

MAXIMIZING ADVERTISING EFFECTIVENESS

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ABSTRACT

This study aims to discover the optimal combination of advertising by incorporating factors including appeal, celebrity endorsement, and new media to assess the influence and effectiveness of advertising. Empirical experiments were conducted using mobile phones as the featured product. Variables tested included two types of appeal (reason and emotion), the presence of celebrity spokespeople, and four types of new media. As a result, the subjects were divided into 16 groups. The data were obtained from surveys on advertisement awareness, advertisement attitudes, brand awareness, brand attitudes, and purchase willingness among students of National Formosa University. A total of 480 effective surveys were collected. The chief methods of analysis were descriptive statistics, *t*-testing, and Scheffe's method. The results of the study are as follows: (1) Different methods of appeal affect advertisement awareness. It was also found that appeals to reason had a significantly larger effect on advertisement awareness than appeals to emotion. In addition, YouTube was the most effective medium for spreading awareness of an advertisement that appeals to reason. (2) The presence of a celebrity spokesperson affects the attitude toward an advertisement. It was also found that advertisements with celebrity spokespeople generated significantly more positive attitudes than those without celebrity spokespeople. In addition, LINE was the most effective medium for spreading positive attitudes toward advertisements with celebrity spokespeople. (3) As for interactions between the variables, celebrity spokespeople in advertisements that appeal to reason generate significantly better advertisement awareness, brand awareness, and purchase willingness than celebrity spokespeople in advertisements that appeal to emotion. The study found that advertisements spread through LINE that appeal to reason and feature celebrity spokespeople are the most effective type of advertisement studied. The optimal combination of factors for this study is therefore: celebrity spokespeople, appealing to reason, and messaging on LINE.

Keywords: Advertisement appeal, celebrity spokespeople, new media, advertisement effectiveness

1. Introduction

The effectiveness of an advertisement represents a hidden communicative transaction between the advertiser and consumer (Ducoffe, 1996). Advertisements invest in advertising and convey messages through advertisements mainly in hopes that consumers are stimulated by and respond positively to the product. Advertisers may assess the effectiveness of an advertisement through metrics such as advertisement awareness, advertisement attitude, brand awareness, brand attitude, and purchase willingness. The assessment of advertisement effectiveness allows the advertiser to gauge the campaign's design and planning, as well as to determine the cost effectiveness of the campaign. Advertisers have begun to use different appeals and feature celebrity spokespeople in their advertisements, aiming to achieve higher effectiveness and establish positive communications with consumers. The various forms of media are the chief means for advertisers to promote their products. However, advertisement effectiveness differs with the medium used, even when the advertisement and the audience member is the same. Choice of medium is therefore crucial.

According to an 2013 study on the size of Taiwan's key advertiser market conducted by the Institute for Information Industry's Foreseeing Innovative New Digiservices (FIND) website, the players in Taiwan's key advertiser market budgeted a total of NT\$25.36 billion for advertising in traditional media such as television, newspapers, radio, magazines, and billboards. This represented a decline of 11.6% compared to 2012. However, the budget for Internet advertisements was NT\$5.48 billion, an increase of 9.9%. This number is projected to rise by a further 15% next year. Among the new forms of media, mobile ads accounted for NT\$851 million in 2013, an increase of 3.7% compared to the previous year. This is the third consecutive year of growth for mobile advertising. The Aegis Group, which accounts for the largest share of media advertising in Taiwan, only had a 5% share in digital media advertising in 2013. However, it has set a goal of reaching a 30% share within three years. Although the Taiwan market's investment in Internet and mobile advertisements was low compared to that of traditional media in 2013, it has also grown for several consecutive years, while traditional media advertisements have declined. Advertisers are projected to increase their investment share in new media advertisements. This will negatively affect traditional media advertising revenue, and the effects will be strongly felt across the advertising and media industries. The increase in new media advertising spending is chiefly due to the increased interactivity, entertainment, and participation that new media allows. However, consumer behavior is rapidly changing alongside the new media environment of the Internet. Advertisers must choose appropriate forms of new media to reach consumers in order to achieve the best return on their advertising. For instance, recommendations shared among young consumers may be more effective than traditional television ads. Advertisements should be designed to be compelling and sharable, and released on social media websites so that the extent of the advertisements can be increased via the sharing features of those sites.

The number of Internet users in Taiwan is growing, which has changed the media environment. Advertisements on new media are dynamic and engage multiple senses to convey messages more effectively. This is a marketing tool with high potential for development, and will likely become widely used by companies in the future. However, companies often find a dearth of relevant research when it comes to answering key questions for decision-making, such as whether Internet advertising is effective and what forms of new media should be used for their Internet advertising. Decisions made without good data often fail. This study evaluates the effect of different appeals and celebrity spokespeople on the effectiveness of new media advertisements. This study hopes to help advertising firms provide better advice for their clients. The study seeks to understand how different appeals, the presence of celebrity spokespeople, and promulgation through new media affects the effectiveness of the advertisement. The aim of this study is to discover:

1. How the interaction between different appeals and the presence of celebrity spokespeople affects advertisement effectiveness.
2. Maximizing Advertising Effectiveness.

2. Literature Review

2.1 *Advertisement Effectiveness*

An advertisement is considered effective when the audience of an advertisement receives the message conveyed and forms positive opinions toward the advertisement or the brand, or even changes their attitude toward the advertiser, and ultimately buys the products featured. Assessing the effectiveness of an advertisement is an essential part of advertising that helps marketers adjust their ad campaigns. Advertisement effectiveness must be evaluated from the perspective of the campaign's goals (Lin Chien-huang, 2001). Generally, the effectiveness of an advertisement can be analyzed from two perspectives: sales and communication (Chow, Rode and Clarke, 1992). Analysis of sales is based on whether the number of units sold increased as a result of the ad. Analysis of communication is based on whether audience attitudes and behaviors are changed as a result of receiving the ad's message (Lee Hsin-lun, 2004). There are multiple variables to advertisement effectiveness, and the variables interact significantly. Assessments of an advertisement's effectiveness in communication are usually conducted along three dimensions: advertisement awareness, advertisement attitude, and brand attitude. Meanwhile, assessment of an ad's effectiveness in sales is based on the sales numbers driven by the advertisement, so it is conducted along the dimensions of the consumer's purchase willingness. However, Mackenzie, Lutz & Belch (1986) believe that purchase willingness, which is often the chief focus for advertisers, is directly and indirectly influenced by advertisement attitude, advertisement awareness, brand awareness, and brand attitude. Therefore, this study also analyzes the dimension of brand awareness in order to judge an ad's effectiveness in communication more comprehensively.

2.2 *New Media*

New media is noted for its equal, free, interactive, open, and border-free characteristics. In the world of new media, everyone is both source and audience, and everyone can communicate with everyone else. This has brought enormous changes in communication for society as a whole. As for the definition of new media, Kuang Wen-bo (2008) argues that "new media" is a common shorthand for the more accurate "digital interactive new media." In terms of technology, new media is digital. In terms of communication features, new media is highly interactive. Digitization and interaction are the essential characteristics of new media. Kuang divides new media into three major categories: Internet, digital broadcast, and mobile (i.e. smartphones). Li Bin (2011) believes that the difference between traditional media and new media lies in the differing lines between "far" and "near", "push" and "pull." Digital media disseminated through the Internet is no longer geographically constrained as traditional media is, and turns audiences from passive receivers to active seekers of information. Traditional media "pushes" processed messages to audiences; in new media, audiences "pull" messages into their lives. Content spread in this way can thus reach highly segmented audiences "on demand." Paul Levinson (2009) proposes three types of media: "Old media" refers to media forms that appeared before the Internet, including newspapers, broadcasts, films, and magazines. These forms of media produce information from the top down. "New media" is the first generation of Internet-based media that developed in the 20th century, including e-mail and web portals such as Google and Yahoo. "New new media" is the second-generation of Internet-based media that appeared at the end of the 20th century and achieved massive popularity in the 21st century, such as blogs, social media sites like Facebook, and YouTube. Mobile media, comprised of messaging apps on smartphones, is also a form of new media that is gaining traction.

2.3 *Advertising Appeals*

Belch and Belch's analysis (1998) of advertising appeals states that appeals are used to attract consumer attention and influence attitudes or emotions toward the advertiser's products or services. A successful appeal clearly conveys a benefit, incentive, identity or reason that explains why a consumer should consider or purchase the product (Kotler, 2003). Advertising appeals may be presented to the consumer in many ways. Most common appeals fall under appeals to reason or appeals to emotion. Shimp (1981) points out that the goal of advertising is to solve consumer problems, and that consumers are rational, systemic decision makers. Shimp therefore believes that appeals to reason are the most effective in influencing consumer attitudes toward a given advertisement. Aaker and Norris (1982) point out that advertisements that appeal to reason are more effective than those that appeal to emotion. They believe that appeals to reason can clearly provide information related to the product, attracting consumer attention and achieving a greater effect. Golden and Johnson's study (1983) also indicated that appeals to reason more effectively generate positive consumer response and willingness to purchase than appeals to emotion because appeals to reason contain more product information and practical content. Therefore, the first hypothesis of this study is as follows:

H1 : The appeal has a significant effect on the effectiveness of advertisements on new media.

H1-1 : In advertisements on new media, appeals to reason have a greater effect on advertisement awareness than appeals to emotion.

H1-2 : In advertisements on new media, appeals to reason have a greater effect on advertisement attitude than appeals to emotion.

H1-3 : In advertisements on new media, appeals to reason have a greater effect on brand awareness than appeals to emotion.

H1-4 : In advertisements on new media, appeals to reason have a greater effect on brand attitude than appeals to emotion.

H1-5 : In advertisements on new media, appeals to reason have a greater effect on purchase willingness than appeals to emotion.

2.4 *Celebrity Spokespeople*

Spokespeople play an important role in conveying the message of an advertisement (McGuire, 1969). Companies use a variety of marketing strategies to drive sales. To differentiate themselves from their competitors, many companies invite celebrity spokespeople, hoping that consumers will have increased emotional identification with the product and eventually purchase the product (Cheng Shao-tung, 2003). McCracken (1989) defines celebrity spokespeople as those who "use their own fame to convey the benefits of using the product to consumers through an advertising campaign." Katz (1987) believes that the effectiveness of celebrity spokespeople is increasing year-by-year: The advantages of celebrity spokespeople include: 1. Attracting attention; 2. Improving the company's image; 3. Redefining existing brands; 4. Promoting new brands; 5. Helping global marketing campaigns. The literature shows that celebrity spokespeople are more effective than non-celebrity spokespeople (Friedman, 1979). Kamins et al. (1989) believe that celebrity spokespeople are more persuasive than non-celebrities. Customer trust and willingness to purchase increase the earlier and less important negative information appears, so the use of celebrity spokespeople generates positive attitudes in consumers toward the advertisement. Tsai Yen-ting (2001) also points out that celebrity spokespeople are most effective in improving the memory of the recommender, attitudes toward the advertisement, and purchase willingness. Therefore, the second hypothesis of this study is as follows:

- H2 : Celebrity spokespeople have a significant effect on the effectiveness of advertisements on new media.
- H2-1 : In advertisements on new media, ads with celebrity spokespeople have a greater effect on advertisement awareness than ads without celebrity spokespeople.
- H2-2 : In advertisements on new media, ads with celebrity spokespeople have a greater effect on advertisement attitude than ads without celebrity spokespeople.
- H2-3 : In advertisements on new media, ads with celebrity spokespeople have a greater effect on brand awareness than ads without celebrity spokespeople.
- H2-4 : In advertisements on new media, ads with celebrity spokespeople have a greater effect on brand attitude than ads without celebrity spokespeople.
- H2-5 : In advertisements on new media, ads with celebrity spokespeople have a greater effect on purchase willingness than ads without celebrity spokespeople.

Chang Sheng-chieh (2009) points out in her study of mobile phone advertisement design that the combination of appeals to reason and celebrity spokespeople has a more significant positive effect on advertisement attitudes than the combination of appeals to emotion and celebrity spokespeople. Tsai Yen-ting's study (2001) points out that the combination of a celebrity spokesperson and an appeal to reason produces better memories of the advertisement and brand attitudes. Meanwhile, the combination of celebrity spokespeople and appeals to emotion produces the best advertisement attitudes and purchase willingness. Therefore, the third hypothesis of this study is as follows:

- H3 : The combination of the appeal and the presence of celebrity spokespeople has a significant effect on the effectiveness of advertisements on new media.
- H3-1 : In advertisements on new media, ads that appeal to reason and feature celebrity spokespeople have a greater effect on advertisement awareness than ads that appeal to emotion and feature celebrity spokespeople.
- H3-2 : In advertisements on new media, ads that appeal to reason and feature celebrity spokespeople have a greater effect on advertisement attitude than ads that appeal to emotion and feature celebrity spokespeople.
- H3-3 : In advertisements on new media, ads that appeal to reason and feature celebrity spokespeople have a greater effect on brand awareness than ads that appeal to emotion and feature celebrity spokespeople.
- H3-4 : In advertisements on new media, ads that appeal to reason and feature celebrity spokespeople have a greater effect on brand attitude than ads that appeal to emotion and feature celebrity spokespeople.
- H3-5 : In advertisements on new media, ads that appeal to reason and feature celebrity spokespeople have a greater effect on purchase willingness than ads that appeal to emotion and feature celebrity spokespeople.

3. Research Method

The aim of this study is to explore the effect of different appeals, as well as the effect of celebrity spokespeople, on the effectiveness of advertisements in new media. The method used in this study is a three-factor mixed experiment. The first factor is the appeal used, with two possibilities: appeal to reason and appeal to emotion. The second factor is the celebrity spokesperson, which also presents two possibilities: celebrity spokesperson featured, and no celebrity spokesperson. The third factor is the form of new media used, with four possibilities: e-mail, Facebook, YouTube, and LINE. Combined with the two possibilities each for the previous two factors, the total number of experimental groups is therefore $2*2*4 = 16$. The experimental groups are as the following table:

Table 1 Experimental design used in this study

Advertising appeals	emotion		reason	
Spokespeople	with celebrity	without celebrity	with celebrity	without celebrity
new media	Spokespeople	Spokespeople	Spokespeople	Spokespeople
E-mail	Effectiveness 1	Effectiveness 5	Effectiveness 9	Effectiveness13
Facebook	Effectiveness 2	Effectiveness 6	Effectiveness10	Effectiveness14
YouTube	Effectiveness 3	Effectiveness 7	Effectiveness11	Effectiveness15
LINE	Effectiveness 4	Effectiveness 8	Effectiveness12	Effectiveness16

The hypotheses derived from the aims of the study and the literature review are evaluated through analysis and comparison of collected data using STATISTICA 8.0. The statistical methods used in the analysis are (1) descriptive statistics; (2) reliability analysis; (3) t-test; (4) Scheffe's method.

4. Analysis of Findings

4.1 Descriptive Statistics of Sample

The chief subjects of the study are undergraduate students, graduate students, and alumni of National Formosa University. Snowball sampling was used, with subjects asked to refer friends and family to take the survey through Facebook, LINE, YouTube, and e-mail. A total of 16 advertisement groups, each with four advertisements, were prepared. Each subject was randomly shown one group of advertisements. For each group, 30 effective samples were collected for a total of 480 samples. The following information may be derived from analysis of the samples.

In terms of gender, 41.3% of subjects are male, while 58.7% were female; females account for the majority of samples. In terms of age, the most common age groups among the subjects in descending order are: 43.1% for age 21 to 25; 17.3% for age 17 to 20; 16.5% for age 26 to 30; 14.7% for age 31 to 35; 8.4% for age 35 and above. The subjects were generally quite young. In terms of disposable income, 59.2% had NT\$5000 to NT\$10,000; 17.9% had NT\$10,001 to NT\$15,000; 10.0% had NT\$15,001 to NT\$20,000; 4.0% had NT\$20,001 to NT\$25,000; 3.7% had NT\$25,001 to NT\$30,000; and 5.2% had NT\$30,000 or above. Judging from the disposable income levels of the subjects, most are students or entry-level workers. When asked about the number of new mobile phones they bought over the past three years, 8.1% said 0, 53.9% said 1, 31.9% said 2, 4.3% said 3, and 1.8% said 4. Therefore, the respondents generally upgrade their

phones once every 1.5 to 3 years. When asked about where they most often saw HTC advertisements, the highest percentage of subjects said television, at 72.1%. This was followed by YouTube at 15.6%, web portals at 5.0%, Facebook at 3.9%, LINE at 2.1%, and e-mail at 1.3%. As for the mobile phones used by the subjects, Apple had a plurality at 29.8%, followed by Sony at 22.3%, Samsung at 21.8%, and HTC at 20.7%. Other brands combined for only 5.4%.

4.2 Reliability Analysis

Cuieford (1976) believes that a Cronbach's α of 0.7 or higher reflects high reliability; Nunnally (1978) agrees that experimental results with a Cronbach's α of 0.7 or higher means the experiment is highly reliable. All analyses of experimental results in this study showed a Cronbach's α of 0.7 or higher, showing that the results are reliable, stable, and internally consistent.

4.3 Hypothesis Testing

4.3.1 The Effect of Appeals on Advertisement Effectiveness

The data analysis results in Table 2 show that the appeal of an advertisement significantly affects advertisement awareness (appeal to reason average = 3.825, appeal to emotion average = 3.547, $t=4.854$, $p < 0.001$). Therefore the study shows that appeals to reason produce better advertisement awareness than appeals to emotion. Therefore, hypothesis H1-1 is valid. The results show that the appeal of an advertisement significantly affects advertisement attitude (appeal to reason average = 3.474, appeal to emotion average = 3.668, $t= -2.921$, $p = 0.004$). Therefore the study shows that appeals to emotion produce better advertisement attitude than appeals to reason. Therefore, hypothesis H1-2 is invalid. The results show that the appeal of an advertisement does not significantly affect brand awareness ($p = 0.105$), brand attitude ($p = 0.139$), or purchase willingness ($p = 0.124$). Therefore, hypotheses H1-3, H1-4, and H1-5 are invalid. The relationship between the form of media chosen and the effect of an appeal to reason on advertisement awareness was further examined. A higher average meant that the form of media had a larger effect on advertisement awareness. The results are as Table 3. They showed that appeals to reason had the highest average (3.915) when shown through YouTube, producing higher advertisement awareness than the other three forms of new media.

Table 2 The effect of appeals on advertisement effectiveness

Independent variable	Dependent variable	average	standard	t-value	P-value
appeals on advertisement	reason advertisement	3.825	0.583	4.854	0.000
	emotion awareness	3.547	0.669		
	reason advertisement	3.474	0.701	- 2.921	0.004
	emotion attitude	3.668	0.756		
	reason brand awareness	3.336	0.694	1.626	0.105
	emotion brand awareness	3.220	0.850		
	reason brand	3.341	0.723	1.481	0.139
	emotion attitude	3.323	0.782		
	reason purchase	3.380	0.803	1.540	0.124
	emotion willingness	3.265	0.825		

Table 3 The effect of media choice on advertisement awareness for appeals to reason

New media	Advertisement awareness		
	average	standard	number
E-mail	3.746	0.495	60
Facebook	3.846	0.563	60
YouTube	3.915	0.579	60
LINE	3.773	0.497	60

4.3.2 The Effect of Celebrity Spokespeople on Advertisement Effectiveness

The data analysis results in Table 4 show that celebrity spokespeople significantly affect advertisement attitude (average with celebrity spokespeople = 3.725, average without celebrity spokespeople = 3.417, $t = 4.689$, $p < 0.001$) Therefore the study shows that advertisements featuring celebrity spokespeople produce better advertisement attitude than advertisements not featuring celebrity spokespeople. Therefore, hypothesis H2-2 is valid. The results also show that the presence of celebrity spokespeople do not significantly affect advertisement awareness ($p = 0.427$), brand awareness, ($p = 0.800$), brand attitude ($p = 0.687$), or purchase willingness ($p = 0.069$). Therefore, hypotheses H2-1, H2-3, H2-4, and H2-5 are invalid. The relationship between the form of media chosen and the effect of celebrity spokespeople on advertisement attitude was further examined. A higher average meant that the form of media had a larger effect on advertisement attitude. The results are as Table 5. They showed that appeals to reason had the highest average (3.777) when shown through LINE, producing better advertisement attitude than the other three forms of new media.

Table 4 The effect of celebrity spokespeople on advertisement effectiveness

Independent variable		Dependent variable	average	standard	t-value	P-value
Celebrity Spokespeople on Advertisement	with celebrity	advertisement	3.709	0.701	0.795	0.427
	without celebrity	awareness	3.662	0.578		
	with celebrity	advertisement	3,725	0.743	4.689	0.000
	without celebrity	attitude	3,417	0.695		
	with celebrity	brand	3,287	0.800	0.253	0.800
	without celebrity	awareness	3.269	0.756		
	with celebrity	brand	3.304	0.749	0.400	0.687
	without celebrity	attitude	3,276	0.761		
	with celebrity	purchase	3.390	0.819	1.822	0.069
	without celebrity	willingness	3.255	0.807		

Table 5 The effect of media choice on advertisement attitude for advertisements featuring celebrity spokespeople

New media	advertisement attitud		
	average	standard	number
E-mail	3.605	0.382	60
Facebook	3.713	0.436	60
YouTube	3.686	0.539	60
LINE	3.777	0.290	60

4.3.3 The Effect of the Combination of Appeal and Celebrity Spokespeople on Advertisement Effectiveness

The data analysis results in Table 6 show that the combination of appeal and celebrity spokespeople significantly affects advertisement awareness (average for appeal to reason with celebrity spokespeople = 3.994, average for appeal to emotion with celebrity spokespeople = 3.425, $t = 6.913$, $p < 0.001$). Therefore, the study shows that celebrity spokespeople paired with appeals to reason have a better significant effect on advertisement awareness than celebrity spokespeople paired with appeals to emotion. Therefore, hypothesis H3-1 is valid. The combination of appeal and celebrity spokespeople also significantly affects brand awareness (average for appeal to reason with celebrity spokespeople = 3.388, average for appeal to emotion with celebrity spokespeople = 3.186, $t = 1.975$, $p = 0.049$). Therefore, the study shows that celebrity spokespeople paired with appeals to reason have a better significant effect on brand awareness than celebrity spokespeople paired with appeals to emotion. Therefore, hypothesis H3-3 is valid. The combination of

appeal and celebrity spokespersons also significantly affects purchase willingness (average for appeal to reason with celebrity spokespersons = 3.494, average for appeal to emotion with celebrity spokespersons = 3.287, $t = 1.967$, $p = 0.050$). Therefore, the study shows that celebrity spokespersons paired with appeals to reason have a better significant effect on purchase willingness than celebrity spokespersons paired with appeals to emotion. Therefore, hypothesis H3-5 is valid. However, the combination did not significantly affect advertisement attitude ($p = 0.242$) or brand attitude ($p = 0.072$). Therefore, H3-2 and H3-4 are invalid.

Table 6 The effect of the combination of appeal and celebrity spokespersons on advertisement effectiveness

Independent variable		Dependent variable	average	standard	t-value	P-value
The Effect of the Combination of Appeal and Celebrity Spokespeople	reason with celebrity spokespersons	advertisement awareness	3.999	0.507	6.913	0.000 ***
	emotion with celebrity spokespersons		3.425	0.752		
	reason with celebrity spokespersons	advertisement attitude	3,669	0.668	- 0.209	0.242
	emotion with celebrity spokespersons		3,781	0.810		
	reason with celebrity spokespersons	brand awareness	3,388	0.678	1.975	0.049 *
	emotion with celebrity spokespersons		3.186	0.896		
	reason with celebrity spokespersons	brand attitude	3.391	0.706	1.809	0.072
	emotion with celebrity spokespersons		3,217	0.784		
	reason with celebrity spokespersons	purchase willingness	3.494	0.797	1.967	0.050 *
	emotion with celebrity spokespersons		3.287	0.832		

4.3.4 Optimal Combinations

The 16 combinations were further examined with Scheffe's method. The higher the average value, the better the effectiveness of an advertisement with that appeal and shown through that form of media. An optimal combination can thus be chosen. Table 7 shows that for advertisement awareness, combination 15, advertisements shown through LINE with appeals to reason and celebrity spokespersons, had the highest average (4.090). For advertisement attitude, combination 15, advertisements shown through LINE with appeals to emotion and celebrity spokespersons, had the highest average (3.861). For brand awareness, combination 11, advertisements shown through YouTube with appeals to reason and celebrity spokespersons, had the highest average (3.433) among the 16 combinations. For brand attitude, combination 11, advertisements shown through YouTube with appeals to reason and celebrity spokespersons, had the highest average (3.459) among the 16 combinations. For purchase willingness, combination 15, advertisements shown through LINE with appeals to reason and celebrity spokespersons, had the highest average (3.678) among the 16 combinations. The combination with the highest overall average was combination 15, advertisements shown through LINE with appeals to reason and celebrity spokespersons. This is therefore the optimal combination for this study

Table 7 Tests for every combination in the experiment

Tests combination	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
advertisement awareness	3.463	3.780	3.863	3.683	3.610	3.636	3.936	3.776	3.073	3.633	4.086	3.736	3.553	3.626	4.090	3.430
advertisement attitude	3.739	3.644	3.622	3.367	3.944	3.533	3.549	3.323	3.689	3.589	3.683	3.256	3.756	3.455	3.821	3.171
brand awareness	3.221	3.311	3.422	3.367	3.177	3.055	3.277	3.245	3.021	3.343	3.433	3.221	3.322	3.311	3.422	3.199
brand attitude	3.333	3.300	3.385	3.362	3.166	3.259	3.296	3.262	3.148	3.306	3.459	3.414	3.221	3.182	3.425	3.126
purchase	3.366	3.261	3.350	3.276	3.272	3.255	3.317	3.272	3.282	3.327	3.633	3.344	3.227	3.133	3.678	3.172
overall score average	3.434	3.459	3.528	3.411	3.433	3.347	3.475	3.375	3.242	3.439	3.658	3.394	3.415	3.341	3.687	3.219
Effectiveness ranking	8	5	3	10	7	13	4	11	15	6	2	12	9	14	1	16

5. Conclusion and Suggestions

5.1 Conclusion

This study found that advertisements that appeal to reason produce better advertisement awareness in consumers than those that appeal to emotion. The cause may be that advertisements that appeal to reason, whether through text or images, can provide more information on the product itself and the value of the product, therefore raising consumer awareness for the advertisement. The study also found that advertisements that appeal to reason produce better advertisement awareness when shown through YouTube. The reason may be that YouTube provides higher video resolution for viewers, allowing them to view the advertisements more comfortably and with better concentration. This also raises consumer awareness for the advertisement.

This study found that advertisements with celebrity spokespeople produce better advertisement attitude than advertisements without celebrity spokespeople. The reason may be that the presence of famous and charismatic celebrities in the advertisement causes consumers to take notice and transfer their positive feelings toward the celebrity to the advertisement, therefore forming positive opinions. It was also found that advertisements with celebrity spokespeople produced better advertisement attitude when shown through LINE. This may be because LINE allows users to create groups of friends with common interests who understand each other's likes and interests. Advertisements with celebrity spokespeople shared through these groups can easily resonate among friends.

This study found that the combination of celebrity spokespeople with appeals to reason produce better advertisement awareness, brand awareness, and purchase willingness than the combination of celebrity spokespeople with appeals to emotion. The reason may be that the fame and charisma of celebrities make it easier for advertisements to attract the attention of consumers. Advertisements that appeal to reason can include more information on the brand and features of the product through text or images, improving consumers' advertisement awareness and brand awareness. For mobile phone advertisements, which demand high engagement, appeals to emotion combined with celebrity spokespeople may succeed in attracting the attention of consumers, but the consumers will remain unconvinced by the product itself. Therefore, such an approach is less effective in driving purchase willingness compared to appeals to reason, based on the benefits of the product itself, combined with celebrity spokespeople.

The study found that advertisements that appeal to reason and feature celebrity spokespeople perform

best when shown through LINE, making this approach the optimal combination in this experiment. The reason may be that the popularity of smartphones has driven mobile device penetration rates. As a free messaging app, LINE has become an important channel of communication between people. Generally, friends in LINE are people that the user have interacted with in real life, so they feel closer. Therefore, advertisements spread through LINE feel like friends telling the user about products. Users are therefore more receptive to the message. This study is centered on smartphones, so product information and features are particularly important to consumers. They therefore prefer advertisements that appeal to reason. Advertisements with celebrity spokespeople are even better for attracting consumer attention.

Table 8 Test results for study hypothesis

Hypothesis	results
H1 : The appeal has a significant effect on the effectiveness of advertisements on new media.	partially valid
H1-1 : In advertisements on new media, appeals to reason have a greater effect on advertisement awareness than appeals to emotion.	valid
H1-2 : In advertisements on new media, appeals to reason have a greater effect on advertisement attitude than appeals to emotion.	invalid
H1-3 : In advertisements on new media, appeals to reason have a greater effect on brand awareness than appeals to emotion.	invalid
H1-4 : In advertisements on new media, appeals to reason have a greater effect on brand attitude than appeals to emotion.	invalid
H1-5 : In advertisements on new media, appeals to reason have a greater effect on purchase willingness than appeals to emotion	invalid
H2 : Celebrity spokespeople have a significant effect on the effectiveness of advertisements on new media.	partially valid
H2-1 : In advertisements on new media, ads with celebrity spokespeople have a greater effect on advertisement awareness than ads without celebrity spokespeople.	invalid
H2-2 : In advertisements on new media, ads with celebrity spokespeople have a greater effect on advertisement attitude than ads without celebrity spokespeople.	valid
H2-3 : In advertisements on new media, ads with celebrity spokespeople have a greater effect on brand awareness than ads without celebrity spokespeople.	invalid
H2-4 : In advertisements on new media, ads with celebrity spokespeople have a greater effect on brand attitude than ads without celebrity spokespeople.	invalid
H2-5 : In advertisements on new media, ads with celebrity spokespeople have a greater effect on purchase willingness than ads without celebrity spokespeople.	invalid
H3 : The combination of the appeal and the presence of celebrity spokespeople has a significant effect on the effectiveness of advertisements on new media.	partially valid
H3-1 : In advertisements on new media, ads that appeal to reason and feature celebrity spokespeople have a greater effect on advertisement awareness than ads that appeal to emotion and feature celebrity spokespeople.	valid
H3-2 : In advertisements on new media, ads that appeal to reason and feature celebrity spokespeople have a greater effect on advertisement attitude than ads that appeal to emotion and feature celebrity spokespeople.	invalid
H3-3 : In advertisements on new media, ads that appeal to reason and feature celebrity spokespeople have a greater effect on brand awareness than ads that appeal to emotion and feature celebrity spokespeople.	valid
H3-4 : In advertisements on new media, ads that appeal to reason and feature celebrity spokespeople have a greater effect on brand attitude than ads that appeal to emotion and feature celebrity spokespeople.	invalid
H3-5 : In advertisements on new media, ads that appeal to reason and feature celebrity spokespeople have a greater effect on purchase willingness than ads that appeal to emotion and feature celebrity spokespeople.	valid

5.2 *Suggestions*

This study showed that for mobile phones, appeals to reason are most effective for advertisement awareness. This shows that consumers care most about features, benefits, and value, so what they know about the product is more important than what they feel about the product. Therefore, it is suggested that companies introducing new products should consider using appeals to reason, because consumers are not yet highly aware of the product. The presence of celebrity spokespeople influences advertisement attitudes. This shows that consumers will transfer their positive feelings toward celebrities to products, improving advertisement effectiveness. Therefore, it is suggested that companies invite popular celebrities to become spokespeople, attracting consumer attention. The advertisements can be shown through LINE, which is a regularly friend-like presence in the lives of its many users. This will bring consumers closer to the product, strengthening brand attitudes and increasing brand exposure. All this helps boost consumers' purchase willingness for the product.

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