

SCALE FOR ADVERTISING EFFECTIVENESS: A STUDY ON TRADITIONAL AND INTERACTIVE ADVERTISEMENTS AS PER THE LAVIDGE AND STEINER MODEL

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ABSTRACT

The research study critically evaluates the advertising effectiveness model developed by Lavidge and Steiner. The model focuses on three stages- cognition, affection and change in behavior. After understanding all the individual three stages, a 44 item scale was constructed for the pilot study. The respondents were shown select traditional and interactive advertisements of consumer durables. The analytical tools used for the research study were cronback alpha, item to total correlation, t-test and exploratory factor analysis. After examination of scale by subject experts, the scale is reduced to twenty eight items for final study. The scale contains attributes for cognition, affection and behavior. The pilot study was conducted on a sample of 100 respondents, while the final study was conducted on a sample of 320 respondents. The empirically tested scale has desirable values in terms of validity and reliability; the scale can be used for further research studies by academicians and industry researchers to evaluate effectiveness of both traditional and interactive advertisements.

Keywords: Advertising effectiveness, traditional advertising, interactive advertising, advertising scale and advertising.

Introduction:

In today's context both the industry as well as advertising agencies need to evaluate the effectiveness of advertisements released. Understanding effectiveness can help the advertising agencies to develop better creative communications, while the industry gets to know about its customer needs, wants, preference and demand. While effectiveness in general depends on the advertising objectives as per DAGMAR, measuring it still remains one of the most discussed aspects of the business as per (Kelley & Turley, 2004) much to the credit of the various methodological and theoretical approaches prevalent in the field of advertising effectiveness. While some studies focus on investment on advertising versus returns obtained, both investments and returns calculations include several invisible marketing costs which cannot be directly linked to either of them. In fact the two theories of advertising, the modern approach and the traditional approach are also a matter

of discussion in corporate houses. While the modern approach treats advertising as investment, the traditional approach treats advertising as a cost. This aspect is too seen even within the same company as the marketing department considers advertising to be an investment that will open doors to new customer, the accounts department or the finance department may think vica versa believing it to be a cost. (Marshall, 2006) in his study also highlighted the fact that the complexity of examining advertising effectiveness is linked to the various attributes of the marketing process which involves various stages to informing the customer, creating a positive attitude towards the brand and ultimately prompting purchase. Marshall widely covered advertising objectives such as audience recall, attention, brand linkage, uniqueness and persuasion etc. (Tsai & Tsai, 2006) in their research concluded that there are two types of advertising effectiveness- sales effectiveness (the advertising resulting in sales) and communication effectiveness (advertising resulting in change of

attitude or perception). While the Industry emphasizes more on sales, the message aspect is critical in context of advertising effectiveness. Hence understanding the message effectiveness is an important criteria specially in the Indian context.

Traditional advertising is that advertising which is using traditional media or media that is permitting one way marketing communication which includes television, radio and print. (A, B, & Lacobucci, 1998); (Dickinger & Zorn, 2008); (Hoffman & Novak, 1996); (Pramataris, 2001). Hence in order to easily differentiate between the two advertising techniques and to promote general understanding the above mentioned criterion will be used as the attribute of differentiation between traditional and interactive advertising.

Continuing the above mentioned criterion of differentiating traditional advertising and interactive advertising, the two way marketing communication hence referred here as 'interactivity', refers as the interaction between sender [who is the advertiser] and receiver [who is the reader/ potential customer] (Yang, 1996). The above mentioned criterion further supports the aspect of two way advertising communication in which information flows between both the parties. Hence for the research study and general understanding, this fact distinguishes Internet Advertising with respect to Traditional Advertising, as traditional advertising can present unidirectional marketing communication message generated by the advertiser/ identified sponsor to the potential customer/ reader. (Bezjian-Avery, Calder, and Lacobucci, 1998; (Dickinger & Zorn, 2008); Hoffman and Novak, 1996; Pramataris et al. 2001; (Shrum, Lowrey, & Liu, 2009).

With relevant review of literature, it can be concluded that the interactive nature of interactive advertising is alone created by the Internet. Other essential aspect of interactive advertising - consumer engagement (which is also a two communication process) can be achieved only by interactive media, which in simple words is Internet.

Gary .A. Steiner and H. Lavidge developed the 'Hierarchy of Effects Model' for the evaluation of advertising function. As per (Lavidge & Steiner, 1961), the first stage in advertising effectiveness is cognition comprising of awareness and knowledge. The second stage is affection comprising of liking and preference. The last stage is action comprising of change in behavior. They also suggested that advertising should not be designed to produce immediate purchases and using sales to measure advertising effectiveness is incomplete and problematic. As a matter of fact, the work by Lavidge and Steiner has laid the groundwork for almost all major models of advertising effectiveness which include (Colley, 1961) developing the DAGMAR: Defining Advertising Goals for Measured Advertising Objectives, which added the aspect of hierarchy for

measuring effectiveness (Barry, The development of the hierarchy of effects: An historical perspective, 1987). Another aspect solidified by the hierarchy models was the provision of advertising managers setting step by step advertising objectives rather than focusing on sales goals only (Colley, 1961; (Barry & Howard, 1990). However their research work is both widely accepted as well as disputed by many (Zajonc & Markus, 1982), (Lazarus, Thoughts on the relations between emotion and cognition., 1982), (Lazarus, 1984), (Watts, 1983). Peterson at all (1986) questioned the practical perspective of cognition and affection. While researchers have raised concerns and limitations about the proper definitions of preference and liking, as well as their measurements.

Research Gap:

While the Lavidge and Steiner model was developed keeping in mind only the traditional advertising, a modern validation for both traditional and interactive advertising was needed. Today there is a constant discussion on advertising effectiveness and since both type of advertising have same objectives, a common research instrument/ scale was needed. Hence the researcher has identified a critical research gap and aspires to serve both industry and academics with it.

Review of Literature:

Many prominent authors have highlighted the fact that a multi-item scale in order to be used for research needs to critically evaluated for usability, accuracy, validity and reliability. A common understanding generated by almost all researchers is that the researcher should keep in mind criterions of reliability and validity especially for the measures of the instrument developed. For this a researcher may use various tests, as per the nature of the data and parameters to be measured. For validity all aspects such as content validity, criterion validity and construct validity need to be considered. (Churchill, 1979), Peter (1981) (Malhotra, 2005).

For internal consistency, the generally accepted measure for a set of items is calculated by the Alpha co-efficient. This co-efficient may have values from 0 to 1. The higher the value of this co-efficient better is the consistency. A value less than 0.6 is avoided as it translates into poor internal consistency reliability. In such a scenario since some items do not share equal consistency, it is better to remove such items. (Malhotra, 2005), in his book has further highlighted the fact that the value of alpha generally increases with the increase in scale items.

In order to create factors or attributes that are similar in nature, the researcher should be possessing knowledge about factor analysis and item correlation. A parametric technique used for data reduction and identifying similar correlated items, factor analysis is

a prominent research analysis tool widely used in the field of social sciences. Factor analysis feature of SPSS 16 was used for the purpose of research study. As per (Hair et al 2010) the current sample size is well within the acceptable range.

Factor analysis depends on the scores of KMO (Kaiser-Meyer-Olkin) which denotes the appropriateness for the same. It is also known as the Measure of Sampling Adequacy and has values from 0 to 1. Higher values of KMO generally signify that the factor analysis is statistically appropriate for data analysis and generalization. In simple words the value of KMO being close to 1 would explain a perfect correlation between variable thus ensuring that the results of factor analysis can be considered appropriate. If the value of KMO is below 0.5, then it is suggested that the factor analysis is not appropriate rather the researcher should try to collect more data. Factor loadings are also taken in consideration, which clearly defines the correlation generated between the factor and variables. (Malhotra, 2005) (Pinsonneault and Kraemer, 1993) (Hair et al 2010). An indepth study by (Hair, 2010), highlighted the following criterion for the value of obtained MSA- If the value of obtained MSA is above 0.80 or 0.80 then it is considered meritorious. For a value of 0.70 or above, it is termed middling. For a value of 0.60 or above, it is termed mediocre. For a value of 0.50 and above, it is termed miserable. Any value below 0.50 is termed unacceptable.

The Bartlett test of sphericity is also an important criterion in factor analysis. It basically helps to confirm a statistically significant relationship between variables before the actual factor analysis is done. The value that has to be considered must be less than 0.05 to be affirmed. (Pallant, 2003).

The procedure followed by this researcher included the steps and calculations described above. The researcher has constructed the scale on three parameters cognition, affection and behavior.

Pilot study:

The pilot research study was conducted with the objective of testing the scale on advertising effectiveness for traditional and interactive advertisements of consumer durables. The Pilot study included 44 questions collected from various individual pretested scales of Brand Recall (Aided and Unaided), Brand Recognition, Brand Awareness, Attitude towards the ad, Attitude towards the brand, Intention to purchase and Actual purchase were considered. The items of the scale to be tested were framed from the following sources. Martín et al (2012), (Adetunji et al 2014), (Pelsmacker et al 2002), (Baker et al 1977), (Hardesty et al 2002), (Obermiller & Spangenberg, 1998), (Jain et al 2004), (Simpson, M., Horton, & Brown, 1996)

The questionnaire for the research study was a structured questionnaire and prepared in English. The sample was selected through judgement sampling. This was so because advertising professionals, subject professors and corporate clients need to be selected on the basis of who could understand the concept of advertising effectiveness and at the same had decision making skills for selecting the appropriate questions. The sample for pilot study was 100 and included advertising professionals (Copywriters, Art Directors, Client-Servicing Executives, Media Planners and Creative Directors), marketing professors (Assistant Professors, Associates Professors and Full Professors) and Advertisers. A necessary criterion for the sample was previous exposure to both interactive as well as traditional advertising. A critical requirement from the sample was-

- a) The sample member was at least a graduate.
- b) The sample member understood English
- c) The sample member had basic computer and internet knowledge such as opening websites and clicking advertisements.

Table A: Sample Details for Pilot Study

Gender	
Male	51
Female	49
Age	
13-19 Years	34
20-39 Years	38
40-64 Years	28
Income	
Upto 2.5 Lakh	23
2.5 Lakh- 5 Lakh	30
5 Lakh- 10 Lakh	32
Above 10 Lakhs	15

The responses of the first coded and then imported to SPSS 16.0 Version. Kronback Alpha coefficient was found out to be .764, T-Test values at 5% level of significance were considered for the discriminating ability of scale item.

Items such as – ‘I can recall the product or brand easily’, ‘The advertisement is easily identifiable and noticeable’, ‘The advertisement is efficient as it bring the message back to my mind’, ‘The advertisement is easily to remember and recollect’, ‘I can acknowledge the advertisement without difficulty’, ‘I found it really something for me’, ‘The advertisement is easily acceptable by the target audience’, ‘I found it credible’, ‘I found it exaggerated’, ‘It is an unpleasant brand’, ‘It is a positive brand’, ‘It is not a reputable ad’, ‘After seeing the ad’, ‘I would like to know more information about the brand’, ‘I am interested the in the brand’, ‘I would patronize this brand and After

seeing the ad' and 'The probability to purchase' is high were deleted for further analysis.

The factor analysis was applied for which the KMO Value was found to be acceptable as well as the Bartlett test was found significant.

The analysis of the pilot study made a critical contribution of the scope of study, apart removing unnecessary questions but also helped in improvising the existing questionnaire in terms of language of use, grammatical errors and sentence framing. After the applied analysis, the scale was reduced to twenty-eight items.

Final study:

The final study was done with the scale items obtained from the pilot study. The developed questionnaire was structured in nature and was prepared in English. The objective of the questionnaire was to measure advertising effectiveness. There were twenty eight questions based on Intensity of Unaided recall (4 Questions), Intensity of Aided recall (3 Questions), Recognition (3 Questions), Awareness (5 Questions), Attitude to the ad (4 Questions), Attitude to the brand (4 Questions) and Purchase Intention (5 Questions). Data was collected from 320 respondents. The scale was administered to each respondent.

The responses of the first coded and then imported to SPSS 16.0 Version. Kronback Alpha coefficient was found out to be .749, T-Test values at 5% level of significance were considered for the discriminating ability of scale item. On analysis it was found that all t-values were statically significant at 5% level of significance, hence every statement was able to discriminate.

All the item to total correlations were between .462 to .675. The exploratory factor analysis was executed. Values of KMO and Barlett test of sphericity is within acceptable range and statistically significant. The factor loadings were in the range .438 to .603.

The analysis of the final study confirms the twenty-eight items of the scale which can be used for evaluating the advertising effectiveness of both traditional and interactive advertising.

Discussions and Suggestions:

The research study has developed a research measurement instrument (Scale) that is empirically tested to measure effectiveness of traditional and interactive advertisements based on the model of advertising effectiveness proposed by Lavidge and Steiner. The final scale covers seven crucial aspects of advertising effectiveness which include 4 scale items for measuring intensity of unaided recall (I cannot recall anything, I can only recall the product category or brand, I can recall the product category and can give a general or detailed description of the message or the design of the ad & I can recall the product

category and brand). 3scale items for measuring intensity of aided recall (I cannot recall any ad for the product suggested, I can give a general or detailed description of the message or the design of the ad & I can recall the brand advertised). 3 scale items for measuring recognition (I recognize neither the brand nor ad among the alternatives shown, I recognize the brand or ad among the alternatives shown & I recognize the brand and ad among the alternatives shown). 5 scale items for measuring awareness (The ad makes me recognize the features of the advertised brand, I am aware of the brand after seeing the ad, I can recall the advertised brand after seeing the ad, I remember a lot about the advertised brand & After seeing this brand I will prefer the advertised brand over other brands). 4 scale items for measuring attitude to the advertisement (It is an attractive advertisement, It is an interesting advertisement, It is a believable advertisement & This advertisement attracts attention). 4 scale items for measuring attitude to the brand (It is a good brand, It is a brand that I like, my opinion of this brand is favourable & It is a brand to be considered). 5 scale items for brand purchase intention (After seeing the ad, it is likely that I would purchase the brand, After seeing the ad, I am convinced to purchase the brand, After seeing the ad, I could recommend the brand to friends, I will definitely buy the advertised brand because of the wordings in the ad & The claims made in the ad will convince me to buy the brand in the future).

The research study was conducted in select cities of India and as future opportunity can be extended at a larger scale. Problem of technical language was faced by the advertising professionals. Some believed that questions were repetitive in nature but from an academic point of view they were needed. After an emerperical analysis 16 items were dropped from the final study. The point raised during the research was the inclusion of demographic factors in the scale, which can be a scope of improvement in future.

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Table B: Scale Validation (Pilot Study)

S. No.	Items	P Value	Item to Total Correlation	Factor Analysis Factor Loading
1	I cannot recall anything	.017	.683	.788
2	I can only recall the product category or brand	~.000	.632	.657
3	I can recall the product category and can give a general or detailed description of the message or the design of the ad	.003	.564	.434
4	I can recall the product or brand easily ^	.589	.....	.....
5	I can recall the product category and brand	.015	.637	.705
6	I cannot recall any ad for the product suggested	~.000	.511	.681
7	The advertisement is easily identifiable and noticeable ^	.632	.....	.....
8	I can give a general or detailed description of the message or the design of the ad	.002	.439	.506
9	I can recall the brand advertised	~.000	.548	.565
10	I recognize neither the brand nor ad among the alternatives shown	~.000	.570	.528
11	The advertisement is efficient as it bring the message back to my mind ^	.768	.....	.....
12	The advertisement is easily to remember and recollect ^	.566	.....	.....
13	I recognize the brand or ad among the alternatives shown	.002	.486	.498
14	I recognize the brand and ad among the alternatives shown	~.000	.559	.492
15	The ad makes me recognize the features of the advertised brand.	.006	.671	.643
16	I am aware of the brand after seeing the ad	~.000	.762	.763
17	I can acknowledge the advertisement without difficulty ^	.072	.....	.....
18	I can recall the advertised brand after seeing the ad	~.000	.458	.506
19	I remember a lot about the advertised brand	.002	.504	.549
20	After seeing this brand I will prefer the advertised brand over other brands	.005	.638	.599
21	It is an attractive advertisement	.012	.766	.606
22	I found it really something for me ^	.432	.....	.....
23	The advertisement is easily acceptable by the target audience ^	.621	.....	.....
24	It is an interesting advertisement	.001	.421	.488
25	It is a believable advertisement	~.000	.430	.521
26	This advertisement attracts attention	~.000	.582	.602

27	I found it credible ^	.654	.....	.....
28	I found it exaggerated ^	.789	.....	.....
29	It is a good brand	.001	.702	.615
30	It is a brand that I like	~.000	.649	.439
31	It is an unpleasant brand ^	.763	.....	.....
32	My opinion of this brand is favourable	.002	.777	.682
33	It is a positive brand ^	.403	.....	.....
34	It is a brand to be considered	~.000	.571	.569
35	It is not a reputable ad ^	.090	.....	.....
36	After seeing the ad, it is likely that I would purchase the brand	.002	.556	.510
37	After seeing the ad, I am convinced to purchase the brand	.006	.684	.495
38	After seeing the ad, I would like to know more information about the brand ^	.098	.....	.....
39	After seeing the ad, I could recommend the brand to friends.	.003	.539	.464
40	I am interested the in the brand ^	.683	.....	.....
41	I would patronize this brand ^	.079	.....	.....
42	I will definitely buy the advertised brand because of the wordings in the ad	.004	.572	.533
43	After seeing the ad, the probability to purchase is high ^	.577	.....	.....
44	The claims made in the ad will convince me to buy the brand in the future	.007	.668	.574

^ Items in bold were deleted from the scale for final study

Table C: Scale Validation – Final Study

S. No.	Scale Items	P Value	Item To Total Correlation	Factor Analysis Factor Loading
1	I cannot recall anything	~.000	.538	.459
2	I can only recall the product category or brand	~.000	.547	.479
3	I can recall the product category and can give a general or detailed description of the message or the design of the ad	~.000	.501	.571
4	I can recall the product category and brand	~.000	.564	.523
5	I cannot recall any ad for the product suggested	~.000	.629	.512
6	I can give a general or detailed description of the message or the design of the ad	~.000	.502	.593
7	I can recall the brand advertised	~.000	.536	.495

S. No.	Scale Items	P Value	Item To Total Correlation	Factor Analysis Factor Loading
8	I recognize neither the brand nor ad among the alternatives shown	~.000	.578	.529
9	I recognize the brand or ad among the alternatives shown	~.000	.588	.514
10	I recognize the brand and ad among the alternatives shown	~.000	.635	.490
11	The ad makes me recognize the features of the advertised brand.	~.000	.675	.578
12	I am aware of the brand after seeing the ad	~.000	.587	.566
13	I can recall the advertised brand after seeing the ad	~.000	.588	.525
14	I remember a lot about the advertised brand	~.000	.569	.517
15	After seeing this brand I will prefer the advertised brand over other brands	~.000	.636	.603
16	It is an attractive advertisement	~.000	.452	.470
17	It is an interesting advertisement	~.000	.627	.434
18	It is a believable advertisement	~.000	.531	.524
19	This advertisement attracts attention	~.000	.490	.466
20	It is a good brand	~.000	.522	.556
21	It is a brand that I like	~.000	.487	.522
22	My opinion of this brand is favourable	~.000	.549	.592
23	It is a brand to be considered	~.000	.570	.534
24	After seeing the ad, it is likely that I would purchase the brand	~.000	.462	.488
25	After seeing the ad, I am convinced to purchase the brand	~.000	.501	.543
26	After seeing the ad, I could recommend the brand to friends.	~.000	.488	.504
27	I will definitely buy the advertised brand because of the wordings in the ad	~.000	.492	.438
28	The claims made in the ad will convince me to buy the brand in the future	~.000	.471	.470
