ARTICLES

A REVIEW ON CURRENT SITUATION OF THE EXISTING VIRTUAL SPACES

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ABSTRACT

This paper is aiming to study the current situation of the existing virtual space in the market in order to find out the demands of virtual spaces in our society based on the comparison between the advantages and disadvantages of virtual spaces. An analytical review on the selected articles will be carried out through snowball review technique to gain better comparison of the pros and cons of the virtual spaces from various perspectives by different authors. Besides, the authors will also observe the needs, demands and rationales of developing virtual spaces according to its functions and contributions in different fields, especially in art education and tourism. The targeted articles are selected based on the mutual discussions regarding the advantages and disadvantages of the existing virtual platforms by Alawad et al. (2015), Burton (2010) and Eardley et al. (2016).

1.0 INTRODUCTION

A virtual gallery and museum can be defined as an organised and systematic collection of featured objects over multimedia which are accessible to offer flexibility to audiences for communication regarding their needs and interests (Alawad et al., 2015). Generally, virtual space has been widely used as one of the technological visual approach in the field of art education and tourism which enables ones to present their artworks or products through websites in form of virtual gallery or virtual museums. This allows the visitors to visit and explore through the presented objects on their websites virtually as if they are visiting in reality. As the extreme high pace of the technology grows, the inventions of virtual space has become more advancing and friendly using at the same times as the audiences nowadays are able to access an exhibitions through mobile applications anytime and anywhere instead of browsing websites like before. The conversion of a web-based virtual space into mobile applications also has been a popular platform for most of the emerging artists or art students in order to boost the engagements of audience. In additions, the audiences also able to accomplish explore, learn, examine and interact with digital form of artworks or artefacts within the environment of single or multiuser without any restrictions in terms of time and space.

However, the subjects or topics related with virtual spaces are still lack of professional study among the researchers or educators regardless in field of arts or information and communications technology (ICT). There are not many articles with related subject has been discussed and published. The reason of choosing the articles by Alawad et al., (2015), Burton (2010) and Eardley et al., (2016) as main articles to be studied and referred is these articles are the most significant articles that can be searched publicly. Besides that, these three main articles also are the latest publications which related with the targeted topic in this five year. The structures of the discussions and idea proposals are mostly up to date, brilliant and providing the readers clean overviews and different perspectives or extra knowledge as well. Most importantly, these chosen articles are discussing mutual topic which includes the advantages and disadvantages of the existing virtual platforms. This would allow the author to compare and contrast the strengths and weaknesses of a virtual platform in different fields and disciplines regarding different perspectives and ideas by these authors as well. At the same time, the author will be able to analyse the demands and needs to improvise the features and functions of the existing virtual spaces in our life.

2.0 ANALYTICAL REVIEWS ON SELECTED ARTICLES
This chapter will review and discuss the selected articles which related with the advantages and disadvantages of the existing virtual spaces. This chapter is expected to conclude the rational of the existence of virtual spaces and the demands of enhancing the development of virtual space in terms of its functions and features. Besides, this chapter will also reveal the potentials of virtual space in different fields and disciplines.

2.1 Beyond Geographical and Cultural Barriers: The Concept of a Virtual Gallery for Arts Designs and Architecture in Arab Saudi

This article is expected to examine and analyse the advantages and disadvantages of a virtual gallery among Saudi Arabian schools of higher educations in arts, designs and architectures which organise exhibitions frequently. The methodology that has been utilised in this article includes comparative research methods. The authors are attempting to reach a summary or conclusion beyond single cases and subjects. The authors not only analyse and explain but also compare the advantages and disadvantages of the targeted objects. The results after the analysis of the pros and cons of a virtual platform not only enable the authors to make overall conclusion but also lead to the solution of proposing a better development idea according the insufficiency of the existing virtual platform that we have today. This could also enable the creators to build better quality of virtual platform which could contribute more in various fields and disciplines. Besides, the implementation of virtual gallery also very important in the field of art and design in order to offer wider collaboration (Lu, 2008), creation (Burton, 2010), teaching or learning process (Carmo & Claudio, 2013) and enrich scholastic or entertainment or understanding (Dede & Ketelhut, 2003).

Table 1 indicates the results or findings by the authors regarding the highlighted advantages and disadvantages of the existing virtual platforms.

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase degree of interaction in manifold</td>
<td>Possibility of misleading artifacts</td>
</tr>
<tr>
<td>Ability to overcome spatio temporal constrainta</td>
<td>Threat of deserialisation of learners</td>
</tr>
<tr>
<td>More potentials instead of limitations</td>
<td>Absence of efficient evaluation tools</td>
</tr>
<tr>
<td>Instant changes are available</td>
<td>Risk to long term vision</td>
</tr>
<tr>
<td>Commercial and marketing abilities</td>
<td>Lack of reliable research findings</td>
</tr>
<tr>
<td>Increase users’ satisfaction and experience</td>
<td>Technical obstacles</td>
</tr>
<tr>
<td>Improve learning performance</td>
<td>Required updated programming knowledge</td>
</tr>
</tbody>
</table>

They concluded that the technology of the development of virtual gallery possess the ability of offering greater flexibility in terms of learning, discussing, marketing, interactions, learning, sharing and critiquing. The development of virtual space not only able to solve the problems of geographical barriers but also enable to decrease the cultural barriers among the students in Saudi Arabian. This technology can benefit the local female students who could not interact with male students due to their local cultural barriers in physical environment. Therefore, the development of virtual spaces is considered as demanding especially in the field of arts and higher educations.

2.2 Web-Based Student Art Galleries

This article is expected to discuss and describe several criteria which related to web-based student art galleries, which is a form of virtual gallery by using the technology of web accessing. In Burton’s discussion, he also highlighted the benefits of exhibiting virtually. He did not elaborate much on his research methodology. Instead, he works on more descriptive statements which related to web-based student art galleries.

According to Burton, searching a good venue to exhibit or showcase can be as difficult for certain community in different age range. He discussed and revealed the potentials and advantages that a virtual space could contribute in our society. Besides, Burton also mentioned that there are many educators whom specialised in field of arts and designs have discovered
that the technology that we have today could generate a virtual platform which enables the artists to present their artworks largely unfettered in size, space and access. Unlike the limitation of spaces in a conventional gallery that may restrict the number of exhibited artworks.

Besides providing limitless virtual spaces for artworks exhibition, the existing technology also enable ones to decide whether to set their artworks publicly or limited only for certain visitor by password access. In other words, a virtual exhibition through web access not only enable ones to project their artworks to the entire world, but at the same time also could offer protection in terms of security and privacy issues. Figure 1 as following indicates the advantages of web-based student art galleries which organised by Burton in his article in year 2010.

revealed the potential of virtual platforms in enhancing the experiences of the audiences nowadays. Figure 2 as following summarises the advantages of virtual spaces that mentioned by the authors in their published article in year 2016.

2.3 An Ontology Engineering Approach to User Profiling for Virtual Tours of Museums and Gallery (Eardley et al., 2016)

This article is aiming to describe a study on the development of a hierarchical ontology for maintaining and producing personalised profiles in order to improve the visitors’ experience in virtual art galleries and museums. The authors also mentioned the benefits of virtual spaces in various field especially in field of arts and tourisms.

In the end of the article, they concluded that the visitors’ experience in virtual galleries and museums can be enhanced or enriched by customisation or personalisation due to the understanding of their visitor profile which enables the content to be adapted according to their preferences in terms of their interests, skills and habits. This statement also

2.4 Chapter Summary

This section summarises the reviewed articles in a literature matrix which indicating the important contents of the selected published articles by different authors. The literature matrix is shown in Table 2 as following:

Table 2. Summary of Literature Review on the Advantages of Virtual Space in Three different Articles
<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Title</th>
<th>Purpose</th>
<th>Advantages of Virtual Space</th>
</tr>
</thead>
</table>
| A. Alawad, M. Aljoufi, A. Tiwari, L. Dagh estani | 2015 | Beyond Geographical and Cultural Barriers: The Concept of a Virtual Gallery for Arts, Design & Architecture Schools in Saudi Arabia | To examine the advantages and disadvantages of a virtual gallery as a substitute for the higher education in Arts, Design & Architecture which located in Saudi Arabian | • Increase degree of interaction in manifold  
  • Ability to overcome spatio temporal constraint  
  • More potentials instead of limitations  
  • Instant changes are available  
  • Commercial and marketing abilities  
  • Increase users’ satisfaction and experience  
  • Improve learning performance  
  • Effortless promotion  
  • Extend the longevity of the temporary or unique exhibiton  
  • Unlimited access to the audience globally  
  • Customisation and personalisation  
  • Variety of useful features |
| D. Burton                   | 2010 | Web-Based Student Art Galleries                                     | To reveal the benefits of exhibiting online in various web-based gallery formats and the alternatives to start an online gallery, also, to discuss some student privacy and protection issues. |                                                                                                                                                          |
| W. A. Eardley, D. E. Ashe, B. D. Fletcher | 2016 | An Ontology Engineering Approach to User Profiling for Virtual Tours of Museums and Gallery | To describe the study of the development of a hierarchical ontology for producing and maintaining personalised profiles to improve the experience of visitors to virtual art galleries and museums. |                                                                                                                                                          |
3.0 DISCUSSION

Based on the comparative review of the selected articles, there are several mutual discussions regarding the contributions of virtual space from different perspectives in terms of its advantages and disadvantages. Referring to Table 2, we can see that Alawad and Burton is actually composing a lot of mutual contents in terms of the advantages of a virtual space. For instance, Alawad and Burton agreed that a virtual space could provide more possibilities in terms of exhibitions’ space as a conventional venue will faces obstacles such as insufficient space to install the exhibited objects. This problem might influence the aesthetics of the overall exhibitions or showcases as the curator might decide to congest every exhibit in an extremely limited space, which also would lead to crowds. This situation will also affect the audiences’ experience or appreciations as well. As mentioned in Alawad’s article, he stated that a virtual space could enhance ones’ satisfaction and provide better experience. Besides, Alawad and Burton also highlighted that a virtual space contributes a lot in terms of instant changes, frequent updates and interactions as well. The technology of virtual space enables the audiences to visit and experience the exhibitions without involving themselves physically. Additionally, the audiences also able to interact with the artists or the related authorities through the comments or feedback system that available in the virtual exhibitions developed. Virtual space also allows the curator or artists to make urgent changes through related websites or virtual platforms.

Besides the common contents among Alawad and Burton, we can also see similarities between the articles by Alawad and Eardley in terms of commercial and marketing abilities. They strongly believed that a virtual platform has the potential to extend the artworks or objects visibility globally as well as increase the audience’s engagements. Besides that, the technology of virtual platform that we have today also allows the related authorities to minimise the costs. This is also synchronised to one of the contents composed by Burton in his article. Burton and Eardley also agreed that a virtual platform enables unlimited and better access to the user globally. In this case, virtual space could boost the amount of visitor with minimum cost as they do not have to spend too much on physical marketing. Instead, they could just spread latest news and information all over the social medias or websites available. Additionally, virtual spaces enable the users to visit the exhibitions without spending their time and money to involve themselves to the real occasions. In line with Artsonia (2014), virtual platform obtained complete commercial abilities as several websites allow the virtual marketplaces to merchandise the services or objects through cyberspace.

From the papers reviewed, it is undeniable that the contributions of a virtual techniques in the society nowadays (Weissblueth & Nissim, 2018). According to Jones (2019), he criticised that the virtual space should be seen as a method into a museum as an alternative to the real one. Yet, there are still some arguments stated that the existence of virtual gallery or museum could never replace the conventional exhibitions. The emergence of virtual space has been widely criticised as it would leads to various problem such as the risk of deserialization of learners (Winslow, 1996), lack of effective evaluation tools (Littman, 1996), vision tiredness (Sánchez et al., 1997), massive impacts on task-centered learning (Grove et al., 1996) and so forth. Yet, these challenges mostly have been solved due to the extremely advancing technology that we have today. The results can be observed from the existing virtual exhibitions that have been successfully providing a convenient platform to satisfy their audiences and artists as well. Some of the artists even utilise virtual spaces as a platform to promote their popularity, especially the new emerging artists.

However, not every problem can be solved by only using the available technologies that we have today. There are countless technical obstacles that we have to overcome (Ryan, 1996). For instance, how do we supposed to know that a virtual gallery or museum is accessible from different programmes, operating systems and devices (Alawad et al., 2015). The developers and the related authorities will have to make detailed considerations that whether the virtual exhibitions presenting the same quality and providing the same experiences for their users whom accessing from different devices. Besides, as the pace of the technology grows in this era, a virtual exhibition requires frequent maintenance in terms of professional programming to ensure the platform independence and prevent it from outdating as well. In this case, a long term technically supports is crucial to maintain a good quality virtual space.

*Different Colours referring to the similar contents by the authors from different published articles.
4.0 CONCLUSION

To conclude, the emergence of virtual space is exactly a demanding platform in this modern era due to its advantages and contributions that we have analysed from the selected articles above. Yet, issue such as technical obstacles might be a major challenge which impacts the development of virtual space. Therefore, these related issues should be studied in more detailed in order to extend the possibilities or developments of virtual spaces. Besides, this related studies also need to be fulfilled so that the implementations and integrations of virtual reality with physical exhibits can be completely accepted among the societies in variety fields and disciplines.

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