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Article

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MARKETING | RESEARCH ARTICLE

Effect of mid-roll video advertising value and perceived intrusiveness on Facebook viewers' response: the mediating roles of attitude and word-of-mouth intention

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Abstract: Advertising plays an essential role for creating brand awareness that leads to consumer behavior toward services and products. The objective of this research is to investigate the role of mid-roll video advertising regarding its perceived intrusiveness and value on viewers' response to those ads. Data from 200 users who have experienced mid-roll video advertising were analyzed in a two-step method via structural equation modeling (SEM) and confirmatory factor analysis (CFA). The indirect impacts were investigated and compared via the bootstrap approach. The analysis confirms that the value of mid-roll video advertising is significantly and positively associated with attitude toward mid-roll video advertising and word-of-mouth (WOM) intention. In addition, the positive connection between WOM intention and attitude as well as viewers' response are observed. However, the negative association between perceived intrusiveness and attitude is

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Jakkrit Thavorn holds a PhD in Technopreneurship and Innovation Management from Chulalongkorn University. His current research interests include strategic management, innovation management, technology management, foresight, and business model innovation.

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PUBLIC INTEREST STATEMENT

In 2021, social media have penetrated Thais' perception successfully. Along with the pandemic thoroughly consuming external environments, advertisements (ads) on social media create paths for brands and companies' images to attract consumers. Video advertising in social media is used to promote their brands and the contents of products and/or services. However, video advertisements, especially mid-roll ads, can lead to negative feelings because these ads interrupt viewers' experiences of the continuation of content while they are watching them. In this study, the role of the mid-roll-ad value and perceived intrusiveness on viewers' responses was investigated based on the advertising value of the 1995's Ducoffe's model. In addition, the mediation effect of attitude toward mid-roll ads and word-of-mouth intention was studied. The exploratory sequential mixed-method was applied. As a result, there was a positive relationship between mid-roll-ad value, attitude toward mid-roll video advertising, and word-of-mouth intention whereas perceived intrusiveness had a negative effect on the attitude. This paper highlights how advertisers strategize their content to successfully attract and satisfy the viewers.

found as well in this research. For the contributions, the result not only strengthens the importance of the advertising value theory as a framework to explain the impact of advertising, but also provides recommendations for advertisers and content creators regarding some managerial actions that may need to be taken in order to satisfy consumers.

Subjects: Strategic Management; Marketing; Organizational Studies

Keywords: online ads; mid-roll advertising value; perceived intrusiveness; attitude; word-of-mouth intention; viewers response; Facebook; Thailand

1. Introduction

Since opening to the public in 2006 till the present, Facebook, one of social networking sites (SNSs), has been one of the third most favorite social global media platforms in January 2022 (or 14.5% of global internet users aged between 16 and 64 years old). This figure increases more than 10.1% compared to the previous year (Kemp, 2022). Among those developed and emerging countries, Thailand ranked 8th of Facebook users (or 50.05 million users in 2022; Statista, 2022). The advertising of a brand on Facebook is considered a powerful social media tool to effectively keep in touch with consumers and turbulent changes of their demands over a period of time (Kang & Park, 2018), especially during the COVID-19 pandemic (2020 onwards). The advancing marketing characteristic of social media is certainly an influential instrument in increasing both business sustainability and brand popularity (Shareef et al., 2019). Based on the statistics, it portrays the significance of video as an instrument for brands and companies to engage their customers in advertising (Gaber et al., 2019).

Videos are able to grab viewers' attention intuitively. The popular social media platforms including Facebook and YouTube have high video traffic. An average of 8 billion views are produced by Facebook daily while the usage of Youtube's mobile video increases to almost 100% each year (Rawat et al., 2019). It is convincing that video ads are online ads which can certainly help to increase users' spending to around 50%. Video advertising, one of the effective marketing tools, is employed largely by companies to promote their respective brands and products (S.-L. S.-L. Wang & Lan, 2018). Furthermore, the sales rate of video advertisements is higher compared to static advertisements, thus enabling them to be used in promoting certain products or brands.

Recently, Facebook has launched the option for content creators to earn money by inserting short ads into their videos. With in-stream ads, creators tend to make longer, authentic contents that can earn money by inserting ads into qualifying videos. There are many types of ad placements that can be inserted into content, including pre-roll, mid-roll, post-roll, and image ads (Widmer, 2017). On Facebook, in-stream advertisements attain approximately on-target rate of 89%. Publishers can adapt their advertisements based on their Facebook audiences so that those advertisements can reach their targeted audience on Facebook. Therefore, creators can make a decision on videos they need to monetize (Mogaji, 2016).

Ad completion rate is largely employed by the media industry in measuring the effectiveness of an ad. Ad completion rate is defined as the percentage of ads which people view entirely and do not stop watching in the midst (Krishnan & Sitaraman, 2013). The objective of any advertising campaign is to minimize abandonment and maximize rates of completion. With the rise in internet video traffic, people prefer to use mid-roll advertisements to promote their businesses. The content, quality and placement of an ad are significant in determining if the user shows an interest towards watching the ad. Therefore, it is essential to investigate the factors that affect viewers' response in terms of mid-roll advertisements on Facebook.

Several advertising researches on mid-roll advertising in the social media (the test was started at the beginning of 2016) has investigated "**viewer response**" replaced as "consumer response" in

this study as the ones who react based on his/her actual behavior towards mid-roll advertisement on Facebook (as abbreviated as mid-roll ads; Berman, 2017; Hsin Chang et al., 2013; Kongsagoonwong & Ngamkroekjoti, 2018; Mukherjee & Banerjee, 2017).

Following the success of mid-roll advertising in other video service providers like Hulu, NBC, CNN, YouTube, and Netflix, Krishnan and Sitaraman (2013) found that the global highest completion rate of 97% was generated when mid-roll ads were inserted in the midst of videos compared to pre-roll ads and post-rolls ads which generated completion rates of 74% and 45% correspondingly. However, Kongsagoonwong and Ngamkroekjoti (2018) found that Thai viewers determined mid-roll advertising on YouTube as interference and disturbing their enjoyment of specific programs. Moreover, they are unlikely to pay attention to content or message and opt for skipping.

Other literature reviews had researched mid-roll advertising in the UK Facebook right after started in 2016, in-stream advertisements attain an approximately on-target rate of 89% (Mogaji, 2016). Others also found that 90% of US viewers consistently watched mid-roll advertising through to completion (Weaver, 2018). As a result, it is the nature of mid-roll ads of which it lends itself to a variety of higher-quality viewer experiences, and should not be overlooked (Weaver, 2018; Widmer, 2017). Therefore, if the creator and administrators of personal Facebook understand the viewers' response well, they will design the online content that matches with the (updated changes of) demand of "Facebooker" or Facebook users. In other words, they can view on a timely basis. The administrators' list cope with a new mobile application that includes tools for streaming video, updating Facebook stories, and messaging people across such platforms among the creator and administrators' personal homepages (Kim, 2015; Rawat et al., 2019).

Hence, the aim of this study is to explore and investigate the determinants of viewer response toward mid-roll advertising on Facebook, with two research objectives. First, we intend to develop a theoretical model to examine the relationships among mid-roll advertising value, perceived intrusiveness, attitudinal dispositions, and word of mouth intention toward viewer response in the context of Thai. Second, we hope to investigate the application of the social influence theoretical model in this study. We believe that the study will offer useful insights for both advertising scholars and executives to understand the intricacies of how mid-roll advertising affects viewer response and to assist marketers in devising better approaches to increase the effectiveness of mid-roll advertising.

In this research, mid-roll ads value is the perception of users regarding the effectiveness and worthiness of the value when they watch the Facebook mid-roll ads. Consumers' perceived intrusiveness is defined as consumers' moment of being obstructed undesirably by the Facebook mid-roll ads. In addition, the role of attitude toward mid-roll ads and word-of-mouth (WOM) intention is also investigated as a mediating effect. Attitude is defined as a person's perception toward mid-roll ads. WOM Intention refers to users' eagerness to convey their thoughts regarding the mid-roll ads to other users.

This research is rationally organized into five sections. The first section explains the theoretical background while the second describes the research design and methodology. The findings and analysis are presented in the third section. The discussion section is provided as the fourth while the final concludes the study where the implications, limitations of this study, and suggestions for future research are provided.

2. Theoretical background and hypotheses development

2.1. Mid-roll video advertising value, attitude toward mid-roll video advertising, and word-of-mouth intention

This study selects two sub-categories under the advertising value based on interview results. There are the quality of information and the credibility. Ducoffe (1995) has conceptualized advertising

value (or ads value) from the traditional approach in 1995 till reaching social networking sites (SNSs) in 1996 and 2000. This study concerns about ads value of consumers perspectives underneath social media tools like Facebook. Zha et al. (2015) define ads values as the general image and evaluation of the value of an advertisement to consumer's attitude. Hsin Chang et al. (2013) researched the quality of information on ads via the internet that consumers care about to be accepted. Such quality copes with the relationship between e-service quality and consumers. Moreover, ads should convince their target consumers to have greater intention to purchase those brands, in addition to having more positive influence on the society to avoid the feeling of intrusiveness. These results correspond to what Ducoffe and Curlo (2000) conceived that ads value as a subjective assessment of worthiness or usefulness of advertising to users while this research focuses on viewers' response on mid-roll ads on Facebook. However, an advertisement which is lack value will generally lead to unfavorable users responses. One dimension of traditional value that they defined as informativeness ads focuses on its quality which indicates valuable, importance, and usefulness. This study instead focuses insightful on the quality of information from mid-roll ads on Facebook based on interview results in the context of Thai, such as easily sources of information, supplying complete product/brand information, brand content, storyline, distribution, and key messages towards their attitude to be accepted.

Yang et al. (2017) defined how trust of people or customers when watching the advertisement. Mukherjee and Banerjee (2017) referred to credibility as how much ability of the advertisers deliver trustworthiness to the receivers or audience that has an impact on consumers' attitude under the social networking ads (SNAs). They added that in the perspective of SMS-based mobile advertisements, credibility of ads has been considered as a critical determinant for shaping consumers' attitude towards the SMS advertisements. In similar lines, in the context of SNAs, it can be expected that advertisement credibility has a positive impact on users'/consumers' attitude towards SNAs. Lastly, Logan et al. (2012) mentioned credibility as the fairness and factualness of advertising in customers' perception. Based on qualitative results, this study concerns about how trustworthiness of ads, credible advertisers, truthfulness of contents, and accurate of updated ads on time delivery.

Attitude refers to a person's sentiments and assessments towards engaging in a certain behavior (Ajzen & Fishbein, 1980). In an advertising context, attitude is perceived as a tendency to engender positively or negatively toward advertising content (Luna-Nevarez & Torres, 2015). Values serve as the foundation of attitudes towards advertising (Beatty et al., 1985). The perceived value of an advertisement is greatly influenced by attitude towards advertising (Brackett & Carr, 2001). The value of advertising has portrayed a substantial effect on attitude toward mobile advertising. The perceived value of web advertising helps to attain satisfaction which in turn motivates users to exhibit favorable behavior (Zha et al., 2015). Even though both sub-categories have launched in several reviews, however as a result of the in-depth interview, they provide deeper insight to question in the quantitative format. Thus, Hypothesis 1 is proposed as follows:

H1: Mid-roll video advertising value has a positive impact on attitude toward mid-roll video advertising.

From the advertising perspective, José-Cabezudo and Camarero-Izquierdo (2012) determined the benefits of electronic word-of-mouth (or e-WOM) via email in terms of its provocative content that motivate unpaid peer-to-peer communication of persuasive messages from identified sponsors. Therefore, it is also particularly important for the firms or brands to choose individuals who are especially motivated to engage in viral dynamics, as an activity from which they derive entertainment and an opportunity to share. Even though Individuals who require high levels of trust (conveying the message or indicating the message in its subject line) are more reluctant and engage in viral dynamics less. Furthermore, in Malaysia, Lim (2015) found a significant relationship

also emerges between internet advertising and e-WOM which will reflect only the way people feel as a result of persuasive communication. However, this study examines the relationship between mid-roll advertising value and WOM intention. In addition, how the efficiency of consumers' attitude mediates the relationship between advertising value and WOM intention. The explanation of the relationship between attitude and WOM intention is proposed in the Hypothesis 5.

The received messages will be perceived by users as useful if those messages fulfill their requirements or contain valuable purchase data. Previous research examined the association between consumers' response and advertising attitude (Tsang et al., 2004). They found that unless consumers are specifically consented to advertising value, they normally have negative attitudes toward that value. Thus, there is a relationship between consumer beliefs and attitudes and consumer behavior. The increase of consumers' purchase intention will make consumers to exhibit a positive behavior towards services or products (Ko et al., 2005). Wahid and Ahmed (2011) also found that attitude mediates between advertisement and response to purchase of the advertised products. Similarly, attitude was found to fully mediate the relationship between value towards ads and intention to refer the ads to others (Kumar & Kaushal, 2016). Thus, Hypothesis 2 and Hypothesis 3 are proposed as follows:

H2: Mid-roll video advertising value has a positive impact on word-of-mouth intention.

H3: Attitude toward mid-roll video advertising mediates the effect of mid-roll video advertising on word-of-mouth intention.

2.2. Perceived intrusiveness and attitude toward mid-roll video advertising

Perceived intrusiveness undesirably affects an individual's experience by interrupting the individual's privacy (Cho, 2004). Nevertheless, advertisement is not the basis of interruption. Dutta-Bergman, 2006 mentioned that the successful advertisement depends on its capability to enlighten consumers. An ad is only perceived as disturbing if the users feel that the advertisement disrupts their objectives (Edwards et al., 2002).

Advertising intrusiveness refers to an advertisement that disrupts the smoothness of an editorial unit (Tudoran, 2019). People may develop an unfavorable response, particularly when users' opinions of their anticipated content are inhibited by marketers or an ad can only be closed by users after watching it for a specific amount of time (Ha & McCann, 2008). Furthermore, users' level of perceived intrusiveness relies on subjective decisions of varied requirements (Hsieh et al., 2021).

The online environment is more disturbing than traditional media (Belanche et al., 2017). The goal of online advertisements is to grab the attention of users; however, online advertisements seem to bring interruption to users (Tang et al., 2015). Advertisements with overstated or unclear statements may cause users to feel disrupted. Users will also feel annoyed if the advertisements are too long or loud (Bauer & Greyser, 1968). Moreover, an individual's objectives may be disrupted by advertisement intrusiveness, particularly when pop-up advertisements appear and obstruct users' activities (Pelsmacker et al., 2019). Madhavan et al. (2019) also found that perceived intrusiveness is negatively associated with the online advertisement, publisher's website, and attitude towards brand.

Following the interview results, the researcher has updated the operational components to fit with the feedback of the respondents from mid-roll ads of Facebook. These are, for example, hard sell, time consumption, threatening privacy, incongruency, and annoying behavior. Therefore, Hypothesis 4 is proposed as follows:

H4: Perceived intrusiveness has a negative impact on attitude toward mid-roll video advertising.

2.3. Attitude toward mid-roll video advertising and word-of-mouth (WOM) intention

Attitude toward consumer behavior implies the degree to which the execution of behavior is valued either positively or negatively (Ajzen & Fishbein, 1980). An attitude of a person affects his or her actual reaction and intentions toward products or services (Hsin Chang et al., 2013). Attitude toward advertising refers to an individual's tendency to demonstrate a positive or negative reaction towards a certain advertisement (Chen & Wells, 1999). According to MacKenzie et al., 1986, an individual's behavioral disposition is greatly affected by his or her attitude toward advertising.

WOM intention is vital in making purchase-related choices. It is found that positive WOM will enable new users to develop interests toward certain products or services (Jones & Reynolds, 2006). Consumers will usually share an advertisement that they like to their friends on social media platforms. In this context, consumers act as initiators of marketing campaigns on social media platforms. A favorable WOM can be developed through attitude toward marketing on social media (Durukan & Bozaci, 2012). Once a favorable attitude is developed for the advertisement, it influences consumers' intention to share information (WOM).

Moreover, Mukherjee et al. (2017) investigated the impact of attitude towards SNAs on WOM intention. They considered both positive and negative results from attitude toward SNAs to be applied. Their results indicated that the attitude towards SNAs once it has a positive sign, resulting in positive WOM intention. There was a strong relationship between the attitude and WOM intentions. Besides, the attributes SNAs of entertainment and credibility were getting along together very well; they both have a strong influence on the attitude of consumers. It is very important to the marketers in terms of its image, sales, and alliance with prospective and existing customers. Chu and Chen (2019) examine the positive relationship between brand attitude and e-WOM intention of consumers' CSR-related activities in social media. Accordingly, it is plausible to expect that viewers' attitudes affect the WOM intention. Thus, it is hypothesized that:

H5: Attitude toward mid-roll video advertising has a positive impact on word-of-mouth intention.

2.4. Attitude toward mid-roll video advertising and viewer response

Purchase intention is the decision of consumers in choosing to purchase a certain product or brand. It enables marketers to understand the view of potential consumers on actual purchase. Online purchase intention refers to the concept which strengthens consumers' aim to buy a certain product or brand via online platforms (Salisbury et al., 2001). Purchase intention is directly affected by product attitude. The substantial predictor of purchase intention in the location-based advertising context is attitude (Xu et al., 2009). Similarly, the increase in stock price and customers' purchase intention are affected positively by brand attitude (E.-B. E.-B. Lee et al., 2017).

Few research upon e-mail advertising revealed that the behavioral intentions of an individual are affected positively by his or her behavioral disposition. Users who think e-mail advertisements are valuable would be more probably to surf the website of the company or go to the physical store (Martin et al., 2003). According to Trivedi and Teichert (2019), customers tend to develop favorable intentions and reactions towards companies and their product offerings, especially when they have a favorable fondness towards an advertisement. Therefore, customers' reaction is affected favorably by their favorable behavior towards advertisements on social networking sites (Y. Y. Wang & Sun, 2010). Thus, the following hypothesis is proposed:

H6: Attitude toward mid-roll video advertising has a positive impact on viewer response.

H7: Word-of-mouth intention mediates the effect of attitude toward mid-roll video advertising on viewers' response.

2.5. Word-of-mouth (WOM) intention and viewer response

It is found in previous studies that intention has a substantial connection with viewer response. The willingness of a person to have an active involvement with marketers helps to portray viewer response in marketing campaigns (Hsin Chang et al., 2013). According to Kent and Brandal (2003), viewer response defines a customer's actual behavior. Customers tend to develop favorable intentions and reactions towards companies and their product offerings, especially when they have a favorable fondness towards an advertisement. Martin et al. (2003) stated that customers will tend to show more favorable reactions if they have positive intentions towards marketers. Therefore, the following hypothesis is proposed:

H8: Word-of-mouth intention has a positive impact on viewer response.

2.6. The conceptual framework

The conceptual framework is to investigate the connection among viewers' response through mid-roll video advertising value, perceived intrusiveness, attitude toward mid-roll video advertising, and word-of-mouth (WOM) intention. figure 1 depicts the model and research framework and Figure 2 shows the mediation effect of Hypothesis 3 and Hypothesis 7.

3. Methods

3.1. Exploratory Sequential Mixed Method Design

This research uses an exploratory sequential mixed method research which presupposes a specific juxtaposition of the qualitative and quantitative components consequentially. According to Creswell and Clark (2017), exploratory designs are useful for exploring relationships when study variables are not known, refining and testing an emerging theory, developing new psychological assessment instruments based on an initial qualitative analysis, and generalizing qualitative findings to a specific population. This research also designated specifically supports the purpose

Figure 1. The conceptual framework.

Note: H₃ and H₇ refer to indirect effects which were mediated by attitude toward mid-roll video advertising and word-of-mouth intention, respectively.

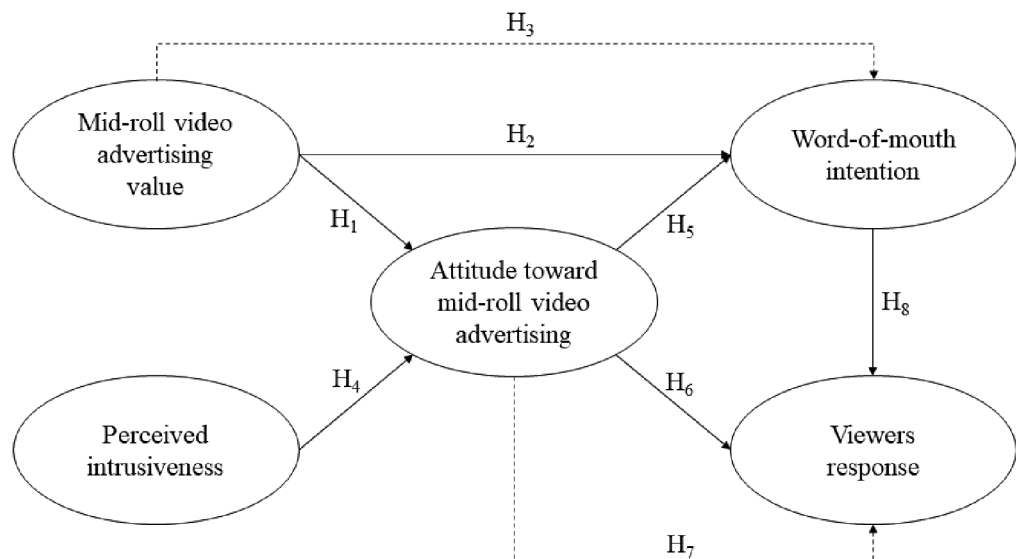
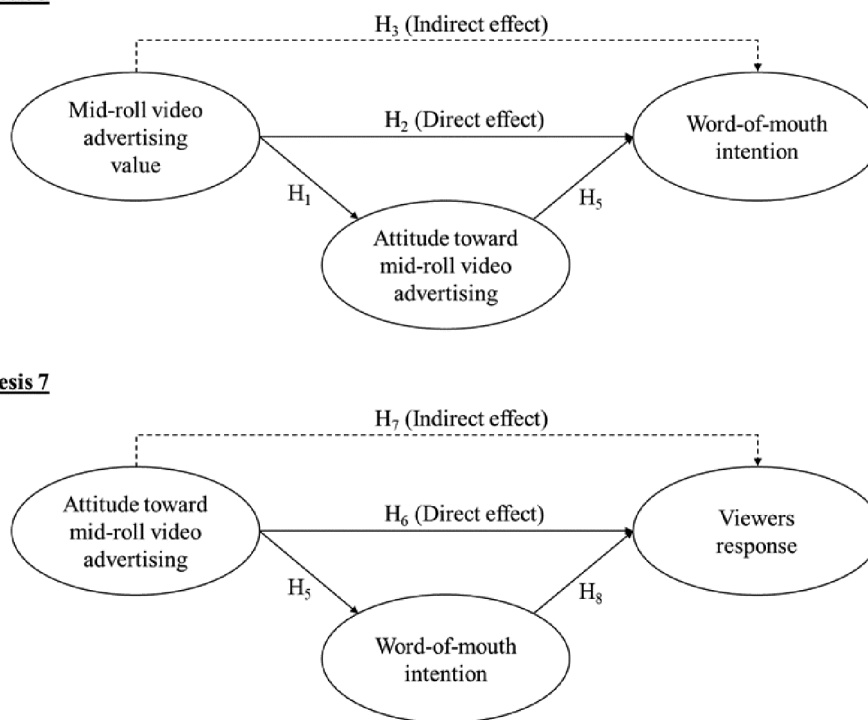


Figure 2. The mediation effect of Hypothesis 3 and Hypothesis 7.



of the phenomenon of mid-roll advertising launched on Facebook since the beginning of 2017 in Thailand (Wagner, 2017).

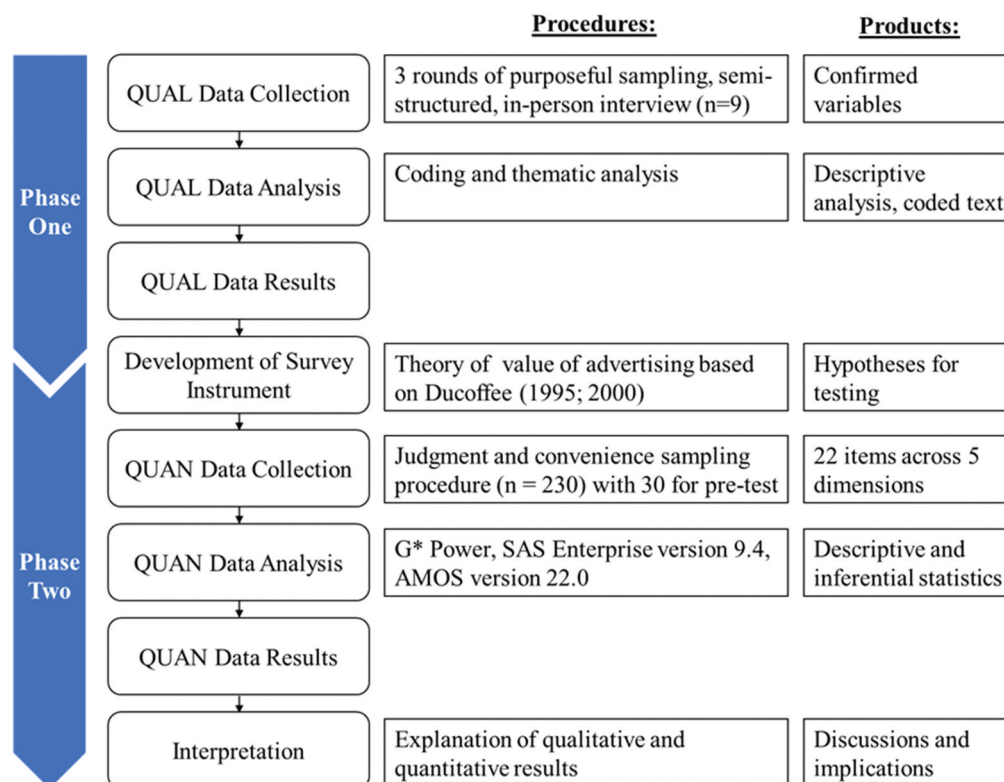
As shown in figure 3, the first phase of qualitative data collection and analysis is followed by the collection of quantitative data to test or generalize the initial qualitative results (Schoonenboom & Johnson, 2017). There are three rounds of interviews; however, up until the third round, interviewers are able to confirm the application of both independent and dependent variables from nine interviewees with marketing backgrounds from at least three international companies located in Thailand. Each round provides the researchers as much closed to validate the ideas generated from the qualitative component based on the related literature reviews. In addition, the researchers had initiated and confirmed the usage of additional components of perceived intrusiveness, quality of information, and appropriate length of time. The specific new variables derived from interviewing sessions are, for example, feeling forced (hard-sell), wasting my time, threatening privacy, incongruent content, and interrupting the original video.

Finally, qualitative research methodologies are used to explore why or how a phenomenon occurs, to describe the nature of an individual's experience on mid-roll advertising on Facebook, while quantitative methodologies address questions about causality, generalizability, or magnitude of such effect on Facebook viewers' responses (Berman, 2017). Therefore, the designed conceptual model (figure 1) was tested out to confirm its application of Facebook with the samples. Findings are compared, with other literature reviews under a different context.

3.2. Sample selection and data collection

In order to investigate the research hypotheses and test the suggested model, an online survey questionnaire was employed as a quantitative approach in this study. This research was conducted aiming at Facebook users in Thailand. In this study, Facebook users who are more than 18 years old and have experienced Facebook mid-roll video advertising were selected as the target

Figure 3. Exploratory sequential mixed method design of this research. Note: QUAL represents qualitative research and QUAN represents quantitative research.



respondents. The online questionnaire survey was created via Google forms. The URL of the surveys was sent through social media platforms, namely Facebook and LINE. The whole process was undertaken on an entirely voluntary basis. The survey answers were sent to a link via Google Form where data are stored in a password protected electronic format and confidentially kept. Therefore, all responses remain anonymous. No one will be able to identify answers from respondents. Facebook users were provided with a detailed explanation regarding the approach and appropriate statistical tests that were applied when participating in the online survey.

According to Hair et al. (2010), structural equation modeling (SEM) analysis is suitable for a minimum sample size of 200 or 10 cases per variable. This study contained 19 observable variables, and thus the minimum sample size was 190. As a consequence, 200 surveys were gathered after the data was collected and screened to be analyzed.

To assure the eligibility of respondents, screening questions such as “Have you ever seen/viewed Facebook mid-roll video advertisings?” were applied in the survey. Respondents who provided a “yes” answer are considered as the participants of the survey. When respondents took part in the questionnaire, the definition of a Facebook mid-roll video advertising was explained to them as follows: “Facebook mid-roll video advertising is activated for 5 to 15 seconds after viewer had watched a video clip on Facebook for approximately 20 seconds without any authority to skip button. Facebook makes its profit by offering the new advertising channel to the publishers for their insert advertisements as video clips.”

3.3. Instrument development

In order to verify reliability and validity of the instruments, scales from previous studies were adapted in this study. The questionnaires were divided into three parts: 1) screening questions, 2) information regarding demographic and behavioral features of respondents, and 3) measurement

items. As for the measurement items, a four-point Likert scale was applied in this study ranging from strongly agree (4) to strongly disagree (1).

The mid-roll video advertising value (VAL), which was the independent variable, was calculated with five items in the proposed model, as per Hsin Chang et al. (2013). Perceived intrusiveness (INTRU) was calculated with five items, as per Yang et al. (2017) and Prendergast et al. (2009). Attitude toward mid-roll video advertising (ATT) was assessed through three items, which was altered from the findings of E.-B. E.-B. Lee et al. (2017). Word-of-mouth intention (WOM) was assessed through three items, which was altered from the findings of Ranaweera and Karjaluoto (2017). Viewers' response (RES) was assessed through three items, which was altered from the findings of Hsin Chang et al. (2013). The scale items are shown in Appendix (Table A1).

A pilot panel of 30 respondents was adopted to test the validity and reliability of the questionnaire. After that, we revised some minor improvements to ensure that the constructs were well-understood, well-structured, evidently stated, and captured the key factors.

3.4. Data analysis

In order to conduct descriptive analysis, we employed Statistical Analysis System (SAS) software version 9.4 in this study. Furthermore, the covariance-based structural equation modeling (CB-SEM) was utilized in this study to analyze the data. This technique encompasses various statistical tools such as path analysis for analyzing a multiple regression, factor loadings, and composite reliability for assessing validity tests and reliability tests respectively. CB-SEM enables the exclusion of measurement scales with low loadings such as lower than 0.5 and/or large error terms, thereby improving the validity and reliability of the latent variables in the model, tested by the confirmatory factor analysis (CFA) (Hair et al., 2014). It also leads to the model with an acceptable fit, verified by various indicators, between the observed and estimated models. In order to carry out CFA and SEM, Analysis of Moments Structure (AMOS) software version 22.0 was employed to assess the proposed hypotheses.

4. Results

4.1. Sample profile

A self-completed online questionnaire format was used to gather data in this study. Respondents made an attempt to recollect their experience with the mid-roll advertisement via the Facebook platform. According to their own opinions about mid-roll video advertising, respondents answered the questions in the questionnaire. A total of 200 valid questionnaires were consolidated for the purpose of analyzing the data. In order to investigate the demographic information, descriptive statistics via SAS was applied in this study. It is portrayed that there were 56.50% of male respondents while 42.50% of them were female respondents. Majority of the respondents were aged between 25 and 34 years (79.50%), were single (91.00%), earned a bachelor's degree (68.00%), and were employed as employees in firms (68.50%).

4.2. Measurement model assessment

Confirmatory factor analysis (CFA) was applied in this study to assess the connection between the constructs and their retained items. To evaluate the presumed connections among the variables, separate tests and a complete CFA model for significance were conducted. There were five latent variables and 19 observable variables in the proposed model. Table 1 portrays the constructs and items for the measurement model.

To ensure the reliability of the model variables, the value of Cronbach's alpha coefficient for each of the constructs, corresponding to their scales, is between 0.767 and 0.845. These values are larger than 0.7, ensuring the internal consistency of each construct (Taber, 2018). In addition, the convergent validities of each construct were also computed. There are three requirements that should be taken into account when measuring the convergent validity: 1) composite reliability (CR)

Table 1. Result of the adjusted measurement model

Constructs	Standardized factor loading	SE	Critical ratio	AVE	CR	Cronbach's alpha
VAL				0.536	0.848	0.843
VAL1	0.896	0.238	7.622			
VAL2	0.633	0.145	8.213			
VAL3	0.885	0.209	7.786			
VAL4	0.587	0.146	6.754			
VAL5	0.592	-	-			
INTRU				0.554	0.859	0.831
INTRU1	0.625	0.114	8.793			
INTRU2	0.878	0.101	12.211			
INTRU3	0.619	0.106	9.239			
INTRU4	0.788	-	-			
INTRU5	0.776	0.111	9.909			
ATT				0.694	0.871	0.845
ATT1	0.917	-	-			
ATT2	0.819	0.073	13.146			
ATT3	0.755	0.106	9.196			
WOM				0.559	0.786	0.767
WOM1	0.538	-	-			
WOM2	0.848	0.183	7.610			
WOM3	0.818	0.193	7.515			
RES				0.615	0.826	0.821
RES1	0.678	-	-			
RES2	0.783	0.120	9.685			
RES3	0.878	0.121	10.503			

Note: SE = Standard error, AVE = Average variance extracted, and CR = Composite reliability

of each construct has a value of at least 0.7; 2) average variance extracted (AVE) has a value of at least 0.5; and 3) standardized factor loading has statistical significance of at least 0.5 (Awang, 2015). Table 1 portrays the convergent validity of the adjusted measurement model.

Overall, the acceptable level of the construct validity is shown through assessing results which implicit that the 5 latent variables are reasonably fit for further structural model assessment. Below are indicators of the goodness-of-fit for the measurement model: Chi-square = 249.578; Degree of freedom = 134; Chi-square/degree of freedom (CMIN/df) = 1.86 (<3.00) (Hair et al. (2010)); Goodness-of-fit index (GFI) = 0.90 (≥ 0.90 ; Marsh et al. (2020)); Comparative fit index (CFI) = 0.941 (≥ 0.90); (Hu and Bentler (1999); Tucker—Lewis index (TLI) = 0.924 (≥ 0.90 ; Hox et al. (2017); Root mean square error of approximation (RMSEA) = 0.066 (≤ 0.08) (Meyers et al. (2005)). According to the data analysis, the goodness-of-fit indices met all requirements in the measurement, thereby the data were in a good fit and structural model analysis could be further conducted for the model.

Furthermore, the discriminant validity stipulates the extent of helping to distinguish each construct (Rönkkö & Cho, 2020). In order to ensure the discriminant validity of constructs or latent variables, the square root of AVE should be higher than the relationship between the respective construct and other constructs. If any two latent variables possess an AVE which are larger than the squared correlation (or coefficients) between those variables, they will thus possess discriminant validity. Table 2 depicts that all pairs of latent variables possess discriminant validity.

Table 2. Discriminant validity of constructs

Construct	VAL	INTRU	ATT	WOM	RES
VAL	0.536				
INTRU	0.030	0.554			
ATT	0.372	0.154	0.694		
WOM	0.320	0.154	0.526	0.559	
RES	0.317	0.305	0.510	0.632	0.615

Note: Italic bold values along the diagonal line represent the average variance extracted (AVE) while the other entries represent the squared correlations.

4.3. Structural model assessment

After assessing the measurement model, a structural model was analyzed using AMOS software (version 22.0) to proceed a path analysis in order to examine the associations in the proposed model. Below are the indicators of the goodness-of-fit indices: Chi-square = 278.846; Degree of freedom = 137; Chi-square/degree of freedom (CMIN/df) = 2.035 (<3.00) (Hair et al. (2010); Goodness-of-fit index (GFI) = 0.90 (≥ 0.90 ; Marsh et al. (2020); Comparative fit index (CFI) = 0.927 (≥ 0.90 ; Hu and Bentler (1999)); Tucker—Lewis index (TLI) = 0.909 (≥ 0.90 ; Hox et al. (2017); Root mean square error of approximation (RMSEA) = 0.072 (≤ 0.08) (Meyers et al. (2005). The indicators fulfilled cutoff values, thus showing that the SEM model was a good fit.

Hypothesis 1 purposed that mid-roll video advertisings value is positively associated with attitude toward mid-roll video advertising. The results revealed that there was a positive relationship between the variables ($\beta = .574$, $p < .001$). The result was also statistically significant. Therefore, it supported hypothesis 1. Mid-roll video advertisings value had positive relationship with WOM intention ($\beta = .173$, $p < .05$), hence supporting hypothesis 2. Conversely, perceived intrusiveness was negatively associated with attitude toward mid-roll video advertising ($\beta = -.335$, $p < .001$), thus supporting hypothesis 3. It was revealed that attitude toward mid-roll video advertisings had a significant positive effect on WOM intention ($\beta = .636$, $p < .001$) and viewers response ($\beta = .355$, $p < .001$), therefore supporting hypotheses 4 and 5. Furthermore, WOM intention showed positive significant influence on viewers response ($\beta = .536$, $p < .001$), thereby supporting hypothesis 6.

Figure 4. Standardized path coefficient and adjusted R-squared.

Note: *** $p < .001$, * $p < 0.05$.

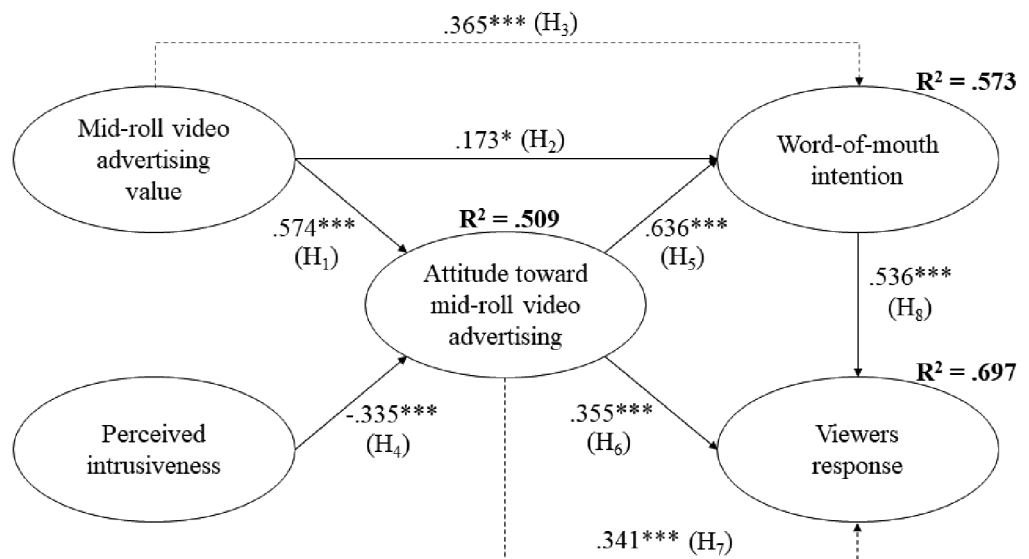


Table 3. Mediation test results

Path	Direct effect	Indirect effect	Result
H3: Mid-roll video advertisings value → Attitude toward mid-roll video advertisings → WOM intention.	.173*	.365***	Partial mediation
H7: Attitude toward mid-roll video advertisings → WOM intention → viewers response.	.355***	.341***	Partial mediation

Note: *** $p < .001$, * $p < 0.05$.

The predictive power of a path model could be assessed through examining the coefficient of determination (R-squared) of each hypothesized construct with higher values, suggesting greater precision of prediction (Hair et al., 2010). Figure 4 portrays the test results of each hypothesis which show the R-squared values and relationship significance of variables.

In order to test the mediation effect of mid-roll video advertisings value towards WOM intention via attitude toward mid-roll video advertising, a bootstrapping technique was applied in this study with 95% bias-corrected confidence level (Yu et al., 2021). The results of mediation analysis showed that mid-roll video advertisings value had a direct effect on WOM intention ($\beta = .173$, $p < .05$), and WOM intention through attitude toward mid-roll video advertising had a considerable indirect effect of .365 (.574 x .636), confirming partial mediation (Collier, 2020).

Viewers response was directly affected by attitude toward mid-roll video advertisings ($\beta = .355$, $p < .001$). The indirect coefficients were assessed and the mediating variable was involved. Then, WOM intention was added to the model. The path coefficients (Attitude toward mid-roll video advertising → WOM intention and WOM intention → viewers response) had an indirect value of .341 (.636 x .536), suggesting partial mediation (Collier, 2020). Table 3 summarizes the mediation test results.

Table 4 shows the summary of all hypotheses testing both direct effect and indirect effect.

5. Discussions and implications

5.1. Discussions of the findings and research contribution

There are twofold contributions illustrated in this study. Firstly, this study offers the application of fitted-in operational components with SNSs, especially Facebook. There are, for example, mid-roll advertising value, perceived intrusiveness, ads attitude, WOM intention, and consumer response. Second, this study offers a comprehensive theoretical model to explain the effectiveness of mid-roll Facebook advertising.

The first objective provides insight of the adjusted variables to fit antecedents influencing viewers' response on mid-roll advertising on Facebook based on the qualitative method. To achieve this goal, the researchers developed semi-structured interview questions to gain a genuine feeling from the target interviewees who had at least used Facebook more than 2 hours per day every day in the past 6 months (from March to August). We had interviewed three rounds to gain the most specific components till data is redundant at the end. As a result, this study found different responses towards ads between email and Facebook. You only read ads in email while watching ads in the form of videos on Facebook. Therefore, operational dimensions were re-designed and/or re-adjusted to fit with a Facebook page (see Appendix (Table A2)).

The second objective provides an insightful presentation on how mid-roll ads value and other antecedents influence viewers' response and tests all hypotheses. To reach that goal, we re-

Table 4. Hypotheses testing results

Hypothesis	Relationship	Result
H ₁ : FMVAs value → FMVAs attitude	Direct	Significant positive relationship
H ₂ : FMVAs value → WOM intention	Direct	Significant positive relationship
H ₃ : FMVAs value → FMVAs Attitude → WOM intention (Indirect)	Indirect	Significant positive relationship
H ₄ : Perceived intrusive → FMVAs attitude	Direct	Significant negative relationship
H ₅ : FMVAs attitude → WOM intention	Direct	Significant positive relationship
H ₆ : FMVAs attitude → Viewer response	Direct	Significant positive relationship
H ₇ : FMVAs attitude → WOM intention → Viewer Response (Indirect)	Indirect	Significant positive relationship
H ₈ : WOM intention → Viewer response	Direct	Significant positive relationship

developed a theoretical model investigating the relationships among (after transformed) mid-roll ads value, attitude, perceived intrusiveness, word-of-mouth intention, and viewers' response. The results show that there are either positive or negative significant relationships amongst all variables (see Table 4).

The findings of this study indicated that all the proposed hypotheses are supported. This study makes the contributions to the marketing literature and practice. Firstly, we aimed to demonstrate that if mid-roll ads on Facebook show their appropriate values they will be perceived as less intrusive to viewers, thus leading to a greater tendency for Facebook to influence the consumer's attitudinal and behavioral dispositions. Even though Y.-G. Y.-G. Lee et al. (2016) and Mukherjee and Banerjee (2017) generally focused on credibility and reliability of product/service information shown in the ads via television and/or SNSs; however, our results specifically show up-to-date information without faking ones of ads will surge higher favorable attitude of viewers' response on time. Such quality information and the positive attitude of FMVAs will play a major role to make customers understand clearly what the advertisers want to convey the key message to others (Hsin Chang et al., 2013). Therefore, our results added on those positive viewers will further discuss those key information derived from FMVAs more with others confirmed by Ranaweera and Karjaluoto (2017) whose their work pointed out that a positive attitude will influence a positive response. Our results successfully lead to a precise and up-to-date portrait of ads value towards positive attitude and positive WOM intention under the context of MVAs of Facebook in Thailand.

Secondly, another proposition result we constructed was between the perceived intrusiveness and attitude towards FMVAs. There is a negative relationship between perceived intrusiveness and favorable attitudes. According to Logan et al. (2012) and McCoy et al. (2017), users' attitudes towards a website are affected by intrusive advertisements. Longer pre-roll and mid-roll video advertisements will increase consumers' unfavorable attitudes and feelings of intrusiveness towards those advertisements (Goodrich et al., 2015). Abbasi et al. (2021) proposed that advertisers should comprehend consumers' interest and need as well as create a shorter version of advertisements with attractive content to overcome the occurrence of perceived intrusiveness. Our result complies with those above models, we found that the less those FMVAs interrupt the original video content, the more the favorable attitude towards FMVAs.

Thirdly, the final proposition was the direct and indirect relationships among variables including attitude of FMVAs, WOM intention, and viewers' response. Our result proved that all hypotheses both direct and indirect show significant positive relationships among others. These results correspond to the model designed by Hsin Chang et al. (2013) and Ranaweera and Karjaluoto (2017).

To be more specific, Hsin Chang et al. (2013)'s model design indicates that the person's attitude will lead to behavior/action, which means that if a person has a positive attitude towards the ads, he/she will positively intend to purchase or react towards ads. Our result corresponds to their model which suggests that higher viewers' favorable attitude that viewers think Facebook using MVA's is a smart idea, those will make use of ads video received in FMVAs.

A parallel relationship corresponds with Ranaweera and Karjaluoto (2017), who said that a positive attitude will influence positive behaviour while this study points out that the higher viewers' favorable attitude that viewers think Facebook using FMVAs is a smart idea. Also, the model of Lien and Cao (2014) revealed that attitudes significantly influence positive WOM behavior. This is in line with the findings of Shih et al. (2013), showing that attitudes toward an online ad had a positive impact on WOM intention. Consumers are generally more willing to suggest advertisements shown on social media platforms to others since they like those ads or their content.

Moreover, Ranaweera and Karjaluoto (2017) and Kwok et al. (2019) showed that WOM and e-WOM are key customer engagement and lead to purchase intention or positive response while this study if viewers discuss any MVAs with others, those will make use of advice received in FMVAs. In conclusion, our results successfully lead attitude and WOM intention towards MVAs of Facebook to viewers' response. In other words, a positive attitude towards the quality of advs will lead viewers to intend to have positive WOM and to positively viewers' response. Therefore, the advertisers who would like to put mid-rolls ads should confirm the much higher value of ads to gain positive viewers attitude which led to a positive response at the end.

For the theoretical contribution, this research offered a more understanding about the position of mid-roll video ads value and intrusiveness. This research confirmed that the quality of mid-roll video ads value and intrusiveness tended to be the factor that fostered the attitude toward mid-roll video ads, which determined the level of WOM intention and viewers response on social media platform. The result strengthened the importance of the Ducoffe theory in explaining the benefits of advertising value, intrusiveness, attitude, and WOM intention, which were also consistent with the findings from prior studies.

5.2. Practical implications

This research provides a recommendation for content creators and advertisers regarding some managerial actions that may need to be taken in order to formulate and strategize advertising for better reach and engagement. Firstly, content creators and advertisers should provide the interesting and appropriate content to attract viewers' attention. Moreover, the length of ads time should be concise and get to the points as quickly as possible. The storytelling advertising with verbal and visual components is recommended to create positive consumers' attitude (Tresa Sebastian et al., 2021).

Secondly, mid-roll video advertising can be shown during native videos, including live videos that are being broadcasted in real-time. Thus, publishers and advertisers should match the content of an advertisement to its targeted viewers. Publishers and advertisers may want to aim at including advertisements in particular videos directly or remove some content completely based on their targeted consumers. Furthermore, advertisers can apply the personalizing advertisement to match their content with viewers' memories on Facebook.

Lastly, publishers should consider their goals and disable non-skippable ads. In the midst of generating brand awareness in a campaign, advertisers should make sure that the contents of their advertisements present brand awareness favorably. Advertisers should consider their targeted audience while planning to promote their brands. Advertisers should let the viewers to be able to skip an advertisement after 5 seconds and this will certainly leave a good impression. Viewers will be more likely to view the advertisement completely when they see it

again in the future. Skippable function in an advertisement may be appropriate for the initial campaign in order to get positive viewers' response.

6. Conclusions, limitations, and further research

This study provides the latest insights into the understanding of factors determining consumer behaviour, in other words, viewers' response used in this study toward mid-roll ads on Facebook. The exploratory sequential mixed method has been conducted to examine how to improve mid-roll advertisement based on social networking sites (SNSs) especially Facebook.

We found perceptively new dimensions of the cognitive feeling of each variable used in this framework. It is observed that all proposed hypotheses are found to fit the data of the study and are supported. We also discover that attitude acted as a mediator for the relationship between ads value while WOM intention for the attitude and consumer behaviour. Overall, this work contributes to the development of a new theoretical model to explain the viewer response toward mid-roll advertisements on Facebook.

Despite having contributions in the study, there are some limitations that still need to be acknowledged. Firstly, this study used the cross-sectional method for collecting data. Therefore, this study could only provide results that reflect the association between variables. The findings of this study require future studies that use the experimental method to prove the causality between the variables. In addition, this research was conducted before the coronavirus pandemic. After the pandemic, consumers have embraced their digital lifestyle, leading to changes in social media habits. It is suggested to conduct longitudinal research in order to find out the ways that users alter their perceived intrusiveness, attitude, intention, and their response over time.

Secondly, the respondents in this study are mostly in the age between 25 and 34 years (accounted for 79.5% of total respondents). This may lead to the conclusion of the viewer response toward the mid-roll ads in a particular age range. However, this age range is the main population in Thailand who spend most of the time on social media (e.g., Facebook), thus the results can be useful for marketers to launch appropriate ads on Facebook to get positive feedback from the main viewers.

Thirdly, the research was conducted using the sample of Facebook users in Thailand. Since the research only involved users of a country, the results may not be generalized to users in other nations. In order to verify and broaden the results, it is suggested that future research can assess the proposed model by using the sample in other nations.

Besides that, this study only involved Facebook throughout the process of conducting this study. Therefore, it is recommended that different types of social media can be employed in future research to compare and examine the differences in mid-roll video advertising among a variety of social media platforms.

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Appendix

Table A1. Scale items

Latent variable		Observed variables
Mid-roll video advertising value (VAL)	VAL1	Mid-roll video advertising provides appropriate length of ads time.
	VAL2	Mid-roll video advertising provides up-to-date information.
	VAL3	I believe the video ads shown by the mid-roll video advertising platform.
	VAL4	Facebook always chooses the reliable advertisers for mid-roll video advertising platforms.
	VAL5	I feel that I am precisely notified after watching the mid-roll video advertising.
Perceived intrusiveness (INTRU)	INTRU1	When the mid-roll video advertisings were shown, I feel forced.
	INTRU2	When the mid-roll video advertisings were shown, I feel that my time was wasted by the videos.
	INTRU3	When the mid-roll video advertisings were shown, I feel that my privacy was at risk.
	INTRU4	When the mid-roll video advertisings were shown, I feel that it disrupts the original content of the video.
	INTRU5	When the mid-roll video advertisings were shown, I feel that it was unrelated to the original video.
Attitude toward mid-roll video advertisings (ATT)	ATT1	I like the idea of Facebook using mid-roll video advertisings.
	ATT2	The use of mid-roll video advertisings in Facebook is a good idea.
	ATT3	The use of mid-roll video advertisings in Facebook is a smart idea.
WOM intention (WOM)	WOM1	I will discuss the mid-roll video advertisings with other people whether positively or negatively.
	WOM2	I will encourage other people to watch the mid-roll video advertisings.
	WOM3	I will post/share messages about the mid-roll video advertisings on some internet message boards.
Viewers response (RES)	RES1	I stay tune to the Facebook mid-roll video advertising until it is over.
	RES2	I often make use of ads video received in mid-roll video advertisings.
	RES3	I want to view Facebook mid-roll video advertising in the future.

Table A2. Operationalization table of variables

Definition by authors	Interviewees feedback
Quality of Information refers to the quality video provided the content or information in the Facebook mid-roll video advertisements (FMVAs) (Hsin Chang et al., 2013; Yang et al., 2017).	Brand, Content, Key message, Storyline, Place to get, Product, Price, Description, Up-to-date information, Appropriate length of ads time
Credibility defines as how the Facebook mid-roll video advertisements (FMVAs) can be believed/trusted or not (Prendergast et al., 2009; Yang et al., 2017).	Truth, Sincerity, Honesty
Perceived Intrusiveness refers to being negatively interrupted by the Facebook mid-roll video advertisements (FMVAs) while viewing or watching the video on Facebook (Hsin Chang et al., 2013; Prendergast et al., 2009; Yang et al., 2017).	Hard sell (feel forced), Waste my time, threaten privacy, Not related (congruence) like watch football video but the female apparel product ads show, Interrupt the original video content (Annoying)
FMVAs Attitude refers to customers' beliefs and/or opinions to the Facebook mid-roll video advertisements (FMVAs), which can be whether positive or negative after experienced with or have watched, seen, viewed, heard (E.-B. E.-B. Lee et al., 2017; Y.-G. Y.-G. Lee et al., 2016).	Smart, mid-roll advertising
WOM Intention means the customers' desire to express and share their thinking as well as attitudes about the related FMVA's topics (FMVA's itself, product or services from advertisers, content) to others (Mukherjee & Banerjee, 2017; Ranaweera & Karjaluoto, 2017).	Positive and negative points of view
FMVAs Viewers' Response once users have watched the Facebook Mid-roll Video Advertisements (FMVAs), they will react or respond to their actual behaviors to the FMVAs (Hsin Chang et al., 2013).	Watch, product/service on mid-roll ads



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