

The Influence of Storytelling Approach towards Bandung Citizens' Empathy to Behaviour Intention on Waste Management Service

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Abstract - Storytelling is one of the content marketing that has been trending among the marketers because of its power to evoke emotional feelings from its viewers. Previous studies have shown that storytelling could evoke empathy of the travelers that lead to intention to visit. However, the research about the influence of storytelling on behavior intentions is still few. Therefore, this study was conducted to find out how storytelling approaches influence Bandung citizens to use waste management services. This research uses both qualitative and quantitative methods by conducting interviews, experiments, and online questionnaires. Two hundred and seventeen Bandung citizens who range from 20-55 years old were involved in this study. The PLS-SEM model is used in this research to analyze the data. The result indicated that self-reference is the only component that significantly generates empathy that leads to intention to use and word of mouth among Bandung citizens. From this finding, the researcher suggests Waste Management companies make storytelling content that relates to potential customers personally and makes them look back to their previous experiences.

Keywords — Behavior Intention, Empathy, PLS-SEM, Quantitative, Qualitative, Storytelling, Indonesia, Waste Management

I. INTRODUCTION

Environmental issues are one of the issues the world focused on today. A conference about climate change was held in Madrid in December 2019 as a proof that the environmental condition in the world is not okay, no exception in Indonesia. According to [1], Indonesia has several environmental problems that need to be solved. First, the existence of our forest is decreasing year by year. Second, corals in Indonesia ocean have been damaged. The condition of Indonesia's corals is quite worrying because 35,15% in Indonesia have been categorized as bad corals. Fishing using boom, throwing plastic waste to the ocean, and coral bleaching phenomena have impacted the damage of coral reefs. Third, plastics. Plastics are commonly used

by society. Unfortunately, 60% of plastics that exist in the world are disposable plastics. After it is used by the society, it will end in the landfill and waters in Indonesia. Lastly, air pollution. In Jakarta, 20-30% of the air pollution is given by coal based PLTU (Pembangkit Listrik Tenaga Uap). Besides that, air pollution also comes from the private transportation used in big cities. If these problems are not solved soon, there is a high risk that the environment we live in today will not exist in the future. Therefore, we should take responsibility to make our environment sustain.

Based on [2], environmental sustainability is about acting in a way that ensures future generations have the natural resources available to live an equal, if not better, way of life as current generations. From this definition, it implies that everyone is responsible for taking care of the environment. Both individuals and institutions have a unique role to play in environmental sustainability. However, the Indonesian are not aware of this responsibility. Waste is one of those (because from four environmental problems in Indonesia, two of them are caused by waste).

According to [3], there are still 24% of Indonesians who do illegal dumping. This waste is thrown to the land, river, lake, and ocean. This phenomenon has caused floods in some areas and made Indonesia in second place for producing plastic waste to the ocean. Besides littering, the awareness of Indonesian to categorize their waste is low. Based on [4], Indonesian households who are categorizing their waste is 49.2%. This study has been conducted in five big cities in Indonesia and could be lower if tested in every city. By not categorizing their waste, it makes the waste hard to be recycled and most of them just end up in landfills.

Moreover, the condition of Indonesia's waste management is still bad. Only 7% of waste is recycled and 69% of them just end in landfills. If this problem is not solved properly, the pile of waste could be higher. Every day, Indonesian

citizens are producing 175.000 tons of waste and if we pile this up, it could be three times bigger than Gelora Bung Karno main stadium in Jakarta. In 10 years, this waste could cover half the city of Jakarta and the height is five times higher than Monas [5]

In West Java, one of the most populated provinces in Indonesia, waste is also becoming a problem because the production of waste is parallelly with the amount of the population. According to [6], the citizens in West Java have produced 27 thousand tons of waste per day. The amount of waste in West Java caused a tragedy on 21st February 2005. On that day, there was heavy rain and the concentration of methane gas inside the pile-up waste had exploded. This two-phenomenon led to a waste slide in TPA Leuwi Gajah and caused 157 people dead [7].

Thus, Nyampih is trying to solve this problem. Nyampih is an application that connects waste producers with waste carriers. This application was made because of the unscheduled waste pick-up system. By using this application, the waste producers could order the service easily when they need it and their waste would not pile up anymore. The service covers pickup service and recycling. The waste that has been picked up by Nyampih will be recycled, so there are only a few wastes that end up in TPA. By doing this, Nyampih also helps to increase the garbage carriers' welfare.

Since the beginning of its establishment, Nyampih marketing team has done much content marketing on their social media platform, mostly in Instagram. However, even though Nyampih's Instagram followers have reached 300+ people (mostly domiciled in Bandung), there has not been any customers from the Instagram followers or there is no conversion from the followers to customers.

Content marketing is the best way to communicate and influence them to use Nyampih service. Moreover, in this pandemic era, everything needs to be done online. Storytelling has been a popular content marketing among marketers. According to Attest.com, storytelling in marketing means communicating the message using narrative. This content could make the viewer feel some emotions and encourage them to act. When someone hears or reads a story, they begin to imagine themselves in that person's shoes. They see themselves in the same situation in the story. Then, draw upon these feelings and lessons from the story when they faced a similar situation.

While many recent research studies have discussed empathy in a sales context to understand and satisfy customer needs (McBane, 1995), only a few studies have examined empathy in a media context to influence customers' behavioral intentions through modern marketing communication methods (i.e., storytelling

approach) (Hsiao, Lu, and Lan, 2013; Aaker and Smith, 2011).

In a previous study, storytelling has shown positive effects on empathy that lead to behavioral intention among the travelers (Hsiao et al., 2013). The components of storytelling that were measured before are perceived aesthetics, narrative structure, and self-reference. Those three elements were assessed and positively influenced the empathy of the traveler. Then, the empathy feeling has led to the travelers' intention to visit the place written in the story.

In this study, the researcher focuses on finding the influences of the storytelling approach on the Bandung citizens' empathy and behavioral intention. The researcher hopes the result of this study could be a solution for Nyampih and other waste management companies to make their content marketing.

A. Heuristics and Empathy

Heuristics have been found to have a crucial part in human reasoning and decision making in previous studies [8]. When a person describes something, it contains a heuristic. For example, if a girl sees a bag, she will probably say whether it is a good or bad bag or when a man sees a car, he will likely say, "it is a luxury or cheap car". According to [9], the mirror neuron in our brain is helping people to show their empathy (sensing another's emotional feeling or condition).

Aesthetics are one of the powerful aspects that influence human thought and behavior [10]. Through art, sculpture, architecture, and the emotions such works reveal, the brain's mirror neuron gains a better knowledge of the connections between reactions and perception. Like in storytelling, when the author puts illustrations, pictures, and figures, it will generate the viewer's empathy from the aesthetics experience. The prior studies by [11], [12] have shown that the perceived aesthetic is positively influenced by the empathy where they felt the events in the story were happening to themselves.

Besides aesthetics, another element that also affects the viewer's emotional reaction is narrative structure [13]. They discovered that the story in advertising might elicit empathy and empathetic responses from the viewer. [11], [12] on their research about the influence of storytelling on the travel intention to visit has shown the positive influence of the structure of narrative on the empathy feeling of the readers.

In addition, self-referencing is bringing personal self to their experience and feelings [14]. A prior study conducted by [10], [14], [15] has shown that by doing self-referencing, people will project themselves into situations or conditions as the characters in the story and thus

generate empathy. Another study by [16] also found that self-referencing strongly influences empathy. The more easily someone imagines themselves in certain conditions, the more empathy he or she will feel for the other person. Therefore, the following hypotheses have been proposed:

H1: The aesthetics of storytelling will positively and significantly influence the empathy of Bandung citizens.

H2: The narrative structure of storytelling will positively and significantly influence the empathy of Bandung citizens.

H3: Self-referencing in storytelling will positively and significantly influence the empathy of Bandung citizens.

B. Empathy and Behavioral Intention

According to the writing of "emotions at individual" [17], it implies empathy is associated with an individual's behavioral intentions. Behavioral empathy touch on to the ability of the readers responding the author's feeling [11]. Therefore, a huge empathy feeling could impact individual behavior. One psychological study stated that people are more likely to share information or even if it is affecting them emotionally [18]. Therefore, the researcher proposes the following hypotheses:

H4a: The empathy obtained by Bandung citizens will positively and significantly influence their intention to use.

H4b: The empathy obtained by Bandung citizens will positively and significantly influence word of mouth.

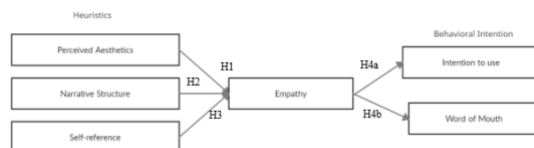


Figure 1. Research Model

II. METHODOLOGY

2.1 Research Approach

The researcher uses qualitative and quantitative approaches using interviews, experimental, then measured by online questionnaires. The qualitative approach is used to find out the behavior of the Bandung citizens while using social media and the type of marketing content they usually watch. On the other hand, the quantitative approach is used to measure the influence of storytelling to Bandung citizens' behavior intentions.

2.2 Research Methodology

2.2.1 Qualitative Approach

In this research, the researcher targeted people that domicile in Bandung City at the age of 20-55 years old because the followers of Nyampih's Instagram are at that age range. The researcher uses judgemental or purposive sampling, which is a non-probability sampling approach.

The sample is chosen based on previously established criteria by the researcher. The researcher will interview people in the range of 20-55 years old who are domiciled in Bandung. The chosen samples are representative of three age groups: the first one is people who are at the age of 20-31, the second is people who are at the age of 32-43, and the third one is people who are at the age of 44-55 years old. The purpose of interviewing people of different ages is to compare their behaviors toward using social media.

Due to the COVID-19 situation, the interview will be conducted online using online platforms such as messaging applications, phone calls, or video conferences. The interview will be conducted using Bahasa Indonesia to make communication between the interviewers and interviewees and to make the interviewee give their opinion clearly to the questions. The researcher wants to know more about the potential customer behavior in using social media, content marketing they prefer to watch, and their opinion about storytelling content. After data collected is enough to answer the questions, the researcher will analyze the data using manual coding which consists of three steps: open coding, axial coding, and selective coding.

2.2.2 Quantitative Approach

To test the hypotheses, a Likert scale of five points, used in the questionnaire's scale from 1 to 5. On a scale of one to five, the narrative structure ranges from "not at all" to "very much to". All other characteristics are rated on a five-point Likert scale, ranging from "strongly disagree" to "strongly agree".

The heuristics indicators consist of 12 items was adapted from [12], [19] which consist of three variables, perceived aesthetic (4), narrative structure (4), and self-reference (4). Empathy was divided into two questions adapted from the [41]'s study. Lastly, the behavior intention consists of seven questions from [20], [21], which comprises two dimensions namely, intention to use (4) and word of mouth (3)

The researchers use an online questionnaire to collect data after creating the questionnaire. Respondents are required to watch the storytelling video before answering the questions. The sample used in this research is Bandung citizens who are in the age range of 20-55 years old. The

minimum sample required for this sample based on [22] theory is 146 responses. After data gathered, the data will be analyzed using PLS-SEM model.

Over a week survey period, the researcher received 217 responses, which means the researcher has passed the minimum criteria. The gender of our respondents consists of 61.3% female and 38.7% male. Many of the respondents are high school graduates (66.4%), followed by bachelor's degrees (29%) and master's degrees (4.6%). Most respondents are between 20-31 years old with a percentage of 96.8%.

III. RESULTS

3.1 Validity and Reliability Test

After data collection, the data will be tested to assess their validity (convergent and discriminant) and reliability. The measures were subjected to factor loadings, AVE, Fornell Lacker Criterion (HTMT), cross-loading, Cronbach's alpha, and composite reliability using SmartPLS. The result showed that there are three indicators valued less than 0.7 (Perceived Aesthetics 4, Narrative Structure 3, and Self-reference 1). Therefore, these three indicators will be eliminated. After eliminating these data, all the factor loading values show numbers above 0.7. Further processing is conducted to test the AVE, HTMT, and cross-loading. For the AVE, all the variables value above 0.5. HTMT and cross-loading test also present that each variable's value was greater than the latent factor correlations to other variables.

	E	IU	NS	PA	SR	WoM
E	0.916					
IU	0.423	0.916				
NS	0.432	0.269	0.791			
PA	0.298	0.256	0.522	0.818		
SR	0.681	0.512	0.475	0.340	0.848	
WoM	0.440	0.582	0.424	0.301	0.482	0.872
AVE	0.839	0.840	0.625	0.669	0.719	0.760
CR	0.912	0.954	0.833	0.858	0.884	0.905
Cronbach's Alpha	0.809	0.936	0.705	0.752	0.803	0.847

Table 2. Validity and Reliability Table

Table 2 reports the HTMT and reliability value of all variables therewith each variable correlation. All values are

greater than the minimum value suggested by [22]. Thus, all the variables are valid and reliable.

3.2 Hypotheses Testing

The researcher uses SmartPLS to undertake a partial least square – structural equation modeling (PLS-SEM) study to assess the hypotheses (H1, H2, H3, H4a, and H4b). Table 3 also shows the model fit of the data by the Normed Fit Index. The index was 0.769, which means the model is 76.9% fit. The researcher found that all the relationships between heuristics and empathy are positive. However, only self-reference shows a significant and positive relationship to empathy. Empathy as a predictor on behavior intention shows a positive and significant relationship to intention to use and word of mouth.

H	Path	Path Coefficient	T Values	Result
H1	Perceived Aesthetics -> Empathy	0.021	0.371	Not supported
H2	Narrative Structure -> Empathy	0.131	1.748	Not supported
H3	Self-reference -> Empathy	0.611	12.324	Supported
H4	Empathy -> Intention to Use	0.423	6.304	Supported
H5	Empathy -> Word of Mouth	0.440	6.493	Supported
NFI: 0.769				

Table 3. Validity and Reliability Table

IV. DISCUSSION

- *The aesthetic of storytelling video will positively and significantly influence the Bandung citizens' empathy.*

Aesthetics showed insignificant results to the empathy, but it is positively correlated. This finding is not aligned with the previous research by [11], [12]. Therefore, this hypothesis is rejected. The possible explanation for this is because the pictures or scenes shown in the sample video are not enough to evoke the empathy of Bandung citizens. The mean of the aesthetics variables showed value above four, which means almost all respondents agree that the video gives good quality of visual. However, the visual has not significantly influenced their empathy feeling.

- *The narrative structure of storytelling video will positively and significantly influence the Bandung citizens' empathy.*

Narrative structure gives insignificant correlation to empathy, which is why it's rejected. The mean of narrative structure variables is the highest among other variables, which means many of the respondents agree that the narrative structure is good. They could understand the authors' feelings and thinking, and the plot of the story.

However, the t-statistic of narrative structure showed a value of 1.740 which is below the standard of 1.96. Therefore, the possible explanation for this result is the narrative structure variables need more respondents to show its significance because this variable already has a good mean and low standard deviation. Moreover, the t-statistic value almost reached 1.96. This finding is not aligned with the [11], [12] study.

- ***The self-reference of storytelling video will positively and significantly influence the Bandung citizens' empathy.***

From all the storytelling components in this research, self-reference has the highest value of path coefficient and t-statistics. This means that self-reference positively and significantly influences empathy. This could be happening because by self-referencing, people bring themselves into the character in the story and looking back to their experience, then it generates empathy. The highest mean from self-referencing comes from the statement "Watching this video makes me think about my behavior toward throwing the garbage", this shows that many of the respondents agree that their empathy is more evoked when the video makes them reflect on their prior experience. This is aligned with the previous study about storytelling by [11], [12].

- ***The empathy obtained by Bandung citizens will positively and significantly influence their intention to use.***

Empathy shows a positive and significant influence on intention to use. This finding is aligned with the [11], [12] study. The highest mean of empathy comes from the indicator of E2, which said "When I watched this video, I felt as though I were the author." This means that most of the respondents have successfully put themselves as the author of the story. The empathy feeling that they have obtained influences them to use the service. However, the empathy feeling just influences them until they want to use it, not plan to use it. It is shown through the high value of mean by the statement "I want to use Waste4Change service."

- ***The empathy obtained by Bandung citizens will positively influence their word of mouth.***

Empathy has a positive and significant influence on word of mouth. [18] on his research about the dragonfly effect said that people are willing to share the information when

they are affected emotionally. In this research, it indicates that when the empathy of Bandung citizens has been generated, they are more likely to share the information and positive things about the waste management services. Moreover, they will recommend the service to their family and friends who asked them about waste management service. It has been proved by the high mean value shown by the statement "After watching this video, I will recommend Waste4change to the person who asked my advice". This finding is aligned with the [11], [12]'s study.

V. CONCLUSION

This study result indicated that self-reference the only component of storytelling that significantly evoke positive emotion for the viewers. Moreover, the result shows that empathy could make people have an emotional reaction and lead to behavioral intentions (intention to use and word of mouth). As a result, waste management companies might use this storytelling style as a marketing communication tool because of its power to evoke empathy and lead to behavior intention.

According to the data analysis about the market behavior toward social media and content marketing, there are some insights that waste management companies should pay attention to. Mostly, the market is spending three hours per day on social media, and it could be longer until five hours per day. So, using social media as a platform will be a good decision. The market also likes storytelling content in the form of video because by watching the video they could feel the emotions and the visual of the situation. People who have watched storytelling content said they are more likely to watch it either on YouTube or Instagram. However, the most used social media from the interviewees are Twitter and TikTok, so these platforms could be considered by waste management companies to upload their storytelling content.

However, there are some limitations in this research. This research is limited to Bandung citizens and the waste management industry. The other industries and geographical locations could be considered in the future. Moreover, empathy only affects the potential market behavior intentions by 17,9% for intention to use and 19,4 % for word of mouth. Thus, other variables beside empathy could be adjusted in future research.

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