

CHAPTER III

RESEARCH AND DESIGN METHODOLOGY

3.1 Research Methodology

Several studies done in Indonesia had indicated the high adoption rate of reusable carrier bags across the country. Other studies have also investigated the factors influencing public behavior on the adoption of reusable carrier bags and public perception regarding regulatory levies of single-use plastic bags. However, there is seemingly no study done towards the current post-adoption public practice in Indonesia and its environmental impacts.

The study conducted for the project was done to seek insight, identify problems and verify information regarding reusable carrier bags and its public practices in the Jakarta Metropolitan Area. Ultimately, findings from the study will be used to make design decisions. To do so, both methods – qualitative and quantitative – were done and are planned with each technique explained below.

3.1.1 Quantitative Method

The quantitative research was done by collecting data from respondents through online forms. Three forms were distributed, each to collect different sets of data. This section presents the data collected from every form, namely Preliminary Survey, Alpha Test survey, and Beta Test Survey. All three forms were distributed purposively to respondents of corresponding demographic, geographic, and psychographic attributes as stated in 1.3.

3.1.1.1 Preliminary Survey

As a part of the preliminary research, a survey was conducted to obtain insight on the post-adoption practices of Indonesians living in the Jakarta Metropolitan Area aged 18—24. The survey focuses on the current public perception/attitude, knowledge, observation, and

behavior on reusable carrier bags, as well as their perception and preference on different media. The survey questions are as follows:

Table 3.1 Preliminary Survey Questions

No.	Section	Questions/Statements	Answer Type	Options
1	Credentials	<i>Aku berumur...</i>	Drop-down	18, 19, 20, 21, 22, 23, 24
2	Perception	<i>Menurutku, jika aku memakai ulang tas reusable sebanyak 1x, aku sudah membantu melestarikan lingkungan.</i>	Linear scale	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
3	Behavior	<i>Saat aku butuh keranjang untuk membawa barang, aku memakai tas reusable daripada plastik sekali pakai</i>	Linear scale	1=Tidak pernah 2=Jarang 3=Sering 4=Selalu
4		<i>Aku (pernah /saat ini) menyimpan tas polipropilena.</i>	Multiple choice	Ya Tidak
5		<i>Aku pernah memakai ulang tas polipropilena (selain dijadikan kantung sampah).</i>	Multiple choice	Ya Tidak
6		<i>Aku memakai ulang tas polipropilena sebanyak 52 kali.</i>	Linear scale	1=Tidak pernah 2=Jarang 3=Sering 4=Selalu
7	Knowledge	<i>Terdapat 9 jenis tas reusable berdasarkan bahan dasarnya. Apakah kamu pernah mendapatkan informasi tersebut sebelumnya?</i>	Multiple choice	Ya Tidak
8		<i>Tas reusable menggunakan lebih banyak sumber daya dalam tahap produksinya dibandingkan plastik sekali pakai. Apakah kamu pernah mendapatkan informasi tersebut sebelumnya?</i>	Multiple choice	Ya Tidak
9		<i>Tas berbahan baku polipropilena perlu digunakan sebanyak 52 kali sebelum didaur ulang untuk mengimbangi dampak ekologisnya.</i>	Multiple choice	Ya Tidak

		<i>Apakah kamu pernah mendapatkan informasi tersebut sebelumnya?</i>		
10		<i>Dampak yang dihasilkan oleh produksi tas reusable mencangkupi perubahan iklim, pencemaran tanah dan air, penghabisan sumber daya, dan toksisitas terhadap manusia. Apakah kamu pernah mendapatkan informasi tersebut sebelumnya?</i>	Multiple choice	Ya Tidak
11	Observation	<i>Sesuai observasiku, dampak penggunaan tas reusable yang tidak tepat ... dibicarakan.</i>	Linear scale	1=Tidak pernah 2=Jarang 3=Sering 4=Selalu
12		<i>Sesuai observasiku, dampak penggunaan tas reusable yang tidak tepat ... dibicarakan.</i>	Linear scale	1=Tidak pernah 2=Jarang 3=Sering 4=Selalu
13	Response	<i>Seandainya tas reusable harus digunakan ulang lebih dari sekali untuk membantu melestarikan lingkungan, aku mau melakukannya.</i>	Linear scale	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
14	Media	<i>Aku lebih percaya - trust - dengan informasi edukasi yang ada di sebuah situs web resmi dibandingkan dengan yang aku temukan di media sosial.</i>	Linear scale	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
15		<i>Seandainya aku mau tahu lebih dalam mengenai tas reusable, aku akan menelusuri web browser untuk menemukan situs web tentang tas reusable.</i>	Linear scale	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju

Adhering to the limitations listed in 1.3, the questionnaire was purposively sampled to the demographic and geographic

confines. The sample size was determined using Slovin's formula, described below.

$$n = \frac{N}{(1 + Ne^2)} \quad (3.1)$$

Where n is the number of samples required, N is the total of population being sampled, and e is the error tolerance. For this study, the population referenced are Indonesians living in the Jakarta Metropolitan Area at large. The total projected population of the Jakarta Metropolitan Area in 2023 is calculated by each sub-region listed below.

Table 3.2 Jakarta Metropolitan Area Projected Population 2023
Source: Direktorat Jenderal Bina Pemerintahan Desa KEMENDAGRI (2023)

Sub-region	Population (citizens)
<i>Kepulauan Seribu</i> District	26.847
Administrative City of Central Jakarta	1.271.885
Administrative City of North Jakarta	1.734.475
Administrative City of West Jakarta	2.537.172
Administrative City of South Jakarta	2.319.896
Administrative City of East Jakarta	3.099.440
Bogor District	5.258.555
Bogor City	919.833
Depok City	1.919.892
Tangerang District	3.031.050
Tangerang City	1.871.052
South Tangerang City	1.378.279
Bekasi District	2.962.008
Bekasi City	2.408.335
Total	30.738.719

Therefore, with an expected accuracy of 90% – by which e is equivalent to 10% or 0.1 – and N is equivalent to the total population as calculated, the ideal sample size would be 100 respondents. The calculation is presented as follows:

$$n = \frac{30.738.319}{(1 + (30.738.319 \times 0.1^2))} \quad (3.1.1)$$

$$n = \frac{30.738.319}{1 + 307.383,19} \quad (3.1.2)$$

$$n = \frac{30.738.319}{307.384,19} \quad (3.1.3)$$

$$n = 99,999675 \quad (3.1.4)$$

$$n \approx 100 \quad (3.1.5)$$

The questionnaire was shared through online groups and public gatherings at the university on Wednesday, 28th of February. On Saturday, 1st of March 2024, the questionnaire received its 100th respondent. The collected data is then processed into Microsoft Excel to be analyzed. Out of 100 respondents, 7% are aged 18, 14% aged 19, 10% aged 20, 43% aged 21, 20% aged 22, 5% aged 23, and 1% aged 24. The respondents' answers are presented as follows.

Table 3.3 Preliminary Survey Results

No.	Section	Questions/Statements	Frequency				Options
			1	2	3	4	
			Ya		Tidak		
1	Perception	<i>Menurutku, jika aku memakai ulang tas reusable sebanyak 1x, aku sudah membantu melestarikan lingkungan.</i>	9	21	39	31	1= <i>Tidak setuju</i> 2= <i>Cenderung tidak setuju</i> 3= <i>Cenderung setuju</i> 4= <i>Setuju</i>
2	Behavior	<i>Saat aku butuh keranjang untuk membawa barang, aku memakai tas reusable daripada plastik sekali pakai</i>	2	9	48	41	1= <i>Tidak pernah</i> 2= <i>Jarang</i> 3= <i>Sering</i> 4= <i>Selalu</i>

3		<i>Aku (pernah /saat ini) menyimpan tas polipropilena.</i>	95	5	Ya Tidak		
4		<i>Aku pernah memakai ulang tas polipropilena (selain dijadikan kantung sampah).</i>	92	8	Ya Tidak		
5		<i>Aku memakai ulang tas polipropilenuku sebanyak 52 kali.</i>	16	47	31	6	1=Tidak pernah 2=Jarang 3=Sering 4=Selalu
6		<i>Terdapat 9 jenis tas reusable berdasarkan bahan dasarnya. Apakah kamu pernah mendapatkan informasi tersebut sebelumnya?</i>	8	92	Ya Tidak		
7		<i>Tas reusable menggunakan lebih banyak sumber daya dalam tahap produksinya dibandingkan plastik sekali pakai. Apakah kamu pernah mendapatkan informasi tersebut sebelumnya?</i>	46	54	Ya Tidak		
8	Knowledge	<i>Tas berbahan baku polipropilena perlu digunakan sebanyak 52 kali sebelum didaur ulang untuk mengimbangi dampak ekologisnya. Apakah kamu pernah mendapatkan informasi tersebut sebelumnya?</i>	15	85	Ya Tidak		
9		<i>Dampak yang dihasilkan oleh produksi tas reusable mencangkupi perubahan iklim, pencemaran tanah dan air, penghabisan sumber daya, dan toksisitas terhadap manusia. Apakah kamu pernah mendapatkan</i>	47	53	Ya Tidak		

		<i>informasi tersebut sebelumnya?</i>					
10	Observation	<i>Sesuai observasiku, dampak penggunaan tas reusable yang tidak tepat ... dibicarakan.</i>	20	42	28	10	1=Tidak pernah 2=Jarang 3=Serang 4=Selalu
11		<i>Sesuai observasiku, dampak penggunaan tas reusable yang tidak tepat ... dibicarakan.</i>	25	45	26	4	1=Tidak pernah 2=Jarang 3=Serang 4=Selalu
12	Response	<i>Seandainya tas reusable harus digunakan ulang lebih dari sekali untuk membantu melestarikan lingkungan, aku mau melakukannya.</i>	0	3	26	71	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
13	Media	<i>Aku lebih percaya - trust - dengan informasi edukasi yang ada di sebuah situs web resmi dibandingkan dengan yang aku temukan di media sosial.</i>	1	9	45	45	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
14		<i>Seandainya aku mau tahu lebih dalam mengenai tas reusable, aku akan menelusuri web browser untuk menemukan situs web tentang tas reusable.</i>	2	7	47	44	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju

Findings from the survey have indicated several points referring to table 3.3.

- 1) The survey suggests that the initial adoption of reusable carrier bags as a replacement for single-use plastic bags had been successful among most of the respondents. (Questions 2, 3, and 4)
- 2) The current perception and practice of underusing reusable carrier bags is present among the respondents. (Questions 1 and 5)

3) The survey suggests that there is a correlation between knowledge and perception/attitude, affecting the respondents' behavior/practices.

(Questions 1, 5, 6—9, 12)

4) The survey suggests the lack of effective information communication regarding the practices and environmental impact of reusable carrier bags.

(Questions 6—9, 10, 11)

3.1.1.2 Alpha Test Survey

An Alpha test was done to obtain user feedback for the campaign's primary medium, the campaign website. A series of questions – 19 in total – pertaining to visual style, user interface, typography, content, and the medium were distributed purposively using Microsoft Forms. By academic regulation, the test must obtain data from a minimum of 30 respondents. Data from 60 respondents were collected. The table below shows the list of questions prompted in the questionnaire.

Table 3.4 Alpha Test Survey Questions

No.	Section	Questions/ Statements	Answer Type	Options
1	Preface	<i>Saya lebih sering mengakses web menggunakan...</i>	Multiple Choice	Smartphone Laptop/PC
2	Visual Style	<i>Menurut saya gaya visual yang digunakan menarik</i>	Linear Scale	1= <i>Tidak setuju</i> 2= <i>Cenderung tidak setuju</i> 3= <i>Cenderung setuju</i> 4= <i>Setuju</i>
3		<i>Menurut saya gaya visual yang digunakan tepat untuk usia 18—24 tahun</i>		
4		<i>Menurut saya gaya visual yang digunakan tepat dengan Tone of Voice “Casual”</i>		
5		<i>Menurut saya gaya visual yang digunakan tepat dengan Tone of Voice “Positive”</i>		
6		<i>Menurut saya gaya visual yang digunakan</i>		

		<i>tepat dengan Tone of Voice “Expressive”</i>		
7	Interface	<i>Saya dapat dengan mudah membedakan teks dengan tombol</i>	Linear Scale	1= <i>Tidak setuju</i> 2= <i>Cenderung tidak setuju</i> 3= <i>Cenderung setuju</i> 4= <i>Setuju</i>
8		<i>Selama mencoba prototype, saya sempat kebingungan mencari tombol</i>	Multiple Choice	<i>Ya</i> <i>Tidak</i>
9		<i>Di bagian manakah anda sempat kebingungan?</i>	Multiple-answer multiple choice	Landing page Quiz page(s) Read more page(s) Finish page
10		<i>Tombol yang beranimasi membuat saya mudah membedakan antara teks dan tombol</i>	Linear Scale	1= <i>Tidak setuju</i> 2= <i>Cenderung tidak setuju</i> 3= <i>Cenderung setuju</i> 4= <i>Setuju</i>
11	Typography	<i>Menurut saya font yang dipilih mudah dibaca</i>		
12		<i>Menurut saya ukuran font yang digunakan memudahkan proses membaca</i>	Linear Scale	1= <i>Tidak setuju</i> 2= <i>Cenderung tidak setuju</i> 3= <i>Cenderung setuju</i> 4= <i>Setuju</i>
13		<i>Menurut saya warna font yang digunakan memudahkan proses membaca</i>		
14	Content	<i>Saya dapat dengan mudah mengerti pesan yang disampaikan</i>	Linear Scale	1= <i>Tidak setuju</i> 2= <i>Cenderung tidak setuju</i> 3= <i>Cenderung setuju</i> 4= <i>Setuju</i>
15		<i>Apa pesan yang anda dapatkan? Jelaskan secara singkat!</i>	Short Text	N/A
16		<i>Saat bermain, saya mengetahui hal baru mengenai tas belanja</i>	Multiple Choice	<i>Ya</i> <i>Tidak</i>
17		<i>Informasi yang terkandung dalam web mudah dimengerti</i>	Linear Scale	1= <i>Tidak setuju</i> 2= <i>Cenderung tidak setuju</i> 3= <i>Cenderung setuju</i>

				4=Setuju
18		<i>Informasi akan lebih saya mengerti jika prototype menggunakan Bahasa Indonesia</i>	Multiple Choice	Ya Tidak
19	Post-Prototype	<i>Jika prototype telah menjadi web, saya lebih memilih untuk mengaksesnya lewat...</i>	Multiple Choice	Smartphone Laptop/PC

The questionnaire was distributed on April 26th, 2024, at Prototype day, held from 09:00—16:00 Western Indonesia Time (UTC+07:00). The following table presents the data acquired from the Alpha Test.

Table 3.5 Alpha Test Survey Answers

No.	Section	Questions/ Statements	Frequency				Options
			1	2	3	4	
			Opt. 1		Opt. 2		
1	Preface	<i>Saya lebih sering mengakses web menggunakan...</i>	47		13		Opt. 1= Smartphone Opt. 2= Laptop/PC
2	Visual Style	<i>Menurut saya gaya visual yang digunakan menarik</i>	0	0	11	49	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
3		<i>Menurut saya gaya visual yang digunakan tepat untuk usia 18—24 tahun</i>	0	1	10	49	
4		<i>Menurut saya gaya visual yang digunakan tepat dengan Tone of Voice “Casual”</i>	0	1	15	44	
5		<i>Menurut saya gaya visual yang digunakan tepat dengan Tone of Voice “Positive”</i>	0	0	15	45	
6		<i>Menurut saya gaya visual yang digunakan tepat dengan Tone of Voice “Expressive”</i>	0	0	12	48	

7	Interface	<i>Saya dapat dengan mudah membedakan teks dengan tombol</i>	1	4	14	41	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
8		<i>Selama mencoba prototype, saya sempat kebingungan mencari tombol</i>	12		48		Opt. 1= Ya Opt. 2=Tidak
9		<i>Di bagian manakah anda sempat kebingungan?</i>	6	5	3	5	1=Landing page 2=Quiz page(s) 3=Read more page(s) 4=Finish page
10		<i>Tombol yang beranimasi membuat saya mudah membedakan antara teks dan tombol</i>	0	1	20	39	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
11	Typography	<i>Menurut saya font yang dipilih mudah dibaca</i>	1	1	9	49	
12		<i>Menurut saya ukuran font yang digunakan memudahkan proses membaca</i>	0	1	11	48	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
13		<i>Menurut saya warna font yang digunakan memudahkan proses membaca</i>	0	1	8	51	
14	Content	<i>Saya dapat dengan mudah mengerti pesan yang disampaikan</i>	0	2	11	47	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
15		<i>Apa pesan yang anda dapatkan? Jelaskan secara singkat!</i>	Data presented separately (see Table 3.6)				N/A
16		<i>Saat bermain, saya mengetahui hal baru mengenai tas belanja</i>	56		4		Opt. 1=Ya Opt. 2=Tidak
17		<i>Informasi yang terkandung dalam web mudah dimengerti</i>	0	1	10	49	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju

					4=Setuju
18		<i>Informasi akan lebih saya mengerti jika prototype menggunakan Bahasa Indonesia</i>	46	14	Opt. 1: Ya Opt. 2: Tidak
19	Post-Prototype	<i>Jika prototype telah menjadi web, saya lebih memilih untuk mengaksesnya lewat...</i>	45	15	Opt. 1= Smartphone Opt. 2= Laptop/PC

The following presents the short-text qualitative data for question number 15.

Table 3.6 Alpha Test Survey Answers (Question 15)

No.	Response
1	<i>Bahwa tas yang reusable lebih bahaya</i>
2	<i>Lebih dibanyakin informasinya</i>
3	<i>Tas belanja bisa dipakai berkali-kali</i>
4	<i>Semua hal bisa dipakai ulang</i>
5	<i>penggunaan ulang tas belanja itu sama penting dengan tidak menggunakan plastik</i>
6	<i>reusable bag sangat berfungsi untuk kehidupan di masa yang akan datang dan juga perlu tau apa saja jenisnya</i>
7	<i>bahwa banyak material yang ternyata masih berbahaya untuk ikom</i>
8	<i>informasi ttng reusing bags</i>
9	<i>sudah jelqs</i>
10	<i>Tahu ingpo baru tentang bahan reusable</i>
11	<i>saya tidak perlu membeli reusable bag kalau sudah punya</i>
12	<i>reusable bags sangat membantu menjaga bumi</i>
13	<i>informasi mengenai reusable bag yang gampang dimengerti</i>
14	<i>manfaat menggunakan sustainable products</i>
15	<i>Mendapat informasi lebih tentang bahan yang bisa digunakan sebagai pengganti plastik</i>
16	<i>reuse your bags to save earth 🌱</i>

17	<i>Menggunakan tas reusable untuk menyelamatkan bumi</i>
18	<i>banyak bahan yang dapat digunakan sebagai tas reusable</i>
19	<i>Use more reusable bag</i>
20	<i>Tidak</i>
21	<i>Tentanggg bahan"</i>
22	<i>menggunakan reusable bag</i>
23	<i>-</i>
24	<i>Kita perlu lebih sadar akan sampah plastik dan menggunakan reusable bags.</i>
25	<i>kalau nge reuse barang barang bisa menyelamatkan bumi</i>
26	<i>Bisa memanfaatkan kantong plastik dan merawat lingkungan</i>
27	<i>Bahwa tas itu harus di pakai ulang</i>
28	<i>Menggunakan ulang tas reusable supaya mengurangi dampak prubahab iklim</i>
29	<i>Reusable bags take longer times buat degradation</i>
30	<i>Tentang reusable bag, material yang digunakan, dan tentang jejak/footprint eco</i>
31	<i>Reuseable bag membutuhkan effort lebih dalam produksi namun dapat membantu untuk lingkungan</i>
32	<i>Reuse your bags</i>
33	<i>Mengurangi penggunaan sampah plastik dan membantu bumi dari penyakit cuaca a.k.a global warming</i>
34	<i>Mungkin UX yg bisa narik orang lebih menarik sprt apa</i>
35	<i>Perlu menggunakan reuseable bag</i>
36	<i>Sangat fun dan informative</i>
37	<i>Menggunakan kembali barang" seperti plastik</i>
38	<i>menarik konsepnya, tapi button button ada yg susah untuk di cari dan di identifikasi.</i>
39	<i>reusable bag dapat membantu kelestarian bumi jika digunakan secara bijak dan bertanggung jawab</i>
40	<i>edukasi tentang pengurangan penggunaan tas plastik dan menggantinya dengan tas yang lebih bagus dan bisa digunakan ulang</i>
41	<i>Tunjukkan lebih banyak resources untuk informasi tentang reusable bags</i>
42	<i>Terdapat beberapa bahan yang dapat digunakan untuk menjadi tas reusable dan tidak untuk menjaga lingkungan</i>

43	<i>Bisa jadi lebih tau soal tas belanja</i>
44	<i>tentang informasi ttg bag yg reusable</i>
45	<i>Penggunaan reusable bag bisa membantu dalam melestarikan lingkungan</i>
46	<i>Reuseable bag lebih baik untuk membantu mengurangi limbah, lebih awet dan eco friendly & sustainable</i>
47	<i>Ingin mengajarkan dan menginformasikan tentang reusable bags yang bisa bermanfaat</i>
48	<i>dampak dari penggunaan tas reusable</i>
49	<i>Dari konsep sudah menarik dan sesuai dengan target umur</i>
50	<i>Websitenya pendek banget, bs tambahin kontennya</i>
51	<i>Memakai ulang tas daur ulang membantu mencegah global warming</i>
52	<i>Bahan Reusable</i>
53	<i>pke reuseable bag mempunyai dampak positive bgi lingkungan</i>
54	<i>Pentingnya menggunakan ulang tas belanja</i>
55	<i>Menggunakan sampah reuseable dapat membantu mengurangi sampah yg tidak bisa dihancurkan</i>
56	<i>Menggunakan tas yang dapat di daur ulang</i>
57	<i>Reusing bags to reduce climate change.</i>
58	<i>Pentingnya menjaga lingkungan</i>
59	-
60	<i>Bahwa lebih baik menggunakan kembali reusable bag</i>

The Alpha Test survey was done to retrieve user feedback on their experience using the campaign website. Five aspects were evaluated, including user media preference, campaign visual style, user interface, typography, and media content.

1) User media preferences

The Alpha Test includes questions about user media preference regarding websites. The goal of the research is to determine:

- a) The user's initial preference of media to access websites,
- b) And the user's preference of media particularly to access the campaign's website.

The significance of user media preference is its contribution to overall user experience which influences the effectiveness of information dispersion upon the campaign's target audience's search.

Pertaining to questions 1 and 19, the respondents show consistent preference in accessing websites through their smartphones as opposed to using laptops or personal computers. 78% of the respondents show initial preference of using smartphones, while the remainder show initial preference of using laptops or personal computers. After participating in the test, a negligible number of respondents shifted their preference. A total of 75% of the respondents remain with the same preference – accessing the campaign's website through smartphone – while 25% prefer laptops and personal computers.

2) Visual Style

The significance of visual style research lies in the visual appeal and attractiveness of the campaign especially toward the intended target audience. In addition, the accuracy of the campaign's visual articulation relative to the intended demeanor – represented by the campaign's Tone of Voice – is prudent to communicate the campaign message effectively.

The visual style section – questions 2 to 6 – shows overall positive feedback regarding the aspect of appeal and accuracy. A total of 82% of the respondents find the campaign's visual style attractive, while the remainder

tends to agree. In addition, a large portion of the respondents – 82% or equivalent to 49 respondents – finds the visual style appropriate for the target audience’s age group, with 17% slightly agreeing and a single respondent slightly disagreeing.

Relative to the campaign’s Tone of Voice, the respondents largely found the visual style to be accurate. 73% of respondents found the visual style accurate to the Tone of Voice “Casual”, 75% to the Tone of Voice “Positive”, and 80% to the Tone of Voice “Expressive”.

3) Interface

Another factor in user experience improvement includes user interface. The significance of functional and appropriate user interface lies in the campaign’s effectiveness to narrate information while providing user involvement.

Questions 7 through 10 reveal that the majority of respondents – 68% or equivalent to 41 respondents – were able to easily differentiate between non-interactive texts and interactive buttons. However, one respondent disagrees, and four others found it slightly difficult. The majority of respondents also agree that animated buttons in the prototype increases distinguishability between static texts and buttons. Throughout the prototype, 12 respondents claim to experience confusion in finding buttons, with each of the prototype’s sections – landing page, quiz page(s), read more page(s), and finish page – to bear such problem.

4) Typography

Typographic choice is also an essential element in effective communication. It ensures the user’s

comfortability in acquiring literary information relative to duration. Pertaining to questions 11 through 13, 82 % of the respondents found the utilized typeface to be legible. 80% of respondents found that the utilized font size eases reading and 85% agrees as well for font color choice.

5) Media Content

The campaign website serves as a medium of message communication and information dispersion. Thus, the website's effectiveness in performing the task must be evaluated.

78% of the respondents found the website to effectively convey the campaign's message. A follow-up question, then, was prompted to seek insight to the validity of their claim, revealing a mix in results. Pertaining to question number 15, at least 14 respondents have successfully received the campaign's message, that is, the importance of reusing their reusable bags. Several other respondents point out specific information contained on the website yet failed to capture the fuller message. Many of the responses pertain to the generalized notion of reusable bags' "green" branding, with responses such as but not limited to "using reusable bags is a good practice to save earth" which are considered too general. Some have also responded with situational answers, such as but not limited to "I have learned more about reusable bags". While others have commented on other aspects of the website.

Despite the mix, a vast majority – 93% of the respondents – claim to have learned new information about reusable carrier bags while using the website. In addition, 82%

found that information contained within the website can easily be understood, although more than three quarters claim that they would have understood it better if the website uses Bahasa Indonesia.

In addition to the questionnaire, the Alpha Test has also gathered qualitative data from user’s real-time feedback. The results of the Alpha Test user real-time feedback are presented in 3.1.2.3.

3.1.1.3 Beta Test Survey

Following the Alpha Test, the campaign website will undergo another round of evaluation and testing. The Beta test is done to evaluate the revisions and improvements based on the feedback received in the Alpha Test.

A revised version of the web prototype along with the questionnaire will be distributed purposively to 30 respondents – as an academic requirement – through online groups. The respondents will be prompted to test the web prototype before giving feedback through Microsoft Forms.

The Beta Test will focus on several key elements of the prototype, including interface improvements, additional features, language, and usability. The list of questions is presented below.

Table 3.7 Beta Test Survey Questions

No.	Section	Questions/ Statements	Answer Type	Options
1	Interface Improvements	<i>Saya merasa pergantian halaman sudah cukup cepat</i>	Linear Scale	1= <i>Tidak setuju</i> 2= <i>Cenderung tidak setuju</i> 3= <i>Cenderung setuju</i> 4= <i>Setuju</i>
2		<i>Menurut saya tombol telah muncul dengan cukup cepat</i>		
3	Additional Features	<i>Fitur Swipe pada “Read more” page(s) membuat saya lebih leluasa bernavigasi</i>	Linear Scale	
4		<i>Tombol “Read More” yang tersedia pada halaman akhir berguna bagi saya</i>		

		<i>untuk mengakses kembali informasi yang ada</i>		
5	Language	<i>Pada saat mencoba web, saya memilih untuk mengguakan bahasa...</i>	Multiple Choice	Opt. 1= <i>Inggris</i> Opt. 2= <i>Indonesia</i>
6		<i>Dengan tersedianya web dalam bahasa Indonesia, saya dapat lebih memahami pesan yang disampaikan</i>	Linear Scale	1= <i>Tidak setuju</i> 2= <i>Cenderung tidak setuju</i> 3= <i>Cenderung setuju</i> 4= <i>Setuju</i>
7	Usability	<i>Saya sempat kebingungan pada Landing page</i>	Multiple Choice	Opt. 1= <i>Ya</i> Opt. 2= <i>Tidak</i>
8		<i>Mohon deskripsikan kebingungan anda pada Landing page secara singkat</i>	Short Text	N/A
9		<i>Saya sempat kebingungan pada Quiz page(s)</i>	Multiple Choice	Opt. 1= <i>Ya</i> Opt. 2= <i>Tidak</i>
10		<i>Mohon deskripsikan kebingungan anda pada Quiz page(s) secara singkat</i>	Short Text	N/A
11		<i>Saya sempat kebingungan pada "Read more" page(s)</i>	Multiple Choice	Opt. 1= <i>Ya</i> Opt. 2= <i>Tidak</i>
12		<i>Mohon deskripsikan kebingungan anda pada "Read more" page(s) secara singkat</i>	Short Text	N/A
13		<i>Saya sempat kebingungan pada "Finish" page</i>	Multiple Choice	Opt. 1= <i>Ya</i> Opt. 2= <i>Tidak</i>
14		<i>Mohon deskripsikan kebingungan anda pada Finish page secara singkat</i>	Short Text	N/A

The Beta Test collected its 23rd respondent on May 20th, 2024. The following table presents the data acquired for the questionnaire.

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Table 3.8 Beta Test Survey Responses

No.	Section	Questions/ Statements	Frequency				Options
			1	2	3	4	
			Opt. 1		Opt. 2		
1	Interface Improvements	<i>Saya merasa pergantian halaman sudah cukup cepat</i>	0	0	7	16	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
2		<i>Menurut saya tombol telah muncul dengan cukup cepat</i>	0	0	6	17	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
3	Additional Features	<i>Fitur Swipe pada "Read more" page(s) membuat saya lebih leluasa bernavigasi</i>	1	1	9	12	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
4		<i>Tombol "Read More" yang tersedia pada halaman akhir berguna bagi saya untuk mengakses kembali informasi yang ada</i>	0	0	4	19	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
5	Language	<i>Pada saat mencoba web, saya memilih untuk menggunakan bahasa...</i>	9		14		Opt. 1= Inggris Opt. 2= Indonesia
6		<i>Dengan tersedianya web dalam bahasa Indonesia, saya dapat lebih memahami pesan yang disampaikan</i>	0	0	3	20	1=Tidak setuju 2=Cenderung tidak setuju 3=Cenderung setuju 4=Setuju
7	Usability	<i>Saya sempat kebingungan</i>	0		23		Opt. 1= Ya Opt. 2= Tidak

		<i>pada Landing page</i>			
8		<i>Mohon deskripsikan kebingungan anda pada Landing page secara singkat</i>	Data presented separately.		N/A
9		<i>Saya sempat kebingungan pada Quiz page(s)</i>	2	21	Opt. 1= Ya Opt. 2= Tidak
10		<i>Mohon deskripsikan kebingungan anda pada Quiz page(s) secara singkat</i>	Data presented separately.		N/A
11		<i>Saya sempat kebingungan pada "Read more" page(s)</i>	2	21	Opt. 1= Ya Opt. 2= Tidak
12		<i>Mohon deskripsikan kebingungan anda pada "Read more" page(s) secara singkat</i>	Data presented separately.		N/A
13		<i>Saya sempat kebingungan pada "Finish" page</i>	1	22	Opt. 1= Ya Opt. 2= Tidak
14		<i>Mohon deskripsikan kebingungan anda pada Finish page secara singkat</i>	Data presented separately.		N/A

3.1.2 Qualitative Method

Several gathering techniques will be used to obtain qualitative data that is useful for making design and content decisions. The sub-subchapters below discuss each chosen technique and their purposes in this study.

3.1.2.1 Existing Study

Existing study was conducted to analyze existing campaigns found on the internet through web browser search about reusable

carrier bags. The findings from this study will provide descriptions of existing campaigns about reusable carrier bags and their environmental impacts from a visual communication design perspective. In addition, the study will provide a basis of viability and insight towards the current efforts of reusable carrier bag usage persuasion.

1) EcoSense's *Kantong Plastik Ga Asik! Vol. 3* Campaign

EcoSense is an Indonesian environmental social startup founded by a team of Indonesian scholars originating from different universities across Indonesia. The project ran a series of campaigns catered to the conservation of the environment. The startup placed in the top 15 Product-based Capstone Project awards in 2022 and is supported by several entities, including Google Indonesia, *Ditjen Dikti Ristek*, Universitas Indonesia, and the Bangkit Academy led by Google, Tokopedia, Gojek & Traveloka (EcoSense, 2023b).

The campaign was held from February 1st, 2023, spanning seven days, ending on February 7th, 2023. The campaign was aimed at persuading the public to use non-plastic carrier bags while shopping.

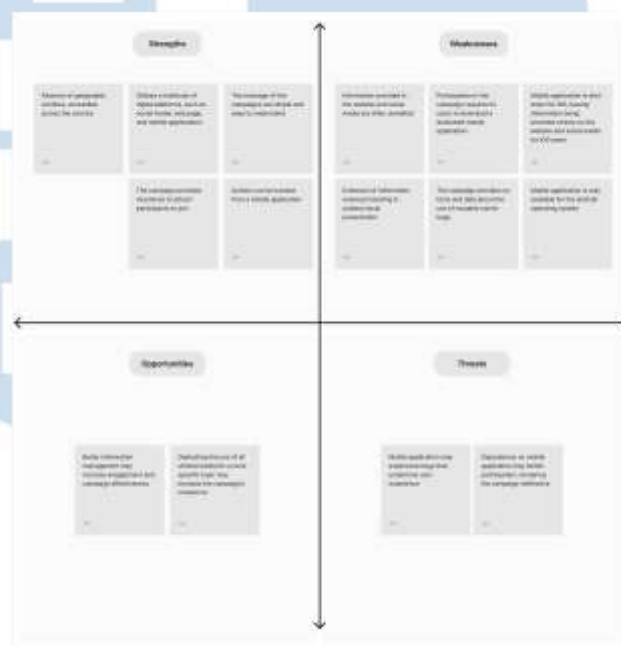


Picture 3.1 EcoSense *Kantong Plastik Ga Asik! Vol.3* Web Page
Source: EcoSense, 2023

The campaign utilizes Instagram as its participatory medium. Participants were asked to create an Instagram Story showcasing themselves using non-plastic reusable

carrier bags while shopping and a caption inviting others to reduce their use of plastic. As an incentive, the participants were rewarded with *EcoPoints* exchangeable for benefits that are accessible through the EcoSense mobile application.

A strength, weakness, opportunity, and threats analysis were done toward the campaign in order to validate the viability of the topic and medium. The analysis is presented in the Picture below.



Picture 3.2 EcoSense *Kantong Plastik Ga Asik! Vol.3* SWOT Analysis

3.1.2.2 Reference Study

Literature reference studies were conducted to establish a foundation for the campaign's topic and its relevance to the target audience in the present day. Two main subjects were explored, namely the availability of information media about the environmental effects of reusable carrier bags, and the target audience's behavior in regard to media usage. The following will discuss both topics' findings separately.

1) Information Media Existence

In order to determine the best visual communication design solution, thorough research was done to gain insight toward existing solutions and their impact. Ten online articles were searched and reviewed – including articles contained in news portals, manufacturer websites, online magazines, and waste management companies – to determine the accuracy of information based on the topic.

The problem with reusable carrier bags revolves around their insufficient reuse and the adverse environmental impacts of such practice. However, the majority of online articles do not provide information regarding said practices but focus on the initial adoption of reusable carrier bags as a replacement for single-use plastic bags. The ten articles reviewed are listed below.

- a) *Dampak Lingkungan dari Tas Belanja Reusable* by Wewadahan (2021)
- b) *Membentuk Kebiasaan Membawa Tas Belanja Sendiri* (Green3R, 2024)
- c) *Dari Tote Bag Hingga Bioplastik, Mana Kantong Belanja yang Lebih Ramah Lingkungan?* (National Geographic Indonesia, 2019)
- d) *Ganti Kantong Plastik Dengan Tote Bag, Ternyata Ini pun Ada Sisi Buruknya, Apa Itu?* From Intisari Online written by Wardayati (2019)
- e) *Tote Bag untuk Pengganti Plastik Juga Bisa Berdampak Buruk, Apa yang Harus Dilakukan?* From Bobo.id written by Iveta Rahmalia (2019)
- f) *Apakah Penggunaan Kantong Kain Sebagai Pengganti Kantong Plastik Lebih Ramah Lingkungan?* (Kompasiana, 2022)

- g) *Sisi Buruk Tote Bag Pengganti Kantong Plastik* in Kompas.com written by Luisa Kus Anna (2019)
- h) *Tas Spunbond: Masalah Baru Akibat Pelarangan Kantong Plastik* in Waste4change.com, written by Mita Defitri (2022)
- i) *Tote Bag: Ancaman Baru yang Kurang Disadari* (Kumparan, 2022)
- j) *Bioplastik Hingga Tote Bag, Tas Belanjaan Mana yang Ramah Lingkungan?* In Kompas.com, written by Julio Subagio and Gloria Setyvani Putri (2019)

The articles reviewed are all online text-based articles, many of which were blogs written by users, while others are news articles written by editors and redaction teams. All ten articles provide consistent information on the effects of reusable carrier bags on the environment should they not be used sufficiently.

2) Target Audience Behavior and Media Usage

In addition to media studies, research was also done to understand the behaviors of the target audience, especially on media usage and behavior. Reiterating the target audience, 18—24 years old are included in the generational segment referred to as gen z. Therefore, the secondary research done on the topic provides information regarding the target audience's behavior and media usage pertaining to gen z at large, especially Indonesian gen z.

a) Work Behavior

In Indonesia, Gen-z takes up the largest population count based on generational segmentation. A large portion of the population is currently in the working age. Gen z Indonesians are subject to a 12-year mandatory schooling requirement before entering higher education

or work. This, however, remains inconsistent when other factors – including socioeconomic status and geographic residence – are taken into account, leaving a gap in education among them. In addition, the majority of Indonesian gen z (67%) – although thought as lacking determination by older generations – have shown willingness to work overtime, provided that they remain compensated. Regardless to the reality of compensation, Indonesian gen z had been found working longer hours in comparison to Millennials. Ironically, the vast majority of the population also values work-life balance, with implications to their attitudes on working conditions such as workplace, where 33% prefer working from home instead of in the office. Over half of them have also claimed to sense better security working in global companies as compared to national companies (Hartanto & Karim, 2023).

b) Leisure & Entertainment Behavior

In the same report breakdown, Hartanto and Karim (2023) have noted that Indonesian gen z has also shown contrast between higher and lower socioeconomic class preferences in hobby and leisure behavior. Higher status gen z tends to have more variety in hobbies and are more likely to have travelling – both domestic and international – as a hobby. The covid-19 pandemic has influenced gen z hobbies as well, sparking interest in new home-based hobbies, such as culinary, botany, and sports. Sports in particular are highly practiced by Indonesian gen z, with 43% doing jogs, 32% soccer, 23% cycling, and 15% badminton.

Indonesian gen z has also adopted a fairly new entertainment medium called streaming platforms. These platforms offer digital products such as music and movies. 30% of Indonesian gen z are willing to spend on music subscriptions while 31% are willing to do so for movie subscriptions. For both entertainment forms, Korean Pop – or K-pop for short – have dominated the industry with 24% of Indonesian gen z showing interest into the movement.

c) Finance & Expenditure Behavior

The majority of Indonesian gen z experiences scarce income, yet some does not. Indonesian gen z income is highlighted with the stark contrast between their expenditures. As many as 56% of the respondents in IDN's report claim to earn below 2.5 million Rupiah each month, followed by 26% claiming to earn anywhere between 2.5 million to 5 million Rupiah. Despite the staggering number, 16% of the respondents claim to earn anywhere from 5 million to 100 million Rupiah each month. These incomes largely depend on geographic residence and the local government's regulation on minimum wage.

These earnings were spent predominantly on food – including staples and raw ingredients for processing – and snacks, accounting for anywhere between 18,69% to 70,59% of their income. This behavior has also influenced the Indonesian gen z tendency on saving up for health. 43% of the respondents claimed to have spared less than 10% of their earnings for health and insurance, while 23% did not spend on it at all. In addition to health and insurances, investments have

appeared to be generally popular among Indonesian gen z, with 37% having started investments, surpassing the 31% that have not.

Indonesian gen z has also displayed financial planning behavior, with 41% claiming to plan their monthly finances and commit to them. Among all expenditures, emergency funds have become the dominant cause of expenditure, accounting for 74% of Indonesian gen z sparing their finances for it despite 38% have claimed for their funds to not be sufficient.

Shopping – or online shopping specifically – have taken the interest of Indonesian gen z. The research shows a staggering 72% of the respondents prefer Shopee as their main e-commerce platform, followed by 12% for Tokopedia, and 11% for TikTok shop. These preferences also vary by gender, with females engaging in Shopee more often than males, and the opposite is true for Tokopedia. Universally, however, Indonesian gen z exhibits a budget-conscious shopping behavior, shown by their attraction toward discounts, promotions, and other offers.

Social media, among all other marketing platforms have proven to be the most effective to reach Indonesian gen z with 44% of the respondents claiming to be moderately influenced by ads and 34% claiming to be influenced on a higher level by them. 62% of Indonesian gen z have claimed that compared to other platforms such as YouTube advertisements, television advertisements, Outdoor advertisements, and other platforms, social media advertisements are the most

influential to them (Hartanto & Karim, 2023; IDN Research Institute, 2024).

d) Media Consumption Behavior

Studies done in recent years have shown a remarkable and consistent characteristic of Indonesian gen z behavior, especially in media usage. Online activities – that is, activities done within the connected web using internet – have become Indonesian gen z’s typicality with the majority of the population spending 1 to 6 hours each day connected to the web. Social media and digital media are the most used media. IDN Research Institute’s survey (2024) that had collected data from 602 Indonesian gen z have found that their online activities in social media include accessing news and acquiring new information, maintaining personal relations, and following influencers. In addition, social media has also recently been used largely by gen z as an alternative to conventional search engines such as Google (Evita et al., 2023; IDN Research Institute, 2024).

Out of the many social media platforms, Instagram have retained its dominance in the Indonesian gen z social media landscape, numbering at 52% of the female population and 53% of the male population owning an account and using Instagram. Following Instagram, TikTok has grown to chase Instagram’s dominance, accounting for 36% of females and 29% of males using and having a TikTok account. X and Facebook were found to also be used with significantly less users. A vast majority of Indonesian gen z – 92% of the respondents – have utilized WhatsApp as their means of online

communication, followed by 3% using Discord, 2% Line, 2% Telegram, and 1% Facebook Messenger.

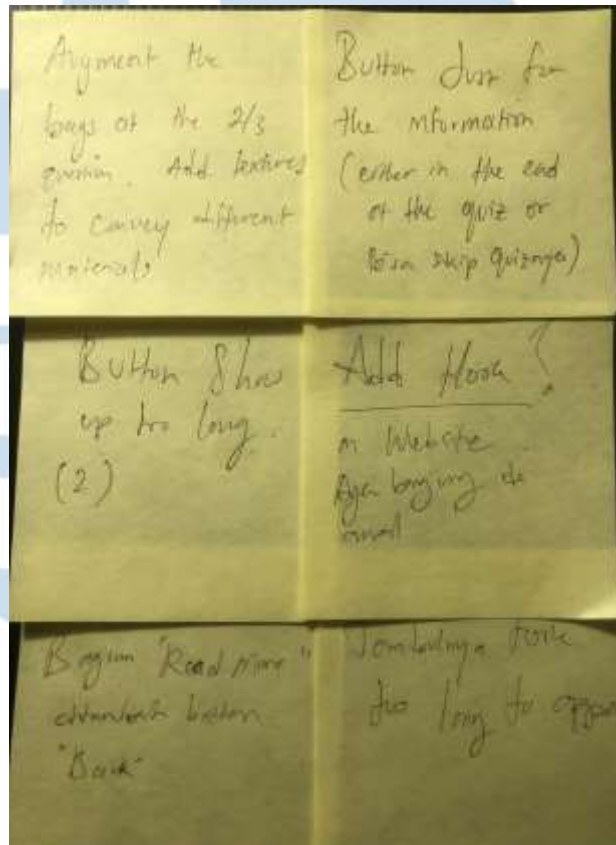
Indonesian gen z has also exhibited a large preference on short-form videos. In a fast-paced world, short attention spans demand quick information dispersion and effective communication which is achieved well by short-form videos. These videos typically circulate between Instagram and TikTok. It offers itself as a budget-friendly alternative to long form videos or other marketing techniques that small businesses and startups can rely on.

In relevance to the existing media regarding reusable carrier bags. The majority – as stated in the previous section – presents itself as online text-based articles. They serve the function of an information media by technicality, however, the format at which information is presented may lack appeal to the target audience of the campaign, as suggested by IDN Research Institute (2024), stating that Indonesian gen-z prefers text-based articles less than any other media.

In another relevance to the topic of reusable carrier bags and its impacts, a study (Calista & Yenni, 2023) has found the correlation between the frequency of the target audience's exposure to information about climate change on their preferred social media platforms and their personal believe and accentuation that the matter regarding climate change is true and important. This study has also shown the negligible difference in the occurrence between both rural and urban areas.

3.1.2.3 Alpha Test Feedback

Qualitative data was also acquired from the Alpha Test. The collection technique involves note keeping of the user's feedback (See Picture 3.1).



Picture 3.3 Alpha Test Feedback Notes

The user feedback revolves around the subject of user interface, user experience, features, and improvements. The six notes are presented and interpreted as follows.

Table 3.9 Alpha Test Feedback Notes Interpretation

Note	Interpretation
<i>Augment the bags at the 2/3 question. Add textures to convey different materials</i>	Visual elements at a section of the website's quiz page can be improved by adding textures to help the user distinguish different materials.
<i>Button just for the information (either in the end or the quiz or bisa skip quiznya)</i>	Provide a way for the user to access all information.
<i>Button show up too long</i>	Decrease the time where the buttons' micro-interaction take place.

<i>Add Hook? On website aga bingung di awal</i>	Improve the website's landing page to provide more context for the user.
<i>Bagian "Read More" ditambah button "back"</i>	Provide a way for the user to access previous sections in the "read more" pages.
<i>Tombolnya took too long to appear</i>	Buttons in the prototype appears with lengthy intervals after pages change.

The qualitative data acquired from the Alpha Test will be used as a basis for the campaign's media improvements.

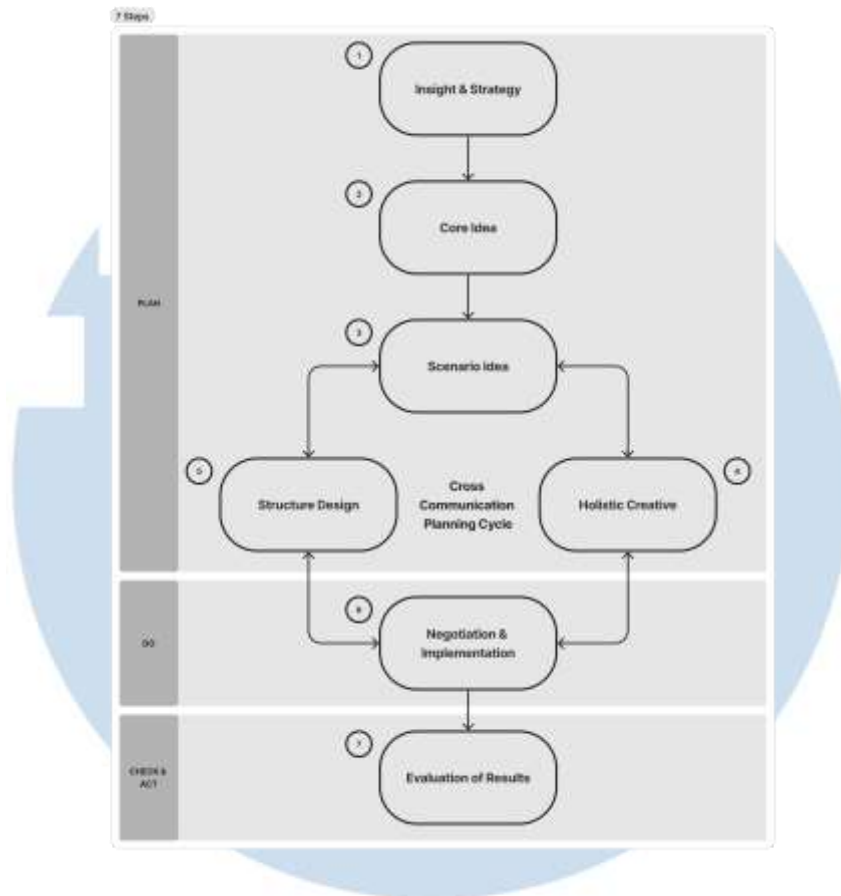
3.1.3 Conclusion

All the data – both qualitative and quantitative – have pointed towards the oddity of the topic's knowledge and awareness within the public. The research suggests that the problem with reusable carrier bags does exist within the constraints of project and demands a design solution.

3.2 Design Methodology

Dentsu's Seven-Step Planning Process found in The Dentsu Way was used as a methodology for the campaign's design. In addition to the framework, the AISAS model – found in the same book – is also incorporated to define the campaign strategies.





Picture 3.4 Dentsu’s Seven-Step Planning Process Diagram (Adapted from “The Dentsu Way” 2011)

The diagram above shows Dentsu’s framework. It segregates a project into seven steps, all of which suits Deming’s (2024) PDSA Cycle – or PDCA, an alternative adopted by Dentsu – largely used in business and manufacture. The planning process refers to the identification of goals, and formulation of objectives and measurements. The “Do” step refers to the implementation of the formulated plan. Following that, “Study” includes the activity of monitoring and validating the plans, and “Act” to the process of making adjustments based on studies.

The steps in Dentsu’s framework include Develop Insight and Strategy, Create Core Idea, Create Scenario Idea, Develop a “Holistic Creative”, Create a Structure Design, Negotiate and Implement, and Evaluate Effects. Each of these steps are explained below.

1) Step 1: Develop Insight and Strategy

Step 1 involves obtaining insight into the target and creating ideas for communication strategies to achieve communication goals. In this step, it is prudent to understand and gain insight into the target, the client, the society, and the media. The book further emphasizes that the campaign objective(s) need to be well identified to ensure the success of the campaign.

2) Step 2: Create a Core Idea

Step 2 involves the creation of a campaign theme that will see consistent application throughout the entire campaign.

3) Step 3: Create a Scenario Idea

Step 3 involves the creation of a form to the core idea.

4) Step 4: Develop a “Holistic Creative”

Step 4 involves the production of *creative works* in relevance to the scenario created earlier. *Creative work* refers to the campaign’s message and artwork.

5) Step 5: Create a Structure Design

Step 5 involves the construction of a *campaign plan* – usually by research – to identify appropriate *Contact Points* and find the most effective sequence plan to reach the target.

6) Step 6: Negotiate and Implement

Step 6 involves the implementation of the constructed campaign. This step includes all forms of coordination and negotiations with all parties involved.

7) Step 7: Evaluate Effects

The last step involves the evaluation and result testing of the campaign. Results will then be used to aid the construction of the next plans.