GUIDELINES ON EFFECTIVE ONLINE ADVERTISING IN INDUSTRIAL BUSINESS SECTOR

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ABSTRACT

Advertising is important for business by presenting a product or service to the public. Recently, the advertising budget of consumer products has increased while the growth rate of the business has declined significantly. This research aims to develop the guidelines on effective online advertising in the industrial business. This research applied both quantitative and qualitative research methods. The quantitative data were obtained from the survey of 500 managers who responsible for advertising in FMCG (Fast-Moving Consumer Goods) business. The data were analyzed by descriptive statistics, reference statistics, and multiple statistics. On the other hand, the model on Guidelines on Effective Online Advertising in Industrial Business Sector approved by 7 experts by using focus group analysis techniques in qualitative research.

The results found that the guidelines for effective online advertising are comprising of 4 aspects. The most important guideline in each aspect was as follows: Creating and content including use the logo as a profile picture for increasing recognition, Channel including select media channel that can be accessed easily in order to reach as much target customer, Information including analyze consumer motivation for advertising creation, and Technology including provide sufficient technology equipment, respectively. The hypothesis testing found that there are no significant difference in the guidelines on effective online advertising for the different types of consumer products.

The analysis of the structural equation model showed that it was in accordance with the empirical data and over the evaluation criteria. The Chi-square probability level, relative Chi-square, goodness of fit index and root mean square error of approximation were .077, 1.208, 0.971 and .020 respectively. The statistical significance of this study was set at .05.

Keywords: Structure Equation Modeling, Online Advertising, Industrial Business Sector

INRTODUCTION

From Thailand's 12th National Economic and Social Development Plan (2017-2021), which associated with vision and goals of Thailand, can be derived into Country Strategic Positioning (Office of the National Economic and Social Development Council, 2018) Country Strategic Positioning aims to develop the objectives and targets for strong and competitive economic systems. Today, Thailand's economic structure has turned into service and digital economic which lead to a new generation of entrepreneurs. This new entrepreneur society or

SME business can adopt the innovation and technology to increase product and service value that lead to the rise in the competitiveness of the business.

Advertising plays a key role in a business as it is a simple way to communicate with consumers. Online advertising has been rapidly used in the market since the introduction of banner ads in the 90s. The business can create online advertising in various formats and platforms to attract target customers. The trend of business spending on digital advertising from 2012-2018 shows in Figure 1.
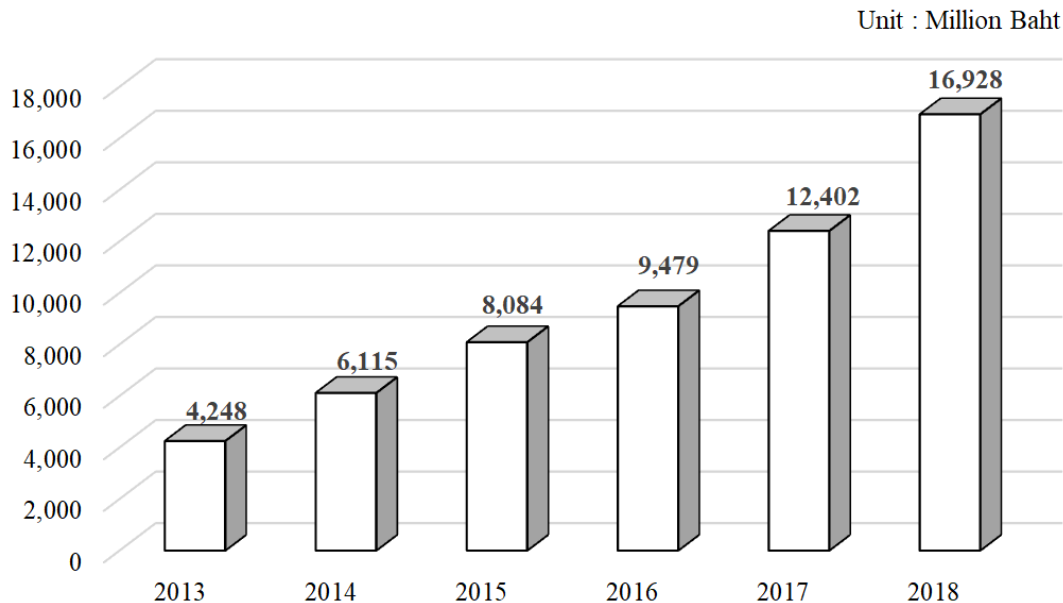
Unit : Million Baht

FIGURE 1
TREND OF BUSINESS SPENDING ON DIGITAL ADVERTISING

According to Figure 1 (Source: The Electronic Transactions Development Agency (ETDA), 2018), the expenses for digital advertising in the industrial sector tend to increase continuously. In 2018, the advertising expenses were 16,928 million Baht, which increased by 36.49% from the previous year. The majority of the advertising budgets are used to express the products and services to reach the mass market. To some extent, the consumer goods industry, where is the most intense competitive sector, uses the highest advertising budgets, accounting for 6,577 million Baht (The Electronic Transactions Development Agency (ETDA), 2018). This is constant with the result from the Advertising Association of Thailand that indicated the organization with the most advertising budgets was household and personal products (Fast-Moving Consumer Goods: FMCG) which are necessary for daily use. However, the growth of consumer products is likely to continually decline as can be seen in Figure 2 (Source: Kantar Worldpanel, 2017). The market survey from Kantar Worldpanel (2017) found that the total value of consumer products in 2017 dropped to 4.42 billion Baht.
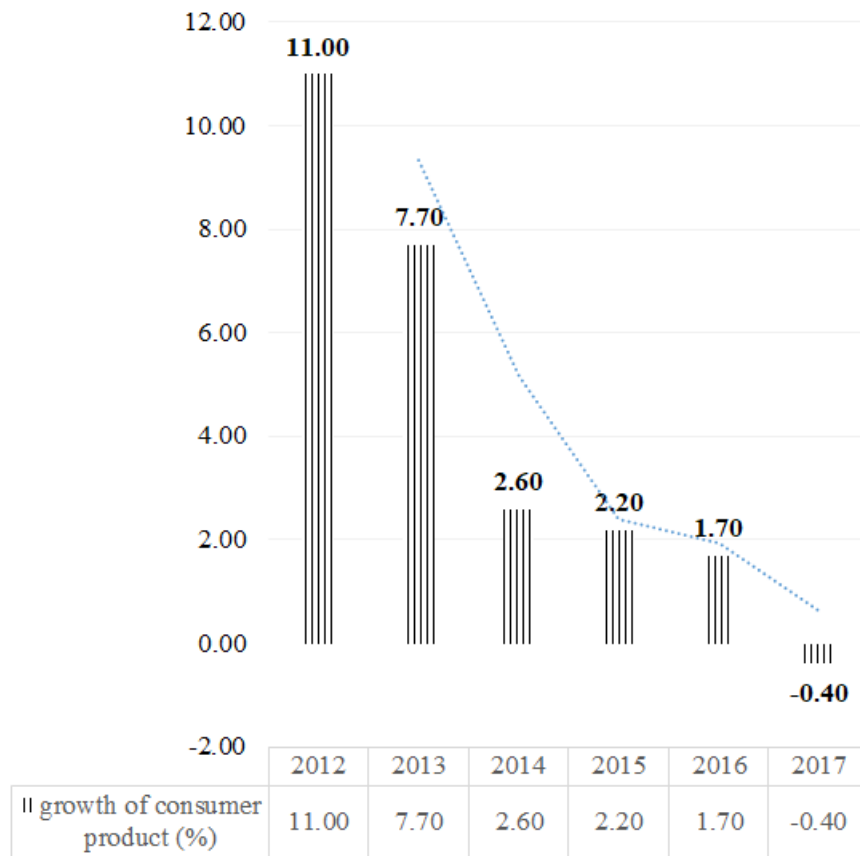
	2012	2013	2014	2015	2016	2017
‖ growth of consumer product (%)	11.00	7.70	2.60	2.20	1.70	-0.40

FIGURE 2
THE GROWTH OF CONSUMER PRODUCT SECTOR

In 2017, the growth of FMCG, such as shampoo, soap, toothpaste, lotion, canned food, seasoning, was the first negative value, accounting for 442,829,500,000 Baht (-0.4%).

The business can use online advertising for presenting products or services, creating good attitude and brand awareness, as well as motivating and encouraging customers to buy the products and services. However, online advertising seems to be ineffective in FMCG market due to the decrease of growth rate which directly affects the business. Therefore, this research aims to explore the effective online advertising guidelines for the industrial business sector.

RESEARCH OBJECTIVES

1. To explore effective online advertising guidelines for industrial business sector
2. To develop a structural equation model of guidelines on effective online advertising in industrial business sector.

LITERATURE REVIEW

There are 4 major concepts relating to the effective online advertising; AIDA Model, DAGMAR, Hierarchy of Effects Model, and the concept of marketing 4.0. The details of which are as follows.

AIDA Model (Lewis, 1908) was initially developed in 1908. The model describes the steps to motivate the target customer to buy until close the sale successfully. This model can adapt to sale promotion and advertising functions. The model has 4 steps as follows;

Step1 Attention: This step is to attract the customer's attention. This can be done through advertising materials such as pictures, sound, or advertising headlines. The advertising materials should attract an audience's attention and willingness to listen.

Step 2 Interest: This step is to create customer's interest by influencing the customer to participate in activities showing that the product or service can solve problems or help the customer, and serve customer's needs.

Step 3 Desire: After the customers concentrate on the advertising and promotion, this step is to stimulate the interest until becoming desire or persuade the customer that they want to own the product or service.

Step 4 Action: This is where customers take action. The effective advertising should motivate consumers to take action or purchase the product or service.

Then, the advertising concept was developed in terms of applying consumer behavior survey. DAGMAR "Defining Advertising Goals for Measuring Advertising Results" was proposed by Colley (1961). The model involves 4 steps.

Step 1 Awareness: This task is to create an awareness of the brand or product to the target customer.

Step 2 Comprehension: This stage is to stimulate a purchase by giving product's information or benefits.

Step 3 Conviction: This step is to convince the target customer by creating interests and preferences.

Step4 Action: Final stage, the customer is encouraged in purchase activity.

Meanwhile, Lavidge & Steiner (1961) devised Hierarchy of Effects Model presenting how advertising influences a consumer's decision to purchase or not purchase the product or service. There are 6 steps, starting from Awareness where customer becomes aware of the product through advertising. The second stage is Knowledge where the customer gains knowledge about the product. Liking is the next step where customer forms good feelings about the product and following by Preference stage where customer prefers the brand or product for his/her future purchase. The next step is a conviction which is about creating the customer's desire to purchase the product. The last stage is Purchase where the customers buy the product. Generally, this model is a marketing communication model but it has been wildly applied to advertising strategy. An advanced advertising strategy applied the hierarchy-of-effects theory through effective advertising messages including awareness, knowledge, liking, preference, convince, and purchase (Belch & Belch, 2003).

However, technology has changed dramatically. Marketing adopts new technology for communication. Kotler et al. (2017) presented Marketing 4.0 model. This model was claimed to be an effective advertising strategy namely "5A's Model". The model mixes between digital and traditional marketing and aims to connect the customers to the product owner. 5A's Model comprises of 5 aspects; 1) Awareness: where the customer knows the brand through experience, advertising, or word of mouth, 2) Appeal: where the customer receives information and become short-term memories, 3) Ask: where the customer gathers more information and opinion about the product, 4) Act: where the customer decides to purchase and establish a relationship, and 5) Advocate: where the customer would build loyalty to the brand because of the positive experience. This will result in retention, repurchase, and finally advocacy for the brand.

From the previous literature, the effective online advertising guidelines can be divided into four aspects including 1) Information, 2) Creating and Content, 3) Technology, and 4) Channel.

Research Hypotheses

From research objectives and previous studies, 4 hypotheses were developed as following;

H1: Information directly influence on Creating and Content

The most important marketing strategy is advertising. The task of advertising is to create interest and attract customers. However, the effective advertising needs customer's information (Ramakhrishnan & Shaban, 2016). Then, the advertising could be created according to the customer's needs and requirements.

H2: Creating and Content directly influence on Technology

Information collection is a crucial task before creating the advertising, otherwise, some messages or keywords could be missing or the edition process could take a long time (Thisakorn, 2016). O'Leary et al. (2015) found that not only hardware and software are required for creating the advertising, but also peopleware is very important for the process.

H3: Technology directly influence on Channel

The success technology implementation depends on the readiness of the organization including hardware, software, information technology, database, communication network, complexity of working processes, and people (Raksawong, 2015). In marketing 4.0, a social network is broadly used for increasing business competitiveness. Moreover, the social network is the tool for effective communication between business and customers (Correia & Medina, 2014).

H4: Creating and Content directly influence on Channel

The organization should advertise on various online platforms, i.e. Facebook, Google, YouTube, Instagram, LinkedIn, Line, and Weblog, because each platform has individual characteristics. Pansuppawatt & Ussahawanitchakit (2011) explained that a creative strategy for advertising needs continuous improvement to support marketing. Therefore, creating competitive advantages by quick response to the customers, the business should apply the technology, especially online technology for advertising on several platforms (Blaschke et al., 2018).

RESEARCH METHODOLOGY

This research used mix-techniques comprising of 3 parts, starting with qualitative research employing in-dept interview technique, followed by quantitative research, and ending with qualitative research using focus group technique to confirm the correctness of the constructed. The research methodology was as follows.

Population and Sample

The qualitative data were derived from an in-depth interview with 9 specialists consisting of 3academic experts in advertising and public relations field, 3 executives from business organizations, and 3 experts in advertising agencies. They were given an interview form with open-ended questions. The questions came from the summarized of previous literature including 4 latent variables; Information, Creating and Content, Technology and Channel. The findings from the interview were analyzed to construct the questionnaire of 100 items with the alpha coefficient by Cronbach at 0.976 (>0.8), discrimination value of the checklist between 0.32-1.70, and Corrected Item -Total Correlation analysis between 0.331–0.646.

The quantitative data were derived from questionnaires manages with 500 samples (Comrey & Lee, 2002) from executives in the organization that registered with the Ministry of Commerce, accounting for 5,973 companies (Department of Business Development, 2019). Stratified Sampling and Random Sampling methods were applied (Lawrence et al., 2017). The data were analyzed with descriptive statistics and multivariate statistical analysis, which were developed into Structural Equations Modeling (SEM) by AMOS. The evaluation of the Data-Model Fit criteria consisted of 4 values, i.e. (1) Chi-square Probability Level > 0.05, (2) Relative Chi-square < 2, (3) Goodness of fit Index > 0.90, and (4) Root Mean Square Error of Approximation < 0.08 (Silpacharu, 2020)

The last part of the research was qualitative research. Focus group analysis techniques were utilized to approve the model on Guidelines on Effective Online Advertising in Industrial Business Sector by 7 experts.

Variables

The effective online advertising guidelines for industrial business sector comprise of 4 components. There were 2 types of variables including 1) Observed Variable which is the effective online advertising guidelines for industrial business sector, and 2) Latent Variables which could be divided into 2 categories; Endogenous Latent Variables including Creating and content, Technology, and Channel, and Exogenous Latent Variables including Information.

Questionnaire

The research tool for collecting quantitative data was a questionnaire. The questionnaire was containing 3 parts as follows;

Part 1 was about the general information of the business,

Part 2 was the levels of importance for effective online advertising guidelines,

Part 3 was an Open-ended question related with the effective online advertising in industrial business sector.

Data Collection

The data for the qualitative part were collected by structured while questionnaire interview was used to collect those for the quantitative.

The quantitative data was collected from FMCG business which 250 samples were from food product organizations and other 250 were from non-food product organizations.

Data Analysis

Descriptive and referential statistics were used to analyze the general data via SPSS software while AMOS software (Analysis of Moment Structures for Research) was used for analyzing and developing the structural equation modeling (SEM).

Descriptive statistics, frequency and percentage, were used to analyze the data in part 1. Mean ($\overline{X}$) and standard deviation (S.D.) were applied for analyzing the data in part 2. Content analysis was employed and concluded in term of frequency for the open-ended question in part 3.

AMOS software was utilized to analyze and develop the structural equation modeling (SEM). Criteria for evaluating the model (Arbuckle, 2011) was presented in Table 1.

TABLE 1
CRITERIA FOR EVALUATION THE CONGRUENCE OF THE MODEL AND THE EMPIRICAL DATA

Evaluating the Data–Model Fit	Criteria
Chi-square Probability Level (CMIN-p)	P > 0.05
Relative Chi-square (CMIN/df)	< 2
Goodness of fit Index (GFI)	> 0.90
Root Mean Square Error of Approximation (RMSEA)	< 0.08

Results

The results showed that the respondents were 50% from food product organizations and the rest were from non-food product organizations. Overall, the important level of the effective online advertising guidelines for industrial business sector was at high level. When considering by aspect, the important level was at high level for all aspects (Table 2).

TABLE 2
MEAN AND STANDARD DEVIATION OF THE EFFECTIVE ONLINE ADVERTISING GUIDELINES FOR INDUSTRIAL BUSINESS SECTOR

Latent Variable	$\overline{X}$	S.D.
Overall	3.99	0.59
Information	4.00	0.62
Creating & Content	4.01	0.58
Technology	3.95	0.68
Channel	4.01	0.69

Overall, there was no significant difference in the important level of effective online advertising. When considering in detail, Information, Creating & Content, Technology, and Channel had no significant difference at statistically significant level of 0.05 (Table 3).

TABLE 3
THE COMPARISON OF IMPORTANCE LEVELS OF THE GUIDELINES FOR EFFECTIVE ONLINE ADVERTISING IN INDUSTRIAL BUSINESS

Guidelines on Effective Online Advertising	t-Value	P-Value
Overall	-0.48	0.63
Information	-0.23	0.82
Creating & Content	-0.25	0.78
Technology	0.30	0.77
Channel	-1.51	0.13

The results of the analysis of relationship path model of Guidelines on Effective Online Advertising in Industrial Business Sector are displayed in Figure 3.
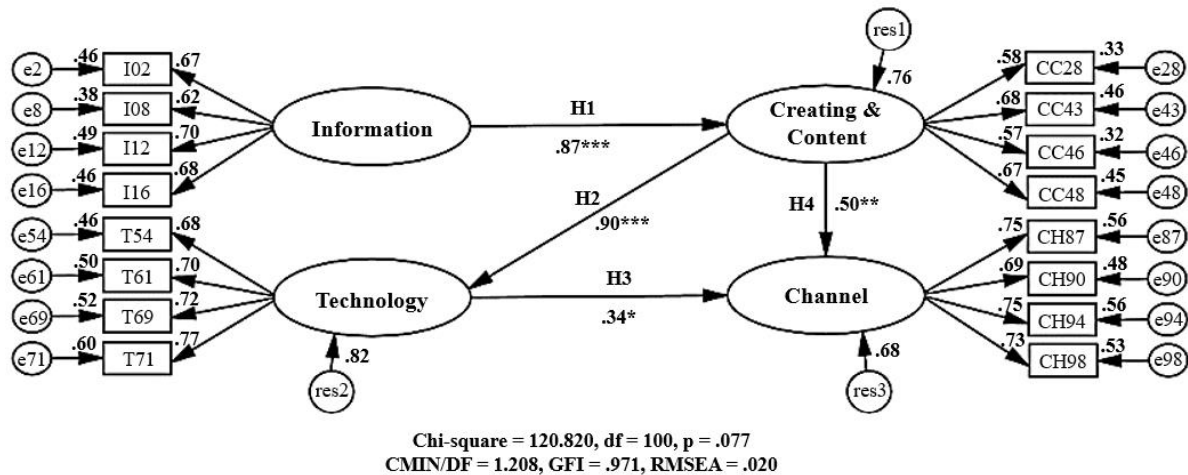

Chi-square = 120.820, df = 100, p = .077
CMIN/DF = 1.208, GFI = .971, RMSEA = .020

FIGURE 3
THE ANALYSIS OF INFLUENCE PATH OF THE MODEL ON EFFECTIVE ONLINE ADVERTISING IN INDUSTRIAL BUSINESS SECTOR AFTER BEING MODIFIED

The analysis of the structural equation model showed that it was in accordance with the empirical data and over the evaluation criteria. The Chi-square probability level, relative Chi-square, goodness of fit index and root mean square error of approximation were .077, 1.208, 0.971 and .020, respectively. The statistical significance of this study was set at .05. This model was over the evaluation criteria and consistent with the empirical data

The results of the hypothesis testing on the developed structural equation model based on the 4 hypotheses are as follows;

H1: Information directly influence on Creating and content

Information directly influence on Creation and content at statistically significant level of 0.001 with Standardized Regression Weight of 0.87.

H2: Creating and content directly influence on Technology factor

Creating and content directly influence on Technology factor at statistically significant level of 0.001 with Standardized Regression Weight of 0.90.

H3: Technology directly influence on Channel

Technology directly influence on Channel at statistically significant level of 0.05 with Standardized Regression Weight of 0.34.

H4: Creating and content directly influence on Channel

Information directly influence on Technology at statistically significant level of 0.01 with Standardized Regression Weight of 0.50.

TABLE 4 STATISTICAL ANALYSIS OF STRUCTURAL EQUATION MODEL FOR GUIDELINES ON EFFECTIVE ONLINE ADVERTISING IN INDUSTRIAL BUSINESS SECTOR IN STANDARDIZED ESTIMATE MODE			
Variables	Estimate Regression Weight	R^2	P
Information creating & content	0.87	0.76	***
Creating & content technology channel	0.9	0.82	***
Technology Channel	0.5	0.68	0.002
Information	0.34	0.68	0.031
I02	0.67	0.46	
I08	0.62	0.38	***
I12	0.7	0.49	***
I16	0.68	0.46	***
Creating & Content			
CC28	0.58	0.33	
CC43	0.68	0.46	***
CC46	0.57	0.32	***
CC48	0.67	0.45	***
Technology			
T54	0.68	0.46	
T61	0.7	0.5	***
T69	0.72	0.52	***
T71	0.77	0.6	***
Channel			
CH87	0.75	0.56	
CH90	0.69	0.48	***
CH94	0.75	0.56	***
CH98	0.73	0.53	***
*** Significant level at .001			

The statistical analysis of the structural equation model was represented in Table 4. The statistical analysis of each component in Information was illustrated in the following: Conduct consumer behavior research to obtain data for advertising (I12) with the standardized regression weight of 0.70 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.49, Use data to resolve conflicts between customers and staff (I16) with the standardized regression weight of 0.68 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.46, Analyze PESTE (Political, Economic, Social, Technology, Ecological) as data support for advertising (I02) with the standardized regression weight of 0.67 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.46, and Gather online conversations for Collective Wisdom (I08) with the

standardized regression weight of 0.62 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.38.

The Creating and Content consisted of the following variables: Apply infographic to explain the product's detail or using process (CC43) with the standardized regression weight of 0.68 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.46, Present organization's corporate social and environmental responsibility (CSR) activities (CC48) with the standardized regression weight of 0.67 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.45, Give employee opportunities to learn and develop themselves regularly (CC28) with the standardized regression weight of 0.58 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.33, and Present raw material for product development (CC46) with the standardized regression weight of 0.57 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.32.

The Technology consisted of the following variables: Able to transfer data to other platforms (T71) with the standardized regression weight of 0.77 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.60, Encourage employees to attend external training or seminars (T69) with the standardized regression weight of 0.72 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.52, Join the event or apply the membership of organizations that provide new technology updating information (T61) with the standardized regression weight of 0.70 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.50, and Invest for technology infrastructure and hardware (T54) with the standardized regression weight of 0.68 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.46.

The Channel consisted of the following variables: Check customer's feedback on web board (CH94) with the standardized regression weight of 0.752 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.56, Upload video clip on Youtube or Facebook (CH87) with the standardized regression weight of 0.746 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.56, Evaluate customer's participation and accession per one post (CH98) with the standardized regression weight of 0.73 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.53, and Post product's pictures on Instagram (CH90) with the standardized regression weight of 0.69 at the statistically significant level of .001, and the squared multiple correlation (R^2) was 0.48.

DISCUSSION

The most importance for effective online advertising in industrial business was Creating & Content (mean = 4.01 and S.D. = .58). From researcher's perspective, advertising strategy should focus on the target customers, make the difference to the product as well as create aesthetics and motivation to the customers. This result consistent with Till & Baack (2005) explained that creativity is the most crucial part of the advertising because people can remember the advertising and keep it in mind even the time passes. Meanwhile, Hritzuk & Jones (2014) indicated that content creation is the biggest challenge for marketers. Advertising should motivate the customers but should not make the customers feel disturbed. The content should present how the product can help the customers as well as build a positive emotional feeling and trust. Moreover, the advertising should create desires for ownership and benefits to customers. Likewise, Avi Dan (2013) claimed that a key of effective advertising is creativity. However, understanding human mature has more powerful than creativity.

There was no significant difference when compare the guidelines of effective online advertising in industrial business sector classified by product types with statistical significance at the level of 0.05. This may be because consumer products are bought by end customers who may have different behavior, motivation, and needs. Similarly, Chamnankij (2015) found that the triple bottom line on website of different industrial sector had no statistical difference at 0.05 level. Moreover, Gleeson (2009) indicated that the use of communication technology to communicate internal staff were not depending on size of the business.

The result of hypothesis testing showed that Creating & Content directly influence on Technology with the standardized regression weight of 0.90. This is because the step after developing advertising idea is to create the advertising that may requires sufficient equipment and technology for effective advertising. This consistent with Ramakhrishnan & Shaban (2016); Silpcharu & Wantanakomol (2017) claimed that the content on online media, for example, video, picture, infographic, blog, article, Facebook, Twitter, email, newsletters on electronic networks, or voice communication, should be created according to the target groups. In addition, O'Leary, O'Leary & O'Leary (2015) explained that there are not only software and hardware in computer systems but also peopleware because people control the computer systems. Therefore, online advertising requires sufficient hardware, software, and peopleware. In particular, peopleware requires the advertising knowledge together with the capability to use and adopt new technology to the advertisement. In addition, the selection of appropriate channels to specific products and target customers is a crucial task.

SUGGESSTIONS

Business should provide sufficient technology equipment and facilities, together with training new technology for advertising creation to employees. In addition, industrial business sector and education sector should cooperate to organize advertising events such as online advertising seminars or advertising contests.

The government should provide internet network covering all areas. Moreover, Advertising Association of Thailand should support technology development for advertisement creation.

Staff who responsible for advertising should create concise, easy, and honest advertising to consumers. After the advertisement has been released to the public, customer behavior and feedback should be analyzed for further information. Also, staff needs to develop themselves including keep updating, training, and learning new technology.

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