PAPER NAME

46227-299280-1-PB.pdf

WORD COUNT	CHARACTER COUNT
8477 Words	**45768 Characters**
PAGE COUNT	FILE SIZE
22 Pages	**352.8KB**
SUBMISSION DATE	REPORT DATE
Aug 30, 2023 3:38 PM GMT+8	**Aug 30, 2023 3:39 PM GMT+8**

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Is Service with a Smile Enough to Satisfy Customers? Sincere and Insincere Smiles via Video and Vignette

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Abstract: The current service trend does not merely involve face-to-face interactions, including smiling (high-contact-service) by service employees, but also using methods such as texting (low-contact service). Sincere and insincere smile studies have used a method involving dynamic (videos) and static stimuli (photographs). However, research into the different types of smiles is still limited to methods using a vignette. This study aims to examine the effect of the type of smile on customer satisfaction using a vignette and video. A total of 139 people participated in 2 (smile: sincere versus insincere) x 2 (media: vignette versus video) groups. The study found that there is an influence from the type of smile on customer satisfaction. A sincere smile using video produces greater customer satisfaction than using a vignette does, because the emotional contagion process through video is more real than it is through a vignette. The interesting finding from this study is that there is a gap in the insincere smile condition between using video and a vignette. The dissatisfaction of customers is greater when served with an insincere smile by text (vignette), compared with a face-to-face interaction by video. Video could only capture the muscle movement on a person's cheeks (*zygomaticus* major), but it could not see the muscle wrinkles formed around the eyes (*orbicularis oculi*), compared to a vignette. This study implies that although the standard operational procedure (SOP) for service demands friendliness, a customer can feel whether a server's smile is genuine or fake. The customer's dissatisfaction toward an insincere smile will be higher with a low-contact service using text than a high-contact service with video.

Keywords: customer satisfaction, experimental, video, vignette, smile
JEL Classification: C91, D91, Z31

Introduction

Imagine you order food directly in a restaurant, or by mobile phone; employee X greets you with a sincere smile. You then order and wait for your food. When your order arrives, you are served by another employee, Y, who gives you an insincere smile. Employee Y smiles but does not feel happy because he/she only did it to meet social and work demands. Even though the two employees smiled at you, which employee made you feel satisfied?

Customer satisfaction is a topic of concern in the fields of business, marketing, and psychology because service is not just an economic exchange but also an emotional exchange between employees and customers. Economic exchanges and emotions that occur through service affect the level of consumer satisfaction. Broadly, there are three aspects relating to customer satisfaction, namely product quality, purchase, and service. This research focuses on customer satisfaction in the context of service, because the growth and development of the service sector ranks first compared to the industrial, manufacturing and agricultural sectors. The service sector in Indonesia is the sector which has experienced the highest increase of GDP and is predicted to contribute to Indonesian's economy by 9.8% until 2024 (Lawi, 2020).

The initial study conducted by the author was to assess the essential aspects of customer satisfaction. The results of the preliminary data from 69 participants showed that employees smiling was the highest aspect (at 67.3%) compared to other aspects such as their cleanliness or greeting customers. Customers' satisfaction with the service quality consists of five dimensions, namely reliability, responsiveness, assurance, empathy, and tangible (Zeithaml, Berry, & Parasuraman, 1988). Tangible is one dimension that affects service satisfaction. The appearance and smiles of employees are included in the tangible aspect.

Customer service satisfaction creates a positive emotional exchange between the customer and service employee (Gong & Yi, 2018). The emotional exchange that occurs in the service involves the expression of the employees having an influence on the customer. Lin and Lin (2011) found that the emotions which employees display during interactions with customers will affect the customers' emotions. One of the leading indicators that can make a customer feel satisfied is seeing someone smile (Grandey, Fisk, Mattila, Jansen, & Sideman, 2005).

Customer satisfaction will be higher when employees display a sincere smile (Duchenne smile) rather than when they demonstrate insincere smiles (non-Duchenne smile). A sincere smile is the expression that results in the movement of the muscles around the eyes (*orbicularis oculi*), and both ends of the lips are pulled upward (Ekman, Davidson, & Friesen, 1990; Martin, Rychlowska, Wood, & Niedenthal, 2017). Meanwhile,

a smile that is not sincere only requires movement of the cheek muscles (*zygomaticus* major).

A study by Barger and Grandey (2006) found that employees who display a full smile (visible teeth) are judged as providing more satisfaction than employees who only smile a little (no teeth seen). Söderlund and Rosengren (2008) prove that customer satisfaction levels are higher when employees smile, as opposed to when employees do not smile. Some previous studies also strengthen the positive impact of a smile on customer satisfaction (Pugh, 2001; Söderlund & Rosengren, 2008)

The results of the meta-analysis study of smile types on 22 articles showed that a sincere smile is rated more positively than an insincere one (Gunnery & Ruben, 2016). However, specifically in research into the type of smile, some researchers have previously used static and dynamic stimuli (Calvo, Gutiérrez-García, Avero, & Lundqvist, 2013; Gunnery & Hall, 2014; Gunnery & Ruben, 2016; Krumhuber, Likowski, & Weyers, 2014). The dynamic stimulus was displayed in the form of a video, while the static stimulus was in the form of photographs (Gunnery & Ruben, 2016). Several previous studies relating to the effect the type of smile has on positive emotions such as happiness, genuineness, or pleasure used photos as static research stimuli (Calvo et al., 2013; Del Giudice & Colle, 2007; Quadflieg, Vermeulen, & Rossion, 2013).

However, service can be both high-contact-service and low-contact-service during its implementation. Service with high contact characteristics involves a direct relationship between the service provider and the customer. This process is called a face-to-face interaction. Although this interaction is sometimes ignored, there are some forms of service nowadays which apply less physical contact (indirectly) between the customer and service provider, for example, internet banking transactions by mail, telephone, or the internet. Some texting services with script have become a standard operational procedure which has to be followed by the service employee. In this study, a smile script in the service context was operated in the vignette model. The limited number of studies that use a vignette in the topic of smiling created an opportunity to conduct this study.

This study will examine the effect of the type of smile on customer satisfaction using a vignette. Vignettes have been widely used in studies into marketing. However, the use of a vignette in service research is still limited, such as service recovery (Swanson & Kelly, 2001) and delays in service delivery (Marquis & Filiatraut, 2002). A vignette is an alternative method, and is used when participants have less experience in product or service evaluations (Wason, Polonsky, & Hyman, 2002). Vignettes provide realism for particular situational or contextual occasions, and increase the participants' involvement. A vignette is a very powerful tool for investigating people's judgment (Atzmuller&Steiner, 2010).

This study will also investigate the interaction effects of different types of smiles

and media on consumer satisfaction. The results of this study will contribute to understanding the influence of the vignette and video methods on the topic of smiles and consumer satisfaction. This study can also be implemented for companies so they pay attention to their employees' smiles, to achieve greater customer satisfaction.

Literature Review

Customer Satisfaction

Customer satisfaction is defined as the critical parameter for evaluating a service provider's performance either from the product's or service's quality, as well as the main factor in achieving the organization's goal (Hao, Yu, Law, & Fong, 2015; Hussain, Al Nasser, & Hussain, 2015; Suchánek, Richter, & Králová, 2014). It could be a response to, or judgment of, the fulfillment of the customer's needs and wants after receiving the product or service (Khan, Liang, & Shahzad, 2015; Xu & Li, 2016). Customer satisfaction can be seen as a positive consumer emotion that is the result of the suitability between the expectation and the service's or product's outcome (Jarideh, 2016; Khuong & Dai, 2019). It strongly relates to the brand or service experience (Chahal & Dutta, 2014). Suchánek et al. (2015) proposed that customer satisfaction can be divided into five forms. First, it refers to the product, either in terms of its quality or availability in the store. Second, the price of the product or service, relating to the payment process and its affordability. Third, the service offered by the providers and it contains an emotional aspect. Fourth, the distribution of the product and the brand's image in society. Fifth, the service quality, which is the crucial determinant for improving customer satisfaction (Izogo & Ogba, 2015; Suchánek, Richter, & Králová, 2014). Service quality itself has several aspects: responsiveness, assurance, empathy, reliability, and tangibility.

Smiling

A smile is a response that appears and is a sign of feeling happy, liking, and being comfortable. In the science of physiognomy, a smile is one of a person's facial expressions. A smile is a movement on both ends of the lips, around the cheeks, and in the eyes. Martin et al., (2017) wrote that a smile is characterized by movements in the muscles around the cheeks (*zygomaticus* major).

Ekman, Davidson, and Friesen (1990) suggested that sincere smiles occur when individuals smile, which results in muscle movements around the eyes (*orbicularis oculi*) and both ends of the lips being pulled up. A sincere smile covers the corner pull of Facial Action Unit (AU) 12's activation and the Raiser Action Unit 6's activation. Martin et al. (2017) suggest that wrinkles characterize sincere smiles in the area around the eyes due to

movement in *orbicularis oculi*. The *zygomaticus* major muscle is the muscle that connects the cheek muscles to the two ends of the lips, so that muscle movement occurs when both ends of the lips are pulled up or back. The *zygomaticus* major muscle is what causes a smile to occur. An insincere smile is a smile that only results in movement of the *zygomaticus* major muscle. Ekman et al. (1990) did suggest that insincere smiles occur when individuals smile but do not cause any muscle movement around the eyes (*orbicularis oculi*). With insincere smiles, only AU 6 is activated, which creates the cheek riser.
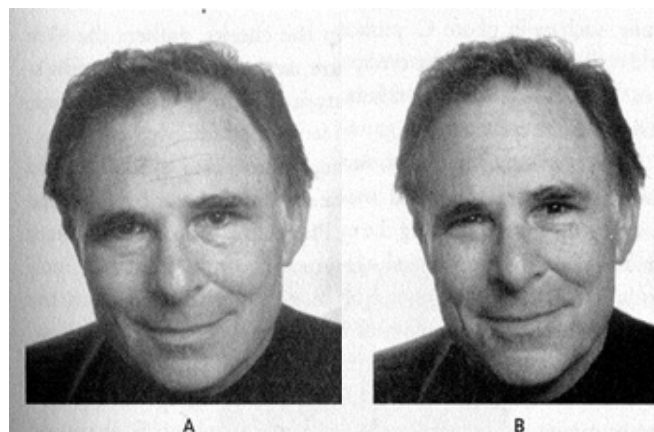

Figure 1. (A) Insincere smile (Non-Duchenne) and (B) Sincere smile (Duchenne)
Source: (Frank & Ekman, 1997)

The Effect of the Type Smile and the Media on Customer Satisfaction

A smile is one of the positive expressions of emotion that signifies hospitality and a desire to help (Harker & Keltner, 2001) as well as the greater of scientific achievement (Kaczmarek et al., 2018). Grandey et al. (2005) showed that an authentic smile has a direct impact on customer satisfaction. The employee who can perform a maximum smile will generate greater customer satisfaction than one who can only produce a minimum smile. The *orbicularis oculi* muscle functions to open and close the eyelids, so that feelings of happiness, pleasure and a voluntary state can be seen. Barger and Grandey (2006) show that the sincerity of a waitress's smile affects her customer's smile and mood during the encounter. Smiles generated from service interactions will create positive emotions; thus, they will have a positive influence on customer satisfaction. This study will examine the effect of two types of smiles: a sincere smile and an insincere smile and the effect they have on customer satisfaction.

If the type of smile has an influence on customer satisfaction, the next question is which method has more influence on customers' satisfaction when a smile is presented in the form of a vignette or a video?

High-contact service and low-contact service have different kinds of interactions

when providing a service. High-contact service represents a direct (face-to-face) interaction between the service provider and the customer. This enables a more accurate observation of the service employee's manner. In contrast, low-contact service does not imply any direct interaction. This interaction involves the use of email or text to communicate with the customer.

Research using video as the media enables the participants to understand natural situations and emotions. The use of video is intended to manipulate a limited number of factors in simple service situations. Video is also useful for investigating the participants' responses to day-to-day services. Stimulus video in the lab can induce more realistic and dynamic emotional cues (Grandey et al., 2005).

Some studies into customer service satisfaction have used experimental methods with vignettes (Mattila and Ro, 2008; Gao and Mattila, 2014; Mattila, Hanks and Wang, 2014; Houston, Grandey and Sawyer, 2018). The participants read the vignette to obtain a constant image of a smile. Mattila and Ro (2008) used a vignette to avoid problems such as time differences, bias due to emotional differences while serving, and to make it easier to create an atmosphere of service with different types of attributes. Mattila, Hanks, and Wang (2014) used vignette methods to avoid customers' deliberate failures. In this study, the vignette we used was a narrative story about the interaction between a consumer and a service employee in a service encounter, which contained the description of the characteristics of a sincere and insincere smile.

The use of a vignette requires the participants to be capable, and able to think. With a vignette, the participants can understand the situation and the details and meaning of the narrative. However, participants who read the vignette are less able to engage with it emotionally (Blodgett, Hill & Tax, 1997; Levesque & McDougall, 2000).

The expression of a sincere smile, either through video or a vignette, will give an idea of the interactions that occur between customers and employees while obtaining some form of service. The use of video will describe the content of the interactions using emotional content that is more prominent than in a vignette. Because customer satisfaction involves not only the aspect of cognition, the customer will more effectively assess the intention through the use of video.

> **H1:** The difference in customer satisfaction is based on the type of smile. Sincere smiles will cause greater satisfaction for customers, compared to insincere smiles.
>
> **H2:** The satisfaction gap between a vignette and a video, in terms of a sincere smile, is wider compared to that for an insincere smile.
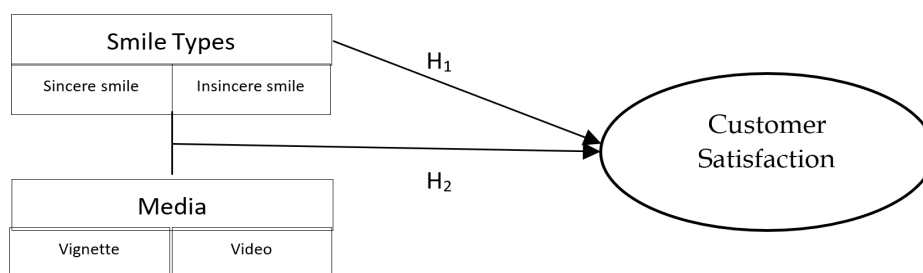
Figure 2. Research Model

Methods

The significance of this study has been based on the previous studies' limitations due to the manipulation used to examine customer satisfaction. This study aimed to examine the interaction effect of the type of smile on customer satisfaction by using video and a vignette. Video refers to high-contact service and the vignette represents low-contact service. Three pilot studies were conducted to determine the experimental stimulus vignette to be used.

Pilot Study 1: characteristics of sincere smile and insincere smile

Pilot study 1 aimed to establish the description of a sincere smile and an insincere smile, with open-ended questions to 20 participants. The results of pilot study 1 showed that there were 17 characteristics of a sincere smile such as: open mouth, squinted eyes, long duration of the smile, showing teeth while smiling, pupils reduced, showing sparkling eyes, etc. In contrast, there were 16 characteristics of an insincere smile such as: short duration of the smile, lips pulled flat, eyes opened wide, both ends of the lips pulled short to the sides, no wrinkled eyes, etc.

Pilot Study 2: Vignette

Pilot study 2 aimed to determine the vignette will be used in the experiment. Three different vignettes were created that involved characteristics of sincere and insincere smile. The results of pilot study 2 ($N = 47$) for the vignette of a sincere smile were: vignette 1 ($M = 4.3$, $SD = 1.06$), vignette 2 ($M = 4.6$, $SD = 0.7$), and vignette 3 ($M = 4.8$, $SD = 0.42$). The vignette of the insincere smile: vignette 1 ($M = 1.2$, $SD = 0.42$), vignette 2 ($M = 2$, $SD = 1.41$), and vignette 3 ($M = 2.9$, $SD = 1.1$). The results of pilot study 2 showed that the moderately rated vignette of a sincere smile and an insincere smile was vignette 2. Thus, the experimental stimulus of this study used vignette 2.

Pilot Study 3: Video

A further pilot study aimed to get a video that was considered to contain a sincere smile and an insincere smile. Participants in the sincere smile group ($N = 20$) and the insincere smile group ($N = 20$) assessed some aspects, such as the level of sincerity of the employee's smile in the video, his/her expression, look, and the language used. The results of the pilot study showed that the sincerity level of the sincere smile video was ($M = 4.2$, $SD = 0.61$), while the insincere smile video was ($M = 1.5$, $SD = 0.68$). The results indicated that the sincere smile video was rated as displaying the characteristics of friendliness very well, while the insincere smile video was rated poorly in terms of friendliness.

Variable

The dependent variable of this study was customer service satisfaction. Consumer satisfaction is an assessment, by the customer, of the services provided. The service providers in this study were all working in restaurants. Restaurant staff were used in this study because they represent the most commonly seen service staff. Haryanto (2013) stated that the culinary business nowadays is developing rapidly, so that people can easily choose a restaurant in accordance with their needs and interests. The independent variable was the type of smile and media. The type of smile consisted of a sincere smile and an insincere smile. The media consisted of two variants: a vignette and a video.

Design

This experimental study used a 2 x 2 between participants design. Participants were placed using a random assignment method into four groups (Sincere smile-Vignette; Insincere smile-Vignette; Sincere smile-Video; and Insincere smile-Video). This experiment used the online application www.random.org to conducted the randomization.

Participants

The result of a G*Power test showed that the total sample required a minimum of 112 participants. The sampling techniques in this study used a *priori* analysis selection that involved the level effect size with moderate criteria in the G*Power application. The characteristics of the participant were: (1) 18 to 30 years old, (2) enrolled student, and (3) they visited a restaurant at least once a week. Some of the considerations that formed the basis for the age of the participants were: (1) People under 17 years of age have proven to be less able to identify different types of smiles, and (2) people under 17 years old have less social experience and perception in interpreting social cues (Gunnery & Ruben, 2016).

The participants' recruitment process used online and offline announcements in

several faculties. The participants who confirmed their readiness to be involved in this study were asked to fill in an involvement letter and decide the schedule from the Google Forms platform: http://bit.ly/partisipanpenelitian01 or via an offline registration. There were 157 participants. They were undergraduate students and postgraduate students; 79% of them were women. Of the 157 participants, 60.4% were aged between 18 and 20 years old. The students came from one of the public universities in Makassar, South Sulawesi, Indonesia.

Materials and Apparatus

Informed Consent Sheet

Information related to the purpose of the study, including information about the responsible researchers, the procedures, and the participants' rights when participating in the experiments were clearly illustrated in the informed consent form. The participants were given time to read this first, then sign the agreement before starting the experiments.

Vignette

The experimental stimulus consisted of a sincere smile vignette and an insincere smile vignette. Each vignette contained a narrative that related a service interaction between a service employee and a customer in a restaurant. The instruction for this vignette was *"Read the vignette below and imagine you are visiting a new restaurant for the first time."*

Sincere Smile Stimulus

"The waitress comes with your order and puts it on the table. The waitress asks whether you want to add anything to your order, or not, and draws her lips back until her cheeks expand and wrinkles appear at the corners of her eyes while she waits for your answer. After the waitress is sure that there is nothing further to add to your order, she invites you to eat and draw her peak of lips until the cheeks expand and wrinkles appear at both of the eyes, and asks for permission to leave."

(*"Pelayan datang membawakan pesanan Anda dan meletakkan di atas meja. Pelayan menanyakan pesanan lain yang Anda inginkan, pelayan menarik ke samping kedua ujung bibirnya dan dalam waktu yang lama ketika menunggu jawaban Anda. Setelah yakin tidak ada pesanan lain, pelayan pamit menyiapkan pesanan Anda sambil menarik ke samping kedua ujung bibirnya"*).

Insincere Smile Stimulus

"*The waitress comes and brings your order and puts it on the table. The waitress asks whether you want to add anything to your order, or not, and draw her lips flatly across her face, her cheeks do not expand, and wrinkles do not appear at the corners of her eyes while she waits for your answer. After the waitress is sure that there is nothing further to add to your order, she invites you to eat and draw her peak of lips flatly, the cheeks not expand and wrinkles do not appear at both of the eyes, and asks for permission to leave.*"

("*Pelayan datang membawakan pesanan Anda dan meletakkan di atas meja. Pelayan menanyakan pesanan lain yang Anda inginkan, pelayan menarik datar kedua ujung bibirnya dan dalam waktu yang singkat ketika menunggu jawaban Anda. Setelah yakin tidak ada pesanan lain, pelayan langsung pergi menyiapkan pesanan Anda sambil menarik datar kedua ujung bibirnya*").

Video

One of the experimental stimuli was a video. The video's duration was 1 minute and 12 seconds and contained a service encounter between an employee and a customer in the context of a restaurant. The video's instruction was as follows: "*Your task is to watch the video using the headset that is in front of you. Imagine this is the first time you have visited this particular restaurant.*" Each participant viewed the video through a laptop screen that was 14 inches in size. Audio from the video was played to the participants via headphones with a frequency of 20-20.000 Hz. The video can be accessed in http://bit.ly/sincereandinsinceresmile.

(a)   **(b)**

Figure 3. Experiment Video: Sincere Smile Video (a) and Insincere Smile Video (b)

Customer Satisfaction Scale

The author composed the scale of consumer satisfaction. The scale was based on the aspects of customer satisfaction proposed by Khoirista, Yulianto and Mawardi (2015), including: Reluctance to move to another restaurant, continuous use, and recommended to others. The scale of customer satisfaction consisted of nine items ($\alpha = 0.83$), an example

item was: "*The service at this restaurant made me want to stay in this restaurant.*" The customer satisfaction scale was measured by choosing one of five possible responses, from (1) strongly disagree to (5) strongly agree.

Manipulation Check

After the participants filled out the customer satisfaction scales, a manipulation check was performed. A sample question was: *"Based on the video you've watched/the vignette you've read, the waitresses served the customer with?"* The manipulation check was measured by selecting either a sincere smile or an insincere smile as the answer to each question.

Procedure

In the beginning, the participants entered the laboratory. They were then divided randomly into four groups: video (sincere smile vs insincere smile) and vignette (sincere smile vs insincere smile). The experiments were carried out individually (one on one). In the video group, there was a laptop for them to use to watch the video, while in the vignette group there was a letter placed on the table for them to read. The experimenter instructed the participants to read the vignette or watch the videos carefully.

Data analysis

We tested the interaction effects using two-ways ANOVA to investigate consumer satisfaction from the interaction effects between the two types of smiles (sincere or insincere smile) and the media used (vignette or video).

Results

Manipulation check

The results highlighted that 18 participants had different judgements about the conditions provided to the experimental group, so they were eliminated. From the original 157 participants in this experiment, we analysed 139 samples.

Main Effect of Smile Types on Customer Satisfaction

The expectation of this result was that the participants in the sincere smile group would be more satisfied than the participants in the insincere smile group. The main effect was significantly correlated with customer satisfaction based on variations in the type of smile, $F(1,135) = 66.53$, $p < 0.05$, $\eta^2 = 0.33$, with customer satisfaction for service with

sincere smiles being greater than for insincere smiles ($M_{sincere}$ = 4.01, SD = 0.56; $M_{insincere}$ = 2.92, SD = 0.97). This result showed that if the employee served the customer with a sincere smile, the customer would feel more satisfaction than if he/she was served by someone with an insincere smile. Therefore, H1 was supported.

Interaction Effect of Smiles Types and Media on Customer Satisfaction

The result of the ANOVA test showed that participants in the sincere smile group measured the vignette or video more sincerely ($M_{sincere}$ = 4.07, SD = 0.69), compared with participants in the insincere smile vignette or video group ($M_{insincere}$ = 2.3, SD = 0.96), $F(1,137) = 142.83$, $p < 0,05$. This result showed that both the sincere smile vignette and video were assessed as being more sincere, compared with the insincere smile vignette and video.

The ANOVA test of the main effect toward customer satisfaction, based on the media used, was significantly proved, $F(1,135) = 12.37$, $p < 0.05$, $\eta^2 = 0.084$. Customer satisfaction in the video group was higher than in the vignette group (M_{video} = 3.75, SD = 0.76; $M_{vignette}$ = 3.3, SD = 1.03). This finding proved that the participants in the video group felt more satisfied that the participants in the vignette group did.

The result of the ANOVA test accepted H2. The result significantly proved the interaction between the type of smile and the media used toward customer satisfaction, $F(1,135) = 7.88$, $p < 0.05$, $\eta^2 = 0.055$. For the sincere smile condition, it was found there was a difference in customer satisfaction between the video and vignette groups ($M_{sincere\text{-}video}$ = 4.06, SD = 0.47; $M_{sincere\text{-}vignette}$ = 3.96, SD = 0.64). Similarly, for the insincere smile condition, it was found there was a difference in customer satisfaction between the video and vignette groups ($M_{insincere\text{-}video}$ = 3.38, SD = 0.9; $M_{insincere\text{-}vignette}$ = 2.58, SD = 0.89). This result proved that a sincere smile using the video method provoked feelings of greater satisfaction, compared with a sincere smile using the vignette method. Therefore, H2 was accepted.
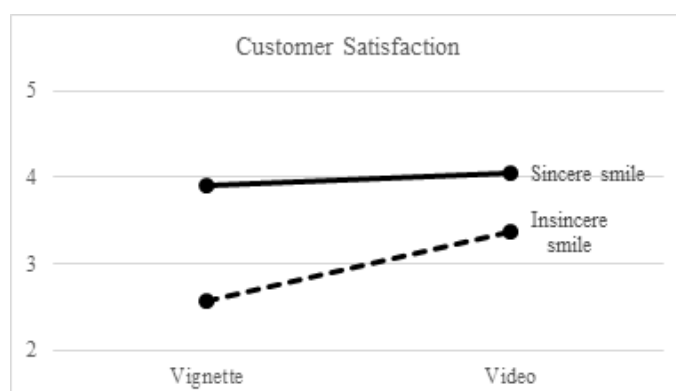

Figure 4. Interaction Effect of Smile Types and Media on Customer Satisfaction

Discussion

The result of this study indicates that the type of smile affects customer satisfaction. Customer satisfaction will be higher when they get a sincere smile, compared to customers who get an insincere one. Therefore, H1 is supported. This result is in line with the previous meta-analysis studies which show that a sincere smile is rated more positively (Gunnery & Ruben, 2016). Different types of smiles focus more on emotional aspects, rather than cognitive ones. A number of studies have shown that a genuine smile is associated with positive emotions (Gunnery & Hall, 2014; Girard, Cohn, Yin, & Morency, 2021). A sincere smile is associated with a positive context, compared to an insincere smile. A sincere smile in this study also proves that it has an impact on positive emotions in the form of consumer satisfaction, compared to an insincere smile. It is common knowledge that a smile is a pleasant form of facial expression and shows a sense of warmth and positive feelings. The result is due to the responses from the group presented with a sincere smile, as they felt satisfied and about 93% of them had the intention to come back to the restaurant. Only 39% of the participants in the insincere smile group said they were satisfied with the overall service. This result follows the research conducted by Grandey et al. (2005). The authenticity of a smile when serving someone has an impact on improving the customer's perception about the hospitality provided; this is not true for the employees who display an insincere smile.

Employees who display sincere smiles affect customers' emotions. Positive expressions that employees display, in the form of a sincere smile, make customers feel more positive emotions (Weijun, Hui, Ling, Ramsey, & Zhengwei, 2018). In contrast, a negative expression by employees will cause the customers' emotions to be negative. This negative emotion from the customers will have a negative effect on the relationship between the customers and the service provider (Petzer, de Meyer, Svari, & Svensson, 2012). These negative implications involve complaining, negative word of mouth (WOM), loyalty, the re-purchase intention, and satisfaction (Koenig-Lewis & Palmer, 2014). The smile that employees display when serving has a big influence on customers' emotions, thus changing their assessment of the service they receive (Lechner & Paul, 2017), and increasing their judgement about the service quality (Houston, Grandey and Sawyer (2018). An employee's positive expression can reduce the negative feelings of a customer through the emotional transmission of employees during the service process, and vice versa (Du, Fan, & Feng, 2011; Hennig-Thurau, Groth, Paul, & Gremler, 2006; Pugh, 2001).

The second main effect relates to the media used to present a smile. The vignette showed a significantly lower level of consumer satisfaction than the video did. The explanation of the effect of different types of media (vignette versus video) is more influenced by cognitive aspects. Reading vignettes is a complex cognitive activity that includes the

process of seeing (visually), paying attention, recalling memories of words and letters, imagining, understanding the meaning, and absorbing and processing the contents of what is being read (Ampuni, 1998). Reading does not only involve cognitive activities but also physical and psychological activities. Participants in the vignette reading groups activated more psychic aspects such as attention, remembering, understanding words, analyzing, imagining, and understanding the reading material, compared to the video groups.

The stages in reading a vignette involve a literal understanding and interpretation. Participants in the vignette groups find the primary meaning of the words, sentences, and ideas in the context of their reading. After doing this literal understanding, the vignette participants also had to interpret what they read by combining the processes of imagining and remembering. Elaboration will cause individuals to alter their attitudes through relevant considerations (Green & Brock, 2000). In the vignette's text, a reader is required to create mental imagery for him or herself (Green, Brock, & Kaufman, 2004). However, in the video, the audience is presented with visual imagery and also audio information. On the other hand, the cognitive process for watching a video is less than that required for reading a vignette. When watching a video, the audience does not need the ability to analyze things verbally, but focuses more on observing gestures and other visual things around the actor. The appreciation process that occurs when reading the vignette and watching the video are different. This causes the level of consumer satisfaction gained from reading the vignette to be lower than that obtained from observing service interaction videos. The participants who watched service videos considered that the service process played by the actors was something that was common in everyday life. With a video, the participants can be more easily distracted by things outside the context of the smile displayed by the actor, compared to narratives that focus more on reading comprehension as a whole. This is caused by the lower information complexity in the video, resulting from looking at the employee's expression. This finding then lowers the participants' understanding toward an insincere smile, instead of using the vignette. With a vignette, a person acquires detailed and clear information. The information in the vignette describes whether the muscle movement in her cheeks and eyes exists or not.

The interaction effect tested in this study proves that watching service videos of people with a sincere smile is considered more satisfying than reading a vignette about someone with a sincere smile. Likewise, watching videos of people serving with insincere smiles consistently results in greater customer satisfaction than reading vignettes about people with insincere smiles does. The participants who watched videos of sincere and insincere smiles did not show a wide gap in their consumer satisfaction. This is because watching videos does not require more complex cognitive skills, and the events performed by the actors are things that are often encountered in real life. Thus, both the service vide-

os of a sincere smile and an insincere smile are still considered satisfactory. The emotional mechanism in the videos of sincere and insincere smiles is more important than the cognitive aspect.

However, participants in the group who read the sincere smile vignette and the insincere smile vignette showed a wide gap. The participants who read the vignette about a sincere smile rated themselves as satisfied, while those who read the vignette of an insincere smile rated themselves as less satisfied. From the participants' answers to a sincere smile in the vignette, about 94% of them either agreed or strongly agreed with be satisfied with the service. Some of the cognitive activities carried out while reading include understanding, memory, attention, and also imagining. When the individual reads the vignette, his/her attention to the content of the vignette will be clearer, so that there is a clear difference between the sincere smile vignette and insincere smile vignette. Sentences containing negative words (insincere smile) will have a greater effect on a person's memory, than positive words (sincere smile) do, in the vignette. The cognitive process in reading a vignette about sincere and insincere smiles is more than an emotional process.

When a service provider displays an insincere smile, it produces a greater negative assessment in customers with low-contact service than with high-contact service. This findings matched with those in a study by Edvardsson (2005), who found that negative service has a stronger effect on a customer's perception of the service quality than positive service does. Those findings can be explained through the information process mechanism, either with a low-contact service customer or a high-contact service one. The cognitive process will affect an individual when he/she encounters various stimuli (Castro, Matzke, & Heatchote, 2019; Umasuthan, Park, & Ryu, 2017), such as in a video. Attention centralization, either simultaneously or with more than one modality, shapes the tendency of individual perception (Solso, Maclin, & Maclin, 2014). Visual and auditory modality, which is displayed similarly with video, become less effective compared with using text modality in a vignette. The interaction process in a high-service contact involves a lot of information, not only from the service provider's smile but from external conditions such as the environment, intonation, gestures, etc. so the customer gains the complexity of the appraisal, which is unlikely in a low-contact service (Ali, Amin, & Ryu, 2016; Wirtz & Lovelock, 2018). Therefore, the limitation of a low-contact service description brings more negative ratings from the customers.

Conclusion

Overall, this study has proven that there is an interaction effect between the type of smile and the media used on consumer satisfaction. The findings of this study also

demonstrate that a sincere smile has a greater effect on customer satisfaction than a insincere smile does. The customer's dissatisfaction toward an insincere smile will be higher in a low-contact service using text than a high-contact service with video.

Limitation

For further research, the participants should come from a broader sample, such as their social economic status, not only from among students. The next study can make the comparison by using a field experimental, aiming for a natural look for the service process's interaction in a low-contact service setting. Further studies are needed that examine the role of gender as a control variable in understanding the influence between the types of smiles on customer satisfaction.

The Implication of the Study

This study proved that (1) a sincere smile has the effect of causing greater customer satisfaction and (2) customer dissatisfaction is greater when people are served by someone with an insincere smile by text (vignette) compared with a high contact service by video. The customer was more able to detect whether the smile is fake when the service is encountered in a low-contact service than a high-contact service. A low-contact service (vignette) makes the customer think more, in an effort to collect more information from the text and imagine the service employee's expression clearly. Companies using this type of low-contact service should be more careful about how they treat their customers, because it is more risky than with a high-contact service. A low-contact service is considered satisfactory by consumers when it combines text and video simultaneously.

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