

Background and Context

- Background of Sungei Road Flea Market

Historical Layer: Known as the Thieves Market, Sungei Road Flea Market has been around for close to eight decades, where locals could hunt for second-hand goods and antiques. The market was closed down on 10 July 2017.

Cultural and Educational Layer: It has been a cultural symbol of the lower societal groups in Singapore where people from these group would gather and trade goods. The market and vendors provide a glimpse into the history of Singapore for future generations (students), paving the story of how Singapore came about, and provide a narrative of those on the lower end of societal spectrum.

Social and Personal Layer: Vendors who have been with the market, hold stories which could paint a life in Singapore during the Kampong and Colonial period before Singapore became the clean city it is today.

- Context we are exploring

Vendors: Looking at their daily routine and activities, interactions with customers.

Market Goers: Exploring surrounding heritage sites, treasure hunting, bargaining

Research methods

	Primary Research	Secondary Research
Vendors	Interview the vendors <ul style="list-style-type: none">- Record and observations- Conduct the trade	Literature <ul style="list-style-type: none">- Defining Place- Wicked Problems
Students (Market Goers)	Google form Survey <ul style="list-style-type: none">- 15-25 year olds- 41 participants	Literature <ul style="list-style-type: none">- The Frame of the Game- Gamification in Learning

Finding:

Research	Method	Findings
Primary Research	Interview	<p>Schedule of the vendors - additional obligations and activities, other than their hawking activities. For example of a day schedule:</p> <ul style="list-style-type: none">→ Morning: Breakfast, Send grandchildren to childcare, Exercise (9 a.m~10a.m), Push cart to market to set up→ Noon: Have lunch while tending to store (at the nearby kopitiam which is convenient), the market opens (1-7pm), leave market to pick up grandkids (5pm)→ Night: Prefer walking home (it takes about 40 min.) than taking transport (one stays at Sengkang, another near Sungei Rd.) <p>Source and categories of goods</p> <ul style="list-style-type: none">→ Source: some give the vendors merchandise for free to sell, picking up thrown-aways to fix and resell

		<p>→ Categories: second hand goods, antiques, electronic appliances, books, jewellery, old clothing and shoes, collectibles like coins, stamps currency notes, etc.</p> <p>The process of trade</p> <p>→ It's fine to bargain the price.</p> <p>→ Customers could ask the history behind the merchandise.</p>
	Survey	<p>Target Audience: 41 respondents of students from Secondary Schools to Tertiary Institution (Age 15-25)</p> <ul style="list-style-type: none"> - 97.6% of respondents have been on a learning journey, out of which Heritage Trails (82.9%) are the most common. - 63.4% enjoyed heritage trails. 36.6% did not. <ul style="list-style-type: none"> - <i>"Top-down knowledge, Limited interaction, Get bored midway, Journey is mundane"</i> - 75.6% are interested in an AR game heritage trail. 24.4% are not interested. <ul style="list-style-type: none"> - <i>"May not be able to capture the essence of the trail, People may only focus on the game, Too superficial and man-made"</i> - 53.7% of them have not heard of Sungei Road Flea Market but 63.4% are interested in a heritage trail on it <ul style="list-style-type: none"> - <i>The oldest flea market, An iconic place, Important part of Singapore history</i>
Secondary Research	Literature	<ul style="list-style-type: none"> - Students' engagement in field trips/trails are better when smartphones are used to weave narratives related to the content of the place, resulting in better learning.¹ - Students' performance and learning improve when there is gamification of field trips.² - A mobile gamification system improves the motivation of students to learn.³

Direction of our project

Given the literature support in gamifying a trail to enhance learning for students, we are planning to create an AR game heritage trail as part of learning journeys where the students are able to experience Sungei Road Flea Market through the perspectives of a vendor and a market goer.

In the game, students are able to

- walk through the daily routine and activities of a vendor, and
- explore surrounding heritage sites of a market goer, and
- even conduct trading and bargaining with one another to simulate the bargaining in the market, replacing what the market had been culturally and personally.

¹ Hillman, T., Weilenmann, A., Jungselius, B., & Lindell, T. L. (2015). Traces of engagement: narrative-making practices with smartphones on a museum field trip. *Learning, Media and Technology*, 41(2), 351-370. doi:10.1080/17439884.2015.1064443

² Chen, C., Liu, G., & Hwang, G. (2015). Interaction between gaming and multistage guiding strategies on students field trip mobile learning performance and motivation. *British Journal of Educational Technology*, 47(6), 1032-1050. doi:10.1111/bjet.12270

³ Su, C., & Cheng, C. (2014). A mobile gamification learning system for improving the learning motivation and achievements. *Journal of Computer Assisted Learning*, 31(3), 268-286. doi:10.1111/jcal.12088