

Exploring the effects of online video advertising message display, product placement, and product involvement on advertising effectiveness

Ying-Fang Lai, Chien-Yuan Lai and Hsiu-Sen Chiang^{3*}

Abstract—The development of E-commerce and online advertising sales has been growing rapidly. The online interactive video advertisement is able to attract people's attention and favored by companies. In particular, YouTube is the most popular online video platform. It also places a lot of video advertisements on its services. At least tens of thousands video advertisements are placed in the YouTube platform. Therefore, how to let consumers remember advertisements and maximize the advertising effectiveness are important issues. The aim of this study is to explore the effects of video advertising message display, product placement, and product involvement on advertising effectiveness. A 2 x 2 x 2 three factors factorial design, advertising messages display (non-skippable in-stream, overlay), product involved (high, low) and product placement (explicit, implicit), is conducted. We adopt independent t-test and two way analysis of variance method to test the main and interactive effects of these factors on advertising effectiveness. The results show that on the YouTube platform, the presentation of advertising messages will not significantly influence advertising effectiveness. However, if the advertising messages and video content is highly relevant, consumers will be more willing to understand product information by clicking the advertising messages. Moreover, explicit product placement had better advertising effectiveness; video advertisements have better advertising effectiveness on the consumers with a higher level of product involvement. Finally, the implications of this research were discussed.

Keywords—YouTube, Product placement, Product involvement, Advertising effectiveness

I. INTRODUCTION

AN Internet has become an integral part in consumers' life, also contributed to the development and maturity of e-commerce market. The improvement of information technology has led to the promotional effects of traditional advertising have gradually waned and an increase in advertising requirements for various multi-media services. Thus, companies will put more aggressive involvements and Internet media to reach the results of advertising marketing [1]. The maturity of Internet technology has brought the vast business opportunities.

Y. F. Lai is with the Department of Industrial Education, National Taiwan Normal University, Taiwan (e-mail: maymayparadise@dwvs.cy.edu.tw).

C. Y. Lai is with Dong Wu Vocational High School, Taiwan. (e-mail: a292755@dwvs.cy.edu.tw).

H. S. Chiang is with the Department of Information Management, National Taichung University of Science and Technology, Taiwan (corresponding author to provide e-mail: maymayparadise@dwvs.cy.edu.tw).

All entrepreneurs will also turn the commercial advertisements, which expand the managing markets to all websites [2]. Taiwan's Nielsen Media Research said "since 2007, the Internet has surpassed newspapers, becoming the second largest consumer of reach frequency". It then means that Internet advertising has stood on the second large media channels.

Recently, video-embedded advertising has emerged as an increasingly attractive marketing tool due to the ubiquity and multi-media services of video sharing platform such as YouTube. The video advertising has some unique characteristics, such as sound, light, color and other plot tension. Thus, video has better ability to transfer the completed advertising messages which also beyond other Internet advertising. According to the data Nielsen surveyed in States, nearly 65% online audio and video content used at the working time [3]. Also, the survey of online video in Insight Explorer marketing research consulting company in May 2009 was showed that there was nearly 30% users used video-sharing platform once a week. Many video sharing sites (e.g. YouTube, Vimeo, and Break) host user-generated video content in the hopes of attracting viewers and thus profits [4]. This rise in online video watching has driven the emergence of online video as an important channel for advertising. YouTube is the most popular platform video-sharing platform provides a complete video upload and browsing services. Many businesses or individuals valued online video marketing trends, through the YouTube to setup a channel for their brand heard, integrated marketing, and expanded the publicity coverage. YouTube makes more than one billion passengers per week and brings advertising revenue.

When consumers focus on the movie of YouTube platform, advertisers hope to effectively convey advertising messages through the platform and bringing revenue. However, excessive advertisement information is not only a burden to consumers but also a waste of marketing efforts. The consumers always hope that advertisement content is determined by their preference [5]. On the YouTube platform, the presentation of video advertising has numerous ways. It is an important issue how to make advertising can be deeply rooted in the minds of consumers and to maximize the effectiveness. Whether the explicit and implicit placement of a product and a brand causes interferences or the consumer's product involvement will affect itself message-processing mode. Therefore, the research explores the

influence that advertising message display, product placement and product involvement on the video advertising effectiveness in YouTube platform.

II. LITERATURE REVIEW

2.1 Advertising Message Display

The popularity of the Internet makes Internet advertising more diversified. Some common types are like e-mail advertising, banner ads, interstitial ads, text ads, etc. There are also other types of advertising on YouTube, such as display advertising, Promoted Videos, brand Channel, shopping services ads, and searching ads. When scholars do research, based on the difference standards, they divided different presentation of advertising messages. The presentation of advertising serves as an intermediary between the messages and consumers. As long as consumers are willing to interact with an ad message, we can talk about the usefulness of Internet advertising to advertisers [6].

When viewers watch videos, different appearances of information about the product or brand attempt to deepen the viewers' impression. However, suddenly appearances of the product or brand advertising messages do visually interfere people who are focusing on videos. Based on the different interference of advertising message on YouTube, the advertising formats can be divided into two types follow:

(1) Non-skippable in-stream advertisement: On the YouTube platform, non-skippable video ads must be watched before your video can be viewed. These ads possible played before, during and after any fragment of a video. For example: Before watching video in CBS channel, consumers need to watch the selling advertising videos. After finishing playing, the video will immediately appear.

(2) Overlay advertisement: On the YouTube platform, the semi-transparent overlay ads that appear on the lower 20% portion of your video.

2.2 Product Placement

Product placement means products and services are noticeable within a drama production with large audiences. This enables the audience to develop a stronger connection with the brand and provides justification for their purchase decision [7]. Pastina (2001) said that product placement makes good advertising recall and a good advertising effectiveness [8]. Product placement is defined as a paid product message aimed at influencing movies audiences via the planned and unobtrusive entry of a branded product into a movie [7]. Russell & Belch, (2005) defined product placement involves paying for products, brand names, brand logos, or product messages to be subtly embedded in entertainment media vehicles to achieve advertising effects through media exposure [9]. Karrh (1998) also defined the product placement as the paid inclusion of branded products or brand identifiers, through audio and/ or visual means, within mass media programming [10]. Internet has brought powerful innovations and improvements in the manner of product placement making it more efficient [11] [12].

With the rise of product placement, media placement is no longer limited to television or movies and YouTube video platform has become a popular media placement. Gupta and Lord (1998) divided product placement strategies into three categories [13]: (1) Visual only, showing products, brands, or logos in the background of television programs or movies but not verbally referencing product messages or including relevant audio. (2) Audio only, in which characters verbally reference brand names or describe relevant brand information. (3) Combined audio-visual, which verbally references brand names or product information while brand images appear on screen. Also, they suggested two types of placement, explicit and implicit, distinguishing them by factors, such as size, position, and centrality to the game action. D'Astous and Seguin (2000), the strategy of product involvement divided into 3 types [14]: (1) implied style product placement: Product is not formally presented and plays a passive role. (2) integrated into a significant product: official product presents an explicit and active role (3) non-integrated but significant product placement: officially presented product or sponsor's name, but not integrated into the content or released before or after the activity.

For this study tries to see if the product placement is causing disruptive on YouTube, or if product placement is easily ignored. Therefore, this study took the significant level of product placement as the classification, explicit and implicit.

2.3 Product Involvement

Product involvement is personal perceived relevance of the objects based on inherent needs, values and interests [15] [16]. Several studies demonstrate that involvement significantly affects consumers' responses to advertisements and the formation of their subsequent product attitudes and purchase intentions [17] [18]. The level of involvement in the marketing application is growing, so we can develop different advertising strategies and marketing strategies based on consumers' different level of involvement. This study explore whether because of the importance of individual differences in cognitive products and the impact to advertising effectiveness.

2.4 Advertising Effectiveness

Ducoffe (1996) defined advertising effectiveness as advertisers go through Ad messages to convey and a cognitive assessment of the extent to which advertising gives consumers what they want [19]. Lavidge and Steiner (1961) proposed that the way to evaluate advertising effectiveness is sale effect and communication effect [20]. The sale effect of advertising is to sell product sales as a measurement, but advertising is just one of the reasons to affect sale effect. If it only takes the sale as a reason to influence advertising effectiveness, it's also easy to be questioned. Moreover, the communication effect is to see how an advertising message to be noticed, understood, accepted, and the level of an attitude generated by a product or changed by a behavior. Therefore, if advertising can make advertisers effectively catch the message in order to reach the purpose of communication.

Early Internet advertising measurement used the click rate to determine if the ad is effective. However, the measurements are still shortcoming. Because the clicking number could not help companies understand the changes in consumer's awareness, attitudes and purchase intention after watching ads [21]. The attitude towards video advertising and intention to purchase has emerged as an interesting topic to explore. The attitude towards advertisement played a vital role towards their willingness to access the advertisement [22]. Ajzen (1991) think behavior is shaped by a person's attitude and intention [23]. Thus, this study adopts three indicators: attitude toward advertisement, intention to click and purchase intention to measure effects of video advertising on YouTube platform [24].

III. HYPOTHESIS

3.1 *The influence of different advertising message display on advertising effectiveness*

Coming with highly interactive Internet technologies, the presentation of Internet advertising is also increasingly diversified and the presentation of advertising messages based on different research purposes. There are several classifications. There were many scholars to explore the impact of different advertising messages display, including ad type, size, position, force etc. [25][26][27]. Jacques et al., (2015) find that displaying advertisement message or content with differentiated strategies results in different click rates [28].

The better or worse of advertising display will directly influence the quality of receiving advertising message. From past researches, it can be known that the better the advertising effectiveness is the better transferring the message to consumers will have. It is not only noticed attracting consumers' attention, but increasing the desires of consumers, which can really raise the profits to advertisers. And between the message and consumers, advertising display plays an important intermediary role. Therefore, this study would explorer if the different advertising message display on YouTube will reach the effective communication with consumers. According to the reason, it gains these hypotheses following:

- H₁: Different advertising display types have a significant influence on advertising effectiveness.
- H₁₁: Different advertising display types have a significant influence on attitude toward advertisement.
- H₁₂: Different advertising message display types have a significant influence on purchase intention

3.2 *The influence of product placement and advertising effectiveness*

Gupta and Lord (1998) followed with an experimenting 274 college undergrads in which they looked at the level of memory to different placement [13]. The results showed that the obvious placement is the best. Fluent involving and clear introduction are easy to cause the consumers' good and positive attitude and purchase intention. The level of recall and recognition of

placement, divided into explicit and implicit to test with subjects and their brand attitude [29]. The result shows that the higher the preferences with the characteristics have, the more positive attitude the obvious brand involvement will be.

According to the literature and the results of the study, it showed a significant level of product involvement have influences among brand recognition, brand recall, brand attitude, ad attitude toward advertisement, and purchase intention. Thus, the research inferred that the clear the product involvement produce, the easier the consumers catch the advertising communication message and better communicative effects will be. Moreover, it will then generate a positive attitude toward advertisement and purchase intention. The hypotheses are described following:

- H₂: Different products placement has a significant influence on advertising effectiveness.
- H₂₁: Different products placement has a significant influence on attitude toward advertisement
- H₂₂: Different products placement has a significant influence on intention to click.
- H₂₃: Different products placement has a significant influence on purchase intention

3.3 *The influence on product involvement and advertising effectiveness*

Korgaonkar and Moschis (1982) mentioned that the consumers got related message, the attitude of higher involvement will not be affected by the changes of the advertising message, but not showed on lower involvements [30]. Consumers respond to an ad more positively and actively when they find themselves personally related to the ad's product [16] [31]. Therefore, the brand switching often happens on the consumer with lower involvement rather than those of with higher involvement.

Based on the literature, the formation or transformation of attitude is based on the degree of persuasion process. Therefore, the process of consumer attitudes will change because of the different involvement of products. For manufacturers, it must address the level of product involvement to select content to consumers in order to effectively achieve the effects of changing consumer attitudes. Therefore, this study was designed to affect the degree of variation in product involvement on advertising effectiveness:

- H₃: Different product involvement has a significant influence on advertising effectiveness.
- H₃₁: Different product involvement has a significant influence on attitude toward advertisement.
- H₃₂: Different products involvement has a significant influence on intention to click.
- H₃₃: Different products involvement has a significant influence on purchase intention.

3.4 *The relationship among advertising message display, product placement, placement, involvement and advertising effectiveness*

Many studies have shown that product placement can affect ad performance. We will explore if the effectiveness of advertising video on YouTube will be changed by of product placement and advertising message display. The hypotheses are as follows:

- H₄: The interaction between advertising message display and product placement have a significant influence on advertising effectiveness.
- H₄₁: The interaction between advertising message display and product placement have a significant influence on attitude toward advertisement.
- H₄₂: The interaction between advertising message display and product placement have a significant influence on intention to click.

Different level of involvement of consumers would have different treatments of advertising and product message [17]. In the advertising process, higher involvements are more sensitive in information and have desires to get the related information. Thus, whether the way of message display, they are expected to produce better attitude toward advertisement. For advertising communicative effectiveness, it is predicted to produce better results. Thus, Hypothesis 5 was proposed as follows:

- H₅: The interaction between advertising message display and product involvement have a significant influence on advertising effectiveness.
- H₅₁: The interaction between advertising message display and product involvement have a significant influence on attitude toward advertisement.
- H₅₂: The interaction between advertising message display and product involvement have a significant influence on intention to click.

When consumers have high level of product involvement, consumers prefer to deal with messages by central route. Because of the adjustment of central route, the subjects have less influence on product placement. On the other word, consumers with lower involvement prefer to deal with message by peripheral route. Taking the adjustment of peripheral route, the influence will become greater for consumers. The hypotheses are shown following:

- H₆: The interaction between product involvement and product placement has a significant influence on advertising effectiveness.
- H₆₁: The interaction between product involvement and product placement has a significant influence on attitude toward advertisement.
- H₆₂: The interaction between product involvement and product placement has a significant influence on purchase intention.

IV. RESEARCH METHODOLOGY

In this study, we explore advertising message display, product placement and the level of product involvement on the influences of advertising effectiveness (attitude toward advertisement, purchase intention). Because of the hyperlink features in Internet advertising, if viewers would like to go click advertising messages, it is the most obvious advertising effectiveness. However, the non-skippable in-stream advertising message display can not to be clicked, so the study will not explore the influence advertising message display toward the intention to click of advertising message.

4.1 *The definition and measurement*

In this study, advertising effectiveness is dependent variables; and advertising message display, product placement and product involvement are independent variables. Operational definition and measuring variables are as follows:

1) Advertising Message Display: The films on YouTube are divided into non-skippable in-stream and overlay by the way of advertising message appeared. The non-skippable in-stream advertising is basically product placement turned up a notch. "Overlying" is the process of hiding digital information in a carrier signal; the hidden information should, but does not need to contain a relation to the carrier signal. During the playback, there is a long bar translucent overlay blocks. Taking the experimental design methods manipulates the advertising message to present variables for non-skippable in-stream and digital overlying advertising. Advertising message display of experimental video 1 and 2 was non-skippable in-stream advertising and experimental video 3 and 4 were digital overlying advertising. They were posted on YouTube platform.

2) Product placement: The films put on YouTube were separated by degree of product placement into explicit and implicit. Explicit product placement typically possesses a combination of the following characteristics: a highly visible and/or large product, logo or other recognizable trait unique to that product, appeared over than 5 times. Implicit product placement reports a lower awareness of the brand, also does not perceive the commercial intents, and appears less than 5 times or even shows in the end of films. The explicit and implicit product placement videos were design in experimental video 1, 3 and 2, 4, respectively.

3) Product involvement: When consumers decide to buy a product based on the inner needs, interests and the value to them, this is defined as product involvement. Involvement level divides into two groups: high involvement and low involvement. The modified Personal Involvement Inventory (PII) of Zaichkowsky (1994) treats involvement as a unidimensional construct; it's summed to produce a single score. The level of product involvement is measured by 7-point semantic differential scale and coded from one to seven [32]. Summing and averaging the scores from 10 questions in the questionnaire was assumed as the involved scales for each sample. All sample scores then were averaged and took 3.5 points as the standard scores to distinguish the level of

involvement. For those higher than 3.5 points were seen high involvement and scores below 3.5 points were as low-involvement.

4) Advertising effectiveness: The advertising effects are measured by referring mainly to three indicators: attitude toward advertisement, intention to click, and purchase intention. Attitude toward advertisement means consumers' tendency to prefer particular advertising stimuli and we have adopted and revised the scale developed by [33]. Intention to click means consumers' tendency to click an advertising message and then link to the webpage of product introduction. We have adopted and revised the scale developed by [34] [35]. Purchase intention means the likelihood of consumers' purchase of a product [36] and we have adopted and revised the scale developed by [37]. Seven items measured attitude toward ad and three and five items measured click and purchase intention, respectively. All of these measures use a seven-point semantic differential scale (where 1 = strongly disagree and 7 = strongly agree).

4.2 The subjects and experimental products

The research basically discussed the advertising result of a film on YouTube. Therefore, this experiment took YouTube as a test platform and the subjects must have the experiences using YouTube. The undergraduate and graduate students are the groups often viewed on YouTube. Therefore, the subjects were mainly college students, graduate students. And because this study would like to know whether students and workers have different views, the experimental sample also includes part of the community. In this study, product involvement is one of the independent variables. So in this study, it chose higher involvement products "digital SLR cameras" as experimental products. In the experiment brands selected, picked out the well-known brands in the industry, avoiding subjects' unknown brand of strangeness to affect the results.

4.3 Experimental design

The purpose of the research is mainly to understand the cause-effect relationship among three independent variables and dependent variable. The independent variables then were manipulated through rigorous experimental procedure to avoid the effect of the errors caused by non-experimental variables as much as possible in order to obtain the best experimental results. Each independent variable (advertising message display, product placement and product involvement) has two levels to measure the main effects of experimental variables and the interaction among all experimental variables. Thus, the research has 8 combinations ($2 \times 2 \times 2 = 8$), showed as Table 1. It spent a month and the testing time in each experiment scenario took 15 minutes.

Table 1: Study design and sample size

	Product involvement (High)		Product involvement(Low)		Total
	Product placement(explicit)	Product placement(implicit)	Product placement(explicit)	Product placement(implicit)	
Non-skippable in-stream	36	48	9	10	103
Overlay	48	30	13	10	101

V. DATA ANALYSIS AND RESULT

5.1 Participants description

This study adopted convenience sampling. 220 questionnaires were distributed, excluding incomplete or filled by chaos respondents and got 204 valid questionnaires. The effective rate is about 92.72%.

According to survey result, 55.4% of people think that they paid attention to the advertisements on the YouTube platform. 76% thought that the overlay-advertising message would interrupt the appreciation of seeing video. If there are high relations between overlay-advertising message and advertising video, 62.3% will click the overlay advertising. While 66.2% indicated the film was their favorited form of advertising. Upon investigation, the most popular form of advertising on YouTube advertising is "click, the ad film will be played." And the least welcomed is "the ad video will be played automatically".

5.2 The reliability and validity analysis

Going through pre-test to extract samples from the population and issued 63 questionnaires and the valid 60 questionnaires and then based on the content to detect and modify. The pilot test is associated with a number of professionals in the discussion after amendment questionnaire. Moreover, we distributed and gathered questionnaires by means of the YouTube platform, thus obviously improving the internal validity of our research. The current research tested for internal consistency by using Cronbach's alpha coefficient, which, for all constructs ranged from .86 to .90 (attitude toward advertisement: 0.885, purchase intention: 0.909, intention to click: 0.860.) and were higher than the recommended cutoff point of 0.7 [38].

5.3 Hypothesis testing

The hypotheses were tested through independent T test and Analysis of variance (ANOVA) in this research. H_1 , H_2 , H_3 are tested the main effectiveness in all independent variables. H_4 , H_5 , H_6 are designed the interactions among independent variables.

5.3.1 Advertising message display vs. Advertising effectiveness

In this study, it tested the impact of non-skippable in-stream advertising messages and overlay advertising messages on YouTube platform. They were showed as H_1 , H_{11} , H_{12} . In the analysis of advertising messages display, the sample was divided into two group, Non-skippable in-stream and Overlay.

Total	84	78	22	20	204
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The independent samples T-test was used to test the significant differences in the advertising effectiveness of different advertising messages display. Table 2 shows different advertising message display does not have significant effect on attitude toward advertisement, purchase intention, and advertising effectiveness.

Levin et al., (1988) believes that the message itself has no major effect. It determines the true effects through the processing motivation of subjects [39]. Therefore, the advertising message display is not absolutely to consumers' influences. It will be changed based on consumers' information processing mode. According to the experimental result, the two reasons are suggested that the advertising messages display may fail to affect the advertising effectiveness: (1) Recently, whether static web page or dynamic web page, they are all affected by much integrating infomercials. It causes that viewers easily ignore the existence of advertisements while seeing videos. Therefore, subjects in this research ignored the existence of non-skippable in-stream and overlay advertising message. (2) Subjects in this research mentioned that the overlay advertising message display interfered with the content while watching. However, if the contents in advertising are more attractive, they will still willing to understand the product and click overlay-advertising messages. Thus, although the advertising messages display will cause the level of interference, it will not affect their preferences attitude toward advertisement. Neither the advertising messages display does on purchase intention.

Last but not the least, this study speculated that the content in an advertisement is the most important factor to affect advertising effectiveness. Although the message in the advertisement will cause interferences, it will not directly affect advertising effectiveness and purchase intention.

5.3.2 Product placement vs. Advertising effectiveness

In this study, it tested putting the product by explicit placement or implicit placement, as being a customer, seeing if there is any difference on attitude toward advertisement, intention to click, and purchase intention. Hypotheses are separately H_2 , H_{21} , H_{22} , H_{23} . According to Table 3, whether it is product placement or implicit placement, the p-value of attitude toward advertisement, intention to click, purchase intention and advertising effectiveness below 0.01. The test shows highly significant. Explicit placement video on the attitude toward

advertisement, intention to click, purchase intention and advertising effectiveness shows the better results on the implicit placement video.

The research inferred that explicit placement directly represents lots of advertising products or trademark. So the subjects were exposed under specific information, they produced better attitude toward advertisement and identification evoking purchase intention. Therefore, supposed that the attitude toward advertisement has produced better results, it will make subjects have purchase intention and motivation. Moreover, the implicit placement causes the uncertain of products or brand in advertising introduction, it may make the subjects were unable to cognitive product or brand, resulting in lower impression and attitude toward ad.

In addition, the implicit placement did not directly show the products or advantages, subjects may not clearly know the product or product features introduced in the film and cannot increase their purchase intention. There is a significant difference between explicit and implicit placement on intention to click. Moreover, the effect of explicit placement is better than implicit placement. If we infer the subjects cannot understand implicit placement in an advertisement, it will be hard to evoke the subjects' click willingness. However, explicit placement clearly exposes the product information and produces the cognition to subjects. There then produce greatest effect of attitude toward advertisement. However, after customers accept the information from advertising replacement, the intention to click will be produced some initial cognitions and emotions. In the end, the click willingness will be raised. Therefore, if the attitude toward advertisement is having an effect, the intention to click will also make effects.

5.3.3 Product involvement vs. advertising effectiveness

In this study, it tests if the level of product involvement will affect the advertising effectiveness. Hypotheses are separately H_3 , H_{31} , H_{32} , and H_{33} . The independent t-test is used to test if there are a great significant effect between product involvement and advertising effectiveness. The results of Table 4 show significant differences among the two groups regarding advertising attitude (p -value = 0.000), and purchase intention (p -value = 0.000). The intention to click is not significance (p -value = 0.793).

Table 2: The t-test of advertising message display vs. advertising effectiveness

Dependent		N	Mean	SD	T	P
Attitude toward advertisement	Non-skippable	103	3.66	.628	.055	.956
	Overlay	101	3.65	.675		
Purchase intention	Non-skippable	103	3.167	.836	.291	.771
	Overlay	101	3.135	.748		
Advertising Effectiveness	Non-skippable	103	3.414	.732	.199	.842
	Overlay	101	3.396	.608		

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 3: The t-test of product placement vs. advertising effectiveness

		N	M	SS	T	P
Attitude toward advertisement	Explicit	105	3.87	.62	4.78	.000***
	Implicit	99	3.44	.67		
Intention to click	Explicit	61	3.16	0.83	2.716	.032**
	Implicit	40	2.82	0.67		
Purchase intentions	Explicit	105	3.28	.73	2.56	.011**
	Implicit	99	3.00	.83		
Advertising Effectiveness	Explicit	105	3.58	.61	3.943	.000***
	Implicit	99	3.22	.69		

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 4: The t-test of product involvement vs. advertising effectiveness

		N	M	SD	T	P
Attitude toward advertisement	High	162	3.76	.66	4.42	.000***
	Low	42	3.26	.62		
Intention to click	High	52	2.91	0.85	-2.63	.793
	Low	23	2.97	0.76		
Purchase intentions	High	162	3.29	.77	5.11	.000***
	Low	42	2.62	.63		
Advertising Effectiveness	High	162	3.53	.65	5.31	.000***
	Low	42	2.95	.56		

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

The possible reason was inferred that subjects having lower involvements have insufficient understanding of the product. As to the meaning of the advertising delivered has lower comprehension. With worse attitude toward advertisement, lower purchase intention would be. Otherwise, subjects with higher involvement have higher inner requirement of the products. That shows better understanding of connotation. Therefore, compared with low involvement, higher involvement has better attitude toward advertisement and purchase intention. This study showed indicates that the level of product involvement will not be affected the click willingness of the overlay advertising messages.

5.3.4 Advertising message display and products placement vs. advertising effectiveness

For this study, two-way ANOVA offers the test of all three of the interaction hypotheses, controlling for each main effect and two-way interaction effects. The hypotheses separately were H_4 , H_5 , and H_6 . In this analysis, the advertising effectiveness is the dependent variable and the factors are advertising messages display (AMD), product involvement (PI), and product placement (PP). In our study, subjects were divided into a high-product involvement (H-PI) group and a low-product involvement (L-PI) group. We conducted a statistical analysis of the two groups regarding the effects that advertising had on the subjects' advertising attitude, and purchase intention in two scenarios: (1) Non-skippable in-stream advertising messages display + explicit product placement and (2) Overlay advertising messages display + implicit product placement

(such as Table 5, 6 and 7). Table 5, 6 and 7 presents the two-way ANOVA results, including tests of the three hypothesized main and interaction effects. The findings are consistent with Hypothesis 5, 6 and 7 that all interaction effects AMD*PP, AMD*PI, and PP*PI, in Attitude toward ad and Purchase intention, are not significant after accounting for the main effects.

In Table 5, the product placement will significantly affect the attitude toward ad. However, the advertising messages display is not significant effect on the advertising effectiveness. The influences of advertising effectiveness from different product placement (explicit and implicit) will not be affected by the effects of non-skippable in-stream and overlay advertising messages. The reason was inferred that the subjects might just be attracted by the video content and ignored the interferences of non-skippable in-stream and overlay advertising message. Moreover, advertising messages display can be only disturbed but did not affect the subject's continued to watch video content. So the interaction is also not statistically significant.

Table 6 shows the product involvement obviously had significant effects in the attitude toward ad and purchase intention. The influences of advertising effectiveness from the level of product involvement will not be affected by different advertising message display. These higher involvement consumers are more active to search for all needed products information by themselves. For example, official product website, product discussion forums, shopping sites etc. It is not necessary to go through the non-skippable in-stream or overlay advertising message for subjects. However, for lower

involvement subjects, because of limited understanding or lack of interests, they usually go for further knowing for products.

Therefore, non-skippable in-stream or overlay advertising message display will not cause any interests to them.

Table 5: Two-way ANOVA—advertising effectiveness by advertising messages display and product placement

Dependent: Attitude toward ad	SS	df	MS	F	Sig.
Advertising Messages Display	.327	1	.327	.771	.381
Product Placement	9.953	1	9.953	23.480	.000***
AMD*PP	.546	1	.546	1.289	.258
Error	84.782	200	.424		
Dependent: Purchase intention					
Advertising Messages Display	1.948	1	1.948	3.410	.066*
Product Placement	1.746	1	1.746	3.056	.082*
AMD*PP	.044	1	.044	0.078	.781
Error	114.261	200	.571		

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 6: Two-way ANOVA—advertising effectiveness by advertising messages display and product involvement

Dependent: Attitude toward ad	SS	df	MS	F	Sig.
Advertising Messages Display	.007	1	.007	.016	.899
Product Involvement	8.363	1	8.363	19.231	.000
AMD*PI	.000	1	.000	.001	.978
Error	86.975	200	.435		
Dependent: Purchase intention					
Advertising Messages Display	1.255	1	1.255	2.359	.126
Product Involvement	9.108	1	9.108	17.119	.000
AMD*PI	.268	1	.268	.503	.476
Error	106.406	200	.532		

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 7: Two-way ANOVA—advertising effectiveness by product placement and product involvement

Dependent: Attitude toward ad	SS	df	MS	F	Sig.
Product Placement	8.584	1	8.584	22.388	.000
Product Involvement	8.718	1	8.718	22.738	.000
PP*PI	.440	1	.440	1.147	.285
Error	76.680	200	.383		
Dependent: Purchase intention					
Product Placement	.962	1	.962	1.807	.180
Product Involvement	9.808	1	9.808	18.432	.000
PP*PI	.017	1	.017	.032	.857
Error	106.427	200	.532		

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

As a result in Table 7, the product placements and involvements obviously affected the advertising effectiveness. However, there are no greatly significant influences under the interactions between product placement and involvement. Roberson (1976) mentioned that the consumers with higher involvement are more active on collecting information [39]. Therefore, it can be inferred that consumers with higher involvement usually actively search for related information for products. It definitely brings up a level of standing. At that time, the explicit or implicit placement of an advertising video will not produce feeling on the differences on attitude toward ad and purchase intention.

There is a significant effect between product placement and

attitude toward ad for consumers. The result found that consumers with lower involvement has better attitude toward ad for explicit advertising because the consumers have no idea about the products. Therefore, implicit advertising somehow appears bothersome for successfully communicating among product information. Thus, explicit placement video has better feeling for lower involvement consumers. However, the purchase intention has no equal result for lower involvement consumers. The reason might because the lower involvement consumers did not familiar with related product information. Even if consumers like the message the advertising video conveyed, they still need time to understand products and keep the reserved attitude.

VI. CONCLUSION

Empirical research was taken to understand how advertising message display, product placement and product involvement interact with each other and also the influence on advertising effectiveness. According to the statistical analysis and hypothesis testing, the research findings are following:

Product involvement is an advertising technique used by companies to subtly promote their products or brands through a non-traditional advertising technique, film on YouTube. This study tested the effects of product placement to advertising effectiveness. After data analysis, it found that the influence of explicit placement on the consumers' attitude toward advertisement and purchase intention will be greater than the implicit placement. The findings showed a lot of exposures of the product information and trademarks are easily to achieve the purpose of communicating with consumers. Consumers have the higher acceptance of explicit product placement of the video advertising. It may affect consumers' perception of product and even cause purchase willingness. The implicit placement advertisements are unable to raise consumer awareness of the product. There are no connections between the products and life necessities, so that the purchase desires will not be raised. Moreover, different product involvements have a significant influence on advertising effectiveness on YouTube. Low involvement subjects are not really consumers, have little interest in products and lack demand of the product. They cannot be easily understood what the true meanings in video advertising try to express or even ignored the product messages. That all causes there have no better attitude toward advertising and purchase intention. However, high involvement subjects have very interested in the product and take the initiative to search relative product information. Therefore, when the product introduction appears in the films, they usually higher concern the contents in advertising than lower involvement subjects. However, advertising message display has no significant on the consumers' attitude toward advertisement and purchase intention. The subjects were generally think advertising messages cause interference when they are watching

videos. There is no interaction effect among product involvement, product placement and advertising messages. Both product involvement and product placement are important factors to affect the Attitude toward advertisement. In addition, intention to click refers to a consumer is willing to click the advertising messages, and to link to the presentation page. In this study, the verification on the product placement to overlay advertising message on intention to click, it found that the subjects' intention to click on films of explicit placement is higher than that of implicit placement. When a large number of product information through advertising film exposure in front of consumers, it increases consumer awareness of a product, or even provoke inherent potential demands, resulting in their willingness to click overlay advertising messages and making this the further understanding of products. Thus, the types of product placement will influence the willingness of consumers click the advertisement.

The study also found that on YouTube, explicit placement advertising is better than implicit placement advertising when subjects watch films. The films played during the advertisements have better advertising effectiveness to higher involvement consumers. Advertising message display cause interferences to consumers but not clearly affect advertising effectiveness. However, if advertising message display has higher relevance with contents in films; consumers, then, will be affected by content and willed to click advertising message to have further understanding the product information.

Therefore, we suggest that manufacturers must notice that the techniques of active marketing and forceful displaying may cause the consumers' resentments. However, if the content of the ad film resonates with consumers, it will reduce the interferences caused by the advertising messages. Consumers will still click the advertising message to gain more related product messages. Therefore, when advertisers produce an advertisement, they need to pay attention to the planning of advertising content as attractive enough and make consumers to ignore the interferences from advertising message.

APPENDIX I EXPERIMENTAL VIDEO



Video1: Explicit placement + Non-skippable in-stream advertising message



Video2: Implicit placement + Non-skippable in-stream advertising message



Video3: Explicit placement + Overlay advertising message



Video4: Implicit placement + Overlay advertising message

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Ying-Fang Lai is Ph. D. student in the Department of Industrial Education, National Taiwan Normal University, Taipei, Taiwan. Her interests include internet community, marketing and information education.



Chien-Yuan Lai received his PhD degree in Information Management from National Yunlin University of Science and Technology, Taiwan. He currently serves as the principal at Dong-Wu senior vocational school, Chiayi, Taiwan. And his interests include virtual community, Internet marketing and user behavior.



Hsiu-Sen Chiang received his PhD degree in Information Management from National Yunlin University of Science and Technology, Taiwan. He is an associate professor in Department of Information Management, National Taichung Institute of Technology, Taiwan. His current interests include e-commerce, internet marketing, data mining, and Petri net.