

A Preliminary Study on the Visual Outcome of Hybrid Animation

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Abstract *Due to the technological advancements that exist in our modern era, there are numerous software and systems being developed to produce a specific art style of an animation. Throughout the years, since the first animation was created in 1908 which was in the traditional hand-drawn style, the list of animation genres is becoming more diverse, bringing in new approaches that could significantly manipulate the visual outcome of the characters, environment, objects and more. The subject of animation usually focuses on the storyline such as the plot, and most audiences believe that this is the most vital part of a successful animation. While that may be true, what many tend to ignore is the impact of the art style and visual appeal that exists in animation.*

In this article, the author dove deeper into the topic to fully understand if the combination of 2D and 3D animation elements will create a more visually appealing outcome. In addition to that, the author seeks to further explore and analyze the methods and processes of combining the two mediums. The researcher will also delve into the software and systems used to achieve either 2D or 3D style animations. Findings from the methodologies will be discussed throughout the article in detail.

Key words *Hybrid Animation, Visual Style, 2D Animation, 3D animation*

Introduction

In hybrid animation, 2D and 3D animation elements are combined to produce a particular visual outcome. The characters in the animation could be in two-dimensional whereas the environment could be in three-dimensional space. 2D elements such as lines might exist in a 3D setting as well. With the existence of hybrid animation, there is a way to combine both hand-drawn and computer-generated elements in an animation. The result of the combination of 2D and 3D styles could be stunning. Successful and popular animated films such as Spider-Man: Into the

Spider-Verse and the short animated film Paperman proves there is a high interest for 2D style in 3D animations (Kivistö, 2019). In terms of methods and techniques in achieving this type of animation, there are various approaches on how to implement the technique of combining two-dimensional and three-dimensional styles together.

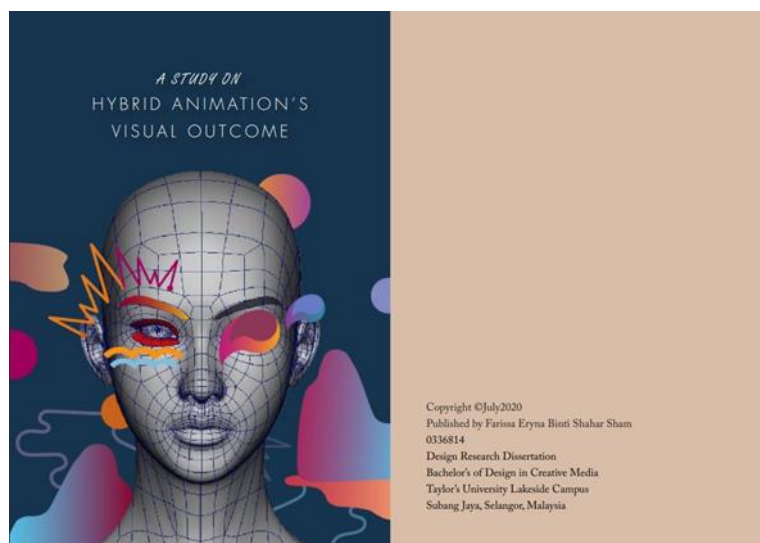


Figure 1: A Preliminary Study on the Visual Outcome of Hybrid Animation Dissertation by Farissa Eryna (2021)

This article's purpose is to explore and analyze various aspects of hybrid animation as well as to focus on the methods and processes of it. The author chose this specific topic within her specialty which is animation and visual effects, because she believes that hybrid animation is an interesting and rising topic in the animation profession, an area which she wishes to work on in the future. Due to the dearth of research done on this field by other experts and students, she has decided to further study and explore this particular topic. To study the topic at hand, a research problem, questions, and objectives have been established. The author will critically review various journal articles in the literature review section and further explain the mixed-methods conducted during this study in the methodology section. The findings and data gathered will be intensively and comprehensively evaluated. In the discussion section, the author will present the results drawn from her research, followed by a final conclusion for this study.



Figure 2: Spiderman: Into the Spider-Verse Poster

Problem Statement

In the past, prior to the development of computer-generated imagery (CGI), animation was a form of art. "Foremost among the technological developments that have affected animation in the past quarter-century is the merging of computing and image-making technologies" (Stabile, 2013).

According to Tina O'Hailey, "Hybrid animation is the combination of two-dimensional (2D) and three-dimensional (3D) animation media. 2D and 3D animation media can be used, and are used, independently of one another" (O'Hailey, 2010).

Animation movies have moved from hand drawn to computer generated 3D animation over the last few decades. The decline of 2D animation elements in the film industry is apparent as with every new animated film that is released, audiences expect a higher performance of CGI renderings (O'Hailey, 2010). 3D animation is best at portraying the feel of realism in imagery (Schoonen, 2015). However, the rise of 3D does not mean the end of hand-drawn animation. Hybrid animation is achieved by giving a 2D appearance to a 3D object or by combining them (Mohammadi, 2019). "To find a way to not leave the drawings behind in the final image," (Kahrs, 2012, 1:21). Therefore, this article will present the processes and methods on how 2D animation and 3D animation can be combined using existing 3D animation technologies that are available today.



Figure 3: Klaus (2D and 3D animation combined)

Methodology

The author intends to further analyze the objectives, “To learn if combining 2D animation and 3D animation elements will create a more visually attractive outcome” and “To explore the process and methods of combining 2D animation and 3D animation”, the relevant and appropriate methodology chosen will be a mixture of qualitative and quantitative methods. This involves creating a questionnaire based on questions focusing on hybrid animation’s art style and its appeal, an expert interview focusing on the art style and appeal of hybrid animation as well as the technique of combining 2D and 3D animation. This will also be followed by a visual analysis focusing on the different types of art styles (2D/3D and Hybrid animation).

Quantitative Method: Questionnaire

The author’s questionnaire focused on collecting the different opinions and perspectives of what the participants think about hybrid animation’s art style and visual appeal. The number of participants that the researcher had garnered was 200. The participants targeted for this questionnaire were “animation enthusiasts” and people who watch animation either frequently or casually. A link to an online survey made by the author was sent out to the researcher’s friends/acquaintances who were known to be animation enthusiasts or by recommendations of others who personally knew them. Furthermore, the survey was also shared on an online animation forum such as “Reddit”.

Qualitative Method: Expert Interview

The interview mainly consists of questions regarding the art style and appeal of hybrid animation. It was conducted online via Microsoft Outlook. There were a total of 7 questions created which were all open-ended questions in order for the researcher to have a more clearer and thorough understanding of the interviewee’s opinions and tips regarding the combination of 2D and 3D animation’s visual outcome (first objective). One of the questions was focusing on the technique of combining 2D and 3D animation which is the second research question for this study.

Findings and Discussion

Through the questionnaire and visual analysis conducted by the author, the derived conclusion affirms that hybrid animation does create a more visually appealing and unique outcome. Most of the participants that participated in the questionnaire managed to give their detailed answers on whether combining 2D and 3D animation will create visually appealing outcomes. The majority of the participants stated that the combination of two mediums produces a captivating and unique visual outcome due to the presence of two mediums.

Furthermore, the author had asked the participants which art style (2D, 3D or hybrid animation) is the most visually appealing and why the participants have chosen that particular art style. As evident in the data collected, a majority of the participants said that the combination of both mediums is very interesting to watch and the mixture of both modern and traditional style of animation is “great”. Some of the participants had also

mentioned that with two types of medium existing in an animation, the freedom of expressing the emotions of characters or the story itself is achieved better. From the sections mentioned, the author deduces that the visual outcome of hybrid animation is more visually attractive and has received positive comments and responses from participants.

The data collected from participants that participated in the visual analysis as well as the expert interview shares similar comments to the respondents' comments in the questionnaire. The participants affirmed that hybrid animation is very interesting and looks less artificial compared to 3D animation. The participants' have also suggested that the integration of the 2D elements on the 3D models or of the 2D elements in the 3D environments should be smooth, noticeable but not distracting. Similarly, the interviewee mentioned that the combination can produce a very engaging outcome if the elements are well incorporated and done well. The interviewee also stated that in order to create something interesting, contrast must exist. Having contrast in elements such as colours, movement and more will definitely make an animation more captivating for the audience.

In Appendix 2, the author had conducted an online interview with an experienced animator to gain more in-depth answers regarding this topic. From the data collected, Mr Faizal mentioned that he combines 2D animation with 3D background and VFX. The 2D animation is used as reference and guide for the 3D animation as well as the VFX. Similarly, an article reviewed earlier in 2.3.1 titled "2D/3D Hybrid Character Animation on "Spirit"" (Cooper, 2002) delves into this subject. The author stated that a 3D animated version of the character was printed to be used as reference. To transition from 3D to 2D style, the animators started by animating the whole shot in 3D animation.

Evidently, it can be seen that the method of combining 2D and 3D animation together requires both of these mediums to match therefore a reference point or a rough guide is necessary during the animation work production.

Conclusion

In a nutshell, it is evident that the visual outcome of hybrid animation has successfully been proven to produce visually appealing outcomes. Implementing the technique of integrating 2D and 3D animation together has tremendous potential for animated films as it could portray unique and captivating visuals for audiences. It is a mixture of both modern and traditional animation which could be refreshing and exciting. The author has come to the conclusion that the technique of merging two mediums together would undoubtedly create a visual outcome that is attention-grabbing if it is well executed. The findings from the author's questionnaire and visual analysis proves that hybrid animation's visual outcome is indeed appealing. The results and responses from the data collected by the author have supported these conclusions and effectively answer the research objectives of the study.

The author has gained new and useful knowledge about hybrid animation throughout this 14 weeks of journey on this specific topic. Journal articles that the researcher had reviewed helped tremendously for the researcher to have a deep understanding of this particular field. Despite the limitations faced by the author while conducting the research methods, the responses from the participants managed to strongly answer the researcher's questions and the results from them were more than adequate.

As more animated films are being produced, the author really hopes and greatly urges others interested in this field to carry out further studies on hybrid animation in the future. The author also hopes that this article will be beneficial to future projects.

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Picture Credits

Figure 1: A Preliminary Study on the Visual Outcome of Hybrid Animation Dissertation by Farissa Eryna (2021)


Figure 2: Spiderman: Into the Spider-Verse Poster <https://moviesanywhere.com/movie/spider-man-into-the-spider-verse-2018>

Figure 3: Klaus (2D and 3D animation combined) <https://beforesandafters.com/2019/11/14/heres-what-made-the-2d-animation-in-klaus-look-3d/>

Appendices

Timestamp	1) Which age group do you watch 2) How often do you watch 3) Do you watch an anim 4) What is your favourite 5) Based on your answer 6) Does the visual appea 7) In your opinion, which 8) Based on your answer 9) Based on the example 10) Between these three 11) Between these three
6/29/2020 21:07:38 50 and above	Not very often (Once or t Yes Spirited away You enjoy the storyline of Yes 3D animation (Toy Story Very close to actual 2 3D animation 30 animation
6/29/2020 21:10:51 20-29	Very frequent (Everyday) Yes Nanobotonuts You like the choice of col Yes Hybrid animation (Spider Much more detailed pictu 3 Hybrid animation 30 animation
6/29/2020 21:11:06 20-29	Frequent (Twice or three Yes Spirited Away by Studio I You prefer that particular Yes Hybrid animation (Spider When there's 2d and 3d i 2 Hybrid animation 30 animation
6/29/2020 21:21:26 50 and above	Moderate (Once a week) No Oddbods You like the choice of col Yes Hybrid animation (Spider Ease to the eye and look 3 3D animation 20 animation
6/29/2020 21:21:56 50 and above	Not very often (Once or t No Toy Story You enjoy the storyline of Yes 3D animation (Toy Story Looks more realistic 2 3D animation 30 animation
6/29/2020 21:22:10 15-19	Not very often (Once or t Yes ratatouille You like the choice of col Yes Hybrid animation (Spider colour combination and c 3 3D animation 30 animation
6/29/2020 21:28:19 20-29	Very frequent (Everyday) Yes Frozen You enjoy the storyline of Yes Hybrid animation (Spider It attracts my attention m 3 3D animation 30 animation
6/29/2020 21:39:30 50 and above	Not very often (Once or t No Spirited away, superman You enjoy the storyline of Yes 2D animation (Peter Pan Simple and classic anim 2 2D animation 30 animation
6/29/2020 21:40:47 20-29	Very frequent (Everyday) Yes Wreck it Ralph You like the choice of col Yes Hybrid animation (Spider The experience is better 3 3D animation Hybrid animation
6/29/2020 21:40:51 50 and above	Moderate (Once a week) Yes Lion King You prefer that particular Yes 3D animation (Toy Story Very entertaining 3 3D animation 30 animation
6/29/2020 21:43:27 20-29	Not very often (Once or t Yes Coco You prefer that particular Yes Hybrid animation (Spider Visually stunning 3 3D animation 30 animation
6/29/2020 21:43:51 20-29	Moderate (Once a week) Yes Monsters Inc You like the choice of col Yes 3D animation (Toy Story Less confusing as comp 2 Hybrid animation 30 animation
6/29/2020 21:49:51 50 and above	Not very often (Once or t No Lion King You prefer that particular Yes 3D animation (Toy Story More realistic in life 2 3D animation 30 animation
6/29/2020 21:50:11 15-19	Not very often (Once or t Yes Upin dan ipin, barbie, bol You enjoy the storyline of Yes 3D animation (Toy Story the animation look real 1 3D animation 30 animation
6/29/2020 21:55:03 20-29	Moderate (Once a week) Yes Spongebob and adve You like the choice of col Yes Hybrid animation (Spider Its aesthetic 3 Hybrid animation Hybrid animation
6/29/2020 21:55:22 50 and above	Frequent (Twice or three No Amazing Awang Khentir You enjoy the storyline of No 2D animation (Peter Pan Simpler Do not waste tin 1 3D animation 30 animation
6/29/2020 21:57:32 15-19	Frequent (Twice or three Yes spirited away, coco You enjoy the storyline of Yes Hybrid animation (Spider Its more realistic and look 3 3D animation 30 animation
6/29/2020 21:58:30 15-19	Frequent (Twice or three No Spider man You enjoy the storyline of No Hybrid animation (Spider - 3 3D animation 30 animation
6/29/2020 22:00:05 20-29	Not very often (Once or t Yes Kungfu Panda You enjoy the storyline of Yes 3D animation (Toy Story Cause it looks more app 2 3D animation 30 animation
6/29/2020 22:00:24 20-29	Not very often (Once or t No Meet The Robinsons You enjoy the storyline of No 3D animation (Toy Story The colours are more ani 3 3D animation 30 animation
6/29/2020 22:00:42 15-19	Frequent (Twice or three Yes spirited away, mob psych You enjoy the storyline of Yes 3D animation (Toy Story Its not quite flat but its no 3 3D animation 30 animation
6/29/2020 22:01:23 50 and above	Not very often (Once or t Yes Cannot remember You prefer that particular Yes Hybrid animation (Spider Lively 2 3D animation 30 animation
6/29/2020 22:02:34 50 and above	Frequent (Twice or three No Disney, boboiboy, pikar You like the choice of col Yes 3D animation (Toy Story Appealing to me 2 2D animation 30 animation
6/29/2020 22:02:49 50 and above	Moderate (Once a week) Yes Upin dan ipin, madagascar You like the choice of col Yes 2D animation (Peter Pan I am old school... Let it cu 1 2D animation 20 animation
6/29/2020 22:05:03 50 and above	Not very often (Once or t Yes Toy story, beauty & the b You like the choice of col Yes 3D animation (Toy Story Looks real 3 3D animation 30 animation
6/29/2020 22:06:08 50 and above	Not very often (Once or t No I don't know You enjoy the storyline of No Hybrid animation (Spider It looks much alive 3 3D animation 30 animation
6/29/2020 22:06:13 15-19	Frequent (Twice or three Yes Garden of Words by Mak You like the choice of col Yes Hybrid animation (Spider Since I myself am studi 3 3D animation Hybrid animation
6/29/2020 22:06:20 20-29	Not very often (Once or t Yes Toy Story You like the choice of col Yes 3D animation (Toy Story Priddi 3 3D animation 30 animation
6/29/2020 22:07:25 20-29	Very frequent (Everyday) Yes Devilman crybaby You like the choice of col Yes 2D animation (Peter Pan It has a more original fee 2 2D animation 20 animation
6/29/2020 22:09:21 20-29	Very frequent (Everyday) Yes Animes, boboiboy, ejen A You prefer that particular Yes Hybrid animation (Spider Its kinda cool Very dyna 3 3D animation 30 animation
6/29/2020 22:09:42 15-19	Frequent (Twice or three Yes How to train your dragon You enjoy the storyline of Yes 3D animation (Toy Story Because it look like the is 2 3D animation 30 animation
6/29/2020 22:12:07 40-45	Frequent (Twice or three Yes Toyota, Akira, Grand day You prefer that particular Yes Hybrid animation (Spider CG animation is great bu 3 3D animation Hybrid animation
6/29/2020 22:13:04 20-29	Very frequent (Everyday) No Avatar the last airbender You like the choice of col Yes Hybrid animation (Spider Combination of both styl 3 3D animation Hybrid animation

Appendix 1: Spreadsheet of Answers From Questionnaire Respondents

 Andrew [inspidea Ooi <andrew.ooi@inspidea.com>](mailto:andrew.ooi@inspidea.com)
Wed 15/7/2020 5:56 PM
To: FARISSA ERYNA BINTI SHAHAR SHAM

Hi Farissa,

Thanks for providing the reference letter.

Please see the response provided by Faizal Wazir below. He's the Animation Supervisor at [inspidea](#).

Kind regards,
Andrew

Below is the list of questions.

1. In your opinion, what are your thoughts on hybrid animation?

It's a step forward towards creating a more unique storytelling medium. As we see more advancement in technology we would probably be seeing more and more of this style of animation not only for big productions but also independent animation works as well.
2. What do you like/dislike about hybrid animation?

I like the unique look it gives the animation it enhances both sides of 2D and 3D. In a predominantly 2D animation with 3D environments, the animation feels more rooted in reality. While in a predominantly 3D animation, the 2D animation elements give a bit of pop and surreal feeling.

Not to say a dislike, but more of a challenge is the difficulty not only in a technical sense but also a workflow or production sense. In terms of technicality one would need strong skills in both 2D and 3D to ensure that it works well. In terms of workflow is finding how to integrate these two elements together and where and how it should be used to help showcase the project.
3. Based on your experiences, what are your tips and tricks in making an animation more visually engaging and interesting?

Contrast helps create something more interesting. Same as how drawing requires contrast of straights vs curves to create an appealing pose. Having contrasting elements be it in design, colors, movement, etc will make an animation more attention grabbing.
4. What do you think makes an animation visually appealing?

Same as question 3, it's contrast. If we were to talk about animation just in terms of the movement of the character, having them move the same way, the same speed throughout feels slow and dull. But by adding contrast of fast and slower movements, we feel more engaged. The movements go through some highs and lows making it more appealing. This can be applied across all elements of animation.
5. As an animator, have you implemented or adopted this technique of combining 2D and 3D animation before?

Previously we had done a project where we had combined 2D animation with 3D background and 3D FX. The 2D animation provided a rough guide in which then the 3D animation would reference from for the fx. As for 3D backgrounds we used it mainly in extreme camera movements to give more depth and control.
6. What could be improved in hybrid animation for it to be more visually exciting and pleasing?

I feel that the ability to fool the viewer to think it's either or is something to be excited about. Spideverse comes to mind whereas when we first watch it we are never fully sure whether it's 2D or 3D.
7. In many aspects of animation production, which or what is the biggest factor in influencing the success of an animation?

Despite technical factors, at the end of the day animation is a storytelling medium. The story conveyed plays a major part in an animation's success. The medium be it hybrid or otherwise helps tell that story. Spideverse would be one of those rare cases where we remember more of how visually stunning it was compared to the story. But visual novelty will wear off as we become more accustomed to it. Similar when 3D animation first hit it big with Toy Story. But at the end of the day, most of us would remember how the story impacted us.

Thank you!

Appendix 2: Online Interview Response (Answers)

Graphic Design as a Tool for Change: Conservation of the Maldivian Culture Through Graphic Design

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31 Jan. 2022

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Abstract *The Maldives is widely known for its natural beauty, but what is less spoken about is its rich culture. Unless and until efforts are made to sustain it, aspects of the Maldivian culture will disappear with time. This research aims to study the utilisation of graphic design as a tool for change in context of the conservation of the Maldivian culture and is targeted towards Maldivians. The objective of this research is to better educate Maldivians about their culture through graphic design, to better conserve the Maldivian culture, to raise awareness on lesser-known aspects of the Maldivian culture as well as to aid Maldivians in gaining better appreciation of the local culture. To achieve the said objectives, data was gathered via online interviews and a Google Forms survey. From the data acquired, the researcher concluded that the lack of sufficient cultural education and resources on the Maldivian culture contributed to Maldivians lacking in knowledge of their local culture. However, there is evidently interest to learn more about it and that Maldivians have a growing sense of appreciation for their local culture. Apart from that, through the analysis of existing designs integrating the Maldivian culture, the researcher is confident that the application of Maldivian cultural elements in designs across various media is effective in the education and conservation of the local culture in the Maldives and that it can be used to shed light on lesser-known aspects of the Maldivian culture.*

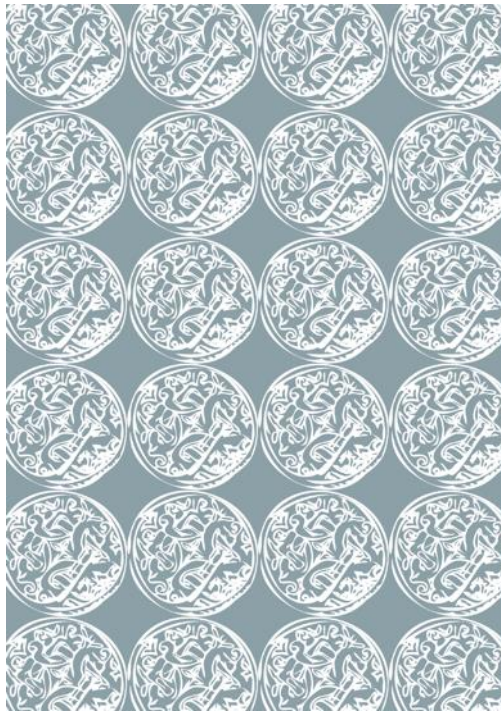


Figure 1. "Foih Gondi", a pattern inspired by Maldivian wood carving, by Mariyam Hanan As-ad (2020-2021)

Introduction

A people and a country cannot exist without culture. The lowest lying country in the world, Maldives, renowned for its natural beauty, is no different. Sculpted by notable influences from Africa, Arabia, India, Indonesia, Malaysia, Sri Lanka and even Persia (Travel Online Australia Pty Ltd., n.d.), the Maldivian culture is rich and vibrant. As with every other culture, continuous and persistent effort is required to sustain it. Otherwise, generations of

treasurable knowledge and values would dissipate, and lost cultural knowledge is often hard to retrieve. With respect to this conception, the purpose of this research is to study the utilisation of graphic design as a tool for change and as a means for the conservation of the local culture of the Maldives.

To begin investigating how graphic design can be used to contribute to the conservation of the Maldivian culture, the researcher recognises Graphic design as a tool for change with conservation of the Maldivian culture through graphic design as the research problem for this research. As described by Philip (2018), culture can now be seen as a growth process that differs between various communities and groups, considering the factors that make an individual community unique and Ding et al. (2020) stated that traditional culture mirrors customs, beliefs and the social environment. Furthermore, as described by Philip (2018) in *Exploring the Role of Culture on Graphic Design*; graphic design is a form of communication, indication and recording. As Aleshawie cited, in Bernard (2013), it was said that at its utmost efficiency, graphic design has the ability to shift culture and even impact a people's visual identity. Additionally, according to Yip et al. (2020); Meggs (1998) & Santoro (2014), graphic design is a medium of communication that utilises visuals and text to relay messages to a given audience.

After much observation, the researcher realised that this subject matter had often been understudied and therefore, hopes that this research is helpful for those looking to study more about Maldives and the Maldivian culture, as well as for those aiming to study the use of graphic design as a tool for change and in the conservation of culture.



Figure 2. "Loamaafaanu", a pattern by Mariyam Hanan As-ad (2020-2021)

Problem Statement

The idea of conservation is ingrained within culture, relaying a people's tangible and intangible history and identity (Hani et al., 2012; Davis et al., 2015; Atalan, 2018). However, as with every other culture, the conservation of Maldivian culture has hurdles to overcome. The introduction of tourism in 1972 helped elevate the standard of living through the foreign income it generated. Although this introduction brought many new threats to cultural conservation, mainly through modernisation, it is also key in preserving local culture; cultural tourism plays a major role in attracting more tourists (Richards, 2010).

However, this approach has a narrow target audience and is inefficient in educating the locals who are not involved in the tourism sector.

A recurrent medium used to facilitate confronting hindrances to culture conservation is the creative industry (Atalan, 2018). As categorized by UNESCO (2005, as cited in Hani et al., 2012), advertising, crafts, design and publishing are subdivisions of the creative industry (Hani et al., 2012), and each division makes use of graphic design, making it a potent tool for the conservation of culture.

Graphic design is all around us. As a result, it can facilitate reaching a wider audience in educating locals of the Maldivian culture, which in turn leads to increased conservation. By researching why Maldivians lack knowledge of their own culture and identifying if there is an inadequacy in the education Maldivians receive with respect to their local culture, along with studying existing works done to conserve the Maldivian culture through graphic design and how can graphic design be used as a tool to enrich Maldivians' knowledge of their culture, the researcher believes that measures can be taken to better preserve the Maldivian culture. Therefore, the research questions identified for this research were:

1. Why do Maldivians lack knowledge of their own culture?
2. What are some of the existing works done to conserve the Maldivian culture through graphic design?
3. How can graphic design be used as a tool to enrich Maldivian's knowledge of the local culture?

Moreover, through this research, the researcher aims to shed light on lesser-known aspects of the Maldivian culture and educate Maldivians about their local culture, to help them gain a better understanding and appreciation of it. As Atalan (2018) stated, "People, who have a consciousness of conservation culture and consciousness of cultural heritage, will be able to both protect today and the past."



Figure 3. "Bambukeyo", a pattern based on the traditional Maldivian snack, 'thelli bambukeyo' (fried breadfruit), designed by Mariyam Hanan As-ad (2020-2021)

Methodology

To obtain the required data for this research, two methodologies were used; online interview and survey. Firstly, to better understand the thinking and purpose behind the incorporation of Maldivian cultural elements in designs by Maldivian designers, to gain in insights into whether they believe this incorporation is important and if they believe Maldivians appreciate their culture and to study existing works of design that integrate Maldivian culture in them, 7 persons and 2 brands were interviewed through email. The selection of interviewees included artists, graphic designers, illustrators and two Maldivian brands that produced designs inspired by the Maldivian culture (refer to Appendix I).

Secondly, an online survey was conducted via Google Forms, for a period of 9 days, from 06th November 2020 to 14th November 2020, and was targeted towards Maldivians only. A total of 9 questions, each compulsory, were presented, (refer to Appendix IV), with the introductory question asking the participants to state their age. The next question was aimed at identifying 5 most common things Maldivians associate their culture with. The following questions were about how familiar Maldivians are with their culture, how well they understand it, if they are keen on learning more about it and the justification for their answer, as well as if they believed that Maldivians' lacked understanding of the local culture in Maldives and what they would have believed could be the reason for this. Last but not least, the participants were asked to state their opinion on using graphic design as a tool for the conservation of Maldivian culture and for the enrichment of Maldivians' cultural knowledge with respect to their own culture.

Findings and Discussion

Yip et al. (2020) indicate that in art and design education, cultural identity is significant in producing designers who are confident, observant, and respectful of themselves and the society they find themselves in and that studies exhibit that education plays a part in art, design and graphic design. Yip et al. (2020) also mention that graphic design education leads the way for students to learn from cultural art forms in their environment.

When asked about what drives the interviewees to incorporate Maldivian cultural elements in their designs and illustrations, Aima (personal communication, 07th November 2020) and Maisha (personal communication, 12th November 2020) both cited the realisations they had whilst living abroad which had influence. Khathoon Rasheed of Maskula (personal communication, 05th November 2020) and Sumi Haleem of Funaos (personal communication, 09th November 2020) conveyed that both brand's designs drew inspiration from and are a celebration of the underwater life of Maldives. Additionally, Aima Musthafa and Hawwa Lahfa (personal communication, 14th November 2020) stated that they were fascinated by their culture and this interest was displayed in their work in the form of the embedded cultural elements from the Maldives. Apart from that, Emau Ahmed Saleem (personal communication, 15th November 2020), Hawwa Lahfa, Iman Rasheed (personal communication, 07th November 2020), Mohamed Sathom (personal communication, 13th November 2020) and Saisa Saeed (personal communication, 14th November 2020) expressed that there was demand from Maldivian clients for the integration of cultural elements in the designs produced. In addition, the interviewees also believed it was important to incorporate the Maldivian culture in designs and illustrations created by local creatives in Maldives.

Furthermore, from the designs provided by interviewees (refer to Appendix III), the most common cultural element identified was the Maldivian traditional attire, the libaas was the most frequent. Concomitantly, it was also the most common answer amongst the survey participants when asked what they associated the Maldivian culture with; with 40 individuals, out of 102 participants, citing it. Hence, it was inferred that there was a positive relationship between the cultural elements that appear most often in designs produced; integrating the Maldivian culture and the aspects of Maldivian culture that locals related with most. Additionally, the data gathered by the researcher confirms that graphic design can in fact function as a tool to enrich and increase Maldivians' cultural knowledge and educate Maldivians on lesser-known aspects of the Maldivian culture.

Moreover, 95 of the 102 survey participants, making up 93.1%, answered that Maldivians lacked understanding of their local culture. Two common reasons given for the lack of awareness and interest was modernisation and westernisation. However, the most frequently stated rationale was the insufficiency of cultural education that Maldivians have

received. According to Putz-Plecko (2008) cultural education is the advancement of cultural knowledge, creativity, and intercultural understanding. In addition, as stated by Kapur (2019), who cited Basis for Cultural Education (2017), cultural education is important in transferring skills, knowledge and values, promoting historical awareness and aids in developing an individual's identity whilst fostering creativity and a curious frame of mind that are beneficial throughout life. Therefore, it is important to find a sustainable solution to increase Maldivians' cultural education, not just for the enrichment of their cultural knowledge, but also to ensure generations of Maldivians' customs, values and ways of life are passed onto upcoming generations. As remarked by Mohamed Sathom in his interview, in present day Maldives, there are only few who are truly educated in the art history of the country and few who possess knowledge of the meaning behind traditional Maldivian designs, making the conservation of the Maldivian culture even more crucial.

Conclusion

In conclusion, the researcher confirms that Maldivians lack knowledge of their culture, with the lack of cultural education being the most significant reason. Nevertheless, despite not being well educated about the local culture, Maldivians still have an interest in learning more and do have a sense of appreciation for their culture. Maldivian designers and illustrators do attempt to integrate cultural elements in their creations and this inclusion reflects positively in the perception of culture amongst Maldivians.

Moreover, the researcher establishes that with the progression of time, it is essential to adapt the application of the Maldivian culture for it to be contemporary and relatable, without losing its essence, in order to sustain it. For instance, the usage of cultural elements in printed surface design, such as that of the cap designed by Emau Ahmed Saleem, as seen in Appendix III, is a contemporary application of the Maldivian culture in an untraditional medium.

Nevertheless, a limitation of the research was that when conducting the interviews, the researcher did not ask the interviewees to differentiate designs that were created as commissioned work and those which were created for personal projects or where or how the designs were utilised. Therefore, the researcher was unable to study, in depth, how the impact of Maldivians' exposure to designs integrating Maldivian culture; is in their perception of the local culture of Maldives and if the locale of design utilisation impacted how they perceive their culture.

Furthermore, the researcher recommends further expanding research into use of graphic design as a tool for change in the context of the conservation of the Maldivian culture, but to not only limit the research to Maldivians and Maldivian designers. As Maldives is known for its natural beauty and is an international hotspot for tourism, it is highly probable that international researchers may take interest in the Maldivian culture. Hence, it is advised to compare and contrast how the Maldivian culture is perceived amongst locals and non-locals, and to collaborate with international researchers to further study the conservation of the Maldivian culture, with design as a medium and tool for change.

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Appendices

Appendix I - Interviewees

The selection of interviewees were individuals and brands that the researcher had come to learn of by word of mouth or through social media. Moreover, a sum of 7 persons and 2 brands participated in the survey and are as follows:

1. Iman Rasheed (graphic designer/illustrator)
2. Maisha Yoosuf (graphic designer/illustrator)
3. Aima Musthafa (artist/illustrator)
4. Emau Ahmed Saleem (art director/graphic designer/illustrator/brand owner of Vilunü)
5. Saisa Saeed (multimedia designer)
6. Mohamed Sathom (animator/illustrator)
7. Hawwa Lahfa (illustrator)
8. Khathoon Rasheed (brand owner of Maskula)
9. Sumi Haleem (art director and founder of Funoas).

Appendix II - Interview Questions

Interview Questions Sent Out To Designers

1. Can you please explain a little bit about your design background?

Justification: To determine the biodata of the designers.

2. I noticed that you incorporate elements of Maldivian culture in your designs. What drives you to do so?

Justification: To identify why the designers incorporate the Maldivian culture in the designs they produce.

3. Do you feel that Maldivians appreciate their culture? Can you please give us your opinion?

Justification: As the designers have field experience, they will have an understanding of the general public's (i.e., Maldivians') attitudes towards their culture. This will help in identifying if local Maldivians have an appreciation for their culture.

4. Do you believe that by including aspects of Maldivian culture within your designs, your designs aid in conserving the local culture and can the designs be seen as a medium to enrich Maldivians' knowledge of their culture?

Justification: By asking the designers if they felt their designs do have a positive impact on the conservation of Maldivian culture, the researcher will be able to determine if using graphic design as a tool to enrich Maldivians' knowledge of their culture is practical or not.

5. Can you please share with us, an example or some examples of designs you produced that have the Maldivian culture embedded in them?

Justification: This question acts as a means for the researcher to collect data for the second research question, "What are some of the existing works done to conserve the Maldivian culture through graphic design?"

6. Do you believe it is important for local graphic designers to integrate the Maldivian culture in the designs they create? If yes, why do you believe so and what are some ways by which this can be done?

Justification: This question aids in identifying how graphic design can be used as a tool to enrich Maldivians knowledge of the local culture, addressing the third research question.

Interview Questions Sent Out To Illustrators

1. Can you please explain a little bit about your art/design background?

Justification: To determine the biodata of the designers.

2. I noticed that you incorporate elements of Maldivian culture in your illustrations/designs. What drives you to do so?

Justification: To identify the illustrators produce illustrations/designs inspired by the Maldivian culture.

3. Do you feel that Maldivians appreciate their culture? Can you please give us your opinion?

Justification: As the illustrators have field experience, they will have an understanding of the general public's (i.e., Maldivians') attitudes towards their culture. This will help in identifying if local Maldivians have an appreciation for their culture.

4. Do you believe that by including aspects of Maldivian culture within your illustrations/designs, your designs aid in conserving the local culture and can the illustrations/designs be seen as a medium to enrich Maldivians' knowledge of their culture?

Justification: By asking the illustrators if they felt their designs do have a positive impact on the conservation of Maldivian culture, the researcher will be able to determine if using graphic design as a tool to enrich Maldivians' knowledge of their culture is practical or not.

5. Can you please share with us, an example or some examples of illustrations/designs you produced that have the Maldivian culture embedded in them? (Eg: projects, campaigns, etc)

Justification: This question acts as a means for the researcher to collect data for the second research question, "What are some of the existing works done to conserve the Maldivian culture through graphic design?"

6. Do you believe it is important for local illustrators/designers to integrate the Maldivian culture in the illustrations/designs they create? If yes, why do you believe so and what are some ways by which this can be done?

Justification: This question aids in identifying how graphic design can be used as a tool to enrich Maldivians knowledge of the local culture, addressing the third research question.

Interview Questions Sent Out To Brands

1. Can you please give a brief introduction of your brand?

Justification: To acquire biodata of the brand.

2. What is the inspiration and concept behind (brand name) and its designs?

Justification: To ascertain if the Maldivian culture plays a part in the designs the brand produces.

3. When we think of culture, we often think of traditional crafts, arts, etc, but do you believe that (brand name) helps portray a different side of the Maldivian culture? If so, please elaborate.

Justification: This will help identify if the designs produced by the brand aid in conserving the Maldivian culture or educating Maldivians about their culture.

4. Do you feel that Maldivians appreciate their culture? Can you please give us your opinion?

Justification: By determining if there is a market for Maldivian culture inspired products, the researcher will be able to identify if there is interest and appreciation for the local culture amongst Maldivians.

5. Do you believe that by producing designs inspired by Maldives, your brand and designs aid in conserving the local culture and can they be seen as a medium to enrich Maldivians' knowledge of their own culture?

Justification: By means of this question, the researcher can establish if using graphic design is practical in the enrichment of the Maldivians' knowledge of their culture and in conservation of the Maldivian culture.

6. Do you believe it is important for local brands and designers to integrate the Maldivian culture (or elements inspired by Maldives) in the designs they create? If 'yes', why do you believe so and what are some ways by which this can be done?

Justification: This will help the researcher gather data for the third research question, "How can graphic design be used as a tool to enrich Maldivians knowledge of the local culture?".

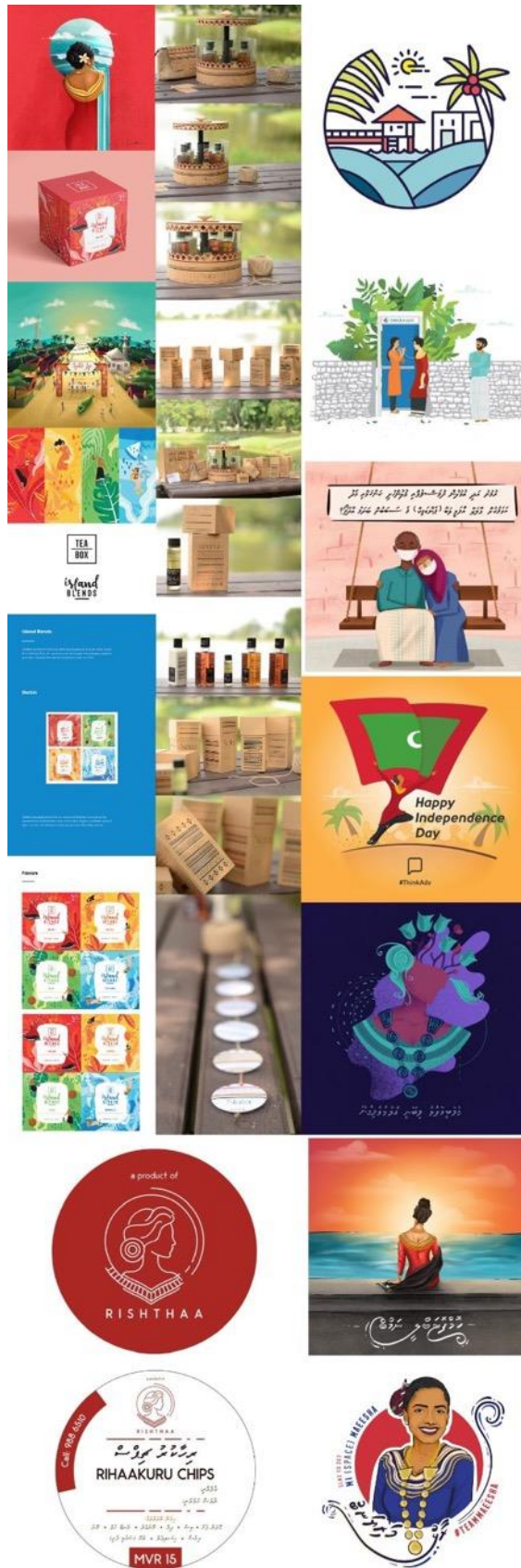
Appendix III - Designs Produced by the Interviewees



Designs by Emau Ahmed Saleem



Designs by Iman Rasheed



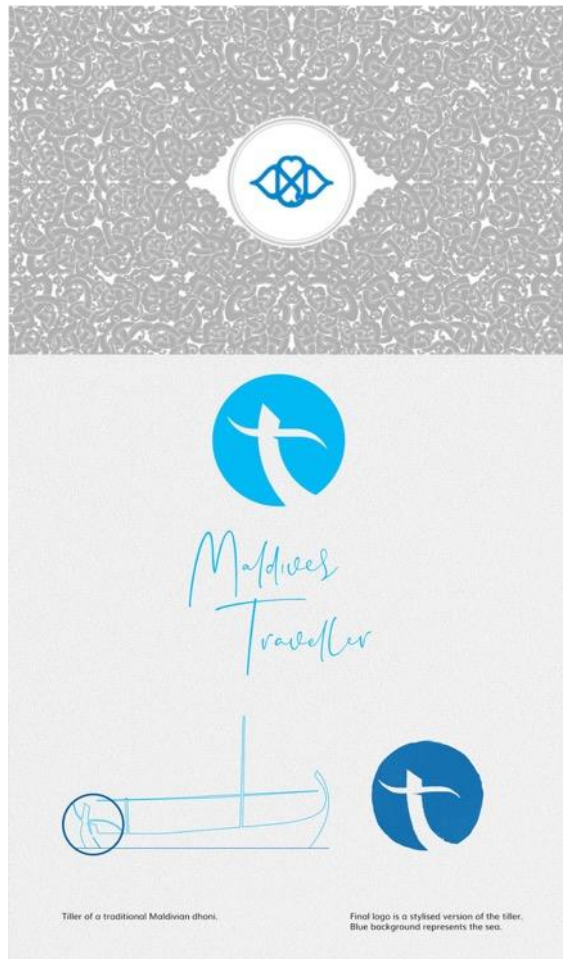
Designs by Hawwa Lahfa



Designs by Maisha Yoosuf



Designs by Mohamed Sathom



Designs by Saisa Saeed

Appendix IV - Survey Sample

Maldivian Culture & Graphic Design

Hi! I am Hanan from Taylor's University's BDCM programme. The objective of this survey is to collect primary data for my Research Methodology [RES 60604] module and is targeted only for Maldivians. The research focuses on using graphic design as a tool for change, to aid in the conservation of Maldivian culture. I appreciate your contribution very much. Thank you.

*** Required**

Age *

Your answer

Name 5 things that come to mind when you think of the Maldivian culture *

Your answer

How familiar are you with the Maldivian culture? *

1 2 3

Not very familiar Very familiar

How well do you understand Maldivian culture? *

1 2 3

Not much Very well

Are you keen on learning more about the Maldivian culture? *

Yes

No

What do you think could be the reason for this? *

Your answer

What is your opinion on using graphic design as a tool for culture conservation and to enrich Maldivians' knowledge of local culture? *

Your answer

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Illustrations in Advertisements

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Abstract *Illustrations have been developed throughout the time from traditional painting to digital painting that are now being favored in advertisements (commonly called adverts or ads in short). The aim of this research is to discuss how advertisements use illustration in marketing and to find out the impacts, strengths, and weaknesses. An online survey of 55 participants and a visual analysis was conducted to collect data. This study was the conclusive result of exploring the purpose of the use of illustration in adverts. The findings showed the roles of illustration of how it communicates, attracts the audience in addition to building the brand image. The research also showed a few factors that affect the impacts of the illustrations. Such as towards adverts that need to demonstrate its exact image of the place, goods or services, photography was best fitted, and age groups also played an important factor. Overall, the use of illustrations impacted participants positively as attractions along with interactions and triggering their emotions as well. The study concludes by how critical it is to use visual elements such as illustrations in advertising to communicate and attract attention.*

Key words *Advertisements, digital illustrations, visual elements, advertisement posters, advertisement illustrations, graphic art*

Introduction

Not all advertisements are alike, some may use photographs, animations, or illustrations. Visual elements have become one of the most important factors in advertisements to lure and attract consumers and illustrations have been used as a key of marketing elements. There is an increasing recognition that illustrations are a great tool in marketing to communicate, encourage and persuade consumers, which supports that a picture is worth a thousand words, meaning the illustrations could convey complex and multiple ideas by a single still image.

One of the main factors of the advertisements would be how visually appealing and unique the goods and services that are being promoted to attract more consumers. Illustrations have been widely used for advertisers and through generations, it has developed making it easier to approach. The quality of consumers' needs and wants is rising due to improved living standards. The advertisements needed to be more visually appealing, gain liability and develop relationships to attract more consumers. The main goal of this paper is to find out how advertisements use illustrations in the market to attract and target certain groups of people. Primary focus of this paper would be to understand and explore the strengths and weaknesses of digital illustrations in advertisements.

Problem Statement

There is growing recognition in research that design is a key in marketing elements triggering human interactions (Negm, 2015). Digital illustrations in ads are being used to help people to get attention and motivate them to gain interests to be used as a powerful tool to bring success to business. As an example, Russian design agency depot has created a new cat illustration for Milgrad's Bryansk dairy plant (Fig 1) and gained huge popularity and increased in sales by positive reactions of consumers (Neira, 2020).

Advertising is a form of communication used as marketing and encourages or persuades customers to use their goods, if the digital illustrations does not convey the message and compliments the goods, the effect of the ads would fall drastically. For example, the GIGA company posted a GIGA Naturally brochure in 2013. The vine illustrations in the background made it difficult to read the information of the product. Poor illustrations and design of packaging would cause confusion among consumers.

As a result, some companies might prefer photography rather than illustrations as it is often perceived as being an obscure and vague medium and lacks immediacy of

photography. Despite the flaws, digital illustrations with good visual designs are known to draw attention and stimulate curiosity. This may highlight the promoted substance and its characteristics, build a personality, associate the promoted products with clear symbols and lifestyles, and instill the image in the consciousness of target consumers. Visual designs illustrate imagery with passion, giving products, service, place, idea, etc. spiritual essence. Images used in advertising express the nature or the implication of the product or service, as well as differentiating it from competitors (Köksal, 2013).



Figure 1. Milgrad's Bryansk Dairy Plant Cat Illustration.



Figure 2. GIGA company brochure design.



Figure 3. Busan University Film Festival (BUFF).

Methodology

Online Survey. Using the survey would gather information about how people view advertisements and how they interpret information from them. This study will help to show what are the elements that help the audience understand what the advert is trying to promote and lay out the weaknesses and strengths of use of illustrations in the advertisements. Online Google form is chosen to conduct the survey. Participants are to be asked how much graphic design helps and influences the advertisements promoted. The survey could collect needed data and the data gathered will show the general trends of the use of illustration in advertising along with respondents' opinions and values.

The main advantage of the survey is that it shows how people see in advertisements in the current day and would show the trends of how illustrations in adverts are viewed by the people. The comparison of photographic advert and illustrated advert would show which kinds of advert is effectful and attracts the most audience. On the other hand, questions had to be simple and easy to understand so that participants could answer them easily. This would make it difficult to collect detailed information about how they see illustrations in adverts. A sample of the survey is found in Appendix I

Visual Analysis. Visual analysis helps to dissect the elements of the print adverts and analyze how the advert is using the illustration to compose meaning, information, and attractions to promote products and services. This study will show the strengths and weaknesses of the use of illustrations, and where it works best and where it is least effective, where photographic elements could be better in certain circumstances.

Six print advertisements were chosen, studied and analyzed. The main objective of the visual analysis was to find out how illustrations are used in advertisements and the strengths and weaknesses of using illustrations. This would help to develop a better understanding of how adverts use illustrations to attract and communicate with the audience. Visual Analysis will help to know the different aspects of the use in illustrations' colors, elements, composition, focal point, shapes, and textures. However, as the study is conducted by a single individual, the research could be biased. A sample of one of the visual analysis is found in Appendix II. All six print advertisements will be found in Appendix III.

There are various visual elements that are the basic vocabulary of the composed communicated art. The principles of design help to plan and organize the elements of art so that advertisements will hold the viewer's interest and command attention (Eliman & Passent, 2005).

Findings and Discussion

One of the main strengths of the use of digital illustrations could be seen as the attractiveness of the illustration, as majority of the participants (96%) of the survey agreed that the digital illustrations visually pleased them and attracted their interests. Research has shown that consumers are mostly affected by how information, judge credibility and usability is contributed by the advert design and aesthetics (Eliman & Passent, 2015). Depending on the advertisements and the targeted audience, digital illustrations are used in different ways to attract the consumers. The color schemes, visual elements and emphasis are all taken into consideration to attract as many consumers as possible. On advertisements promoting products the illustrations tend to be used as visual elements to emphasize on the main product, on the other hand on advertisements promoting services illustrations could demonstrate the services with simplified illustrations which could be easily understood by viewers with its unique colors and stylized illustrations (Fig 3, Appendix III).

As illustrations could play with unreal characters, stylized people, and perspective, it creates surreal attractiveness but can relate to what it is. As people view the illustration, they will be entertained as it will tackle their curiosity and creativity. Illustrations could also carry information and be able to carry a story. For example, on Fig 4 (Appendix III), multiple hands with different color of fingernails reaching for the vinyl album shows people of different backgrounds, culture, age could come and enjoy music from the promoted shop. It could also be interpreted as friends and family enjoying the music together.

98% of the participants agreed that illustrations establish a personality for the product or service that is being promoted. Fig 13 (Appendix I) is an advert print by skincare brand Vaseline. The advert uses one of the iconic historical paintings which is familiar to viewers. It features the cracks of old paintings that are related as cracked skin smoothed out using Vaseline, which helps to symbolize the use of the Vaseline and presents the main personality of Vaseline. The research also showed that illustrations in the advertisement can also trigger the audience emotionally by connecting them with experiences the audience had made a powerful impact on the viewer's mind. When Fig 10 (Appendix I) were shown participants claimed that it triggers their anxiety and could connect with the characters in their daily life.

The use of illustrations is not always favored and one of the reasons is clarity. 63% of the participants claimed that they wanted to see the actual product of the advertised goods. Hence, advertisers use photographs for better visual experience as it could provide clearer imagery than illustration as it is more believable to the viewers. Furthermore, illustration does provide the theme of the item that advertisements are promoting but as there are lack of details and the stylization of the actual item it will arouse suspicion and have doubts of how the actual item would appear in real life. Different interpretation is another factor to consider when using illustration as Interpretations differ as people have different points of view. Depending on the cultural backgrounds, the meaning of some symbols and colors are not universal and therefore could cause confusion and difficulties interpreting the information from the illustrations.

Conclusion

The purpose of this study revolves around the roles of illustration in advertisements and how they interact with the viewers. The main goal of the advertisements was to attract and communicate with the viewers. Findings in this study suggest that illustration can be seen easily in the adverts on social media, posters, newspapers, magazines and so on. People have been exposed to illustration to a point where they do not recognise it. Advertisers had to be more complex and appealing to attract consumers to gain interests in their advertisements as much as possible which made design elements to be one of the most important key ingredients to trigger interaction with viewers.

In addition, colourful, creative attractive illustrations in the advert lead to more than a communication tool. The study shows illustrations have been considered a factor that helps viewers to emotionally be affected, hooks the idea and message into long term memory, and to build personality along with brand image. Participants from the survey expressed they had emotional connection which derived from their experiences through illustrations which were evident that illustration has successfully embedded story and message towards the viewers. Weaknesses were also pinpointed as when compared to photographs as illustration is unable to carry the exact detail of the place, goods, and services the advert is trying to promote. However, the use of illustration has shown a tendency to overcome the weakness to be used as supporting visual elements used along with the photographed goods and services. The use of illustration in advertisements may often be viewed as an attraction, but the study showed it contributed more important roles to communicate, storytelling and building image and personality to the adverts.

This study had numerous limitations. Due to the low number of participants (55) it would be difficult to generalise the results. Participants' ages were mostly 17 to 25 making it difficult to examine how different age groups react to the illustrations in the advertisement. Lastly, the research was mainly focused on consumers' view but not the intention of the advertisers' uses of illustration in the advert.

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Appendices



Fig 1



Fig 2



Fig 3

Appendix I: Survey Questions

01. Figures 1, 2 and 3, are mattress advertisements. Which one is the most attractive to you?
02. Please provide a short reason for your answer.
03. Which part of the chosen advertisement attracts you the most?
 - Illustration / photography

- Color scheme
- Display of the product
- How the advert is portrayed



Fig 4



Fig 5



Fig 6

04 Figures 4, 5 and 6, are beverage advertisements. Which one is the most attractive to you?

05 Please provide a short reason for your answer.

06 Which part of the chosen advertisement attracts you the most?

- Illustration / photography
- Color scheme
- Display of the product
- How the advert is portrayed



Fig 7



Fig 8



Fig 9

07 These are digital illustrations. Do you find them visually appealing? Give a short reason to your answer.



Fig 10

08 This is an advertisement for a brand of JBL. Do digital illustrations stimulate your curiosity?



Fig 11



Fig 12



Fig 13

09 Referring to the three advertisements of Figures 11, 12 and 13, which of the illustrations describe the product/service accurately and most effectively? Choose ONE and give a reason for your answer.

10 Does the illustration help to tell what the advertisements are trying to promote?

11 Do you think digital illustrations establish a personality for the product that is being promoted?

12 Among Figures 11, 12 and 13 which one is the most memorable advertisement to you? State your reason.

Appendix II

Figure used in Visual Analysis.



Busan University Film Festival (BUFF)



Figure 4 Vinyl Album Shop “Music lab” Advert by Maan



Figure 5 The 6th Korean urban agriculture Expo



Figure 6 Yuju print advert by Hasan & Partners.



Figure 7 Juice advertisements by Brooke Vukovic



Figure 8 Yogurt Advertisements of FAGE TruBlend Strawberry

The Importance of Suitable Visuals in the Sociopolitical Use of Graphic Design

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Abstract *The purpose of this research is to understand the importance of suitable visuals in the sociopolitical use of graphic design in order to convey a message successfully. This research looks at the rise of digestible content on social media and how it differs from historical examples of sociopolitical graphic design. To explore this, a visual analysis was conducted on selected examples from both categories. Additionally, a survey of 90 participants was also conducted via an online questionnaire in order to further understand why meaningful graphic design is important in conveying a message successfully. The research concludes that the visuals need to be suited and responsibly used in order for audiences to completely and wholly understand the message.*

Key words *Activism, Instagram, Symbolism, Cyberactivism, Graphic Design*



Figure 1. Example of digestible content from Instagram. Image courtesy @Impact

Introduction

While tapping through Instagram Stories, one might come across a variety of cyberactivism related posts being reshared. These posts are usually designed in aesthetical ways that are in touch with modern graphic design trends and aim to create awareness for a certain social issue. However, sometimes at a second glance, there is a disconnect between the visuals and the message. The visuals are bright and bold, while the message is grave and gloomy. This is described as a way of making the content “digestible.” An example can be seen in Figure 1 where the message of sexual assault is being conveyed on a background that appears very soft and cheerful. The visuals and the message don't match and hence the perception of the issue can become distorted.

There are countless examples of sociopolitical graphic design works that are successful in conveying a message whilst achieving the balance between being implicit but impactful. The propaganda posters produced during the Vietnam War are one of them. See Figure 2, as an example, where there is a relevant and appropriate use of visuals unlike Figure 1. The Vietnam War visuals were able to convey the complexities of the war to the audience successfully and also relate to their emotions (Bromwich, 2016). With the objective to find out the importance of meaningful graphic design in conveying a message to audiences and using the Vietnam War posters and current activism posts seen on Instagram, this research aims to answer the question,

Why is meaningful graphic design important in conveying a message successfully?

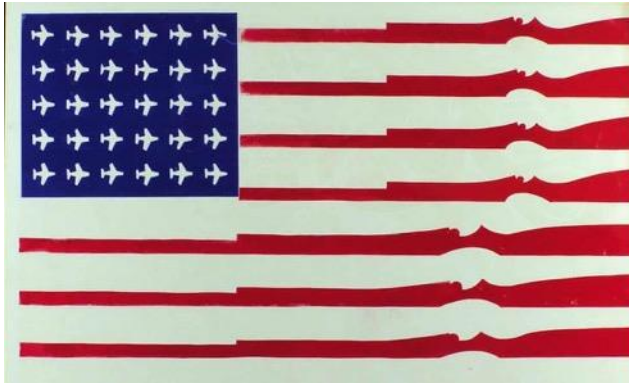


Figure 2 American Flag (untitled) 1970, silkscreen, printed on the blank side of a Carson Morris calendar. Image courtesy of The Guardian

Problem Statement

The purpose of graphic design is communication and it's a powerful tool that can be used to spread information when done correctly (Barnard, 2013). With the right combination of visuals, text and design principles, one can create an impactful message that can resonate with thousands.

Regarding sociopolitical graphic design, during the Vietnam War thousands of propaganda posters were produced by artists that were so powerful that they swayed the opinions of the US public on the conflict (Barton, 2015). This led to most Americans feeling uncomfortable with what was going on in Vietnam and without the support of the people, the war eventually ended by the US withdrawing (Walsh, 2013). If the people hadn't felt uncomfortable and stopped supporting the war, it would've probably continued as President Johnson needed approval ratings in the elections (History.com Editors, 2009). These posters successfully empathized with the masses and delivered their feelings on the conflict successfully., an example of which can be seen in Figure 2.

However, sociopolitical graphic design has progressed more and more as technology rapidly advances, giving millions of people access to social media (Dean, 2021). Social media grows in the number of users every day and a lot of activism is taken there to help create awareness because it can reach millions easily. Instagram has become a major platform for this as it allows multiple photo sharing in one post which accounts use to create attention-grabbing "slide show" posts about sociopolitical issues (Nguyen, 2020).

However, in order to keep up with the rapid pace of social media and lowered attention spans, content has to be made "digestible" and easy to understand. This is a broad spectrum of content creation and hence, the research will be conducted in order to explore the importance of suitable visuals and responsible design in sociopolitical graphic design.



Figure 3 Image featured in the questionnaire, question number 8. Instagram Post by @ArtsByFion. (March 18, 2021). Image courtesy of @ArtsByFion.

Methodology

For this research, two methods of data collection were engaged to gauge the understanding of the viewers as well as facilitate a discussion for the visual analysis. The visual analysis was conducted to identify the strengths and weaknesses of the selected examples of design, and what was the reason behind the viewers' perceptions of these designs. This analysis allowed this research to come to the conclusion on the importance of suitable visuals in a reliable manner. It was conducted by first researching the design's historical and social context. The techniques deployed by the designer to affect and impact the audience were identified and examined. Using this, an argument was constructed on whether the design has been successful or not, supported by evidence from the online questionnaire. A sample of the visual analysis is found in Appendix B.

The online questionnaire was conducted in order to gain insight into the public perception of some examples of sociopolitical graphic design. Since a key purpose of sociopolitical graphic design is to create awareness, it is important to perceive whether the viewers were getting the correct message or not. The survey questionnaire adopted for this research was divided into 4 sections. The first was an introduction section to get to know the age, nationality and graphic design experiences of the respondents. This was for gaining knowledge on the social background and understanding how opinions differ across demographics.

The second section was about design sensibility. Respondents were asked to express which designs they find to be more sensible and hence aid in the understanding of why meaningful graphic design is essential in creating a sensible and impactful design.

The third section was related to digestible content. This is related to the research objective which is to find out the importance of meaningful graphic design in conveying a message to audiences. This section served to find out whether digestible content can convey a message and whether it is meaningful and impactful to the respondents. They were asked to express how important it is to them and whether they prefer uncomfortable visuals to be paired with uncomfortable issues.

The last section consisted of two images of sociopolitical graphic design, one from the 1960s and one from 2021. This section asked the respondents to express their thoughts and opinions on these two and briefly explain why. This helped understand which qualities got the message and context across to audiences. A sample of the questionnaire can be found in Appendix A.

Findings and Discussion

This discussion revolves around Figure 1 (Post by @Impact), Figure 2 (American Flag) and Figure 3 (Post by @ArtsByFion). Using the data from the visual analysis, questionnaire and additional secondary sources, this section aims to answer the question of, why is meaningful graphic design important in conveying a message successfully?

The visual in Figure 2 features the American flag made up of guns and warplanes, indicating that the flag that once stood for freedom, now stands for bloodshed and violence. This irony and the use of appropriation of the American Flag is what makes this a strong design— even without the use of typography— the audience will be intrigued by the design because the familiar visuals of the flag are being disrupted and creates tension, hence pulling the audience in to look further into the design. The Gestalt law of closure used by stacking the red guns creates the illusion that the white stripes of the flag are there, increasing the familiarity of the visual. Using the Gestalt Theory strengthens the design because Gestalt psychology helped introduce the idea that human perception is beyond just what we can see. It allows for the design to penetrate the subconscious and be more impactful (Cherry, 2021). Additionally, the disruption of familiarity will be likely to have a stronger impact on the audience as it removes the need to have any prior knowledge of the context.

On the contrary, the post in Figure 3 doesn't seem to successfully convey its message to the audiences. Some respondents of the questionnaire described the visual in Figure 3 as,

“Looks like random phrases.”

“The image on the right [Fig. 3] is nondescript and doesn't connect with a specific context.”

“...the other one [Fig. 3] just looks like brainless text.”

This is interesting because it indicates that the viewers were not able to make the connection to the context of the post. The post doesn't appeal to them because it doesn't make sense to them. The visuals are not related to the context and there is no appropriate use of symbols. Symbols are powerful and effective tools in graphic design. They help make the audience understand abstract concepts and ideas with just a simple graphic (O'Connor, 2021). There is a reference to the shape of the COVID-19 Virus in the “Not Virus” graphic but without other relevant visuals, viewers are not sure what the post is supposed to make them feel.

Figure 1 follows a similar pattern in terms of visuals. At a glance, the graphic elements of the post (star and circle) have nothing to do with the message being publicized. The message is about society's attitude of blaming women when the conversation is about sexual violence. From a design aspect, the use of text alignment on the second slide also seems to take away from the message as the large gaps disrupt the reading pace of the viewer. The Shillington School of Graphic Design states that “alignment creates a sharper, more unified design.” Unification and alignment in design are essential because they determine the path the eye will follow and help make it seamless (Harvey, 2015). Hence, poor alignment results in a low-quality reading experience resulting in the viewer being disinterested in the message, deeming it unimportant. Additionally, the bold font does little to emphasize the jarring statistic and the stacking of the “of” is also quite distracting and appears as if there is a typographic error in the text. Good typography is extremely important in graphic design. It can be used to create harmony and consistency in a design. Harmonious designs are easy to follow and will be more likely to retain viewers (Corrigan, 2019). If audiences do not stay long enough to get the complete picture, the design would have failed in conveying the message successfully.

Hence, the ambiguous definition of the term digestible content can lead to its easy misuse. It can result in the work seeming lazy and shallow. As shown by the Vietnam War poster, suitable graphics are extremely important in conveying a message successfully. All 32.2% of the respondents who preferred digestible content specified that it would only work if the visuals are suitably chosen. Conclusively, to answer the research question, it can be said that meaningful graphic design is important in conveying messages successfully because successful deliverance entails the viewers receiving the information in its complete accuracy. If the graphic design is not meaningful, the perception of the message can become distorted, meaning the design failed to fulfil its purpose. If the visuals mislead the audience or does not portray the issue accurately, the message would not be delivered.

Conclusion

Graphic design has proven to be an essential part of activism throughout history. The example of the Vietnam War shows that through visuals, the status quo can be changed. Additionally, the example also highlights the importance of using suitable and relevant visuals when creating design works for sociopolitical issues. If the visuals used in the Vietnam War weren't related to the war and the emotion surrounding it, they would not have penetrated through to the audience the way it did. The visuals and its accurate portrayal of the issue is what made the campaign successful.

Moving onto current times, digestible content has a lot of benefits in terms of creating activism-oriented content. The primary research proves that people prefer that type of content on social media because it fits the pace of bite-sized Instagram content. With the use of proper design principles, suitable visuals and relevant symbolism, digestible content can be an extremely successful and powerful tool in this day and age of fast-paced mass media.

However, digestible content currently has a vague and ambiguous definition and characteristics that lead to its misuse. If designers are not responsible when creating digestible content, the message of the design can be perceived wrongly by the audience resulting in the graphic design work being unsuccessful in its main function, which is to communicate effectively.

The research methods engaged to investigate this were a visual analysis that compared sociopolitical visuals from the Vietnam War and current Instagram posts. A survey of the public opinion on the aforementioned visuals was conducted using an online questionnaire. The opinions of the public were compared to the visual analysis data to understand why the perceptions of the types of content varied.

Therefore, looking back at the research problem, the importance of suitable visuals in the sociopolitical use of graphic design in conveying a message to the audience successfully, it can be said that it is highly important for the visuals to be used in a suitable, sensible and responsible manner for the design to be successful in conveying its message. If the visuals mislead the audience or don't portray the issue accurately, the message would not be delivered accurately.

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Picture Credits

Figure 1: Impact [@impact]. (2021, March 30). Bringing this back. The conversation regarding rape has only been focused on women for far too long. It's time we shift the dialogue and look at the issue from a different perspective. [Instagram post].

https://www.instagram.com/p/CNCPeulhSoD/?utm_source=ig_web_copy_link

Figure 2: Bromwich, K. (2016). After Kent State: 1970s anti-war student art – in pictures. The

Guardian. <https://www.theguardian.com/artanddesign/gallery/2016/jan/30/after-kent-state-1970s-anti-war-student-art-in-pictures>

Figure 3: Fion [@artsbyfion]. (2021, March 18). Racism is a virus... [Instagram post].

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Appendices

Appendix A: Survey Questionnaire

The Use of Graphic Design for Sociopolitical Purposes

Hello! I'm a graphic design student at Taylor's University Malaysia, and I'm conducting research for my Design Research Methodology module. I am exploring the importance of suitable visuals in the sociopolitical use of graphic design in conveying a message to the audience successfully and would like to know your opinion. Your honesty and time are greatly appreciated.

*** Required**

1. How old are you? *

Mark only one oval.

17-22

23-28

29-34

35-40

41 and above

2. Where are you from? *

Mark only one oval.

Asia

Europe

North America

Australia

Middle East

Africa

South America

3. Do you have any graphic design experience? *

Mark only one oval.

1 2 3 4 5

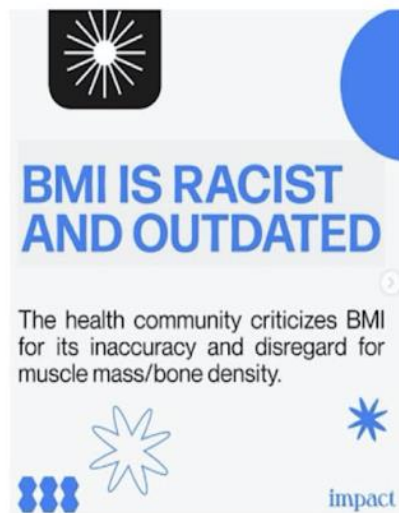
No experience Very experienced

Design sensibility

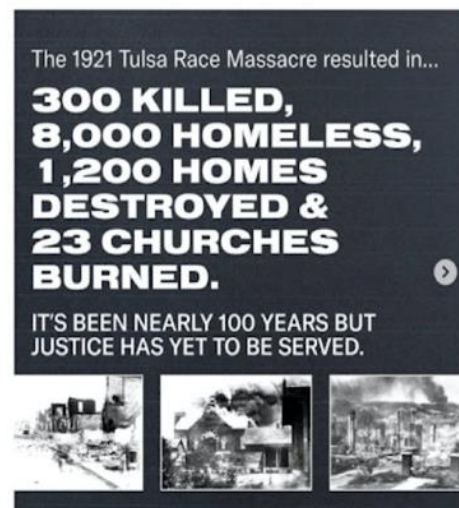
Design sensibility is the capacity to express and respond to complex emotional influences in a sensitive manner.

4. Which design do you think has more visual sensibility. Please briefly explain why. *

Design A



Design B



5. Do you get the meaning of the message in this post based on the colour and its overall design/visuals? *



Digestible content

Digestible content is an increasing trend in graphic design where content is made easy to understand through aesthetically pleasing visuals.

6. How important do you think it is for sociopolitical issues to be made digestible? *

Example of sociopolitical issues made "digestible"



Mark only one oval.

1 2 3 4 5

Not important at all Very important

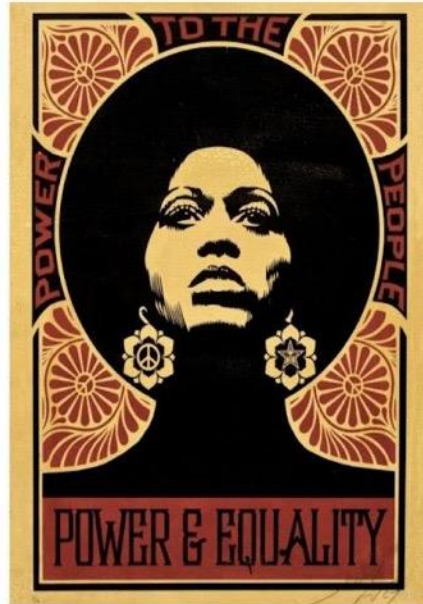
7. Should uncomfortable issues be paired with uncomfortable visuals, or is making them digestible using aesthetic visuals more effective in your opinion. Please briefly explain why. *

Impactful content

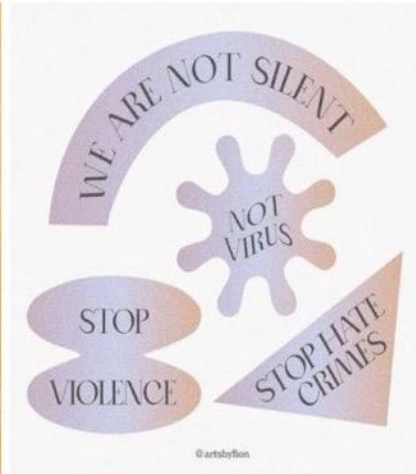
Please look at the images below and the following questions.

The two images below are both forms of sociopolitical graphic design. The next section is about them.

Design C



Design D



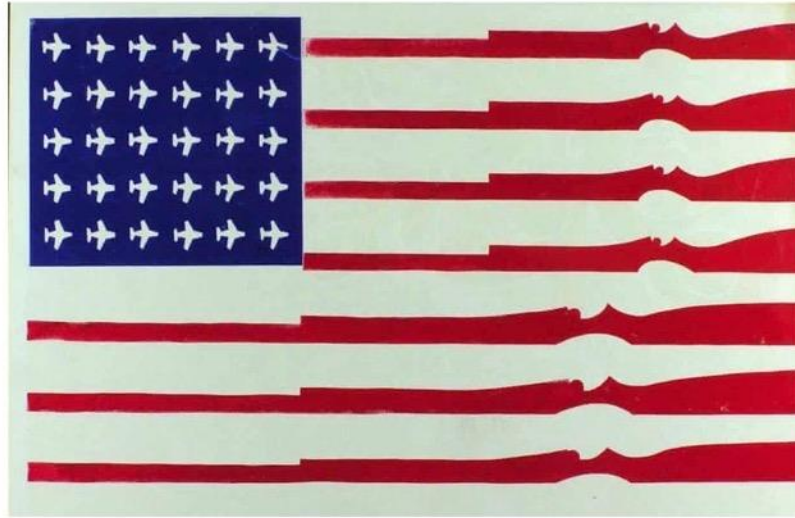
8. From the images, which do you find easier to understand the historical and cultural context of? Please briefly explain why. *

9. From the images, are the visuals suitable for each of the designs? Please briefly explain why. *

10. Do you have any other opinions on the two images and the associated visuals? *

Appendix B: Sample of Visual Analysis

Visual Analysis of American Flag (Untitled), 1970



- I. **Historical context:** This poster is a part of the hundreds of anti-war posters made by the University of California, Berkeley. These came after the Kent State Massacre on May 4th 1970, where the National Guard fired onto anti-war protestors, killing four and wounding nine. The incident marked the first time that a student had been killed in an anti-war gathering in United States history.
- II. **Social context:** During this time anti-war sentiments were expanding among the American public. They were becoming greatly opposed to the United States' involvement in the Vietnam War and the atrocities being committed in Vietnam. Thousands of visuals in forms of posters, photographs and more flooded media outlets which brought the horrors of the war to the American public.
- III. **Visual techniques deployed:** This visual uses appropriation in the form of the American flag. The original visual of the flag has been altered to feature guns and warplanes to send the message that the flag that once stood for freedom and "The American Dream" now stands for violence and war. The Gestalt law of closure used by stacking the red guns creates the illusion that the white stripes of the flag are there, increasing the familiarity of the visual.
- IV. **Effectiveness/Analysis of visual techniques:** The use of appropriation is very appropriate and well done. The audience will be intrigued by the design because the familiar visuals of the flag are being disrupted and creating tension. Hence, pulling the audience in to look further into the design. The disruption of familiarity will be likely to have a stronger impact on the audience as it removes the need to have any prior knowledge of the context. Using the Gestalt Theory strengthens the design because Gestalt psychology helped introduce the idea that human perception is beyond just what we can see. It allows for the design to penetrate the subconscious and be more impactful

The Overview of Tangible Elements to Create a Culturally Significant Character Design

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Abstract *Cultural significance allows people to identify a culture through visual representations. It is vital to showcase cultural significance in character design to create a memorable and commercialisable animated character design. However, due to the lack of cultural characteristics in Mainland Chinese animations, the country's animation appears uncompetitive. Moreover, previous works have failed to address the tangible elements to create a culturally significant character design. Hence, the researcher was determined to further discuss the tangible elements in this article. To achieve this objective, a cross-comparison visual analysis was conducted on the character design of Nezha, a well-known deity of the Chinese mythology, with Nezha from the Mainland Chinese animations such as Nezha Conquers the Dragon King (1979), and Nezha (2019). Moreover, the finding of the online survey indicated clothing is the most influential tangible element to evoke cultural significance in character design. The findings of this study would expand the understanding of the tangible elements to create cultural significance in animated character design.*

Key words *Character design, culture, cultural significance, Chinese culture, animations*

Introduction

Character design plays a vital role in an animation's production. To create a good character design, it needs to be recognisable to the viewers. Therefore, the character needs to have a strong and appealing identity. Identity can be established through the infusion of cultural elements. This is because culture reflects the era of the animation, which creates cultural significance in the character. In this article, the researcher aims to focus on the animated character design of Mainland Chinese animations, and the tangible elements which create cultural significance in the characters. Cultural significance will be achieved when cultural characteristics are reflected on the tangible elements on the character design. Consequently, the identity of the character design will be well-established.

In the emphasis of this research, the researcher highlights the problem statement in the first section. It is followed by the methodologies used to achieve the research objective. For this study, visual analysis and online survey were conducted. The research findings will be presented and discussed in tables and figures. Lastly, an overview of the findings is summarised in the conclusion.

Problem Statement

According to Luo (2017), animation in Mainland China has flourished with ups and downs in recent years. However, due to the growth of the market economy, both aesthetic and commercial value should be taken into consideration while producing an animation (Zhou, 2017). Hence, various domestic animation enterprises started to collaborate with animation enterprises abroad for economic interests. Unfortunately, this situation has led to imitations of foreign works, which were found lacking Chinese cultural characteristics (J. Liu & Y. Liu, 2017). Although the reformation of China had introduced the country to the international stage, there was still a lack of cultural designs in its animation (Zhou, 2017). Consequently, the lack of cultural infusion resulted in a low cultural significance in its animations' character design. The weak identity in characters made them less recognisable to the viewers and affected the positioning of the Mainland Chinese animation industry accordingly.

Hence, to resolve this issue, exploration, and integration of Chinese culture in animated character design was encouraged (Zhou, 2017). China is a country with rich cultures and history. Therefore, character designers should make good use of the cultural elements and infuse them into the character designs and there are various ways to integrate culture into character designs. However, in this study, the researcher aims to explore the tangible

elements to create cultural significance in character design. Tangible elements are important as they can be perceived at first glance and form the first impression of the viewers towards the characters. Hence, a study on this topic is important to establish a solid persona and strong identity for animated character designs in Mainland Chinese animations.

Methodology

A visual analysis was conducted to identify the tangible elements that infused cultural significance in Nezha, from Chinese mythology, and Nezha from *Nezha Conquers the Dragon King* (1979) and *Nezha* (2019). Well-known for his rebellious personality, Nezha is a protective deity in Chinese mythology. He has inspired the production of various TV shows and cartoons with great success (Shen et al., 2020). Therefore, the researcher decided to research this character as it has cultural significance in the Chinese culture. After sourcing for the sample images on Google Images, the researcher first conducted a visual analysis on Nezha from Chinese mythology. The tangible elements and their cultural significance are listed clearly in a table as shown in Table 1. The result was then used to cross-compared with Nezha from *Nezha Conquers the Dragon King* (1979) and *Nezha* (2019). *Nezha Conquers the Dragon King* (1979) and *Nezha* (2019) are animation adaptations based on Nezha's story in *Fengshen Yanyi*, also known as *The Creation of The Gods* (Chen, 2019). These two adaptations featured two different character designs of Nezha. Their similarity and differences will then be discussed in the findings and discussion section. To avoid bias in this visual analysis, secondary data were used as references instead of merely personal judgement.

An online survey was used to determine the most important tangible element on a character design that creates cultural significance in it. Google Forms and Wen Juan Xing, a questionnaire creator in Mainland China, were used as the research instruments to create this online survey. The questionnaires were shared on Facebook, Instagram, WeChat, WhatsApp and Hellotalk, a global language learning and language exchange app. This methodology has collected a total of 97 respondents, with 80 respondents from Google Forms (Appendix 1), and 17 respondents from Wen Juan Xing (Appendix 2). The target audience for this online survey were the Mainland Chinese and overseas Chinese. These two groups of audiences were chosen as they both are familiar with the Chinese culture. Having these two groups would allow the researcher to compare the opinions of two different groups of Chinese. Characters from *Nezha Conquers the Dragon King* (1979) and *Nezha* (2019) were used as research subjects in this methodology. By using the same character designs throughout both methodologies, it would ensure a fair comparison in results. The results of this methodology were presented in a bar chart format which will be presented in the findings and discussion section.

Findings and Discussion

In this section, the researcher would first analyse the character design of Nezha from Chinese mythology featured in Figure 1.



Figure 1. Character design of Nezha from Chinese mythology

Table 1. The Visual Analysis of Elements that Create Cultural Significance in the Character design of Nezha from Chinese Mythology

No	Elements	Features of Elements	Cultural Significance/ Meanings/ Functions
1.	Hairstyle	Wedge-shaped patch and space buns	<ul style="list-style-type: none"> In the figure, Nezha shaved off all his hair and only kept a small wedge-shaped patch along the top of his forehead as well as spacebuns at the side of his head. This was a well-known hairstyle for Chinese kids in the past.
2.	Face Features	Slanted eyes	<ul style="list-style-type: none"> Slanted eyes are one of the most significant face features to depict a Chinese.
3.	Costume	Dark green lotus leaves	<ul style="list-style-type: none"> Chinese lotus flower has its significance in China as it has been regarded as the footprints of Buddha (E. Lehner & J. Lehner, 2012). Lotus was used as an object to reincarnate Nezha after he sacrificed his life to save his parents (Shen et al., 2020).
4.	Weapon 1 (Handheld)	Fire-tipped Spear	<ul style="list-style-type: none"> Chinese soldiers used spears as a fighting weapon in the ancient China. Besides, a variety of spear forms were used starting from the Ming dynasty (Ma, 2009). Since fire is a defining element of Nezha, this weapon of his has this element (Wu, 2020). It can be used to defeat his opponents.
5.	Weapon 2 (Leg)	Wind Fire Wheels	<ul style="list-style-type: none"> This is one of the well-known weapons used in Chinese martial arts, Tai Ji Chuan (Sun, 1999). According to Shih (n.d.), Nezha uses this as his mode of transportation, which also made him a deity for transportation.
6.	Weapon 3 (Wrist)	Universe Ring	<ul style="list-style-type: none"> According to the Universe Ring (n.d.), the Universe Ring was gifted to Nezha by Taiyi Zhenren, Nezha's teacher. When Nezha is separated from his body, the Universe Ring will transform into a circular object with a sharp blade. Besides, the Universe Ring can feel the emotion of Nezha.
7.	Weapon 4 (Around his body)	Red Armillary Sash	<ul style="list-style-type: none"> According to Tao (2019), the Red Armillary Sash is used by Nezha to tie up his opponents.

The table above shows that the above tangible elements were what made Nezha appear culturally significant to the viewers. The researcher observed that each tangible element presented on the character sculpture has its own significant meaning which is relevant to traditional Chinese culture. As a result, the viewers would recall the image of this character when they see any adaptation of the character in the future. Besides, the researcher also noticed that there was a lot of emphasis placed on the weapons of the character to portray his identity as a warrior deity in Chinese mythology.

The researcher has conducted another analysis to cross-compare Nezha from Figure 1 with Nezha from *Nezha Conquers the Dragon King* (1979) and *Nezha* (2019). The result of the cross-comparison across all three figures of Nezha is attached in Table 2 in Appendix 3.

Based on the comparison in Table 2 shown in Appendix 3, the researcher observed there were changes made from the Nezha from Chinese mythology to the Nezha from *Nezha Conquers the Dragon King* (1979), and *Nezha* from *Nezha* (2019). Despite the differences, the researcher noticed that the character designers still preserved the essence of the character. In *Nezha Conquers the Dragon King* (1979), Nezha in Figure 3 was seen to

resemble Nezha in from Chinese mythology in Figure 2 very closely. Only minor improvisations were made, such as the face features, hairstyle, and costume. Nezha from *Nezha (2019)* in Figure 4, on the other hand, was improvised further and looked very different from the Nezha from Chinese mythology in Figure 2 but still resembled Nezha from *Nezha Conquers the Dragon King (1979)* in Figure 3. Various amendments were introduced, especially on its costumes. Despite the changes, the researcher believed cultural significance was still present, as the character designer utilised red as the main colour scheme for the character. This is because red is a symbolic colour in Chinese culture. Besides, weapons of Nezha were also preserved from Figure 2 to Figure 4.

To understand cultural significance from the public's point of view, an online survey was conducted. A comparison between the character designs of *Nezha (2019)* and *Nezha Conquers the Dragon King (1979)* was shown as part of the question. In the questionnaire, the researcher questioned: What do you think are the tangible elements that will make the characters shown above look culturally significant? Tangible elements such as clothing, hairstyle, accessories, props, face features were suggested as options for the participants to choose from. The finding of this questions is attached in Table 3, Appendix 4.

Based on the results of Instrument 1 in Figure 5, Table 3, 67.5% (54) of the respondents believed that "all of the above" which included "clothing, hairstyle, accessories, props, face features" would make an animated character more culturally significant. Among the elements, "clothing" with 35 votes, had the highest votes, followed by face features, hairstyle, accessories, and props. Meanwhile, 76.47% (13) of the respondents in Instrument 2 believed that "all of the above" which included "clothing, hairstyle, accessories, props, face features" would make an animated character more culturally significant. Among the elements, "clothing" 35.29% (6) had the highest votes, followed by hairstyle, accessories, and props and face features.

The results shown in Table 3 proved that the respondents in both Instrument 1 and 2 valued clothing as the most influential tangible element which would make a character look culturally significant. Hairstyle, face features, accessories and props also contributed to the cultural significance of a character design. Based on this result, the researcher believes that it is because clothing occupies most of the areas of a character, hence it plays a significant role in conveying a certain culture at the viewers' first glance.

In essence, even when the character designs have been improvised for adaptations as discussed in the visual analysis, cultural significance is still present. Tangible elements such as animation style, colour scheme, hairstyle, face features, costumes, weapons, and props can create cultural significance to a character design. Among many tangible elements, the results from the online survey indicated that clothing, also known as costume, is the most influential tangible element to create cultural significance in animated character design.

Conclusion

In the making of character design, many aspects would be taken into consideration to best showcase the character in a culturally significant way. One of which would be the tangible elements, elements that can be seen with bare eyes by the viewers. According to the findings of the visual analysis, cultural significance in Mainland Chinese animated character design can be created through tangible elements. For example, animation style, colour scheme, hairstyle, face features, costumes, weapons, and props. Creating animation adaptations based on mythology is recommended as audiences would be able to resonate to the animation and its character design well. For instance, *Nezha Conquers the Dragon King (1979)* and *Nezha (2019)* were adaptations of the Chinese mythology of Nezha. The innovation of tangible elements should also take place. However, character designers should also be aware of the changes introduced so the character can preserve its essence while being presented in its new look. Meanwhile, the findings of the online survey showed that clothing plays the most significant part in delivering cultural significance. Hence, character designers should consider incorporating Chinese cultural elements into clothing when designing characters.

This research allows other researchers or practitioners of relevant research to understand the importance of cultural significance in character design towards the creation of the animation. Identifying the tangible elements allows character designers to understand the

details to pay attention to while infusing cultural elements in a character. Besides, understanding it from the viewers perspective through the researcher's online survey questionnaire allows the character designers to identify elements that capture the attention of the viewers. Through visual analysis, the cultural significance of the Chinese culture has also been identified in this research which allows the practitioners to understand more about this culture.

In the near future, the researcher intends to expand her research to study more animated character designs based on Chinese mythology. With that, the researcher can explore the ways to infuse cultural elements into the character designs. Furthermore, variations of animated character designs can be created while preserving the cultural significance.

In conclusion, cultural significance plays a vital role in creating a character design with strong identity to stand out from the rest. With that, Chinese cultural elements should be incorporated in Mainland Chinese animated character designs to showcase cultural significance. Culture tells the stories of a nation. Hence, let the animated character designs speak the stories of China with the infusion of the Chinese culture.

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Picture Credits

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Appendices

The image shows a digital survey interface with two sections. The top section, titled "Section 1 of 6", is "Culturally significant Character design in positioning Mainland Chinese animation 角色设计的文化代表性与中国动画的定位". It includes a header image of a character from an animation, a researcher's introduction in English and Chinese, and four research objectives. The bottom section, titled "Section 2 of 6", is "Section 1: Demographic Analysis 第一部分: 人口分析". It contains six numbered questions with radio button options for Yes/No and multiple-choice answers.

Section 1 of 6

Culturally significant Character design in positioning Mainland Chinese animation 角色设计的文化代表性与中国动画的定位

Hi there! I am a researcher from the Bachelor of Design (Hons) in Creative Media of Taylor's University, Malaysia. I am conducting a research on character design and Chinese culture. Below are the objectives of this questionnaire: 大家好！我是一名来自马来西亚泰勒大学的创意媒体设计研究学者。这个问卷，我是跟设计有关的一个设计课题，而我想探讨的是角色设计的文化代表性与中国动画的定位。以下是我的研究此课题的目的：

- To understand the importance of culturally significant character design. 了解具有文化代表性角色设计的重要性。
- To identify the tangible elements which can make the animated characters in Chinese animation culturally significant. 探讨能够让中国动画角色有文化代表性的因素和元素。
- To understand animation preference of the viewers towards culturally significant character design. 了解观众对于有文化代表性角色的动画喜好。
- To identify the factors that influence the positioning of an animation. 了解影响一部动画定位的因素。

There are four sections in this survey. Your responses to this survey will be kept confidential and anonymous. 这个问卷共有四个部分。您的问卷的答案将保持保密和匿名。感谢您的时间！

* It would be a great if you can express your ideas in English, but answering in Chinese is acceptable as well. 若您能用英文表达您的想法那会对我们的研究有很大的帮助。不过用中文回答也能接受。

After section 1 Continue to next section

Section 2 of 6

Section 1: Demographic Analysis 第一部分: 人口分析

Description (optional)

1. Are you Chinese? 请问您是华人吗? *

Yes 是

No (Please proceed to no.4) 否 (请前往第四题)

2. If yes, are you from Mainland China? 如果您是华人, 请问您来自中国大陆吗?

Yes 是

No 否

3. If no, where are you from? 若您不是来自中国大陆, 请问您来自哪里? *

Malaysia 马来西亚

Indonesia 印度尼西亚

Singapore 新加坡

Other...

4. Please state your age group. 请选择您的年龄阶段. *

18 and below (18岁/18岁以下)

19 - 25

26 - 30

31 - 40

41 - 50

51 and above (51岁/51岁以上)

5. Are you studying/ working in the character design/ animation field? 请问您是否就读/ 工作了 动画/ 角色设计 领域? *

Yes 是

No 否

Other...

6. How often do you watch animation? 请问您观看动画的频率. *

Almost everyday 每一天

1 - 10 times per week 一周内1-10次

1 - 10 times per month 一个月内1-10次

1 - 10 times per year 一年内1-10次

Never 从未看

One section down and three more to go! 您完成了一个部分, 还剩下三个部分哦!

Description (optional)

After section 2 Continue to next section

Section 2 of 6

Section 2: Animation Preference based on Culturally significant Character Design 第二部分：动画喜好与文化代表性的角色设计

Understand more about what cultural significance is and pick your favourite animation based on its character design! 理解什么是文化代表性和根据角色设计选择您喜欢的动画!

What is cultural significance? 什么是文化代表性?

"Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations" (BIB, Global, n.d.). In other words, "cultural significance means being able to recognize a particular culture through certain representations" (Yip, 2020).
 "文化代表性是指美学、历史、科学、社会或精神上的价值，为过去、现在或未来几代人所重视。" (BIB, Global, n.d.). 换句话说，"文化代表性意味着能够通过某些代表形式来识别一种特定的文化。" (Yip, 2020).

1a. Without knowing the storyline, please rate the likelihood of you watching an animation with culturally significant characters. 在不知道故事的情况下，请列出您会观看一部具有文化代表性角色的动画的几率。

1 2 3 4 5

Very Unlikely ○ ○ ○ ○ ○ Very Likely

1b. Based on the answer above, please further elaborate on your reasoning. 根据上述的回答，请您作出解释。

Long answer text


2. What do you think of the role of cultural significance in an animation's character design? 您认为文化代表性在一部动画角色设计中的作用?

1 2 3 4 5


Very Unimportant ○ ○ ○ ○ ○ Very Important

3. Below are three (3) sets of pictures that showcase the differences in character design between (left) Nezha, 2019 and (right) Nezha Conquers the Dragon King, 1979. Please observe the differences. These two animations are adaptations of the story of Nezha, a well-known warrior deity in Chinese mythology. 下列三组图片展示了《哪吒之魔童降世》2019（左图）与《哪吒闹海》1979（右图）的角色设计差异。请观察它们之间的差异。这两部动画改编自哪吒的故事，一个著名的中国神话。 (Description optional)


Set 1: Nezha 第一组：哪吒 (2019 vs 1979)



Set 2: Taiyi Zhenren 第二组：太乙真人 (2019 vs 1979)



Set 3: Li Jing 第三组：李靖 (2019 vs 1979)



3a. Based on the differences in character design, which animation would you be more interested to watch? 根据上述的角色设计差异, 您打算看哪一部动画影片?

Nezha (哪吒之魔童降世) (2019)

Nezha Conquers the Dragon King (哪吒闹海) (1979)

3b. Based on your answer above, what is the major factor that leads you to choose the said animation? Please further elaborate on the factor. 根据您的答案, 请对以上您选择动画影片的原因, 请为动画影片做解释。

Long answer text

3c. What do you think are the tangible elements that will make the characters shown above look culturally significant? 请问您觉得下列哪些视觉元素能让上述的角色具有文化意义?

Clothing 服饰

Hairstyle 发型

Accessories 配饰

Props 道具

Face features 面部特征

All of the above 以上皆是

Other...

4. Nezha (2019) has taken in \$725 million worldwide, making it the highest-grossing non-U.S. animated film in history, as well as the second-highest-grossing movie of any kind in China. (Li, 2019). (哪吒) (2019) 在全球的票房收入为7.25亿美元, 是有史以来票房最高的非美国动画电影, 也是中国票房第二高的电影。

Description (optional)

4a. Based on the options below, which do you think is the main factor that contributed to the worldwide recognition and success of Nezha (2019)? 您认为下列因素是影响哪吒(2019)的全球知名度和成功的主要原因?

Character design 角色设计

Value (E.g. movie genre; I am the master of my own destiny) 价值观 (例: 电影的类别; 我命由我不由天...)

Storyline 故事情节

Music 音乐

Other...

4b. Please also elaborate further on the chosen factor. 请为所选因素做进一步解释。

Long answer text

5. It is recognized that if there is no traditional culture in Chinese animation creation, whether it be grand, and then well-made, is only an imitation of other country's animation" (Xiao & Zhang, 2010, p. 237). Only when the essence of traditional culture is grasped, the animated character can have a distinctive art trait (Xiao & Zhang, 2010). 只有当传统文化的精髓被掌握, 动画角色才能具有独特的艺术特征。

Description (optional)

5a. Based on the above statement, what is your point of view? 根据您的上述陈述, 谈谈您的观点。

Long answer text

Two more sections to go! 还有两个部分!

Description (optional)

Section 3 of 4

Section 3: Can I hear from you? 第三部分: 我想听你说.....

Other than the two (2) animations mentioned in section 3, do you have any other Mainland Chinese animation recommendation that showcases cultural significance? If yes, please kindly fill in this section; if no, please skip to Section 4. 除了第三部分中提到的动画电影, 您还有其他任何中国大陆动画影片推荐吗? 如果有, 请在此部分填写; 如果没有, 请跳到第四部分。 (例: 动画片的名字)

3a. Please recommend one (1) Chinese animation that you think showcases cultural significance. (E.g. title of animation) 推荐一部您认为最能体现文化代表性的中国动画。(例: 动画片的名字)

Short answer text

3b. Based on your answer above, please name one (1) culturally significant character in the Chinese animation. (E.g. name of the character) 根据您的上述回答, 请推荐一个动画影片中最具文化代表性的角色。(例: 角色的名字)

Short answer text

3c. Why do you think the character you chose above is culturally significant to you? (E.g. characteristics of the character) 请问您为什么觉得上述您选择的角色具有文化代表性? (例: 角色的特征)

Long answer text

You're almost there, but not there yet! 还有一个部分!

Description (optional)

After section 4 Continue to next section

Section 3 of 4

Section 4: Feedback Session 第四部分: 反馈环节

Description (optional)

What do you think about this questionnaire/ research topic? 请问您对此问卷/研究课题有什么想法?

Long answer text

And... you're one click away from finishing this questionnaire! 您要完成问卷了!

Description (optional)

After section 5 Submit form

Appendix 1. Online survey questions in Google Forms (Instrument 1)

Culturally significant Character design in positioning Mainland Chinese animation 角色设计的文化代表性与中国动画的定位

Hi there! I am a researcher from the Bachelor of Design (Hons) in Creative Media of Taylor's University, Malaysia. I am conducting a research on character design and Chinese culture. Below are the objectives of this research. 大家好! 我是一名来自马来西亚莱佛士大学的创意媒体设计研究学者。这个学期, 我必须探讨与研究一个设计课题, 而我的课题是角色设计的文化代表性与中国动画的定位。以下是我的研究此课题的目的:

- 1. To understand the importance of culturally significant character design. 了解具有文化代表性角色设计的重要性。
- 2. To identify the tangible elements which can make the animated characters in Chinese animation culturally significant. 探讨能够让中国动画角色有文化代表性的可感知元素。
- 3. To understand animation preference of the viewers towards culturally significant character design. 了解观众对于有文化代表性角色的动画喜好。
- 4. To identify the factors that influence the positioning of an animation. 了解影响一部动画的定位的因素。

There are four sections in this survey. Your responses to this survey will be kept confidential and anonymous. 这个问卷有四个部分, 您对本问卷的答案将被保密和匿名, 感谢您的时间!

* It would be a great if you can express your ideas in English, but answering in Chinese is acceptable as well. 若您能使用英文表达您的想法那会对我的研究有更大的贡献, 不过使用中文回答也能被接受。

Section 1: Demographic Analysis 第一部分: 人口分析

*1. Are you from Mainland China? 请问您来自中国大陆吗?

Yes 是

No 否

*2. If you're not, where are you from? 若您不是来自中国大陆, 请问您来自哪里?

Malaysia 马来西亚

Indonesia 印度尼西亚

Singapore 新加坡

Others 其他

*3. Please state your age group. 请选择您的年龄阶段。

18 and below (18岁/18岁以下)

19 - 25

26 - 30

31 - 40

41 - 50

51 and above (51岁/51岁以上)

*4. Are you studying/ working in the character design/ animation field? 请问您是否就读于/ 就业于动画/ 角色设计领域?

Yes 是

No 否

Others 其他

*5. How often do you watch animation? 请列出您观看动画的频率。

Almost everyday 每一天

1 - 10 times per week 一周内1-10次

1 - 10 times per month 一个月约1-10次

1 - 10 times per year 一年内1-10次

Never 从未看

One section down and three more to go! 您完成了一个部分, 还剩下三个部分哦!!

[下一页](#)

问卷星 提供技术支持

Culturally significant Character design in positioning Mainland Chinese animation 角色设计的文化代表性与中国动画的定位

Section 2: Animation Preference based on Culturally significant Character Design 第二部分: 动画偏好与文化代表性的角色设计

What is cultural significance? 什么是文化代表性?
 "Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations" (IGI, Global, n.d.). In other words, "cultural significance means being able to recognize a particular culture through certain representations." (Yip, 2020)
 "文化代表性是指过去、现在或未来世代的美学、历史、科学、社会或精神价值"。换句话说, "文化代表性意味着能够通过某些代表来识别特定的文化。"


*6. Without knowing the storyline, please rate the likeliness of you watching an animation with culturally significant characters. 在不了解故事情节的情况下, 请列出您观看一部具有文化代表性角色的动画的可能性。
 Very unlikely 极不可能 1 2 3 4 5 Very likely 极有可能

*7. Based on the answer above, please further elaborate on your reasoning. 根据上述的答案, 请作出详细解释。


*8. What do you think of the role of cultural significance in an animation's character design? 您怎么评价文化代表性在一部动画角色设计中的作用?
 Very unimportant 非常不重要 1 2 3 4 5 Very important 非常重要

Below are three (3) sets of pictures that showcase the differences in character design between (left: Nezha, 2019) and (right: The legend of Nezha, 1979). Please observe the differences. These two animations are adaptations of the story of Nezha, a well-known warrior deity in Chinese mythology. 下列三组图片显示《哪吒之魔童降世》2019 (左图) 与《哪吒闹海》1979 (右图) 的角色设计差异, 请观察它们之间的差异。这两部动画改编自哪吒的故事, 一个著名的中国神话。


Set 1: Nezha 第一组: 哪吒 (2019 vs 1979)



Set 2: Taiyi Zhenren 第二组: 太乙真人 (2019 vs 1979)



Set 3: Li Jing 第三组: 李靖 (2019 vs 1979)



*9. Based on the differences in character design, which animation would you be more interested to watch? 根据上述的角色设计差异, 您更愿意看哪一部动画电影?
 Nezha (哪吒之魔童降世) (2019)
 Nezha Conquers the Dragon King (哪吒闹海) (1979)

*10. Based on your answer above, what is the major factor that leads you to choose the said animation? Please further elaborate on the factor. 根据上述的答案, 请列出您选择该动画电影的原因, 请为此原因作出解释。




*11. What do you think are the tangible elements that will make the characters shown above look culturally significant? 请问您觉得下列哪些元素能让上述的角色具有文化代表性? (可多选)

- Clothing 服装
- Hairstyle 发型
- Accessories 配饰
- Props 道具
- Face features 脸部特征
- All of the above 以上皆是
- Others 其他



Appendix 2. Online survey questions in Wen Juan Xing (Instrument 2)

Table 2. The Results of Cross-Comparison of Nezha from Figure 1 with Nezha from *Nezha Conquers the Dragon King* (1979) and *Nezha* (2019)

Images of Character Design	 <p data-bbox="596 703 829 790">Figure 2. Character design of Nezha from Chinese mythology</p>	 <p data-bbox="861 703 1141 790">Figure 3. Character design of Nezha from <i>Nezha Conquers the Dragon King</i> (1979)</p>	 <p data-bbox="1192 703 1452 763">Figure 4. Character design of Nezha from <i>Nezha</i> (2019)</p>
Animation	N/A	<i>Nezha Conquers the Dragon King</i> (1979)	<i>Nezha</i> (2019)
Animation Style	N/A	2 Dimensional	3 Dimensional
Colour Tone	Vibrant colour scheme	Vibrant colour scheme	Red colour scheme
Tangible Elements	Features of Tangible Elements		
Hairstyle	Wedge-shaped patch and space buns	Space Bun	Space Bun
Face Features	Slanted eyes	Slanted but large eyes and red tattoo mark on forehead	Westernised eyes and red tattoo mark on forehead
Costume	Dark green lotus leaves	Pink lotus petals and dark green lotus leaves	Kung Fu Style costume
Weapon 1: Fire-tipped Spear	Present	Present	Present
Weapon 2: Wind Fire Wheels	Present	Present	Present
Weapon 3: Universe Ring	Present on wrists	Present on wrists	Present on neck
Weapon 4: Red Armillary Sash	Present	Present	Absent

Appendix 3. The Results of Cross-Comparison of Nezha from Figure 1 with Nezha from *Nezha Conquers the Dragon King* (1979) and *Nezha* (2019)

Question: What do you think are the tangible elements that will make the characters shown above look culturally significant?

Table 3. The Bar Chart Result of the Tangible Elements to create Cultural Significance in Character Design on Instrument 1 (top) and Instrument 2 (bottom)

Types of Instruments	Bar Chart Results
Instrument 1: GoogleForms	<p>Figure 5. Bar Chart Results on Google Forms</p>
Instrument 2: WenJuan Xing	<p>Figure 6. Bar Chart Results on Wen Juan Xing</p>

Appendix 4. The Bar Chart Result of the Tangible Elements to create Cultural Significance in Character Design on Instrument 1 (top) and Instrument 2 (bottom)

The Design of Educational Games in Teaching History

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Abstract *Video games are increasingly being used in classrooms for educational purposes due to the immersive quality they have. This research aims to understand the design features of a well-designed educational game and study how games can be used in education, especially in teaching history. This article puts forward visual analyses of two games, a questionnaire and email interviews with two experts in education to answer these questions. It can be noted that the main features of games that make them useful in teaching are their visuals, challenges, and narratives. Experts also believe that games that discuss historically accurate information should be used. Results show that gamification techniques such as points and leaderboards are an important part of motivating students to learn.*

Key words Gamification, design, education, history, video games

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Introduction

Video games engage players in productive play, especially with the increasing power they have to create interactive worlds. While most instructors and researchers agree that games have both motivational and instructive features, there is no consensus on the essential characteristics of an educational game.

Understanding the social concepts and procedures such as “historical evolution, change/permanence, diversity, multi-causality, social progress” is more motivating and easier to grasp using video games (Cáceres & López, 2010). Most games are made for entertainment and commercial use. However, research has been increasing in gamification in education, with frameworks and theories proposed to integrate games into curriculums.

In this article, the researcher has explored the features of a well-designed educational game that can teach history. With the lack of research done on this topic, the researcher has posed research questions and objectives to tackle it. The first section contains a problem statement, followed by a methodology using three data collection methods. The researcher will then present the findings of her research in the form of tables and charts and will critically analyse the data. Results drawn from this research will be discussed and the article be summarised in a conclusion.

Problem Statement

Today's students – the digital natives – are growing up with digital technologies and it is crucial to change the way they are being taught in schools if we are to prepare them for this technology-driven world (McClarty et al., 2012). McClarty et al. go on to further state that “the unique value of the engagement factor within digital games is the ability to sustain engagement and motivation across time, particularly with more challenging learning tasks.” The benefits of these games have been debated for years, and the main conclusion that educators and scientists come back to is that games are appealing and tend to motivate students to learn by increasing their emotional engagement (Whitton, 2011, as cited by Abdul Jabbar & Felicia, 2015).

However, the empirical data outlining the “relationship (of games) to specific learning outcomes are often problematic and has been slow to emerge” (Spires, 2015). In addition, video games currently specifically developed with educational purposes in mind cannot compete with these commercial games in their design, attractiveness, graphic recreations, sound effects, and potential level of interaction with the story (López & Cáceres, 2010).

Good educational games will consider both the learning goals or content and the gameplay simultaneously (FAS, 2006), and they should have rich graphics and multitasking interfaces (Prensky, 2001, as cited by McClarty et al., 2012). They have the potential to “enrich, enliven, and recreate the complexity of the past in ways that other secondary sources, such as textbooks, role-plays, lectures, and videos, may be unable to capture (McCall, 2012 as cited by Wright-Maley et al., 2018). Therefore, this research aims to explore the features of a well-designed educational game that can teach history and analyse the elements in commercial games available today that make them suitable to be used in classrooms.

Methodology

Visual analyses were done on two games: a commercially successful franchise game (Assassin's Creed Origins (Figure 1)) and an educational game (Attentat 1942 (Figure 2)). The results of both analyses were compared to understand the design features and gameplay elements of both types of games that may motivate students in studying history. Notes were made on how effective the art styles of the games are at communicating the historical aspects and how they create immersion for the player. The researcher chose the MDA (Mechanics, Dynamics, and Aesthetics) framework (Hunicke et al., 2004), as a basis of the visual analysis as it brings together the taxonomy used in game design, development, criticism, and research. The findings were compiled into a table that follows the MDA framework, as discussed further.

Research materials classified according to MDA framework		
	<i>Attentat 1942</i>	<i>Assassin's Creed Origins</i>
Aesthetics (emotional responses that emerge from the player's participation in the game's dynamics)	Narrative, Challenge	Submission, Discovery, Sensation, Narrative
Dynamics (create aesthetic experiences)	Narrative: mix of full-motion video, actual audio-visual footage, and interactive graphic novel style Challenge: getting caught by the police (Gestapo)	Submission: realistic and highly rendered visuals Discovery: variety of environments, characters, quests, and side quests Sensation: fluid combat system with a variety of weapons Narrative: main quest/adventure, dialogue
Mechanics (actions, behaviours, and control mechanisms)	Point-and -click, conversational options, mini games, puzzles	Exploration, fighting, recon, progression

Table 1. The research materials of the visual analyses classified according to the MDA framework.

Email interviews were conducted to understand the features that educational games will require for gamifying the classroom from a professional point of view. The researcher has chosen two expert teachers who specialize in the subject area of gamification and the interviews were executed via email to offer the participants ample time to answer at their own convenience. The responses (Appendix 1) were assessed and summarized for comprehension (Table 2).

Summary of Findings	
1	It is imperative that the content of the game to be used in the classroom is historically accurate and aligns with the course material.
2	Games used in classrooms should be uncomplicated, with clearly defined learning goals and simple instructions.
3	Both experts believe that a good storyline is necessary for immersion and that visuals also help in this regard.
4	McCall believes that the content of the game should be presented in the form of tasks that promote cognitive thinking instead of encouraging the memorization of facts.

Table 2. Summary of findings from the email interview

A standardized questionnaire was prepared and sent out to various people who play games either casually or frequently (Appendix 2). This was to understand whether it is the design or content of games that make them appealing to gamers and to gain the insight of young people who grew up playing games and understand how they work. The questionnaire contained 13 questions in total, with both multiple-choice questions and open-ended short answer questions. Long answer questions were not included as the researcher aimed to rate the features of games. The first four questions were to get a complete understanding of the demographics of the respondents, how frequently they played games and what types of games they played the most. The rest of the questions were to determine whether it was the design of the games or their content that most strongly resonated with the respondents. Responses with a large amount of detail and ones with varying and interesting opinions were especially noted, as were the responses that were classified under "Others" as these provided a different view the researcher had previously not thought of when developing the questions. The Findings section of this paper will provide a descriptive analysis of the responses.

Findings and Discussion

When asked what their preference is in playing a new game, 21% of the questionnaire's respondents said that they are more interested in good graphics and interesting characters and design. This is due to these features creating more immersive worlds. According to the MDA framework (Table 1), games create different emotional responses in relation to the game mechanics. While analysing Assassin's Creed Origins, the researcher discovered that Discovery and Submission are two of the Aesthetics that a player experiences. Discovery refers to the urge to explore the game world, which is created in this game by the variety and richness in its environment and character designs.

Submission is a connection to the game and while the game has an overhauled combat system, it is the art of the game that truly shines, which creates a game that players want to go back to. On the other hand, Attentat 1942 focuses on pushing its storyline forward, creating Narrative as one of the Aesthetics that emerge from the player's interaction with the game. It uses a mix of art styles to do so, such as a full-motion video, audio-video footage from the past, and graphic novel style. These points effectively conclude that visual design is an important aspect when creating educational games.



Figure 2. Research material 1 (Assassin's Creed Origins).



Figure 2. Research material 2 (Attentat 1942).

The interviews conducted with instructors confirm that teachers use games with good stories to keep their students interested. When teaching a social science subject such as history, they find it imperative that the story presents socio-historic facts accurately. The researcher believes that game developers and researchers should creatively use the historical events of the past to write stories that are then presented in the games. When looking into commercial games, one of the reasons the researcher chose Assassin's Creed Origins is due to the historical accuracy in its world-building.

As elaborated in Table 1, the game's main quest creates a narrative that increases the players' interaction with the game. On the other hand, Attentat 1942 drives its narrative forward as its focus since the game intends to provide the players facts and information about the specific event in history through the story. It is also important to note that different genres of games present different types of narratives. Action and shooter games have a set storyline that players complete, whereas adventure and strategy games give the players choices in moving the story forward in different directions. Almost half of the

respondents in the questionnaire answered that they play action and action-adventure the most, which might be due to their story-heavy gameplay, compared to genres such as sports or racing. The respondents also believe that educational games should have a strong narrative.

The main difference between video games and other forms of audio-visual media is their interactivity. Games are unique in that players get to choose how the media will continue and what the ending will be. This is due to the variety of game mechanics they employ across several platforms. The actions of the players and the control mechanisms in the game are utilized to create challenges. Educational games use challenges to help players develop mental skills such as problem-solving and decision making and to deliver content. *Attentat 1942* provides a good example of how information and facts are delivered through the challenges in a game; it uses puzzles and mini games to present historical events and facts, while the looming threat of being jailed is always overhead.

The player also faces the threat of not being able to get answers and clues from all the characters if they do not complete the tasks properly. In view of an educational perspective, gamification is mainly done by mapping game elements (such as points, badges and leaderboards) to gamification design principles (such as goals, challenges, and feedback) (Agre et al., 2015). They are commonly used in gamifying learning and have proven an increase in student participation in classes. One of the interviewees, who is an expert in gamifying the classroom, believes that such game elements provide students an opportunity to test their knowledge and get immediate feedback. However, the researcher believes that, while this direct method of gamification is valuable, games that comprehensively use challenges to promote both cognitive skills and information retention are highly necessary for an immersive experience.

Conclusion

In conclusion, the findings show that educational games should consider both design features, gameplay elements and narrative for an immersive experience for students. The findings from the questionnaire show that players believe that games and gamification will keep their interest in education and that they should be integrated into classrooms to maximize student motivation.

Throughout the duration of her research, the researcher has learned much about games in the context of education, especially through the literature review and visual analysis. The email interviews also provide a unique view for the researcher on how games are being used in the present for teaching. Although the researcher has experienced limitations in conducting her research, the goals of the research have been met satisfactorily. With the development of more games and advancements in technology, the researcher hopes that more studies will be conducted on the feasibility of using games in education.

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Appendices

INTERVIEW QUESTIONS

This research is a study of design features of games that deliver specific learning objectives by motivating students.

In this context, design features can be the visuals of the game/environment design, overall mood/colors used, character design, 2D or 3D elements) and the gameplay features such as the type of game (strategy/action-adventure etc.), gamification elements used (points, badges, leaderboard, levels etc.) and how the narrative of the game leads to the learning objectives.

1. In your opinion, can commercially available video games be used in education? if so, what features of these games make them suitable for use in the classroom?
It is possible if it is done in a proper and strategic manner. We have to be mindful or take into consideration of students who are not used to playing games. Hence the objectives of introducing commercially available video games must be clearly indicated at the onset of the class. The features that would work when introducing commercially available video games include elements that can capture students' overall performance (i.e. leaderboard), video games with storyline so that students can be immersed in learning and video games that provide value where students can reflect to determine what skills that they have gained whilst playing video games. It has to be something that goes beyond that students to have fun or merely to complete a mission.
2. Do you believe that creating a game first and then choosing the learning goal that seemed to fit well with that technology is an effective way to teach? if so, are there any challenges to this method?
I would advise the other way round that is to select the learning outcomes first and then to start creating a game. Otherwise it will result in a lot of editing and revising in order to align the learning outcome to the game. When games are being created, there should be stages in getting feedback on its effectiveness, relevance etc. Hence in most circumstances, there will be alpha stage, beta stage and so on. By receiving new feedback and new input, hence the video games can be much better and relevant for students. Students would appreciate more when the video games are structured and aligned to the expected skills.
3. "An educational game should put players in touch with what is fundamentally engaging about the subject.... enabling them to partake in those pleasures of the discipline that motivate its expert practitioners" (Klopfer et al., 2009). In your opinion, what parts of gameplay (the narrative, interactivity, visuals etc.) make games engaging to your students?
From my experience, students appreciate the narrative of the game so that they are able to feel that there are in 'that' reality to complete the 'mission'. Students also appreciate that their knowledge relating to a particular module to be tested in the game. They of course value the high-quality visuals and this would depend on the budget in designing the video game. With no or limited funding, the video game cannot be as high-quality as the students expect. Students also would like to see their performance throughout the game and hence it is best to have a summary of their progress at the end of each scene. At the end of the game, students would want to see who achieve high score, as this would boost their confidence and also provide a feeling of accomplishment although it is actually a learning assessment for the students.
4. Some educational instructors have developed video games by defining a specific learning goal and building the game around it. These "educational games" are content-centric and "cannot compete with these commercial games in their design, attractiveness, graphic recreations, sound effects and their potential level of interaction with the story (López & Céspedes, 2010)". Do you believe that such "educational games" can motivate and engage students?
Yes definitely hence the importance of educational instructors to collaborate with research centres to obtain funding or collaborate with other academics to get support in designing the video games. The process of developing video games is a continuous process and it does not the moment the story line ends. Students will revisit or play the game over and over again hence it is important to continuously enhance and update the video game. This can motivate and sustain students' interest and attention for a long period of time. In fact, it can also make learning for that particular module to be memorable and enjoyable to learn.
5. In gamifying your course, do you believe that an educational video game built specifically with the course material in mind would be helpful? If so, what features (design features or gameplay features) would be most suitable to include in the game?
To be honest, because it requires a lot of time and effort to be designing for one course material, it is advisable to develop a video game which is all-rounder that covers the entire modules for that course / program. This way, students will take a longer period of time to complete the game as the students will need to develop knowledge for all modules. This can nevertheless result in students to be independent learners as they would want to self-study in order to complete the 'mission.' The best feature to be included in the video game is to have a leaderboard so that students can keep track of their progress throughout learning albeit whilst playing video game.

Appendix 1a: Transcript of email interview with expert 1

INTERVIEW QUESTIONS

This research is a study of design features that deliver specific learning objectives by motivating students, especially for teaching history.

In this context, design features can be the visuals of the game (environment design, overall mood/colors used, character design, 2D or 3D elements) and the gameplay features such as the type of game (strategy/action-adventure etc.), gamification elements used (points, badges, leaderboard, levels etc.) and how the narrative of the game leads to the learning objectives.

1. In your opinion, what are the characteristics of video games that can be effective in education? In history and social studies education where teaching critical thinking skills should be a high priority, a game that is relatively uncomplex and focused on a specific historical event or system is the most effective. So, for example, a game like one from the Stronghold series, or Anno series.

2. What do you consider when choosing commercially available video games to teach history? Does it represent an aspect of history that I want (my curriculum is designed for) y students to investigate and there are historical sources available for students to read as a way to analyze and critique the game.

3. Do you believe that creating a game first and then choosing the learning goal that seemed to fit well with that technology is an effective way to teach? If so, are there any challenges to this method?

Historical games, the way I used them, are different because they are made commercially for non-entertainment purposes and then we use them for learning purposes. In general I think that it is critical that the core models in a game for learning, whatever the field, are focused on the subject material the student is learning about, so designing a game before considering the learning objectives is not an ideal way to learn through gameplay.

4. "An educational game should put players in touch with what is fundamentally engaging about the subject.... enabling them to partake in those pleasures of the discipline that motivate its expert practitioners" (Klopfer et al., 2009). In your opinion, what parts of gameplay (the narrative, interactivity, visuals etc) make video games engaging to history students?

Students generally compare the gameplay to other things they might be doing in class so even older less sophisticated games can be appealing because of choice and interactivity Visuals help but are not essential

5. Some educational instructors have developed video games by defining a specific learning goal and building the game around it. These "educational games" are content-centric and "cannot compete with these commercial games in their design, attractiveness, graphic recreations, sound effects and their potential level of interaction with the story (López & Cáceres, 2010)". Do you believe that such games can motivate and engage students in a subject such as history?

I don't believe history instruction should ever be about learning historical "facts" without their context and their usefulness for some cognitive task. So a game that is designed to reinforce content that does not authentically incorporate that content into core gameplay models will likely not be very useful educationally.

Appendix 1b: Transcript of email interview with expert 2

Exploring the use of games in an educational context

Questions Responses

Exploring the use of games in an educational context

Hello!
I am an undergraduate student from Taylor's University undertaking a research module. My objective is to understand the design features of games that make them appealing and how they can be utilized in a classroom setting.
This survey is aimed towards students who play video games. It will approximately take 5-10 minutes of your time.
Thank you for your responses!

1. What is your age? *

Below 18

18-24 years

25-34 years

35 years and above

2. What is the highest level of education you have completed? *

High school graduate, diploma or equivalent

Associate degree

Bachelor's degree

Master's degree

Doctorate degree

Other

3. How much time do you spend playing games each week? *

Less than 1 hour

1-2 hours

3-5 hours

6-9 hours

10+ hours

4. Which of the following types of games do you most usually play? (Choose up to 3) *

Action and First Person Shooter (such as Call of Duty, Halo, Fortnite)

Adventure (such as Myst, Firewatch)

Action-adventure (such as Legend of Zelda, Resident Evil, Assassin's Creed)

RPGs and MMORPGs (such as Final Fantasy, World of Warcraft)

Strategy (such as Civilization, League of Legends)

Simulation (such as The Sims, RollerCoaster Tycoon)

Puzzle (such as Tetris)

Sports (such as FIFA, NBA)

Racing (such as Super Mario Kart, Need for Speed)

5. Which of the following is the main reason you would choose to play a new game? *

Advertised as having a good storyline/narrative

Has impressive graphics

Is a sequel of an existing game

Has good character design/art style

Has good gameplay

Allows for social interaction

Other...

6. How often do you think challenges in a game, such as time constraints and competition with other players, encourages you to keep playing the game? *

Always

Often

Sometimes

Rarely

Never

Appendix 2a: Questionnaire form (Part 1)

7. Techniques such as points, badges, leaderboards and progress bars have been traditionally used to "motivate" users to continue playing games. As such, how important do you think such visual indicators are in encouraging you to play games? *

Very important

Fairly important

Important

Slightly important

Not at all important

8. Do you believe that commercial video games have educational potential? *

Yes

No

Maybe

9. If you answered yes to question 8, which of the following best describes the way a game can be utilized for educational purposes?

Learning specific content

Problem solving

Decision making

Other...

10. A number of games have been developed by instructors with education specifically in mind. * In such games, how important do you think is the narrative (storyline)?

Very important

Fairly important

Important

Slightly important

Not at all important

11. Due to various restrictions, such games may not be as visually pleasing as commercially available games. How important do you think is the visual appeal of such educational games? *

Very important

Fairly important

Important

Slightly important

Not at all important

12. Commercial games such as Civilization, Minecraft and Assassin's Creed have been repurposed for use in classrooms. Do you believe that this is an effective way to teach students? *

Yes

Maybe

No

13. Please explain your reasoning for the previous answer. *

Short-answer text

Appendix 2b: Questionnaire form (Part 2)