



Political economy of HEI branding: Internationalization opportunities through virtual tour 360 UPNVJT

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Abstract

A virtual tour is a digital feature that is increasingly easy to find everywhere due to technological advances that support daily life. During this pandemic, virtual tour features found their urgency as an essential promotion and branding. The focus of the study in this article is on the use of the Virtual Tour feature in higher education institutions (HEI) as a political economic means of branding, domestically and internationally. Digital browsing is intended to support visitors' understanding of the information and facilities of a higher education institution without having to visit the location physically. This study aims to review the differences in Virtual Tour features from various Virtual Tour services offered by multiple HEIs globally through observation of secondary data and analysis of survey results. This study aims to find the vital aspects of a high-quality Virtual Tour feature. The result is thus used to analyze and assess the readiness of the University of Pembangunan Nasional "Veteran" Jawa Timur Virtual Tour feature, also known as the Virtual Tour 360 UPNVJT. Secondary data analysis and survey results show that several elements are considered necessary in the best Virtual Tour feature service that is essential for branding and internationalization, thus contributing to HEI's political economy. However, not all higher education institutions implement these Virtual Tour features entirely and consistently. Likewise, Virtual Tour 360 UPNVJT has not fully implemented all these essential features but has implemented some of these aspects. This study concludes that the quality and completeness of a Virtual Tour features of an HEI is vital to ensure the quality of information delivered to HEI's website visitors, one of the critical points of the political economy of higher education institutions.

Keywords: Virtual tour, political economy of HEI, branding, internationalization, virtual Tour 360 UPNVJT

Introduction

Along with the development of technology, humans have created what is known as virtual space, literally a virtual space that allows the exchange of information with relative ease. Gradually, the more advanced area is built, allowing the weave of information networks ingeniously, bringing more formats of information that can be conveyed online-those information's formats ranging from documents to audio and even video. The sophistication of these technological advances is slowly pulling the real world into the virtual world, converting it into a digital reality. This process refers to the concept of digitization, which Brennen & Kreiss define as digitalization reconstruction of a wide range of aspects of social life (2016).

It is mainly oriented towards a digital telecommunications framework where hardware and software features are starting to accommodate various online activities thanks to the excellent audiovisual inputs and outputs quality. Over time, what we hear from the virtual space is not much different from what we hear in the real world, and what we see in the two areas will become more and more similar.

Essentially, these digitization advancement leads to a discussion of virtual tours. Suryanto & Wibowo (2020) ^[14] define virtual tours as delivering information that makes users feel they are directly exploring a location. Virtual tours can be presented in various formats, where Maines & Tang (2015) ^[7] describes three types of virtual tours, namely (1) still image gallery (image display, generally photos), (2) video gallery (moving visuals, which can also be accompanied by sound), and (3) 360° Interactive Virtual Tour (a type of visual exposure that allows the user to be able to shift the point of view horizontally or even from any angle). Mention that several supporting aspects can also help virtual tours, such as sound effects, music, narration, and text, to add detail to the environment presented.

Virtual Tours have been around for quite a long time. Campustours.com mentions that the first virtual tour appeared in 1994 and provides a basic overview of various institutions. Higher Education Institutions (HEIs) implement virtual tours as an alternative to conventional tours to offer another way for visitors to get campus exposure without directly exploring the campus. The application of virtual tours is essentially a development from digital tours, using various formats ranging from simple photography promotional video tours to interactive virtual exploration. Since then, the use of virtual tours has exponentially grown. ICEF Monitor (2015) said that in 2012, one of the virtual tour design service providers, You Visit, had had 150 clients. In 2015, clients skyrocketed, allowing You Visit to partner with 1000 HEIs worldwide to create various virtual tour services. This information shows that HEIs worldwide have realized that virtual tours are critical to support their multiple needs relatively quickly. Therefore, over time, a virtual tour has become an increasingly popular feature among HEIs.

Based on the description above, this study is thus aimed to review and analyze the differences in various virtual tour features from various virtual tour services offered by HEIs globally through observation of secondary data and analysis of survey results. This study aims to find the vital aspects of a high-quality virtual tour feature. The result is thus used to analyze and assess the readiness of the University of Pembangunan Nasional "Veteran" Jawa Timur Virtual Tour feature, also known as the Virtual Tour 360 UPNVJT. This study uses a secondary data analysis by comparing virtual tour features from Global's Top Ten HEIs, Asia's Top Ten HEIs, and Indonesia's Top Ten HEIs. Data for the comparison is collected using online observation, and the classification of the HEIs' rank is based on 2021's Webometric's Ranking Web of Universities. Another method used in this study is survey analysis specifically designed to observe visitors' experience towards the University of Pembangunan Nasional "Veteran" Jawa Timur Virtual Tour feature, also known as Virtual Tour 360 UPNVJT. The survey analysis thus provides insights on what needs to be improved from the Virtual Tour 360 UPNVJT.

Political Economy of HEI: Branding, Internationalization, and Virtual Tours: Today, HEIs products are big business.

Public Relations has become more focused on marketing - and central to marketing - is branding. Branding in Old English means to burn, and dating from the mid-17th century, it came to mean "a mark of ownership made by branding" events or people. Starting in 1827, the word "branding" began to refer to products such as the word "rank." There is an evolution in the connotation of "branding" from negative to positive. Marketing experts have directed HEIs' leaders to improve "brand experience," "brand awareness," "brand attachment," and "brand architecture." In short, HEIs' branding aims to present a coherent visual identity of the HEI and assess the benefit of education by tracking the brand of the HEI. Branding increasingly targets younger populations and is explicitly used by HEIs to reach teens and parents by building "brand awareness." There has been a massive increase in marketing spending to improve branding qualities. Branding is about gaining and maintaining product loyalty because association with the brand in and of itself is a powerful form of symbolism and frequently translates to gaining economic capital. In other words, the product's brand becomes part of an individual brand. Saying one graduated from a Top HEIs carries status, and protecting the level becomes paramount (Stack, 2016) ^[13].

As businesses, HEIs certainly have competitors like other industries. HEIs must build brand awareness, both conventionally and digitally, to attract prospective students. With the advancement of communication technologies and globalization, digital marketing reached its highest potential. Digital marketing can help HEIs procure data on prospective students to engage students better and persuade them to register. HEIs need a digital marketing strategy to strengthen their branding qualities and create a strong brand foundation. Some of the things that make digital marketing so important for HEIs (Sevima, 2020) ^[11] are (1) information about the campus could be spread widely and quickly, (2) save on promotion costs, (3) increase searchability on the Internet. Various means supporting digital marketing are social media platforms, digital ads, websites, campus search platforms. It is now more common to provide virtual tours on the HEIs' official website because learning processes and information deliveries can be more enjoyable using multimedia (Wijaya, 2015) ^[15].

One of the uses of multimedia as an information medium is virtual tour 360 technology. Virtual tours have the characteristics of placing the user as if they were in an image and can freely access virtual situations created with a 360 point of view (Bastian, 2018) ^[1]. A virtual tour consists of a combination of photos taken from a panoramic point of view. Photos are taken and then stitched in such a way to create reality in the best possible way. Virtual tours allow users to freely explore the rooms of a building, view pictures, and enjoy the view from a location, with a 360° perspective (Navrotska, 2013) ^[8]. In the journal compiled by Osman, Wahab, and Ismail, a virtual tour is a technology that places the user in an image and allows the user to increase situational awareness and significantly increase the ability to see, capture and analyze virtual data. The virtual tour shows users the surrounding environment they want to know (Osman, 2009) ^[10].

Virtual tours are currently widely applied as promotional media and information media. Some of the most famous virtual tour places are museums, tourism areas, universities, real estate, historical sites, parks and breeding areas, public places such as the White House and the Taj Mahal, and hotels

and motels (Bastian, 2018) ^[1]. In addition to displaying a business, virtual tours represent a product or service (Wisanto, 2015) ^[16].

Branding is essential for HEI's internationalization goals through digital marketing and virtual tours. According to Hawawini (2016) ^[5], internationalization is the process of incorporating international and multicultural components into existing institutions' learning, research, and service functions. In addition to these definitions, Hawawini also presents two meanings of the concept of education's internationalization according to several institutions and experts. According to the European Parliament, the internationalization of education is a deliberate process of integrating international, intercultural, or global dimensions into post-secondary education goals, functions, and delivery. This process is impertinent to improve the quality of education and research for all students and staff and make a meaningful contribution to society. The internationalization process in education enhances the quality of existing education and prepares educators and students to have high competitiveness. Furthermore, the Center for Internationalization and Global Engagement describes the internationalization of HEIs as a strategic and coordinated process that seeks to harmonize and integrate international policies, programs, and initiatives, thus positioning colleges and HEIs to be more globally oriented and internationally connected. It is hoped that with these goals, existing domestic HEIs can produce highly competitive graduates and not be inferior to the already established HEIs abroad.

The existence of a verbal commitment, the presence of a mission, goals, vision, strategy, structure, policy, the fact of the primary curriculum and other curricula, the existence of study activities and internships abroad, the involvement of institutions in other countries, campus culture, the presence of synergies and relationships between activities that are decreed are crucial elements of HEI's internationalization (Olson, Green, and Hill 2003) ^[9]. Internationalization in education cannot be carried out without there being any follow-up. Therefore, commitment from existing educational institutions is needed to maintain internationalization programs. With the existing obligations and synergies, internationalization can be realized. From various literature reviewed, it can be concluded that the purpose of internationalization of HEI is (1) to harmonize and coordinate higher education policies and position universities to be more internationally oriented, and (2) to improve the quality of education and research of all students and staff. However, internationalization could not be achieved if the foreign HEIs could not reach domestic HEIs, or vice versa.

In the last decade, internationalization of HEI have been substantial towards acquiring more recognition, as national recognition itself is not enough in the globalizing context. Internationalization is important for rankings and accreditation. The higher the rank and the more the accreditation acquired, the more recognized the HEI in terms of education quality. From HEI's political economic point of view, more recognition means more prestige and distinction. Recognition, prestige, and distinction are means of non-monetary competition between HEIs (Schulze-Cleven, *et al*, 2017) ^[12]. Based on these growing urgency, HEI are now focusing not only on their main business process, which is to deliver high-quality education, but also on increasing and upgrading their digital branding in order to acquire global

recognition.

Based on the description above, it can be seen that branding and digital marketing are vital for internationalization. HEIs branding must communicate HEI's internationalization elements fluently to foreign prospective students and parents. One of the most compelling ways is to utilize virtual tour features. For HEIs, virtual tour features are essential components that provide several advantages argue that virtual tours can improve HEIs' image and boost marketing. Anwar (2018) ^[1] states that virtual tours can solve for new students unfamiliar with the campus plan and cannot visit the campus directly. Suryanto & Wibowo (2021) ^[14] also mentioned that virtual tours could open up opportunities to collaborate between domestic and foreign partners. According to Hanover Research (2020), several essential features must be present in virtual tours to create effective branding and marketing. Those features are (1) virtual tours must provide a variety of content on the webpage that supports virtual terms, such as asynchronous combinations (which record a video about campus exploration guided by a tour guide or supporting explanations), synchronous combinations (which holds webinars or campus tours directly through social media platforms), or provide direct Q&A services; (2) virtual tour must be flexible to be able to be accessed anywhere and anytime, including the scheduled activities and essential information needed by visitors; (3) virtual tour must show human visage, most notably those who have a crucial role; and (4) virtual tour must be able to show campus' value, the most prominent would be environmentally safe and friendly, that would be the determinant factor for prospective students.

Virtual Tour Feature Comparisons: Trends in Global, Asia, and Indonesia

Seeing the importance of virtual tours for the HEIs, it is interesting to observe virtual tours that have been used as means of branding by different universities globally, in the Asian region, and Indonesia. The comparison of those HEIs is based on several most crucial features for the virtual tour effectiveness in delivering HEIs branding elements to persuade prospective students. Features observed are the interactivity of the virtual tours, the availability of guides and explanations, the availability of scheduled times, and the availability of live chat features. These features indicate some kinds of two-way communication between the HEIs and viewers.

As can be observed from Table 1 above, every HEIs ranked as Global Top Ten HEIs have already utilized virtual tours as their means of marketing, and included in the virtual tour is the feature of online scheduled tours. Meanwhile, seven out of ten HEIs have also equipped their virtual tours with interactivity. Interactivity used by these HEIs vary in format, the simplest being to choose and direct viewers to places desired individually. Another essential feature is the live chat feature that would allow viewers to interact with HEIs in real-time to enable viewers to communicate and express inquiries. Each of the Global Top Ten HEIs has already provided this live chat feature, although most live chat features are only available during the scheduled tours. Moreover, those HEIs also further accommodate viewers by providing tour guides and explanations of the places shown in the virtual tours. Compared to the Global Top Ten HEIs, Asia's Top Ten HEIs have not utilized virtual tours to the fullest, as shown in Table 2 below.

Table 1: Comparison of Virtual Tour Feature of 2021 Webometrics Global's Top Ten HEIs (Author's Construction as of 11 September 2021)

Name of University	Virtual Tour	Interactive	Tour Guide & Explanation	Campus Tour Schedule	Live Chat
University of Washington	Available	Not available	Available (Also on Youtube)	Available	Available
Cornell University	Available	Available (Livestream)	Available	Available	Available
John Hopkins University	Available	Available	Available	Available	Available (During scheduled tours)
Yale University	Available	Available	Available	Available	Available (During scheduled tours)
University of California San Diego	Available	Available	Available	Available	Available (During scheduled tours)
University of Toronto	Available	Not available	Available (Not interactive)	Available	Available (During scheduled tours)
University of Wisconsin Madison	Available	Not available	Available	Available	Available
Pennsylvania State University	Available	Available (Certain colleges)	Available	Available	Available (During scheduled tours)
New York University	Available	Available	Available	Available	Available (During scheduled tours)
Eidgenössische Technische Hochschule Zürich	Available	Available	Available	Available	Available (During scheduled tours)

Table 2: Comparison of Virtual Tour Feature of 2021 Webometrics Asia's Top Ten HEIs (Author's Construction as of 11 September 2021)

Name of University	Virtual Tour	Interactive	Tour Guide & Explanation	Campus Tour Schedule	Live Chat
University of Tokyo	Available	Available (Zoom meeting)	Available	Available (Upon request)	Available
Kyoto University	Available	Not available	Available	Not available	Not available
Tel Aviv University	Available	Available	Available	Not available	Not available
Sun Yat Sen (Zhongshan) University	Not available	Not available	Not available	Not available	Not available
Tsinghua University	Available	Not available	Available	Not available	Not available
Hebrew University of Jerusalem	Available	Not available	Available (Guidebook & Youtube)	Not available	Not available
Tianjin University	Available (Using drone)	Not available	Not available (Only drone view)	Not available	Not available
Tohoku University	Available	Available	Available	Not available	Not available
Central South (Zhongnan) University	Not available	Not available	Not available	Not available	Not available
Beihang University	Available	Available	Available (In Chinese)	Not available	Not available

According to Table 2 above, two out of ten HEIs ranked Asia's Top Ten HEIs have not used the virtual tour as their means of marketing. However, Tianjin University has gone beyond by utilizing drones as their virtual tour view. Only four out of ten HEIs can be classified as interactive in terms of interactivity. Furthermore, only the University of Tokyo, which ranked first, is equipped with a live chat feature and scheduled online campus tours, which means that most of the HEIs did not provide viewers with means of inquiries. Unlike

interactivity, in terms of explanation and availability of tour guides, most of the HEIs have already offered the virtual tour with brief descriptions. Some have even been equipped with tour guides. By comparing Table 1 and Table 2, it is clear that there is a wide gap in the utilization of virtual tours amongst the HEIs, notably in the use of interactivity. HEIs ranked in the Global Top Ten HEIs emphasized interactivity, allowing more engagement between the HEIs and viewers.

Table 3: Comparison of virtual tour feature of 2021 Webometrics Asia's Top Ten HEIs (Author's construction as of 11 September 2021)

Name of University	Virtual Tour	Interactive	Tour Guide & Explanation	Campus Tour Schedule	Live Chat
University of Indonesia	Available (Video profile only)	Not available	Not available	Not available	Not available
Universitas Gadjah Mada	Available	Not available	Available	Available	Available
IPB University	Available	Available	Available (Video)	Not available	Available
Sepuluh Nopember Institute of Technology	Not available	Not available	Available	Not available	Available
Brawijaya University	Not available	Not available	Available	Not available	Not available
Airlangga University	Available	Not available	Available	Not available	Available
Telkom University	Available	Available	Not available	Not available	Not available
Institut Teknologi Bandung	Available	Available	Available (Text)	Not available	Not available
Binus University	Available	Not available	Available (Separate page)	Not available	Not available
Universitas Sebelas Maret	Not available	Not available	Available (Youtube)	Not available	Not available

Similar to Table 2, as shown in Table 3 above, most of the HEIs ranked as Indonesia's Top Ten HEIs have already been equipped with virtual tour features, but only three provide interactivity. Slightly better than Asia's Top Ten HEIs, eight out of ten HEIs in Indonesia have already provided tour guides and explanations on their virtual tour feature. Same as Table 2, only one HEI in Indonesia offers an online scheduled campus tour, Universitas Gadjah Mada. Overall, it can be seen from the comparison between Table 1 to 3 above virtual

tours have been utilized as means of branding and digital (online) marketing towards foreign viewers. With that being said, HEIs ranked Global Top Ten HEIs are perceived to be more-well prepared for internationalization. Meanwhile, HEIs ranked in Asia's and Indonesia's Top Ten HEIs need to make adjustments and improvements to catch internationalization opportunities with Global HEIs. As mentioned in the chapter before, it is imperative to communicate HEIs' values and other fundamental elements

towards foreign partners to create cooperation and partnership opportunities internationally.

Virtual Tour 360 UPNVJT: Assessments and Opportunities

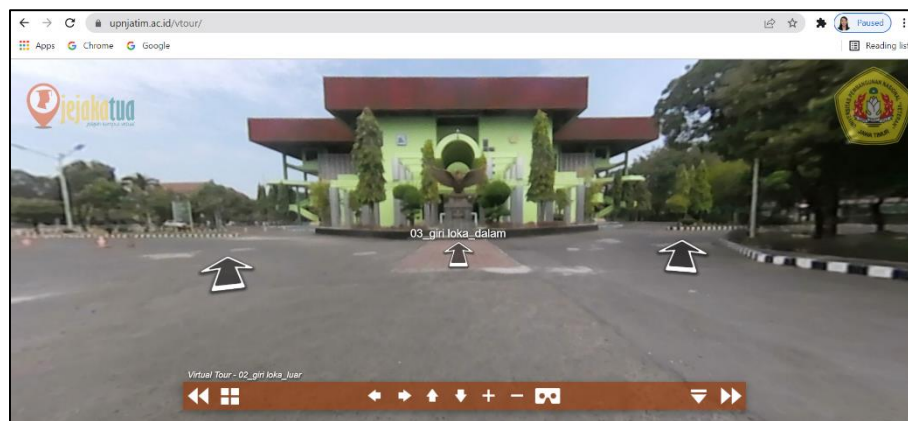


Fig 1: Virtual Tour 360 UPNVJT (as can be accessed on <https://www.upnjatim.ac.id/vtour/>)

After the observation is made on HEIs globally and domestically, it is strategic to observe University of Pembangunan Nasional "Veteran" Jawa Timur's (UPNVJT's) virtual tour feature more known as Virtual Tour 360 UPNVJT. This virtual tour can be found on the UPNVJT's official webpage. Same indicators are used to observe Virtual Tour 360 UPNVJT. It can be found from Table 4 below that there are three main results made from assessing the Virtual Tour 360 UPNVJT in comparison with other HEIs' virtual tour features. Those results are about (1) format, (2) tour guide and explanation feature, and (3) scheduled campus tour and live chat feature. Regarding the format of the virtual tour itself, Suryanto & Wibowo (2020) ^[14] said that Virtual Tour 360 UPNVJT was made using the auto-stitching technique,

which involves "taking" and "merging" images into various panoramas using the Insta360 software. These images are then processed and watched using the KRPano viewer software. The result is a 360° visual that can be shifted freely and enlarged or reduced according to the visitor's desire. However, this result still has a drawback in which it cannot move from its reference point. Thus, making the Virtual Tour 360, UPNVJT viewers can only look around. However, the Virtual Tour 360 UPNVJT offers more than one point of view so that viewers can see 360° visuals from different environments. In addition, viewers can also watch Virtual Tour 360 UPNVJT through the VR (Virtual Reality) point of view feature.

Table 4: Virtual Tour 360 UPNVJT Feature (Author's Construction as of 11 September 2021)

Name of University	Virtual Tour	Interactive	Tour Guide & Explanation	Campus Tour Schedule	Live Chat
University of Pembangunan Nasional "Veteran" Jawa Timur	Available	Available	Not available	Not available	Not available

Regarding each point's tour guide and explanation feature, unfortunately, Virtual Tour 360 UPNVJT still did not equip with this feature. The only reference information that viewers can see is the name attributed to each place (e.g., 'tennis court' or 'swimming pool'). Compared to Virtual Tour 360 UPNVJT, most of the Global's Top Ten HEIs have this feature already. When entering said virtual tour's screen, viewers are also presented with small screens containing explanatory text about the environment being viewed (sometimes accompanied by additional photos and related links). In addition, viewers can also find a tour guide figure placed in the corner or center of the screen to explain the environment being listened to verbally and in real-time.

Regarding scheduled tours and live chat features, these two features cannot be found in the Virtual Tour 360 UPNVJT. Likewise, on the official website of the University of Pembangunan Nasional "Veteran" Jawa Timur, no information was found regarding the existence of live chat or scheduled tours at all, either online or offline. Thus, making it impossible to know whether there are any events planned or not. In addition, there is also no information regarding Livestream activities on the university's Youtube Channel, so it is unknown whether there is an opportunity to participate

in a live chat session or not.

To further complete the assessment of Virtual Tour 360 UPNVJT, a simple survey was conducted to capture viewers' opinions. The purpose of the study is to find out the respondents' understanding of Virtual Tour 360 UPNVJT the respondents' outputs to see what features are most coveted or considered necessary. The survey aims to collect information on respondents' knowledge, experience in using the virtual tour, opinion on the design and audiovisual, and whether the virtual tour could attract prospective students. As in respondents' knowledge, the survey shows that 89.2% of respondents already know that UPNVJT provides a virtual tour feature on its official webpage. In response to the respondents' experience, Virtual Tour 360 UPNVJT is considered relatively easy to access, as stated strongly agreed by 51.4% of the respondents.

Regarding the Virtual Tour 360 UPNVJT, it can be summarized that the design is quite attractive and not confusing, supported by 59.5% of the respondents. Concerning Virtual Tour 360 UPNVJT audiovisual, 59.5% of respondents urge the importance of adding some audio formats to support the visual format, either through voice messages or live tour guide displays. 56.8% of respondents

strongly agreed on the images' clarity, while 54.1% were satisfied with the Zoom In and Zoom Out features.

Although the survey result is entirely satisfactory, much more is still needed to improve the Virtual Tour 360 UPNVJT about its delivery of the university's value, vision, mission, culture, strategy, and safety of its environment. The first improvement would be presenting the university's image to capture and represent its distinctive identity. The survey found that 81.1% of respondents agreed with this urgency, while 18.9% opposed it. It can be concluded that although there is a significant percentage of respondents against it, most respondents still agree with it. Meanwhile, the survey results show that 94.6% of respondents agree that Virtual Tour 360 UPNVJT can improve the image of UPNVJT. This percentage indicates that almost all respondents agree that Virtual Tour 360 UPNVJT is an integral factor of UPNVJT's branding, digital marketing, and means of community assessments, both domestically and internationally. Finally, the survey also contains data on respondents' opinions on how Virtual Tour 360 UPNVJT can increase students' inclination to enroll at UPNVJT by positioning themselves as prospective students. 43.2% of the respondents strongly agree, 45.9% agree, and 10.8% feel normal about their inclination to enroll in UPNVJT.

Conclusion: Virtual Tour's Essential Features and UPNVJT's Internationalization Opportunities

Based on information compiled in previous chapters, it can be concluded that virtual tour features of the Global Top Ten HEIs have been equipped with complete essential features to attract viewers. Features presented vary, such as a virtual tour accompanied by an audio guide chaperoning a virtual trip around campus. However, Asia's Top Ten HEI has yet to implement these features thoroughly. Some HEIs still have not utilized virtual tours, but the official webpage presents pictures of buildings and important places around campus. Every virtual tour offered by the HEIs observed has been proven to be flexible, in the sense that the virtual tours can be accessed anytime, anywhere, and provide essential information the viewers need. It also refers to how easy the virtual tour is to operate. Some of the virtual tours also displayed human visages, one of which is the existence of tour guides. In addition, the presenter of the virtual tour navigation guides can also be displayed directly on the virtual tour screen, creating an atmosphere that feels like being guided by a campus representative in real-time. All of the virtual tours have also been regarded as successful in representing campus' values and distinct identities that would be beneficial in reassuring prospective students. Particularly on the assessment of Virtual Tour 360 UPNVJT, it can be summarized that UPNVJT needs to improve to engage viewers better. Primary features such as explanations on various sites, tour guides, scheduled tours, and live chat must be presented. As mentioned before, it is vital to engage viewers better as most likely viewers would be prospective students or other possible foreign partners. Tour guides and explanations, campus tour schedules, and live chat are two-way communication representing UPNVJT's values, missions, goals, strategies, cultures, activities, and, most importantly, the safe and friendly environment that pursues

education. Furthermore, the complete virtual tour would allow UPNVJT to engage with a foreign partner for further cooperation, thus creating more internationalization opportunities.

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