the left side of the administrative building facing the UPOU Oblation and may be accessed near the administrative building parking zones.

### **Teaching and Learning Hub (TLH)**

The reshooting took place in front of the TLH Building where it was mentioned that it currently houses the three faculty offices. See Appendix Q for the script.

The developer and team also reshot the following offices, all located on the left side of the TLH building:

### **Faculty of Education (FEEd) Office**

Upon entering the building, the FEEd office is the first faculty office visible. In the 360-degree video, the programs offered by Fed and where it focuses were mentioned. See Appendix Q for the script.

### **Faculty of Information and Communication Studies (FICS) Office**

Upon entering the building, the FICS office is located next to the FEEd office. In the 360-degree video, the programs offered by FICS and where they focus were mentioned. See Appendix Q for the script.

## **Faculty of Management and Development Studies (FMDS) Office**

The FMDS office is the last faculty office you'll see in the TLH building. It is situated near the TLH Conference Room, close to the P.E.R.M.A. Garden. In the 360-degree video, the programs offered by FMDS and where they focus were mentioned. See Appendix Q for the script.

The shooting continued in the following days. On July 9, 2024, the developer and the team reshot several areas of UPOU, specifically the Instructional Materials Development and Printing Office (IMDPO) Building and Oblation Hall.

## **Instructional Materials Development and Printing Office (IMDPO)**

The IMDPO building is located to the right of the administration building when facing the UPOU Oblation. In the 360-degree video, it was mentioned how it functioned before and the current offices it temporarily houses. See Appendix R for the script.

This building currently houses four temporarily relocated offices, which are the following:

- **Educational Media Production (EMP) Unit**

The reshooting took place in one of the room offices on the second floor of the IMDPO building. It was mentioned in the 360-degree video what EMP does in terms of media production for UPOU. See Appendix R for the script.

- **Office of Public Affairs (OPA)**

The reshooting took place in one of the room offices on the second floor of the IMDPO building. It was mentioned in the 360-degree video what OPA is responsible for UPOU. See Appendix R for the script.

- **Office of Gender Concerns (OGC)**

The reshooting took place in one of the room offices on the second floor of the IMDPO building. It was mentioned in the 360-degree video that OGC serves the UPOU community. See Appendix S for the script.

- **Ugnayan ng Pahinungód UPOU**

The reshooting took place in one of the room offices on the second floor of the IMDPO building. It was mentioned in the 360-degree video about what the UPOU Pahinungod is. See Appendix S for the script.

## **Oblation Hall**

Oblation Hall is part of the IMDPO building and is located behind it on the ground level, near the Multi-Purpose Hall. It was mentioned in the 360-degree video about the function of Oblation Hall. See Appendix S for the script.

The last day of reshooting was scheduled for July 16, 2024, the developer and the team scheduled filming the last buildings, specifically the CCDL Building and the Academic Residences, commonly known as AR.

### **Centennial Center for Digital Learning (CCDL) Building**

The reshooting took place in front of the CCDL building, where it was also mentioned in the 360-degree video the other UPOU facilities that can be found inside it. See Appendix T for the script.

### **CCDL Auditorium**

The reshooting took place on the 2nd floor of the CCDL building. In the 360-degree video, it was mentioned about its capacity to accommodate in terms of events. See Appendix T for the script.

### **UPOU Sandbox**

The reshooting took place on the 1st floor of the CCDL building in between the UPOU Sandbox and CDMO Office. In the 360-degree video, it was mentioned about its functions and where it is being used. See Appendix T for the script.

### **Campus Development and Maintenance Office (CDMO)**

The reshooting took place on the 1st floor of the CCDL building beside the UPOU Sandbox. In the 360-degree video, it was mentioned about its responsibilities for UPOU. See Appendix T for the script.

## **Academic Residences (AR)**

The reshooting took place inside the Academic Residences Building. The floors of the building and who it can accommodate were mentioned in the 360-degree video. See Appendix T for the script.

After the reshooting, which was conducted in the form of 360-degree videos, the developer then sought to reshoot the hallways and stairs of every office and building, which also went well.

## **Post Production**

### **Editing**

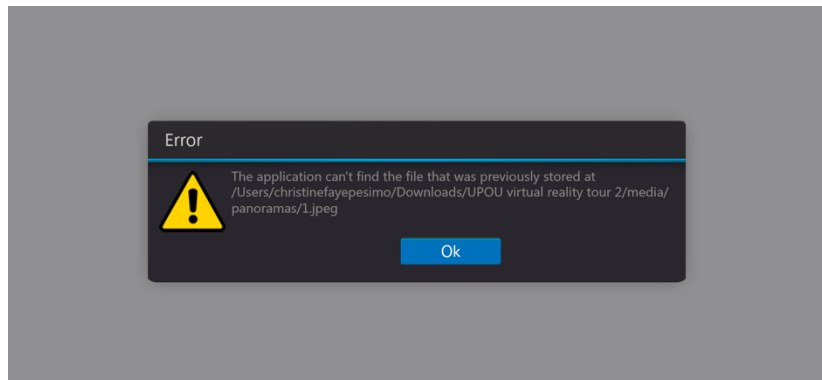
After the first planned shots were made, the developer incorporated the clips and the pictures into the project, processed them in Insta360 Studio, and then conducted the necessary further operations through 3DVista software.



**Figure 11.** Insta360 X3 Studio

In this case, the sample and the first few shots were created and posted on June 20, 2024, by the developer to demonstrate the objectives and the potential of her creative project to her adviser as well as to ensure that the concepts may succeed.

At first, they ran into some technical problems: some portions of the tour were not working because some files were lost during export. They also experienced the challenge of large file sizes during that day as loading them online was tough since they consume much space.



**Figure 12. Lost Files**

In this case, the developer sought ways and means of solving the identified technical issues and at long last found how to do so.

In the process of editing, the developer also identified the following issue while testing the application: after the 360-degree video has been viewed, the user is transferred to a new point in the virtual tour. To this, the developer and her adviser decided that the videos should not be placed on a loop and they proceeded to sort this out. After a solution was found with the editor, the editing went on fairly well.

As with any application, some bugs cannot be avoided when saving and exporting files for a web preview of the virtual tour, and the editing was finally done on July 27, 2024.

## **Posting**

The UPOU Virtual Tour with immersive videos, tagged as BetaVR, was made accessible to the public on July 31, 2024.

However, during the review and trial of the uploaded virtual tour with immersive videos of UPOU, the developer realized that the tour was somewhat laggy and some of the hot spots did not work as they should. In response, the developer has acted and made modifications.

On August 1, 2024, news about the UPOU Virtual Campus Tour with Immersive Videos was officially published on the UPOU Facebook page and website, announcing that it was now accessible to the public and that even UPOU students who live abroad could access it.

## IV. RESULTS AND DISCUSSION

The final project is now posted on the web and can be accessed at the following link: <https://iop.upou.edu.ph/vrtours/upouvr/betavr/>.



**Figure 13.** The new UPOU Virtual Tour Opening

The new UPOU Virtual Campus Tour, BetaVR, features immersive 360-degree videos, 360-degree photos, and interactive elements. It is an enhanced version of AlphaVR, UPOU's first-ever virtual campus tour.

The static 360-degree images in AlphaVR led the developer to consider changes based on feedback from the Office of Public Affairs survey. Many comments highlighted that AlphaVR lacked interactivity and relied too much on static images.

As a result, most 360-degree photos from AlphaVR were enhanced, and immersive videos were integrated to improve engagement, though the core content remains unchanged. Interactive elements were also added that would make the user feel more engaged, like interactive hotspots that were hyperlinked to some offices' official websites and PDF catalogs for the facilities that can be rented by people outside the UPOU community. See the differences in the following figures.



Figure 14. UPOU Library in AlphaVR



Figure 15. UPOU Library in BetaVR with an interactive information icon hotspot



Figure 16. AVR in AlphaVR



Figure 17. AVR in BetaVR with an interactive information icon hotspot



**Figure 18.** PDF attachment as an interactive hotspot

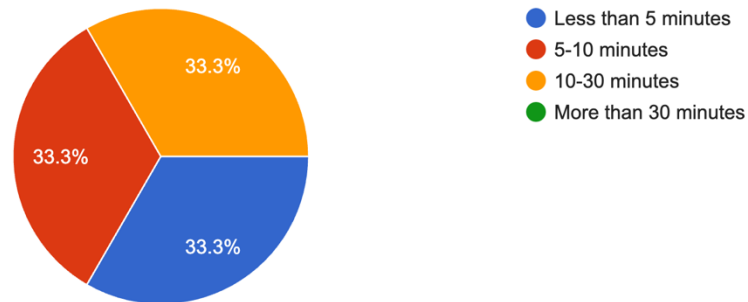
After introducing BetaVR to the public, the developer let some UPOU staff experience the latest UPOU virtual tour using an HMD (Meta Quest 2). Eight people tried it using HMD equipment, and one accessed it only through the web.

Afterward, participants provided feedback through a Google Form prepared by the developer. The feedback form briefly covered three topics: usage patterns, interest, spatial presence, and perceived ease of use.

The developer then gathered and analyzed the responses submitted in the Google Form. The usage pattern category resulted in an equal distribution, with the nine participants' responses spread evenly across three different time ranges.

The three different time ranges include less than five minutes, five to ten, and ten to thirty minutes. See Figure 19.

Duration of Sessions:  
9 responses

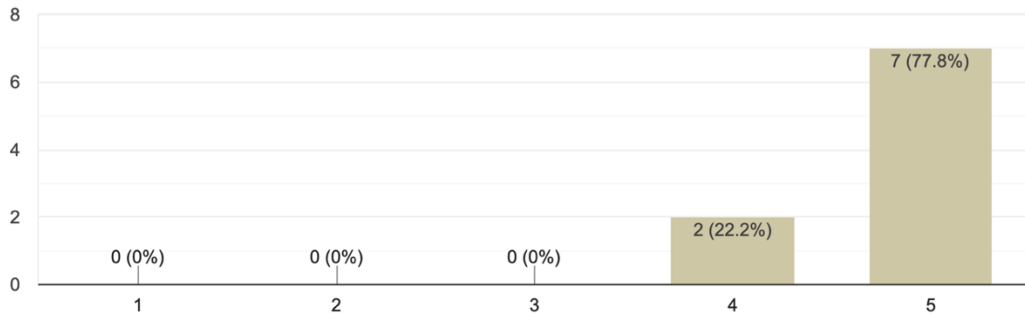


**Figure 19.** Survey Results for Duration of Sessions

The questions asked to the participants in the interest category were those with responses on the Likert scale of 5. Seven out of nine gave the virtual tour a score of 5, which showed they ‘strongly agreed’ with the idea that the virtual tour was entertaining, while two out of nine gave a score of 4, which meant they ‘agreed’ with the notion. This implies that the majority of participants’ enjoyment levels for the virtual tour were high, and no participants complained about low levels of enjoyment. This is a positive result that reflects that participants were highly interactive and satisfied with the virtual tour facilities. See Figure 20.

Interest in VR Technology: The virtual tour was entertaining.

9 responses

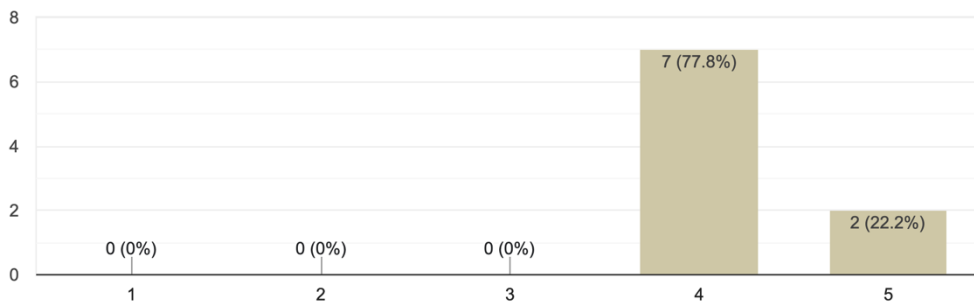


**Figure 20.** Survey Result for Interest in the Virtual Tour

As part of the spatial presence category of the survey, participants were asked whether they had the feeling of being really ‘there’ in the virtual environment. Two participants responded 5, as ‘Strongly agree’, and seven other participants responded 4, as ‘agree’. This implies that the use of the immersive videos that had been incorporated into the experience, made them to have the feeling that they were in the environment. See Figure 21.

Immersive Experience: To which extent do you feel present in the virtual environment, as if you were really there?

9 responses



**Figure 21.** Survey Result for Spatial Presence in the Virtual Tour

After nine participants completed the Google form, the developer gathered their open-ended feedback. Participants provided feedback to improve hotspot placement and noted that some hotspots weren't functioning properly. One participant, using an HMD, expressed concern about the BetaVR's opening scene, suggesting it might not be ideal for users with acrophobia as it could trigger discomfort when accessed via an HMD. See Appendix U.

But despite having positive comments and feedback, the developer still experienced some struggles in the BetaVR.

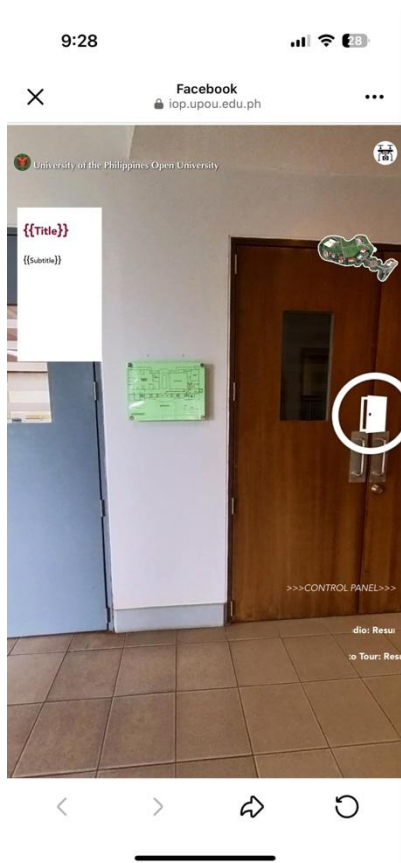
**Internet Connection.** During testing, the BetaVR was found to load slowly with a weak internet connection, a problem the developer also encountered. To address this, the developer tried accessing it using various internet connections in different locations. In these cases, it worked efficiently, which is supported by the experience of the IOP staff, and her friends, who mentioned that the access was fast and with no glitches.

**Media Quality.** The examined case revealed that the developer was having issues loading the immersive videos because of the media quality. The other issue that the developer realized when getting into the BetaVR is that while waiting for a clear view of the media attached, it takes time to load. To this end, the developer changed the export of media quality to 85% instead of 100% so as not to overload the virtual tour with data.



**Figure 22.** Media Export Settings with Quality set to 85%

**Mobile Access.** The developer did not struggle to access the BetaVR; however, the mobile preview of the BetaVR was not as smooth as it was anticipated by the developer. When the tour was first introduced, some of the features like the caption, sub-caption, or action button that are displayed when one hovers on the tour were not included. The developer came to know that modifying the skin settings was essential. After changes have been made to it, the caption, sub-caption, and the action button appeared clearly. See Figures 23 and 24.



**Figure 23.** Caption and Sub caption issues

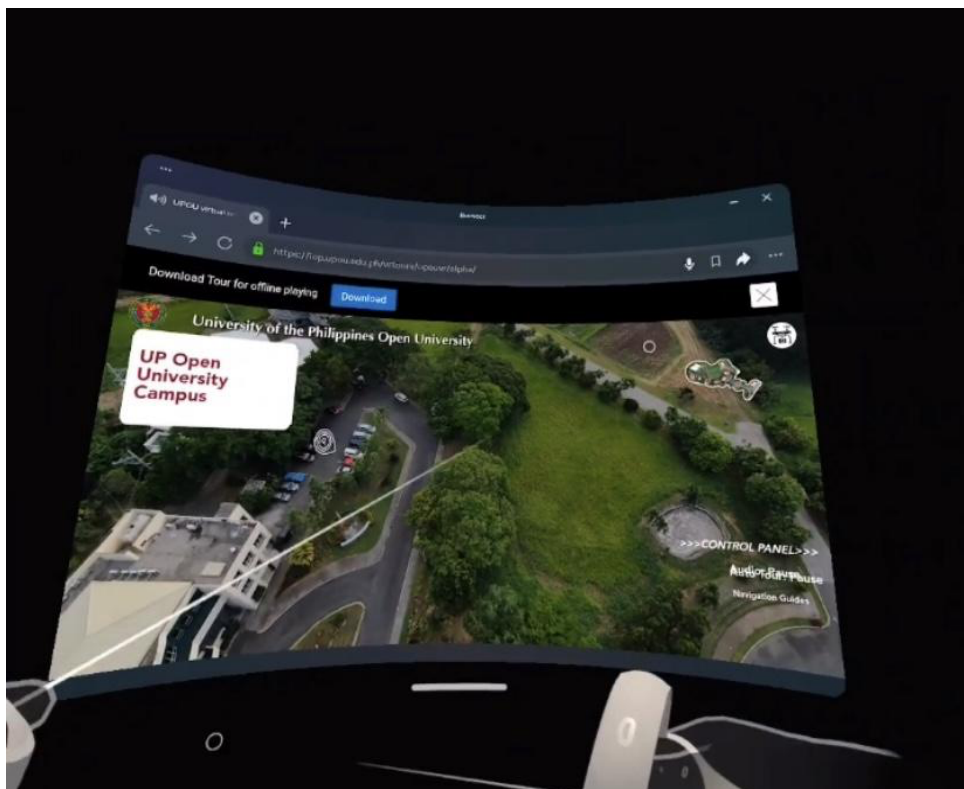


**Figure 24.** Issues were resolved

**HMD (Meta Quest 2) Access.** Some challenges were observed while using HMD equipment that is Meta Quest 2 to access BetaVR. During the preview of the tour, the caption, subscription, and action buttons had to be refreshed several times to be displayed. Additionally, the virtual reality icon disappeared, prompting the developer to edit the main tour, though VR mode still didn't function correctly online. While the issue remains unresolved for online access, virtual reality mode works when BetaVR is downloaded for offline use.



**Figure 25.** Screenshot of HMD issues encountered during BetaVR preview



**Figure 26.** Screenshot of HMD Resolved Issues during BetaVR preview

Before initiating her project, she spent quite a while learning about the equipment she'd be using, such as the Insta360 X3 camera and 3DVista software. She then asked those around her what they thought about the latest UPOU virtual tour. With their participation, she was able to gather feedback from them and identify shortcomings or areas where the initiative fell short.

After gathering feedback, the developer proceeded to schedule revisions. Nonetheless, due to practicality concerns, not every section of UPOU was recorded using 360-degree videos with a tour guide or 360-degree photos. For example, outdoor facilities such as the Multi-Purpose Hall (MPH), UPOU's Centennial Plaza, and the P.E.R.M.A. Garden were excluded from the recording process. The developer had initially planned to feature the P.E.R.M.A. Garden, with the P.E.R.M.A. Garden consultant as the speaker, as he was a key person knowledgeable about the garden, rather than the virtual tour guide.

Additionally, certain locations, such as the Community Hub (CommHub) Building and the UPOU gate, were not reshot. This was because the national highway was situated in closer proximity and there was a considerable amount of background noise from passing vehicles that could modify the audio quality.

A similar issue is with the UPOU Oblation, which was located in the vicinity of the UPOU gate and was subject to unavoidable noise from vehicles passing by. As the developer began editing the 360-degree videos, she discovered that the studio

application did not have an option to improve sound quality, thinking that it would just restrict her capacity to edit it, so those areas were left as is.

Before presenting her creative project at the BAMS MMS 200 Colloquium, the developer and her adviser agreed to change the project title to "Enhancing the UPOU Virtual Campus Tour with Immersive Videos." This revision summarized the project's focus on incorporating immersive videos into the virtual tour.

Talking about two of the most challenging aspects for the developer was scheduling and weather. The virtual tour guide has other work responsibilities, so the developer needed to adjust her schedule as she had requested a major favor to be the 'tour guide' for this virtual tour. Additionally, the developer faced technical issues in the editing and exporting process of the tour, which further delayed the project's posting and required even more time and effort.

The developer learned several valuable lessons from the project. A key lesson was the importance of proper communication. Since the developer faced an issue with communication and learned and improved accordingly. The other important lesson was that patience is required for working on this kind of project.

The developer had another unforgettable moment with the project when she believed all was done, only to find out that she had not taken the time to photograph a road at UPOU using the 360-degree photo mode again. However, at that particular time, the area was quite untidy; there were many leaves on the floor because of the

recently encountered a storm. Realizing that a better and clearer photo was needed, the developer contacted the Campus Development and Maintenance Office (CDMO) to ask for help in clearing the area around the site. They were as kind as to help her and this time, the event was yet another memorable moment in the process of establishing the project.

Despite challenges and time commitments in finishing the project, the developer found it challenging but also enjoyable, learning quite a lot through the process. The project proved to be rewarding in many ways. The process took several drafts and overall some engaging back-and-forth along with feedback from her adviser and even trial runs of the tour were helpful to further develop the project. Lastly, the people and staff's support, time, and sufficient equipment and software helped to move the project forward.

## V. CONCLUSION, AND RECOMMENDATIONS

As the project Enhancing the UPOU Virtual Campus Tour with Immersive Videos concludes, the developer's interest and questions remain. The developer understands that integrating immersive technology has resulted in major improvements to the UPOU Virtual Tour. However, questions arise: will it attract the interest of new and old students, visitors, and staff? Will the outcomes of the feedback differ from the first? These are some of the questions that stir the developer's curiosity, and he hopes that someone else will pursue this project and take action to improve it further, making it even more interesting and engaging for people.

The enhancement of the UPOU Virtual Campus Tour was both challenging and rewarding, especially since this initiative is for the benefit of UPOU. Returning to its objectives and significance, the creation of the UPOU Virtual Campus Tour with immersive videos accomplished its purpose.

Furthermore, the developer believes that if someone wants to continue the project, the primary focus should be on carrying out maintenance and potential upgrades to the virtual tour. The initial feedback and reviews pointed out technical issues, such as lagging and bugs, which were resolved with revisions.

In conclusion, the developer believes that this project represents another milestone and the beginning of making use of immersive media and technologies for better immersive experiences. Furthermore, the experience obtained from this project will serve as a foundation for future work, ensuring that the UPOU Virtual Campus Tour continues to grow and adapt.

## **Recommendations**

The UPOU Virtual Tour is a work in progress and is welcome feedback or suggestions for it to be better. That also means that there are lots of ways for this project to grow — by adding more features, like augmented reality, eye tracking technology, haptic technology, etc. In addition, in terms of the use of 3DVista software, it has a variety of immersive media tools and even interactive quiz features that would make the audience more interested when they explore the tour. Lastly, collaboration with other universities might also lead to new strategies and changes that the UPOU Virtual Campus Tour needs to consider due to the rapid rise of advancements in virtual campuses.

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## Appendices

## APPENDIX A

### Email Notice for the UPOU Virtual Tour Reshooting (June 14, 2024)

#### Notice of Reshooting for UPOU VR Tour Project - Phase 3

External

Inbox x



**Immersive Open Pedagogies Program** <iop@upou.edu.ph>  
to UPOU, UPOU, Quality, Office, bcc: me

Thu, Jun 13, 8:49 AM



Dear Colleagues,

Good day!

We hope this message finds you well, we apologize for the short notice. In preparation for the improvement and Phase 3 of the UPOU VR Tour project, we would like to inform you that reshooting will take place on June 14, 2024, at 1:30PM. The reshooting will occur in the following offices:

- Office of the Registrar
- University Library
- Quality Assurance Office

We appreciate your cooperation and understanding as we work to enhance the VR tour.

Thank you!

Best regards,

Immersive Open Pedagogies Program (IOP) and Office of Public Affairs (OPA)



## APPENDIX B

### Email Notice for the UPOU Virtual Tour Reshooting (June 21, 2024)

#### Notice of Reshooting for UPOU VR Tour Project - Phase 3

External

Inbox x



**Immersive Open Pedagogies Program** <iop@upou.edu.ph>

to Educational, UPOU, UPOU, ICT, Oc, bcc: me

Fri, Jun 14, 4:51PM



Dear Colleagues,

Good day!

I hope this message finds you well. In preparation for the improvement and Phase 3 of the UPOU VR Tour project, we would like to inform you that reshooting will take place on June 21, 2024, from 9:00 am to 5:00 pm. The reshooting will be conducted at various times throughout the day.

The reshooting will occur in the following offices:

Audio Visual Room (AVR)

EMP Studio

Office of the Vice Chancellor for Finance and Administration (OVCFA)

Office of the Vice Chancellor for Academic Affairs (OVCAA)

Office of the Chancellor (OC)

ICT Development Office (ICTDO)

We kindly request your assistance in maintaining cleanliness and tidiness throughout the office.

We appreciate your cooperation and understanding as we work to enhance the VR tour.

Thank you!

Best regards,

**Immersive Open Pedagogies** Program (IOP) and Office of Public Affairs (OPA)

## APPENDIX C

### Email Notice for the UPOU Virtual Tour Reshooting (June 27, 2024 | Rescheduled to July 9, 2024)

#### Notice of Reshooting for UPOU VR Tour Project - Phase 3

External

Inbox x



**Immersive Open Pedagogies Program** <iop@upou.edu.ph>

Tue, Jun 25, 8:42 AM



to Oc, UPOU, FICS, FMDS, FED, Office, Roberto, bcc: me

Dear Colleagues,

Good day!

I hope this message finds you well. In preparation for the improvement and Phase 3 of the UPOU VR Tour project, we would like to inform you that reshooting will take place on June 27, 2024, from 2:00 pm to 5:00 pm.

The reshooting will occur in the following offices:

- OC Conference Room
- TLH
  - FICS
  - FMDS
  - FEd
- OVCAA

We kindly request your assistance in maintaining cleanliness and tidiness throughout the office.

We appreciate your cooperation and understanding as we work to enhance the VR tour.

Thank you!

Best regards,  
Isaac Perez

#### Notice of Reshooting for UPOU VR Tour Project - Phase 3 (Rescheduled)

External

Inbox x



**Immersive Open Pedagogies Program** <iop@upou.edu.ph>

Thu, Jun 27, 11:25 AM



to Oc, UPOU, FICS, FMDS, FED, Office, Roberto, me

Dear Colleagues,

Good day!

I hope this message finds you well. In preparation for the improvement and Phase 3 of the UPOU VR Tour project, please be informed that the reshooting has been rescheduled to Wednesday, July 3, starting from 10:00 am onwards.

The reshooting will occur in the following offices:

- OC Conference Room
- TLH
  - FICS
  - FMDS
  - FEd
- OVCAA

We kindly request your assistance in maintaining cleanliness and tidiness throughout the office.

We appreciate your cooperation and understanding as we work to enhance the VR tour.

Thank you!

Best regards

### Email Notice for the UPOU Virtual Tour Reshooting (July 3, 2024)

## APPENDIX D

### Email of Invitation to Chancellor, Vice Chancellors, and Directors to Participate in 360 Video shoot for the UPOU Virtual Tour Reshooting (June 26, 2024)

#### Invitation to Participate in 360 Video Shoot for UPOU VR Tour Project - Phase 3



External > Inbox x



**Immersive Open Pedagogies Program** <iop@upou.edu.ph>  
to Victoria, Office, Roberto, bcc: me ▾

Tue, Jun 25, 1:21PM ☆ ↶ ⋮

Dear Colleagues,

Good day!

We hope this message finds you well. As we prepare for Phase 3 of the UPOU VR Tour project, we are excited to invite you to participate in a short 360-degree video shoot by welcoming the VR tour viewers with a brief script as the heads of your respective offices. The shoot will take place on June 26, 2024, from 8:30 to 11:00 am.

If you are available and wish to participate, please confirm your availability by replying to this email. If you want to participate but are unavailable on that day, kindly provide us with an alternative schedule when you are free.

Here's the sample script that you may follow:

1. Introduce yourself and the office you oversee.
2. In 2-3 sentences, describe your office and its function within the University.

We kindly request your assistance in ensuring that your office is clean and tidy for the shoot.

We appreciate your cooperation and understanding as we work to enhance the VR tour experience.

Thank you, and we look forward to your involvement in this exciting project.

## APPENDIX E

### Invitation of 360 Video shoot for UPOU Virtual Tour Reshooting for Dr. Finaflor Taylan (June 27, 2024)

Invitation: 360 Video Shoot for UPOU VR Tour Project - Phase 3 @ Thu Jun 27, 2024 3:30pm - 4pm (GMT+8) (clpesimo@up.edu.ph) External Inbox x



**Immersive Open Pedagogies Program** iop@upou.edu.ph via google.com  
to me, Finaflor, hbmacaldo, Jessa ▾

Wed, Jun 26, 3:11PM ☆ ↶ ⋮

	<p><b>360 Video Shoot for UPOU VR Tour Proj...</b> <a href="#">View on Google Calendar</a></p> <p><b>When</b> Thu Jun 27, 2024 3:30pm – 4pm (GMT+8)</p> <p><b>Who</b> Finaflor Taylan, Hannah Gabriella Macaldo, Jessa Perez, Immersive Open Pedagogies Program*</p>	<p><b>Agenda</b> Thu Jun 27, 2024</p> <p><i>No earlier events</i></p> <p>3:30pm 360 Video Shoot for UPOU VR Tour Proj...</p> <p><i>No later events</i></p>
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Here's the sample script that you may follow:

1. Introduce yourself and the office you oversee.
2. In 2-3 sentences, describe your office and its function within the University.

**When**

Thursday Jun 27, 2024 · 3:30pm – 4pm (Philippine Standard Time)

## APPENDIX F

### Email Notice for the UPOU Virtual Tour Reshooting (July 9, 2024)

#### Notice of Reshooting for UPOU VR Tour Project - Phase 3

External

Inbox x



**Immersive Open Pedagogies Program** <iop@upou.edu.ph>

to Educational, UPOU, Ugnayan, CDMO, Office, Roberto, me

Thu, Jul 4, 2:22 PM



Dear Colleagues,

Good day!

I hope this message finds you well. In preparation for the improvement and Phase 3 of the UPOU VR Tour project, we would like to inform you that reshooting will take place on July 9, 2024, from 10am onwards.

The reshooting will occur in the following offices:

- IMPDO
  - OGC
  - OPA
  - Pahinungod
  - EMP
- Oblation Hall
- MPH

We kindly request your assistance in maintaining cleanliness and tidiness throughout the office.

We appreciate your cooperation and understanding as we work to enhance the VR tour.

Thank you!

## APPENDIX G

### Email Notice for the UPOU Virtual Tour Reshooting (July 16, 2024)

Notice of Reshooting for UPOU VR Tour Project - Phase 3 External Inbox x ✕ 🖨 📧



**Immersive Open Pedagogies Program** <iop@upou.edu.ph>  
to CDMO, Office, Roberto, me ▾

Mon, Jul 15, 8:40 AM ☆ ↶ ⋮

Dear Colleagues,

Good day!

I hope this message finds you well. In preparation for the improvement and Phase 3 of the UPOU VR Tour project, we would like to inform you that reshooting will take place on July 16, 2024, from 10am onwards.

The reshooting will occur in the following offices:

- CCDL
- Sandbox
- CDMO

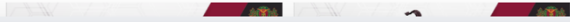
We kindly request your assistance in maintaining cleanliness and tidiness throughout the office.

We appreciate your cooperation and understanding as we work to enhance the VR tour.

Thank you!

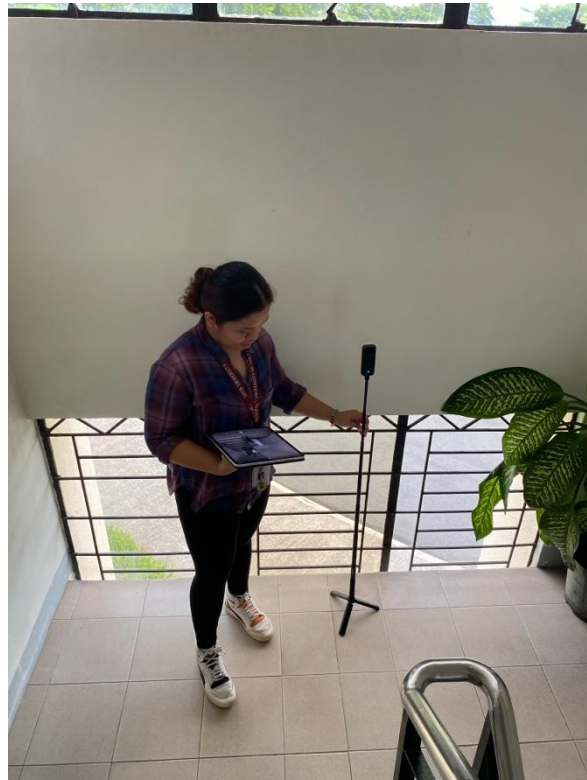
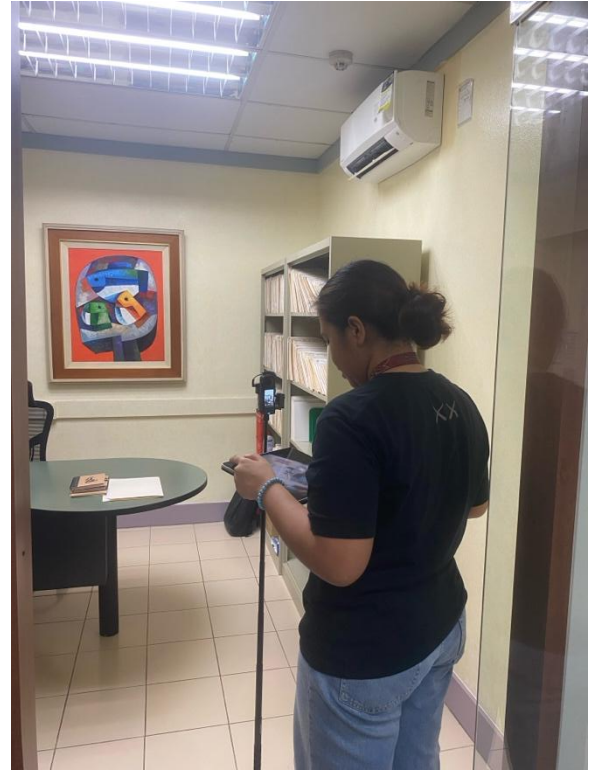
Best regards,  
Jessa Perez

**Immersive Open Pedagogies** Program (IOP) and Office of Public Affairs (OPA)



## APPENDIX H

### Behind the Scenes During the Production Days



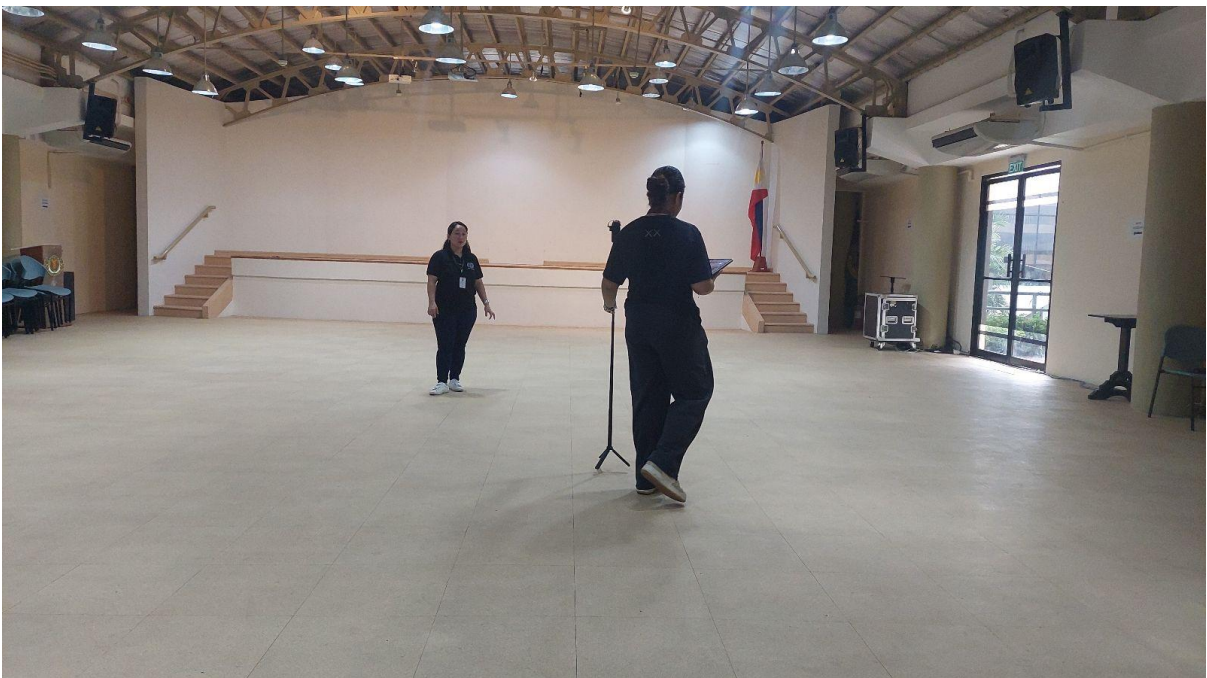
## APPENDIX I

### Behind the Scenes During the Production Days



## APPENDIX J

### Behind the Scenes During the Production Days



## **Appendix K**

Script for Reshooting on June 7, 2024

### **Welcome Message**

*"Hello and Mabuhay! Welcome! This is the University of the Philippines Open University or UPOU. UPOU is the 5th constituent unit of the University of the Philippines System. On February 23, 1995, UPOU was established.*

*UPOU pioneered online teaching and learning, and it continues to lead in the study and practice of open learning and distance education in the Philippines and globally."*

### **Abstract Rendition of the Oblation by Jerusalino Araos**

*"This is the Abstract Rendition of the Oblation. It is located here at the lobby of the Administration Building, and it is entirely made of wood, crafted using various traditional woodworking techniques."*

## **Appendix L**

Script for Reshooting on June 14, 2024

### **Office of the University Registrar**

*“This is the Office of the University Registrar (OUR).*

*The OUR is responsible for student admissions, registration, and handling concerns about student records.*

*If you have questions about admissions, enrollment, your records, credentials, or grades, you can always visit the UPOU OUR. They are ready to help!”*

### **Quality Assurance Office**

*“This is the Quality Assurance Office or AO.*

*QAO was established to enhance the culture of quality assurance at UPOU by taking the lead in planning and overseeing QA-related matters in the university's academic and administrative functions.”*

### **University Library**

*“This is the UPOU Library. It is located on the first floor of the Administration Building.*

*The UPOU Library provides e-library resources available to all UPOU faculty, staff, and students wherever they may be located.*

*But if you prefer to study on campus, you can always visit the UPOU library which provides you a wide range of resources and information available in different formats.”*

## **Appendix M**

Script for Reshooting on June 21, 2024

### **Office of the Vice Chancellor for Finance and Administration (OVCFA)**

*“This is the Office of the Vice Chancellor for Finance and Administration (OVCFA). It is located here on the 2nd floor of the Administration Building.*

*Under the OVCFA, are the following offices:*

*Accounting Office*

*Cash Office*

*Human Resource Development Office (HRDO)*

*Supplies and Property Management Office (SPMO)*

*Campus Development and Maintenance Office (CDMO)”*

### **Audio-Visual Room (AVR)**

*“This is the UPOU Audio-Visual Room located on the 2nd floor of the administration building. This is where events such as meetings, conferences, seminars, and forums take place.”*

### **Educational Media Production (EMP) Studio**

*“Behind the AVR is the Educational Media Production Studio, a creative space and specialized facility that serves as a hub for recording.*

*The EMP Studio is designed to produce multimedia content for online education and distance learning. “*

## **Appendix N**

Script for Reshooting on June 21, 2024

### **Office of the Vice Chancellor for Academic Affairs Office (OVCAA)**

*“This is the Office of the Vice Chancellor for Academic Affairs, it is located here on the third floor of the administration building.”*

### **Office of the Chancellor (OC)**

*“We have arrived at the 3rd floor of the Administration Building. Here, you will find the Office of the Chancellor (OC). Come and visit to have the chance to meet Chancellor Melinda dela Peña Bandalaria.”*

### **OC Conference Room**

*“This is the OC Conference Room; this is where the Chancellor holds meetings and receives her visitors.”*

### **ICT Development Office (ICTDO)**

*“We are now here at the Information and Communication Development Office or ICTDO.”*

## **Appendix O**

Script for Reshooting on June 26, 2024

### **Chancellor Melinda dela Peña Bandalaria**

*“Hello everyone. I am Dr. Melinda dela Peña Bandalaria, the Chancellor of UP Open University. Welcome to the Office of the Chancellor!”*

*The Office of the Chancellor (OC) plays a crucial role in overseeing the overall management, supervision, and administration of UPOU. It sets the strategic direction of UPOU to perform its functions and accomplish its mandate as stated in its vision, mission, and goal statements as defined under Republic Act 9500, the UP Charter of 2008, and Republic Act 10650, the Open and Distance Learning Act of 2014.*

*Feel free to explore the OC and the rest of UPOU through this VR tour.”*

## **Appendix P**

Script for Reshooting on June 27, 2024

### **OGC Director**

*“Welcome! I’m Finaflor F. Taylan, the Director of the Office of Gender Concerns at the UP Open University.*

*The Office of Gender Concerns is mandated by the UP Board of Regents to facilitate gender mainstreaming in all university operations and functions, including teaching, research, public service, and administration. We also provide necessary assistance to those who may need it, especially in relation to gender-based concerns, such as the provision of a breastfeeding station and case management for sexual harassment, sexual exploitation, and sexual abuse cases.”*

## **Appendix Q**

Script for Reshooting on July 3, 2024

### **Teaching and Learning Hub (TLH)**

*“This is UPOU Teaching and Learning Hub or TH located at the right side of the administration building. TLH houses the three Faculty Offices of UPOU — The Faculty of Education (FEEd), the Faculty of Information and Communication Studies (FICS), and the Faculty of Management and Development Studies (FMDS).”*

### **Faculty of Education (FEEd) Office**

*“This is the Faculty of Education (FEEd). FEEd offers programs related to Arts, Instructional Design and Technology, Business Education, and Teacher Education Programs Education, and Teacher Education. These programs focus particularly on the fields of Science, Math, Language and Literacy, and Social Studies.”*

### **Faculty of Information and Communication Studies (FICS) Office**

*“This is the Faculty of Information and Communication Studies (FICS). FICS offers programs related to Multimedia, Computer Science, Information Systems, and Communications.”*

### **Faculty of Management and Development Studies (FMDS) Office**

*“This is the Faculty of Management and Development Studies (FMDS). FMDS offers programs related to Health, Environment, Management, Research and Development, Social Work, ASEAN Studies, Land Use Planning, and Sustainability.”*

## **Appendix R**

Script for Reshooting on July 9, 2024

### **Instructional Materials Development and Printing Office (IMDPO)**

*“This is the Instructional Materials Development and Printing Office (IMDPO) building. This is located left side of the Main Building and was built in 2001. It used to house the printing unit of the university when printed modules were still delivered to students.*

*Now, it temporarily houses the Office of Student Affairs, Office of Public Affairs, Office of Gender Concerns, Ugnayan ng Pahinungod UPOU, and the Educational Media Production Unit of the Center for Open and Digital Teaching and Learning.”*

### **Educational Media Production (EMP) Unit**

*“This is the Educational Media Production Unit (EMP) of the Center for Open and Digital Teaching and Learning. It is responsible for the technical production during events, as well as the production of Open Educational Resources for the university.”*

### **Office of Public Affairs (OPA)**

*“This is the Office of Public Affairs or OPA. OPA is responsible for the implementation and coordination of information programs, as well as the reporting of public service initiatives of the university.”*

## **Appendix S**

Script for Reshooting on July 9, 2024

### **Office of Gender Concerns (OGC)**

*“This is the Office of Gender Concerns (OGC). OGC functions specifically to create and sharpen awareness relating to gender development among the UPOU Community.”*

### **Ugnayan ng Pahinungód UPOU**

*“This Ugnayan ng Pahinungód UPOU is the official volunteer program of the University of the Philippines.”*

### **Oblation Hall**

*“This is the Oblation Hall. Oblation Hall houses the Puting Oble and serves as a venue for the exhibits and small meetings held at UP Open University.”*

## **Appendix T**

Script for Reshooting on July 16, 2024

### **Centennial Center for Digital Learning (CCDL) Building**

*“This is the Centennial Center for Digital Learning (CCDL) building. Here you will find the Learners' Hall, the UPOU Sandbox, the CCDL Auditorium, and the Campus Maintenance and Development Office (CDMO).”*

### **CCDL Auditorium**

*“This is the CCDL Auditorium. It is located on the second floor of the CCDL Building and can accommodate up to 150 guests in academic gatherings such as seminars, conferences, forums, and other important events for the university.”*

### **UPOU Sandbox**

*“This is the UPOU Sandbox. It is the first facility you can see on the first floor of the CCDL building. Having its vibrant colors on the inside compared to other offices in UPOU, this is intended to be an environment for honing the minds of guests to be used effectively during brainstorming, meetings, and forums.”*

### **Campus Development and Maintenance Office (CDMO)**

*“This is the Campus Development and Maintenance Office (CDMO). It is mainly responsible for developing plans and strategies, as well as managing and supporting the essential functioning services of UPOU.”*

### **Academic Residences (AR)**

*“This is the UPOU Academic Residences (AR). It is a three-story building intended to accommodate UPOU students, staff, faculty members, and guests.”*

## Appendix U

Participants overall comment from the feedback survey conducted

**Participant 1:** *"Media command in VR Mode: the selections at the far end are difficult to read."*

**Participant 1:** *"Some interaction buttons do not work."*

**Participant 2:** *"Improvements on the arrows (as signs), may it be color/design, etc. for easier identification of signs."*

**Participant 3:** *"Improvement of the angles of the images of the location so that the transition to the adjacent location is smooth."*

**Participant 4:** *"The first part of the virtual tour is not advisable for persons/users with acrophobia. (aerial view). I suggest adding an option before the virtual tour proper for the user to choose either a virtual map or an actual aerial view. Ask them if they have a fear of heights, etc., for them to choose which navigations, maps, or views they would like to explore. (This is to avoid accidents or unforeseen events.)"*

**Participant 5:** *"Clear vision quality"*