

# Digital Amnesia in Indonesia Generation Z on Instagram Advertisement Information Absorption

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## Abstract

Digital Amnesia is the experience of forgetting information that you trust a digital device to store and remember for you. The researcher uses four indicators of digital amnesia: remember without looking up, emotional impact of losing data or access to data, behavior related to internet searches, and install IT securities on devices. This research will find out the level of digital amnesia in Indonesia Generation Z on Instagram advertisement information absorption. The research is using quantitative descriptive approach and online survey method. The questionnaire was distributed to 100 respondents using purposive sampling method. The theories used by the researcher include the S-O-R (Stimulus-Organism-Response) theory, Marketing Public Relations theory, Digital Amnesia theory and Consumer Behavior theory. The research shows that Generation Z experiences digital amnesia the most when they see Story Ads, and the least when they see Reels Ads. This is supported by the data showing that Generation Z is categorized as having high levels in all four indicators (remember without looking up, emotional impact of losing data, behavior related to internet searches, and install IT security on devices). The research findings can be an insights for Marketing Public Relations practitioners to make an advertising more easily to access, to save, and to be remembered with add more visuals than a text.

**Keywords:** Digital amnesia; Instagram ads; advertising; marketing public relations; S-O-R theory.

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## 1. INTRODUCTION

According to Mehrabian and Russel in Yu et al. (2021, p.3), Stimulus-Organism-Response theory is a framework to elucidate how organisms mediate the relationship between stimulation and response through various mechanisms that incite individuals' cognitive and emotional states, which in turn drive behavioral responses. In another word, S-O-R theory can be described as a theory that explains how stimulus influence an individual to cause response. For practitioners, S-O-R theory has been applied on the Public Relations activity when making and deliver the message to communicant.

Public Relations is a management function that builds and maintains good and beneficial relationships between organizations and the public that influence the success or failure of organizations (Cutlip, Center, & Broom, 2012). Apart from being responsible for establishing relationships, a Public Relations practitioner also has a role in producing communication products as a stimulus to communicate the brand and the products and/or services offered. This is usually known as Marketing Public Relations activities. According to Suciwati (2013), Marketing Public Relations is defined as a planning and evaluation process that can increase sales and customer satisfaction through designing a communication strategy for delivering credible information. Marketing Public Relations activities are different from marketing activities. If marketing focuses on sales and profit, Marketing Public Relations activities focus more on preparing and disseminating information with the aim of educating and instilling a good understanding of the brand to the target public (Mulyasari, 2020).

Based on data from the Indonesian Internet Providers Association (APJII), in the period 2021-2022 internet users in Indonesia have increased to 210 million users, where before the pandemic the total internet users only reached 175 million users. This encourages practitioners to carry out digital communication activities, including in advertising. One of the social media that practitioners can use to advertise is Instagram,

namely through Instagram Ads. Reporting from [hubspot.com](https://www.hubspot.com), Instagram is the social media with the highest ROI. Therefore, Instagram Ads can be an alternative media for Marketing Public Relations practitioners to communicate brands and their products through advertisements.

In communicating the brand through the media, one brand with another brand must compete for the attention and positive response from the public. Research by Burke & Srull (1988) shows that an individual may be exposed to 300 to 600 advertisements per day and only remember a handful of the advertisements seen. Out of a total of 13,265 adults who were respondents, 53% of them stated that they could not remember, especially specifically, the advertising information they heard, saw, or read in the last 30 days. Based on research results from Lunio Agency (2021), audiences can be hit by 6,000 to 10,000 digital ads per day. These findings highlight a growing phenomenon that influenced by digital growth nowadays, which is information overload. According to recent studies, the rise of algorithm-driven content curation on platforms like Instagram has increased the volume of advertisements, but it has also contributed to selective attention and digital fatigue (Goldhaber, 2020). This aligns with the concept of "digital amnesia," where users depend heavily on technology to retain information, reducing their ability to recall details independently (Kaspersky Lab, 2015).

Meanwhile, the response generated by the audience according to Prezi (2017) is that 80% cannot remember the content from the brand in just three days which is caused by several factors, namely, irrelevancy (55%), lack of motivation to remember it (35.7%), and too much content to retain (30%). This shows that exposure to a large number of advertising messages in a short period of time raises a response in the form of a tendency to forget or have difficulty remembering the information provided, where in the current context the information provided is in the form of messages from the brand regarding brand identity and the products offered. The condition where an individual is unable to remember information is known as digital amnesia.

According to Kaspersky (2017), Digital Amnesia is defined as "the experience of forgetting information that you trust to a digital device to store and remember for you". Doktersehat.com (2019) defines Digital Amnesia as a phenomenon, where humans, especially the millennial generation to generation Z, tend to rely on technology as a substitute for the brain in storing memories. This is a challenge in itself for Marketing Public Relations practitioners, where practitioners must compile and create interesting messages, especially on Instagram Ads, so that audiences do not easily forget the messages received. The researcher uses Nazaruddin Musa and Mohd Sobhi Ishak's previous research as a research reference. This research is entitled "The Identification of Student's Behaviors of Digital Amnesia Syndromes and Google Effect in the Department of Library Sciences, State Islamic University of Ar-Raniry, Indonesia". The research conducted by Nazaruddin Musa and Mohd Sobhi Ishak used a quantitative methodology. The results showed that 70% of respondents said they were more dependent on smartphones than before. 70.9% of respondents also stated that they transferred their memory to a smartphone. Whereas in receiving information, 73.6% of students expressed confusion by receiving a lot of information at once and 78.9% felt annoyed with the hyperlink feature. The difference between previous research and research conducted by researchers lies in the research subject. In addition, previous research focused on identifying the behavior of Ar-Raniry University students in lecture activities, while researchers conducted research related to Digital Amnesia in Generation Z in absorbing advertising information on Instagram. So, based on the explanation of the background above, the researcher wants to know "How is digital amnesia in Generation Z in Indonesia in absorbing advertising information on Instagram?"

## 2. LITERATURE REVIEW

### 2.1 Stimulus-Organism-Response Theory

Mehrabian and Russel in Yu et al. (2021, p. 3) explains the Stimulus-Organism-Response theory or commonly referred to as the S-O-R theory as "a framework to elucidate how organisms mediate the relationship between stimulation and response through various mechanisms that incite individuals' cognitive and emotional states, which in turn drive behavioral responses.". Mulyana (2017), explains that the S-O-R theory describes how verbal words, non-verbal cues, images, and certain actions will stimulate individuals to respond. According to Ongkojaya (2022), there are three elements in the S-O-R theory, namely stimulus (message), organism (communicant), and response (reaction that arises from the organism). This theory provides a structured framework for understanding how external stimuli (in this research is represented by Instagram Ads Content) influence the Organism (represented by Respondents) to create response (lack of remembering information). By using this theoretical approach, the study captures the dynamic interaction between Instagram

advertisements as stimuli and their impact on Generation Z's ability to absorb and retain information.

## 2.2 Marketing Public Relations

According to Thomas L. Harris in Puspita (2019), Marketing Public Relations is a process of planning, carrying out and evaluating activities that can increase sales and customer satisfaction by creating a communication strategy to convey credible information. The focus of Marketing Public Relations lies in the preparation and dissemination of information with the aim of educating and instilling a good understanding of the brand to the target public (Mulyasari, 2020). Not only communicating the brand, Marketing Public Relations activities also include communicating brand products in the form of goods and/or services offered by the company so that awareness can emerge in the minds of the public about brand products (Vrontis, 2019). In this research, the theory is used for supporting how researcher see the behavior of the organism. This theory supports to explain what kind of Stimuli that easy to forget by the organism and vice versa.

## 2.3 Digital Amnesia

The phenomenon of Digital Amnesia was discovered in 2007 which was introduced by Dublin (Lodha, 2019). At first, Digital Amnesia was introduced by Manfred Spitzer, a neuroscientist, as Digital Dementia. Spitzer describes Digital Dementia as a condition that arises as a result of excessive use of digital technology, causing a decrease in individual cognitive abilities. Along with the development of technology and the internet, several researchers began to examine a similar phenomenon known as digital amnesia. According to Kaspersky (2017), Digital Amnesia is defined as "the experience of forgetting information that you trust to a digital device to store and remember for you". In other words, the phenomenon of digital amnesia shows an individual's tendency to forget information. There are four indicators in digital amnesia that are used in this research, namely remember without looking up (capacity to remember the information obtained), emotional impact of losing data or access to data (emotional attachment between individuals and the presence of information), behavior related to internet searches (individual behavior in searching for information), and install IT security on devices (increasing the security of individual gadgets).

## 2.4 Instagram Ads

Instagram Ads is an advertising service offered by Instagram so that users can place advertisements for their business to reach a wider audience beyond their followers (Instagram, 2023). Brax, a company engaged in branding, explains the grouping of ad types on Instagram which are divided according to certain categories. Based on the format, there are four types of Instagram ads, such as photo/image ads, carousel ads, collection ads and video ads. Based on the section, there are four types of Instagram Ads that will be researched, namely Story Ads (Instagram ads that appear in the form of photo, carousel, or video on Instagram Story section), Feed Ads (Instagram ads that appear on Instagram Feed section, which is the first page when user open the Instagram), Explore Ads (Instagram ads that can be seen in Search and Explore section), and Reels Ads (Instagram ads that appear with video vertical format on Instagram Reels section). In this research, researcher use Instagram Ads classification based on section.

## 3. METHODOLOGY

The method used in this study is a survey method with a quantitative approach. Researchers use digital amnesia indicators, namely remember without looking up, emotional impact of losing data or access to data, behavior related to internet searches, and install IT security on devices as measuring tools. The questionnaire was aimed at Generation Z in Indonesia with an age range of 13-28 years who have an Instagram account and use Instagram actively. The population in this study are Instagram users, both male and female who are domiciled in Indonesia and/or who are Indonesian citizens (WNI). Based on data obtained from NapoleonCat, the number of Instagram users in Indonesia is 94,541,900 users. The sampling technique used by researchers is the Non-Probability Sampling technique, namely Purposive Sampling. Researcher took 100 people from all of the city in Indonesia who suite with the criteria to be respondent for this research.

## 4. RESULTS AND DISCUSSION

### 4.1 Validity Test

Validity test is used to show the extent to which a measuring device can measure what it wants to measure (Umar, 2002). The researcher tested the validity of each statement item from the four indicators used, namely remember without looking up, emotional impact of losing data or access to data, behavior related to internet searches, and installing extra IT security on devices. The total number of statements that will be tested for validity and reliability by researchers is 24 statement items. The statement is declared valid if the r count has a value that is greater than the r table value. Table 1 is the results of the validity test conducted by the researcher for statements in each of the indicators in every Instagram Ads section.

**Table 1.** Validity test

Section	Indicator	Statement	R Count Value	R Table Value	Category	
Story Ads	Remember without looking Up	1	0.362	0,196	Valid	
		2	0.738	0,196	Valid	
	Emotional impact of losing data or access to data	1	0.822	0,196	Valid	
		2	0.650	0,196	Valid	
Feed Ads	Behavior related to internet searches	1	0.792	0,196	Valid	
		2	0.549	0,196	Valid	
	Remember without looking Up	1	0.769	0,196	Valid	
		2	0.809	0,196	Valid	
Explore Ads	Emotional impact of losing data or access to data	3	0.781	0,196	Valid	
		3	0.736	0,196	Valid	
	Behavior related to internet searches	1	0.798	0,196	Valid	
		1	0.470	0,196	Valid	
Reels Ads	Remember without looking Up	1	0.799	0,196	Valid	
		2	0.837	0,196	Valid	
	Emotional impact of losing data or access to data	3	0.736	0,196	Valid	
		3	0.535	0,196	Valid	
	Behavior related to internet searches	1	0.450	0,196	Valid	
		1	0.638	0,196	Valid	
	Install IT security on devices	access to data	2	0.259	0,196	Valid
			3	0.594	0,196	Valid
Behavior related to internet searches		1	0.736	0,196	Valid	
		1	0.535	0,196	Valid	
Install IT security on devices	access to data	2	0.638	0,196	Valid	
		3	0.259	0,196	Valid	
	Behavior related to internet searches	3	0.259	0,196	Valid	
		4	0.594	0,196	Valid	

### 4.2 Reliability Test

The reliability test is used to test whether a measuring instrument can be used or not (Hidayat, 2021). Researchers conducted a reliability test using SPSS with the Cronbach's Alpha formula. The measuring instrument is declared reliable if the reliability test shows an alpha value greater than 0.6. Table 2 is the results of the reliability test conducted by the researcher.

**Table 2.** Reliability test

Section/Indicator	Cronbach's Alpha	Alpha Value Limit	N of Items	Category
Story Ads	0.832	0.6	5	RELIABLE
Feeds Ads	0.878	0.6	5	RELIABLE
Explore Ads	0.887	0.6	5	RELIABLE
Reels Ads	0.889	0.6	5	RELIABLE
Install IT security on devices	0.778	0.6	4	RELIABLE

### 4.3 Overall Findings

Table 3 is the findings of researchers regarding digital amnesia in Generation Z in Indonesia in absorbing information on Instagram based on four digital amnesia indicators which are broken down into four ad

categories based on section.

**Table 3.** *Digital amnesia indicator*

<i>Digital Amnesia Indicator</i>						
<i>Section</i>	<i>Remember without looking up</i>	<i>Emotional impact of losing data or access to data</i>	<i>Behavior related to internet searches</i>	<i>Install IT securities on devices</i>	<i>Total</i>	<i>Category</i>
<i>Story Ads</i>	2.89	3.30	3.72		3.30	High
<i>Feeds Ads</i>	3.10	3.13	3.55		3.27	High
<i>Explore Ads</i>	3.41	2.99	3.22	3.28	3.23	High
<i>Reels Ads</i>	3.02	3.04	3.45		3.20	High
<i>Total</i>	3.11	3.12	3.49	3.28	<b>3.25</b>	<b>High</b>
<b>Category</b>	<b>High</b>	<b>High</b>	<b>High</b>	<b>High</b>		

Table 3 shows that digital amnesia in Generation Z in absorbing advertising information on Instagram is included in the high category with the largest mean value of 3.30 in the Story Ads section and the lowest is in the Reels Ads section with a mean of 3.25.

#### 4.4 Analysis

Based on existing data findings, it can be seen that it is confirmed the theory of Digital Amnesia, the research findings shows that Generation Z in Indonesia easily to forget the information that they have been received on Instagram Ads. In accordance with the indicators from the theory that is used, the result of the research are Generation Z can not remember things without notes or looking up on something and have a hight emotional attachment with their data that they saved on their media. Research data also shows that the most information that easily forgotten by Generation Z is in the form of Story Ads.

Data result shows that in the Story Ads section, digital amnesia in Generation Z in Indonesia in absorbing the information contained in Story Ads is in the high level with a mean value of 3.30. This shows that Generation Z in Indonesia is experiencing digital amnesia in the absorption of Story Ads information that is seen. The third indicator, behavior related to internet searches, has the highest mean value, 3.72 which is included in the high class. Being attached to technology encourages Generation Z to always be connected online, with humans or with existing information. Unlike the previous generation, Generation Z, known as digital natives, has the characteristic of always trying to be connected (Kohnova, Papula, & Salajova, 2021). In another word, it can be said that Generation Z will always try to connect or reconnect with information found on social media. This is also supported by data findings by researchers from additional statements that researchers add to the questionnaire which shows that the most common thing to do to retrieve the desired information is by swiping/scrolling.

While the first indicator, which remember without looking up, gets the lowest mean value with a mean value of 2.89 which is included in the low level of digital amnesia. As previously explained, Story Ads presents information that is dominated by visuals. In addition, there is a behavior of Generation Z in receiving information from stimuli, that tend to remember information in the form of pictures. This statement is supported by data obtained by researchers from additional statements contained in the questionnaire which states that 77% of respondents most often remember information in the form of pictures. This is also supported by journal from Krajina (2018) which states that Generation Z understands information in the form of images better and must take longer to understand information in written form. The compatibility between the form of information conveyed by the Story Ads stimulus and that received by Generation Z makes Generation Z able to remember all the information in Story Ads so that digital amnesia for this indicator is low.

For the second section, which is Feed Ads, data findings shows that overall Generation Z has a high level digital amnesia when they see Feed Ads. The third indicator, behavior related to internet searches, has the highest mean, which is equal to 3.55 and it's classified to high level of digital amnesia. This condition can caused by the existence of features that makes Generation Z as user capable to save ads, especially in the form of Feed Ads. In addition, organisms, namely Generation Z, also have behaviors in the form of difficulty remembering information, so what they do is utilize digital devices as external memory. Dupont (2022) states that Generation Z is currently using digital devices to help them remember information. From the existing description, it can be said that the existence of features in Instagram answers the organism's need to have an

external memory to assist in remembering the information received through the previously viewed Feed Ads stimulus. This results in a response from the organism in the form of not remembering the information and immediately looking for a possible place to get the desired information.

While the first indicator, which is remember without looking up has the lowest mean score, 3.10 and it's classified to high level of digital amnesia. As explained in the previous section, Generation Z as an organism has difficulties in receiving, processing, and remembering information in written form and it tends to be easier to receive, process, and remember information in the form of pictures. Salleh, Mohbab, & Baharudin (2017) states that Generation Z tends to prefer viewing photos or videos rather than reading books or procedure texts. This is also supported by data from additional statements which show that as many as 74% of respondents stated that they more often remember information in the form of pictures. So that there is a discrepancy between the form of information conveyed by the Feed Ads stimulus and the form of information that can be received by the organism. This results in a response, in which the organism cannot get all the information conveyed by the stimulus as a whole, which tends to receive, process, and remember information in the form of images only.

For the third section, Explore Ads, data findings show that Generation Z classified in high level on digital amnesia when they see ads content in the form of Explore Ads. This condition is caused by the behavior of organisms in receiving messages, where Generation Z is easier to process and absorb information in the form of images. Meanwhile, it takes longer for Generation Z to process and absorb information in written form. This is supported by the findings of the researcher's data from additional statements in the questionnaire. The findings of the data indicate that the most frequently remembered information by respondents is a picture with a total answer of 68% of respondents. While captions get the lowest answer, namely as many as 14% of respondents. Meanwhile, the message conveyed from the stimulus is not always just in the form of an image, but can also be in the form of writing as in Explore Ads where there is also a written message in the caption. The second indicator, namely the emotional impact of losing data or access to data, has the lowest mean, which is 2.99 which is included in the low class. This shows that there is no response in the form of sad, panic, or confused emotions from the organism when it loses access to the information contained in the Explore Ads that it has seen. This is because compared to other section ads, Explore Ads are section ads with more access options. As explained in the previous section, Explore Ads can be uploaded if they have been uploaded in the Feed Ads section. Apart from that, there are several features on Instagram that users can use to save and access the Explore Ads they want, such as the bookmark feature, share via direct message, and ad activity. The existence of various supporting features makes the user not produce a response in the form of emotion as in other section ads, because he feels he can access and obtain Explore Ads information again.

In the Reels Ads section, digital amnesia in generation Z is in high level with 3.17 mean score. The third indicator, namely behavior related to internet searches, obtained the highest mean value, namely 3.45 and entered the high class in digital amnesia. Schwieger & Ladwig (2018) stated that Generation Z's introduction of technology to access information started early. This forms the characteristics of Generation Z to be self-educated and self-service on seeking information, so that the behavior of Generation Z appears to immediately look for places that allow them to retrieve the desired information, in this context in the form of Reels Ads. Researchers obtained data findings which stated that in searching for information contained in Reels Ads, the most common method used by respondents was by swiping/scrolling with 38% of respondents obtaining answers. While the first indicator, namely remember without looking up, obtained the lowest mean value with a value of 3.02. This is caused by differences in motivation in Generation Z in using reels tabs, namely to seek entertainment. Menon (2021), there are seven Generation Z motivations for using Instagram Reels, namely self-promotion, entertainment, escape, surveillance, novelty, documentation, and trendiness. From the seven motivations behind Generation Z in using reels, it can be seen that although the level of digital amnesia in the reels section is lower than in other sections, Generation Z is more focused on producing messages than seeking and receiving information.

For fourth indicator, which Install IT securities on devices, data findings show that respondent tend to increase security for their Instagram account and do block and report to any ads they not interested to. It shows from data findings on the first statement, "I am increasing the security of my Instagram account because there is information I need in that account." Which get the highest mean of 4.06. As explained in the previous section, Generation Z is a generation that was born with technology, so it is also known as Gen Tech, Net Gen, iGeneration, and Digital Natives (Salleh, Mahbob, & Baharudin, 2017). This makes Generation Z attached to and dependent on digital devices when searching for information. In addition, Generation Z also relies on digital devices to remember information. Due to Generation Z's difficulty on remembering information, they

tend to utilize digital devices as external memory. This is supported by Dupont's journal (2022) which states that Generation Z is currently using digital devices to help them remember information. The existence of important information contained in the device makes Generation Z try not to lose access and not lose information that has been stored. The existence of important information contained in the device makes Generation Z try not to lose access and not lose information that has been stored.

While the fourth statement, which is "I activate the 'use data from partners' feature so that Instagram Ads that I like can reappear on my Instagram" has the lowest mean of 2.6. Generation Z, known as digital natives, has the characteristic of always trying to be connected (Kohnova, Papula, & Salajova, 2021). That is, Generation Z will always try to connect or reconnect with what is found on social media, including information. The behavior of Generation Z to always be connected creates another behavior from Generation Z, namely providing personal information to the platform so that it can obtain the desired information, one of which is through the 'use data from partners' feature. However, the data findings are in contrast to Generation Z's behavior in providing information on the platform used. This can be caused by a lack of user awareness, especially Generation Z, of the 'use data from partners' feature available on Instagram. This is supported by the journal from Lim & Yazdanifard (2014) which states that many Instagram users are not aware of the changes and developments in features related to settings so that users can receive advertisements according to their interests and desires.

## 5. CONCLUSION

This study aims to determine digital amnesia in Generation Z in absorbing advertising information on Instagram. The findings of the data obtained by researchers indicate that digital amnesia in Generation Z in absorbing advertising information on Instagram is in the high category. In more detail, the highest digital amnesia in Generation Z lies in the absorption of information contained in Story Ads, Feed Ads, Explore Ads, and the lowest is Reels Ads.

Section Story Ads has the highest mean value, which is 3.30. This is due to the high results on the emotional impact of losing data indicators, behavior related to internet searches, and installing IT securities on devices. While the first indicator, namely remember looking up, obtains results that are included in the low category. This happens because there are characteristics of Generation Z which has a dependence on digital devices that are owned in obtaining, processing, and storing information. The dependency of Generation Z on digital devices causes the behavior to return to the digital devices they have in order to re-access the information contained in the desired Story Ads.

Meanwhile, the Reels Ads section has the lowest mean value, which is 3.20. This is caused by the value of each indicator approaching the lowest point of the high category. But overall, each indicator falls into the positive category. This happens because Generation Z has different motivations for using Reels Ads. Basically, Generation Z uses and consumes content that is on the reels tab to seek entertainment. So that when there is an upload, including Reels Ads, which does not have an element of entertainment, Generation Z as an organism will have a tendency to pass or be reluctant to process the information provided to the Reels Ads stimulus.

The results of existing research related to digital amnesia in Generation Z in Indonesia in absorbing advertising information on Instagram can be a consideration and concern for Marketing Public Relations practitioners in choosing media to convey messages, especially through advertisements on Instagram.

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