Integrated Souvenirs in Exhibitions

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ABSTRACT

Souvenirs are an essential part of the museum experience, but currently, souvenir shopping is the final step of the museum visit. There is a disconnect between exploring the exhibitions and buying the souvenirs that turns the souvenir into a commodity that lacks context. This paper explores how integrated souvenirs, souvenirs that are received in the middle of the museum exhibition experience, creates more meaningful souvenirs and increases information accessibility.

Although there are art exhibits and established museums, such as the Color Factory and Cooper Hewitt Smithsonian Design Museum, that have integrated souvenirs, they are not always used to give context or access to exhibition information. This project fills the gap of current research by creating integrated souvenirs with the purpose of teaching and increasing accessibility. Through user testing an exhibition on the History of Manhattan's Chinatown with integrated souvenirs, the results demonstrate that integrated souvenirs are more meaningful than regular souvenirs and are helpful in revisiting the exhibition's content again. These findings are the beginnings of future research on souvenir and exhibition design.

KEYWORDS

Interactive exhibitions, souvenirs, exhibition design

1 Introduction

At the end of a museum experience, visitors typically enter the museum gift shop to buy a souvenir which the Oxford English Dictionary defines as "Something that is given or kept as a reminder of a place, person, event, etc.; a memento, a keepsake; spec. a (typically small and inexpensive) item designed for sale to tourists and having some association with the place visited" [1]. The first half of the definition demonstrates that souvenirs can act as retrieval cues, "stimuli that can help us retrieve information that is stored in our memories," helping the visitors recall their museum visit [2].

Although those are noble merits, most souvenirs fall under the second part of the definition, being part of consumer culture. Souvenirs have become commodities, produced only to be bought, not to preserve the history behind the object as they lack the context of the exhibition and original culture [3]. However, this could be fixed by buying the souvenir during the museum experience rather than after. There is evidence that if the souvenir is received during the museum visit, visitors are able to generate memories as they finish exploring the exhibition rather than afterwards [4]. By receiving the souvenir in the middle of the exhibition, visitors would be able to give context to their souvenirs, creating more meaningful connections between the souvenir and exhibition information. This would shift the purpose of the souvenir from being a commodity to a purposeful retrieval cue.

The purpose of this project is to use integrated souvenirs to create a meaningful connection between the exhibition and the visitor as well as increase the accessibility of the exhibition's content. Integrated souvenirs are souvenirs that are incorporated into the exhibition and included in the ticket price. The visitors would receive the souvenir as they explore and interact with the exhibition. By receiving the souvenir during the museum experience, visitors will be able to give the souvenir context and use it to revisit the exhibition's content in the future.

As for the structure of this paper, the next section will discuss related works that have also explored integrated souvenirs in different ways and for different purposes. Next, the methodology will describe the complete exhibition and the choices made for accessibility. Then, I will explain how the research question is evaluated, share the user testing data, and expand on the evaluation results. Finally, the paper will be concluded with reflections and further research.

2 Related Works

This research lies at the intersection of souvenir design, interactive exhibition design, and exhibition accessibility. There are many art exhibits and well-established museums

that have implemented different strategies to tackle those topics. For this paper, I will focus on two prime examples for each category: the Color Factory and the Cooper Hewitt Smithsonian Design Museum, both interactive exhibitions with integrated souvenirs in New York City.

2.1 Color Factory

The Color Factory in SoHo is an example of an art exhibit that includes physical integrated souvenirs. For $38 a ticket, visitors explore Color Factory's twelve participatory installations where they experience different colors that make up New York City and receive small goodies to explore the colors in a multisensory way [5]. The goodies, which function as physical integrated souvenirs, range from small pins to wear and take home to consumable treats to have on the spot such as candies and drinks (Image 1).

Image 1: Color Factory integrated souvenirs in the form of candies [20]

Although some of the integrated souvenirs, such as the pins, can function as retrieval cues, that is not the main purpose of them. Their main purpose is to allow visitors to experience colors with senses other than sight. For example, visitors are given different color candies, as seen in the picture, to explore the colors through taste. These integrated souvenirs at the Color Factory are not meant to enhance the souvenirs themselves but the exhibition. Since the integrated souvenirs are consumed on site, the visitors are not forming memories around the souvenir when they receive it; instead, the visitors are creating context for the exhibition which differs from the integrated souvenirs I am exploring.

2.2 Cooper Hewitt Smithsonian Design Museum

Six miles north of the Color Factory is the Cooper Hewitt Smithsonian Design Museum that uses digital integrated souvenirs. Cooper Hewitt is a design museum meant to educate the public about design [6]. When visitors buy their tickets, they are offered a Cooper Hewitt Pen (Image 2) which allows them to draw on interactive large screens and save information about the exhibition's objects as they tour through the design museum. The saved information, containing photos and descriptions of the object, act as a digital integrated souvenir which can be accessed after the visit by going to the museum's website and entering their special code printed on their ticket (Image 3). However, visitors worry about losing their ticket because it is only a small piece of paper that contains their ability to see their saved items after the museum experience [7]. From personal experience, I went to the Cooper Hewitt two years ago in 2019, and I have lost my ticket. I had originally stored it in a safe spot, but I have had to move at least four times since, making it hard to find a piece of paper.

Image 2: Cooper Hewitt Pen [21]

Image 3: Cooper Hewitt Ticket with code to access digital integrated souvenirs [22]

Even if visitors save their tickets and enter the code to the museum's website, they still have more obstacles to get through. For some, the first page of saved objects will load, but the following pages will not, preventing visitors from reliving most of their experience [7]. For my friend, she discovered that none of her objects from her visit had been saved onto the website. This was disappointing for her as she had opted to not take photos around the museum as she usually does because she was expecting the pen to do that for her. Sadokierski also regretted taking photos, expressing that new technology is cool but easily frustrating when it doesn't work the way it's supposed to [7].

2.3 The Gap

The purpose of my project is to create meaningful integrated souvenirs that help visitor's revisit the exhibition's content easily through well-established technology. Although the Color Factory has physical integrated souvenirs, the souvenirs are meant to enhance the experience not the memories. Some of Color Factory's souvenirs could serve as retrieval cues for the experience, but many are consumed at the exhibit. On the other hand, Cooper Hewitt has educational digital integrated souvenirs, but the new technology is not reliable and can be very frustrating. My integrated souvenirs would create context of the exhibition while being accessible by using QR codes and websites.

3 Methodology

3.1 Exhibition Details

The integrated souvenirs presented in this project is part of an exhibition on the history of Chinatowns in New York City. The exhibition would ideally be at the Museum of Chinese in America (MOCA) in Lower Manhattan. I chose this topic because of how the COVID-19 pandemic has negatively affected Chinatowns and increased anti-Asian hate. Business has decreased in Manhattan's Chinatown because of COVID restrictions and racism, causing many businesses to close completely. As of March 2021, "at least 17 Chinatown restaurants and 139 ground-floor stores have permanently closed during the pandemic" [8]. I want to use my exhibition to teach visitors the deep culture and history of Chinatown, shedding light on the importance of this neighborhood.

The exhibition details the history of the different Chinatowns across New York City, and for Manhattan's Chinatown, the exhibition describes the history based on the different waves of people that arrived in Manhattan. The Manhattan part is divided into five sections: Tiashan, Hong Kong/Guangzhou (HK/GZ), Taiwan, Fuzhou, and present. The first four groups are based on the main groups of immigrants to Chinatown over time, and the last group would be about the current Asian-Americans in Chinatown [9]. Due to the time constraint of this project, I will only focus on three groups: HK/GZ, Fuzhou, and present. I choose HK/GZ and Fuzhou because they are the two biggest communities in Manhattan's Chinatown, making the most impact on the neighborhood, and I choose the present to highlight what young Asian-Americans have been doing to help preserve Chinatown.

3.2 Integrated Souvenirs

To receive the integrated souvenir, museum visitors will pay for the integrated souvenirs as they pay for their museum ticket. For example, at MOCA, the general admission fee is $12; however, for this exhibition with an integrated souvenir, the ticket is $18 because it includes the museum admission and the souvenir. The visitors would not receive the souvenir at the door with their ticket, but they would receive the souvenir when they arrived at the corresponding exhibition.

For this exhibition about the history of New York City's Chinatowns, the integrated souvenirs will come in blind boxes which is a form of packaging where the buyers do not know which souvenir is inside; therefore, the selection of the souvenir is random. I chose blind boxes because they have a collectible quality that makes them more sought after because the collections tend to be limited edition and the souvenir is chosen by chance.

Inside the blind boxes offered at the museum is an integrated souvenir and pamphlet explaining the integrated souvenir (Image 4). For this exhibition, each souvenir would correspond with the different groups of people. Since I am focusing on a portion of the groups for this project, I made three of the five souvenirs by hand using polymer clay, 3D modeling, 3D printing, and fake floral.

Image 4: Blind box with integrated souvenir and pamphlet that was used for this project

The theme of each souvenir was chosen by finding something meaningful to each group (Image 5). For HK/GZ, I sculpted a pork bun out of polymer clay to represent dim sum and Nom Wah Tea Parlor. Dim sum is a tradition from HK/GZ and Nom Wah Tea Parlor, at over one hundred years old, is New York City's oldest dim sum restaurant [10]. The pork bun is Nom Wah's house special dish. For Fuzhou, I crafted a flower arrangement primarily using polymer clay and fake florals. Flower shops on East Broadway are unique to the Fuzhou community because the Fuzhou immigrants kept traditional ritual services and activities [11]. These flower shops provide ritual services, paraphernalia, and talent for traditional ritual activities, such as ritual instruments, opera singers, and special flower arrangements. Finally, for the present group, I 3D modeled and printed a gold coin and stand that represents the logo of Welcome to Chinatown, a grassroots initiative started by young Asians to help New York City's Chinatown [12]. The meaning behind each souvenir is meant to represent an important feature of each group.

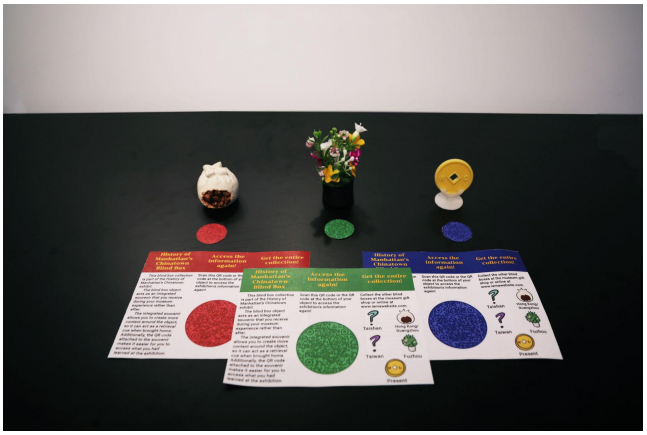

Image 5: The three different integrated souvenirs made for this project with their corresponding QR code and pamphlet

Inside the bind box is also a pamphlet that accompanies the souvenir (Image 6). The pamphlet is divided into three sections. The first section explains the purpose of the blind box and integrated souvenir. The second section has a QR code that is also on the souvenir. Finally, the third section shows the different souvenir options in the blind box collection. The pamphlet will give users a better understanding of the integrated souvenir and possibly incentivize them to buy more blind boxes.

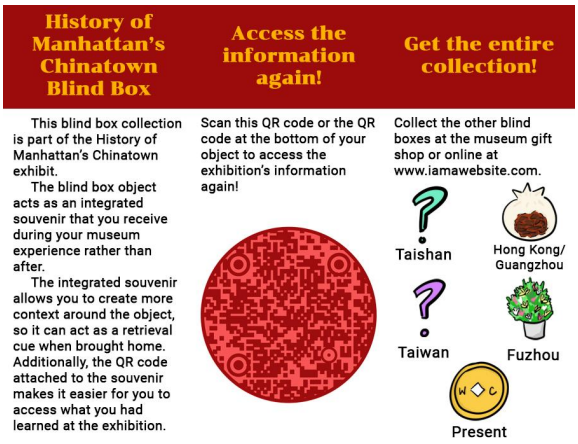

Image 6: The pamphlet included with the blind box

3.3 Souvenir Interactions

The souvenirs have two different interactions, one at the museum and one after leaving the museum. At the museum, visitors will place their souvenirs on a laser cut black platform with a frosted acrylic sheet acting as a monitor screen (Image 7). Inside the platform is a color sensor and Arduino that will recognize which souvenir is placed on the platform because each souvenir has a colored QR code at the bottom. With the help of p5.js and p5.serialcontrol, the corresponding webpage will be projected on the frosted acrylic after the souvenir is placed on the platform. For example, if the pork bun was placed on the platform, the webpage will be about the history of HK/GZ in Manhattan's Chinatown.

Image 7: Black platform, frosted acrylic sheet, and projector set up at the museum

The informational website, made using HTML and CSS, contains history about the group of people, an in-depth reasoning to the souvenir, and things to check out in Chinatown related to the group. The content of the website was found through Google and Asian/Asian-American online communities and physically exploring Chinatown. Although the souvenir sends visitors to the webpage related to the souvenir's group, the visitors will be able to learn about the history of the other groups by navigating between the pages. The souvenir does not limit the visitors to the group that the souvenir is associated with; instead, the souvenir acts as a key to access all the information.

The purpose of the museum interaction is to give more meaning to the souvenirs. As the visitors engage with the souvenir, the users form context and memories about the exhibition's content around the souvenir which helps the souvenir become a better retrieval cue. This makes the integrated souvenirs more purposeful than a souvenir bought at a gift shop after the exhibitions.

Once users leave the museum, they can interact with the souvenir through the QR codes (Image 8). As mentioned before, there is a QR code at the bottom of each souvenir and on the pamphlet from each blind box. Both QR codes are the same and will take users to the webpage the users saw during the museum experience. Although the souvenirs act as retrieval cues, the users will not remember everything perfectly, so the QR codes allow users to revisit the museum information again.

Image 8: Interaction at home by scanning the QR code at the bottom of the integrated souvenir

3.4 QR Codes

I decided to use QR codes because they are easy to use, web-based, low cost, and reliable technology. With almost everyone having access to a smartphone or tablet, QR codes are easily usable. Users do not need to worry about pressing the wrong button or understanding text instructions [13]. QR codes are also great for those with learning disabilities because they can examine the information at their own pace on their own device that is set up for their needs [13]. Overall, QR codes are great for accessibility and easy to use by anyone.

These QR codes lead to web-based applications, so users do not need to download a new native app. Since 2014, more than 50% of smartphone users download zero apps a month, meaning it is difficult to convince people to download a new app [14, 15]. For the majority of app users, their top ten most used app accounts for almost all the time they spend on apps, so there is little interest for new apps in the user's life, especially when the app will be seldom used [cite]. Native apps have a high barrier of entry that QR codes and websites do not have.

Additionally, apps are more expensive than QR codes and websites. A native app will cost tens of thousands of dollars that modestly-funded museums do not have [13]. For museums under established institutions, like the Cooper Hewitt, they have a large budget that can cover an app or even a new device like the Cooper Hewitt Pen. For example, the Smithsonian Institution spent $91 million dollars on renovations of the Cooper Hewitt which included the addition of the new touch screens and Pens [7]. For a small, local museum, like MOCA, without the same support, QR codes are the perfect solution because they are free to make and easy to maintain.

Finally, QR codes are reliable. Unlike the Cooper Hewitt Pen and its digital souvenirs, QR codes will not frustrate the users. QR codes have been around since 1994 and were approved by the International Organization for Standardization in 2000, demonstrating its effectiveness [16]. In fact, QR stands for quick response, meaning the technology will not leave people waiting or worried [16]. QR codes are well-established technology that everyone can rely on without frustration. Overall, QR codes have many benefits, including accessibility and reliability, making it the best solution for this project.

4 Evaluation

For evaluating this project, I looked at Barbieri et al.'s research for how to user test because the researchers were testing a digital interactive museum experience which is similar to my project [17]. The authors did different tests on usability, enjoyment, and attention by using questionnaires and interviews [17]. The usability tests involved giving the testers a list of tasks to do while the enjoyment and attention tests allowed the testers to spend as much time as they would like exploring the exhibition [17]. For the scope of this project, I focused only on the enjoyment test because I felt that those results would best answer my research question.

The user test began with me walking the participants through a scenario where they arrive at MOCA and buy a $18 dollar ticket instead of a $12 ticket. Then, I describe their arrival to the exhibition, specifically the section on the history of Manhattan's Chinatown. There, the participants selected between three blind boxes. The users opened the blind box, looked through the pamphlet, and went through with the museum interaction. I let them take as long as they would like using the black platform set up and exploring the websites. When they were finished with the museum interaction, I had them try the post-museum interaction with the QR codes. After testing the different experiences, the participants filled out a questionnaire and participated in an interview to expand on their questionnaire answers.

The questionnaire followed in Barbieri et al.'s example of using a seven-point Likert scale and Smileyometer for responses [17]. The Likert scale had seven items with 1 being "Strongly Disagree" and 7 being "Strongly Agree." The Smileyometer is part of the Fun Toolkit used to measure satisfaction and fun [18]. Image 9 is the Smileyometer that was presented to the participants which range from "Awful" to "Fantastic" [19]. The Smileyometer was also turned into a Likert scale with 1 being "Awful" and 5 being "Fantastic."

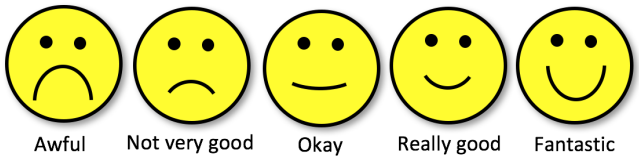

Image 9: The Smileyometer scale presented in the questionnaire [19]

For this iteration of the project, I was able to complete four user tests. Of the four, three were students in the same program as me and one was someone who knew the program very well. Three of them were undergraduate students and one was a graduate student. Also, two of them were Chinese Americans and two interacted with New York City's Chinatowns often. Although this was not the most diverse pool of test subjects, I was still able to gain great insight from these tests.

5 Evaluation

To get an overview of the questionnaire results, the responses for each question were averaged out.

Question	Average Score
Would you do an interaction like this again at a museum?	6.5
Would you like to receive souvenirs during the museum experience as part of your ticket price again?	6.5
Would you pay slightly more for a museum ticket if you received a souvenir as part of the experience?	5
Is the integrated souvenir more meaningful to you than a souvenir bought at the end of a museum experience?	5.75
Do you ever wish to have access to what you had learned in a museum again?	6.5
Would you scan the QR code at least once after leaving the museum?	6.25

Table 1: Likert Scale Questions and Scores (1 is "Strongly Disagree" and 7 is "Strongly Agree")

Question	Average Score
How would you rate the overall experience of the museum interaction?	4.5
How would you rate receiving a souvenir during the museum experience as part of your ticket price?	4.5

Table 2: Smileyometer Questions (1 is “Awful” and 5 is “Fantastic”)

Looking at the results in Table 1 and Table 2, the participants had a very positive experience with the integrated souvenirs interaction. From the Smileyometer, with 5 being “Fantastic”, the participants rated it a 4.5. Additionally, from seven-point Likert scale, the participants gave a 6.5 (with 7 being “Strongly Agree”) when asked if they would do the interaction again at a museum.

The user tests show a mostly positive outlook on the integrated souvenir. When testing for happiness from the souvenir, the participants gave a 4.5 from the Smileyometer. The participants answered a 6.5 out of 7 when asked if they would like to receive an integrated souvenir again. Continuing with the seven-point Likert scale, the participants said 5 for paying slightly more for an integrated souvenir, and 5.75 for the souvenir being more meaningful because it was integrated into the exhibition,

Finally, on the question of accessibility of exhibition information, the answers were also very positive. The participants responded with a 6.5 on having experiences of wanting to revisit information learned at the exhibition again and a 6.25 on the chances of scanning the QR code after the museum experience at least once.

5 Discussion

The results overall confirm my hypothesis that integrated souvenirs would help with accessibility to museum information and that integrated souvenirs are more meaningful than souvenirs bought after the museum experience. When asked about revisiting museum information, most participants strongly agreed (scoring 6.5 out of 7) that they wished they could access the exhibition's information again, and most of them (scoring 6.25 out of 7) also said they would use the QR code at least once post-museum visitation. The strong positive reaction demonstrates the usefulness of the QR code after the museum experience.

As for how meaningful the integrated souvenir is, the participants answered with an average of 5.75. During the post-questionnaire interview, one participant discussed how the souvenir was more meaningful because the interactions allowed users to create more memories with the souvenir and exhibition. Without telling the participants the purpose of my project, this participant gave me feedback that was perfectly aligned with my reasonings of why integrated souvenirs are more meaningful than a regular souvenir.

The post-questionnaire interview was very insightful and brought two interesting points about the integrated souvenir and the souvenir interaction. The first one is on the willingness of paying for a physical integrated souvenir. One tester liked the idea of the integrated souvenir but was not always willing to pay extra money for it because their willingness would depend on their financial situation at the moment. This made me consider if there should be an option to not get the integrated souvenir and still have access to the exhibition because right now, the souvenir is necessary for accessing the exhibition’s content. For the Color Factory, there is not an option to pay less for the experience without the integrated souvenirs because their integrated souvenirs are an essential part of the experience. For the Cooper Hewitt, visitors are able to explore the museum without the Pen. The Pen is meant to add to the experience, and the lack of the Pen does not prevent visitors from experiencing the museum. This also brings up a question of how paying more for the ticket and integrated souvenir is preventing the spread of knowledge to people who are not able to afford the souvenir.

The second point was on the souvenir interaction with the frosted acrylic screen. One participant did not like the screen and website set up because it is very similar to the commonly used monitor. They wished the interaction would be more engaging and interesting outside of a screen to make the integrated souvenir even more meaningful. They had suggested after the museum experience, the souvenir could be brought to the places mentioned in the exhibition and having an interaction there. I found this suggestion to be really thought-provoking and I would love to explore it in the next iteration of this project.

Due to the scope of this project, the testing had various limitations. There are other questions I wish I was able to ask, such as how much do users trust QR codes. In my future tests, I would include the missing questions that would give me an even better understanding of the integrated souvenir’s impact. I also like to test usability and attention the next time I do tests because this time I only did tests on enjoyment. Finally, I would like a bigger test subject pool that is more diverse. My current users do not reflect a large age or interest range. Overall, I still have a lot to explore and test for this project.

6 Conclusion

The research in this paper explores how integrated souvenirs can benefit exhibition visitors by being more meaningful and helping information accessibility. My project fills the gap of physical integrated souvenirs that are meant to be educational and accessible. Through my user testing, integrated souvenirs are more meaningful and helpful to museum visitors after the museum experience, but more testing is needed to find the best interactions with the integrated souvenirs.

Although some opportunities for future research were previously mentioned in the discussions section of the paper, there are still many things to explore in this field. For example, another suggestion was to figure out how the souvenirs could be more personalized or customizable. By being personalized, the integrated souvenir would have more meaning and increase the audience of people who would like their souvenir. Beyond the exhibition design, the exhibition content still needs work. I was hoping to do extensive research on the history of Manhattan's Chinatown for this project by looking at archives and artifacts from MOCA's Collections and Research Center, but I did not have time to do that. For now, the website's content is not fully complete, but is a strong foundation for me to finish this exhibition.

My project of souvenirs and exhibition design as well as the exhibition's content are both things I am very passionate about. I have always loved crafting small objects and building installations, so it was great to do both for this project. I have also loved learning so much about the history of Chinatown and Chinese in New York City from my time working on this project. I would love to bring this exhibition fully to life one day to share what I have learned to the world because I think the rich history and nuances of the Chinese community are overlooked in New York City. By making the History of New York City's Chinatowns into a real exhibit, I would be able to fully share and test the work I have put into integrated souvenirs and bring more of the complexity and culture of Chinatown to the public eye.

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