

**SAFER INTERNET FOR CHILDREN – ONLINE IN –
GAME ADVERTISING EFFECT BY EXAMINING THE
INFLUENCE OF A MATCH BETWEEN GAMES AND
ADVERTISING**

Executive summary report of
**MAJOR RESEARCH PROJECT
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EXECUTIVE SUMMARY REPORT

ABSTRACT

Internet revolution has great influence the way the children interact online with others. In game advertising is used by companies to inform, motivate, entertain as well as influence children while playing video games. Products are positioned in the video game in the form of game characters so that children while playing the game were influenced. In game advertisers use various marketing methods to attract the children so that the positive attitude and recall of brand name would be higher as the product or brand is repeatedly appeared in the game. The review of literature indicates that children's recall of brand or product which is used in the Advergaming lead to the positive buying behavior of the same product. Despite the extensive literature, there is a need to probe into children's response from various socio economic backgrounds and different contexts of In game advertising.

The present study aimed at finding out the influence of In-game advertising on children. A survey was conducted to find out the general patterns of children's online gaming behavioral patterns. Later, an experimental study was conducted by selecting children and they were asked to play four online games for an hour for a month in particular. Thereby, the behavioural patterns with regard to In-game advertising on children were studied. Thus a survey on 303 and an experimental study on 107 children were conducted in Tirupati, Andhra Pradesh.

The results show that there is a gradual increase in the percentage of children playing video games in recent times. The data also show that children have started playing at very early age of 12 years. The types of games children play, type of advertisements children recall, association with the level of playing online video games and congruity, integration, prominence, interest of in-game and factors that influence purchase intentions were measured. The study helps to initiate interventions for creating awareness and respond to In-game advertising critically.

Need for the study

The rapidly evolving digital environments with an increasing number of smart devices that embed Internet-based solutions have made children early adopters of new technologies. They increasingly engage in text messaging, playing online games, watching TV online and participate in virtual worlds and social networking activities from an early age. Rapidly, children

become Internet savvy and their online presence encompasses not only the use of the digital content, but often requires them to take consumer decisions. Several studies indicate that children are increasingly becoming online consumers of digital content and particularly of online games (Stenzel et al., 2011).

As reported by Méndiz (2010), recent years have seen the implementation of interactive advertising, resulting in significant changes in the communication paradigm. This new interactive framework radically transformed the fundamental points of the advertising concept, which had long been characterized by one-way communication, separation between information and advertising and persuasive intent. It is this paradigm shift in advertising communication that consolidated the advergaming format, a combination of the words advertising and videogame. Méndiz (2010) denominates product placement applied to electronic games as in-game advertising.

The insertion of brands and real products into virtual worlds contribute to enhance the realism of these sites. According to Martí (2010), the advantage of associating electronic games with advertising is that amidst the saturation of traditional advertising media electronic games have important entertainment value that serves as a hook to attract consumers tired of unwelcome advertisements. Unlike conventional advertising formats that encourage a more passive and often unappealing relationship for children, Advergaming bring children into direct contact with the brand and allow greater interaction. Additionally, because children are typically frequent video game players and are already familiar with the language of online games, they more easily identify with and form an affinity for the brands advertised. Moreover, since children are newly entering the world of consumption, electronic games is used by advertisers as an important instrument to earn loyalty and educate children for consumption.

Online environments present new revenue streams for businesses. According to Lehdonvirta (2009), offering virtual goods has become a new source of revenue for online consumer services. At the same time, children are more vulnerable to risks related to the online world than other groups of consumers . Research has shown that children have a limited understanding of what marketing is. They do not always recognize marketing contents as such, and are not necessarily able to distinguish marketing content from other content (Eagle & Beaz, 2009). It is children's susceptibility and lack of experience that makes them vulnerable to marketing tactics, and they therefore have a greater need for protection against its pressures and influence.

The Indian gaming industry is worth \$200 million. Of it, around \$70 million is real money gaming and the remaining \$130 million is casual gaming. The macro challenges of the in-game advertising from the advertisers perspective which is closely linked with the micro approach of its viewers or customers has been discussed and analysed but there was much less focus on research towards the children's perspective as customers. Hence, a study was undertaken with the following objectives. In view of the above cited and discussed reviews in the field of In-Game Advertising, the study examines association between Congruity, Integration, Prominence in In-Game Advertising and Interest and Purchase Intention of children

Objectives

1. To examine the influence of match between the game and congruity, integration and prominence of advertising on children.
2. To test the impact of In-game advertising on children.
3. To find out the association between congruity, integration and prominence and purchase intentions of children.

4. To find out the association between parents' socio economic background and children's intensity of In-game advertising.
5. To develop a electronic game to promote positive messages among children Keeping in view of the objectives the following hypotheses are formulated

Hypothesis -

H1: Congruity of IGA relates positively to players' interest in IGA.

H2: Integration of IGA relates positively to players' interest in IGA

H3: Prominence of IGA relates positively to players' interest in IGA

H4: The level of playing online games positively relates to the overall impact of IGA

H5: The association between level of playing online games would be greater in survey than in the experimental study.

Method of Research

For this study, a survey method has been adopted initially by selecting children on random basis from 4 schools in Tirupati town, a semi urban area in Andhra Pradesh. A sample of 303 children was selected randomly. In second phase, an experiment was conducted on children where children were drawn from the survey sample and instructed to play four specific video games and their experience with In -Game advertisements was assessed. Based on the survey, an experimental method is adopted to measure the five total variables i.e. Congruity, Integration, Prominence, Interest and purchase Intentions of several items relevant to In-Game Advertising.

Survey

A survey method was carried out by selecting a sample of 303 children randomly from four different schools which include two private and two government schools in Tirupati, a semi urban area in the state of Andhra Pradesh . A total number 76 children were chosen randomly

from each school who were studying 8th, 9th and 10th class. The children belong to the age group of 12-16 years. A unfilled questionnaire were deleted and thus making a total sample of 303 children.

Experimental Study

Children were grouped into three categories by their class and age. Forty children were chosen from 8th, 9th and 10th class each which makes a total sample of 120. The participants who have shown interest to play from survey were chosen randomly for experimental study. The children included in the experiment study fall in the age group of 12- 15 years and studying 8th, 9th and 10th class. Four online games chosen through pilot study were uploaded in the desktops in a computer lab in schools after taking permission from the school principal . The children were allotted one hour in their schedule to play games for an hour for 30 days. The researcher has instructed the participants to play all 4 games to expose them to all the brands in the game. Right after completing 30 hours of playing ,participants were given a questionnaire to fill in. The children who finally included in the experimental study are in age group of 12-15 years. The principals did not allow 10th class students to play video games for a month as they have board exams. The questionnaires took approximately 20-30 minutes to complete. The children who could not play 30 hours were excluded from experiment study leaving 107 children as a total sample.

Study tool

A structured tool with five point Likert's scale (Strongly agree-SA, Agree-A, Neutral-N, Disagree-D, Strongly disagree-SD) is drafted to find out the Congruity, Integration, Prominence, Interest and Intention of children with regard to several items of In-Game Advertising.

MAJOR FINDINGS

In-Game Advertising has been a great opportunity for the advertisers for promoting their products and services. As majority of the decisions of parents are oriented towards the children's interest and preferences, the in-game advertising has gained a boom in the recent past. Online gaming has become one of the most attractive and entertaining element for children. Inevitably, the children are engaging in this kind of entertainment. Children of the present generation are provided with sophisticated technology, thought provoking ideologies, fast developing environments and lots of freedom, freedom to think, act, and live. Hence a much intensified study is made focused on number of children's online gaming patterns. The discussion is oriented on aspects of in-game advertising especially its Congruity, Integration, Prominence, influence on Interest and Purchase Intentions of children.

A pre-test survey was conducted without specific conditions on the general patterns of children's online gaming behavioural patterns. Later, an experiment study was conducted by selecting specific group of children and they were asked to play four online games in particular. Thereby, the impact of In-game advertising on children was studied in Tirupati, a semi urban area, Andhra Pradesh.

Findings of Pre-test Survey Results (Unconditional Assessment of Children Playing Online Games)

1. In the survey, 60 per cent were male children and 40 per cent were female children. 43 per cent of the children belong to 8th class, 28 per cent were from 9th class and 29 per cent were from 10th class.

2. The study has focused on the occupation of the parents both father and mother. 36 per cent of the children's fathers were engaged in business and 83 per cent children's mothers were home makers. The mode of using internet indicates that 63 per cent of the children use internet through their mobiles and 13 per cent use internet through mobile and tab.
3. The medium or instrument through which the children are engaged in online video games is assessed and the results put forth that 55 per cent of the children play video games via mobiles and 9 per cent play games through mobile and tab and others on different platforms.
4. A detailed data with regard to duration, frequency, number of hours, and level of playing online video games was obtained and it was found out that 20 per cent of the children have been playing video games from more than 6 years and 28 per cent of them were playing video games for the past 1-2 years. Further, 31 per cent of the children were playing video games from less than one year. This indicates that there is a gradual increase in the percentage of children playing video games in recent times.
5. The frequency of playing video games shows that 39 per cent of the children play online video games once a week or less. There was a focus made on the level of playing online games. 44 per cent of the children were playing video games at moderate level.
6. The billboards in the game environment have highest impact on the children with a weighted score of 2039. The same also has an effect on their intention to purchase the product by a weighted score of 5030. The influence of posters in the game environment was ranked second with a weighted score 1966 and purchase intention being 4744 as weighted score. The least influencing ad types were advergames with a weighted score 941 and purchase intention with 2609 scores.

7. Basing on the weighted scores rendered to the priorities of the children it was discovered that children preferred the brand that they are familiar with a weighted score of 2615. Secondly, they prefer to learn the product information displayed in the advertisements with a weighted score of 2231.
8. Children preferred to watch advertisements most were clothes at a weighted score of 3686 followed by toys at a weighted score of 3117. The least preferred advertisements were accessories being ranked at 14th in the list with a weighted score of 1103.
9. The correlation between the gender of the children and their opinion on the congruity of in-game advertisements while playing online games is analyzed and it was found out that there is a correlation between these two. Hence, it can be statistically stated that there is an impact of gender on In-game advertising congruity.
10. The analysis shows that there is no association between gender and overall impact of in-game advertisements on children playing online video games. The prominence, interest, and integration have been nominal with their impact.
11. The association between level of playing online games and congruity was observed at 0.01% level of significance.
12. Interestingly, it was found out that the integration of in-game advertising has a significant relation with the level of playing online video games at 0.01% level of significance and the congruity, integration, prominence, interest of in-game advertising has a significant association with the level of playing online video games by the children as well. The overall impact also indicates the similar results at 0.05% level of significance.

The data that is primarily collected and interpreted has given meaningful and sensible conclusions with regard to children's, attitude towards the in-game advertisements

while they play online video games via various mediums. This assessment was carried out unconditionally. This further has paved way for more implications while collecting the data where children were intentionally asked to play four online video games to carry forward with further investigations. At the experiment study , the children were asked to play video games specifically and their attitude, perception with relevant to in-game advertising congruity, intention, prominence, purchase interest were examined and interpreted accordingly.

Findings of Experiment Study

1. Male children comprise more in number with 82 per cent and female with 18 per cent because girl students were refused to play online games for a month. It show that boys were more interested to play online games than girl students . 73 per cent of the children belong to 8th class, 22 per cent of them are in 9th class, and 5 per cent of them are in 10th class. The principals did not allow 10th class students to involve in experiment study due the board exams.
2. The occupation of the parents determines their attitude, time spent for their family and income levels which indirectly impacts the children's choices. It is identified that 63 per cent of the fathers are involved in business, 25 per cent are government employees, and 8 per cent hold professional jobs and only 5 per cent are without job. Coming to mothers' occupation, 76 per cent are homemakers , 15 per cent of them are in business and 7 per cent are government employees and 3 per cent are in professional jobs.
3. It is important to note the mode of using internet by children under the study and also the mode of playing video games by the children to draw the inferences relevant to in-game advertising. It is interesting to note that 23 per cent of the children use the internet

facility via mobile phones, about 16 per cent of the children have access to internet through multiple devices such as desktop, laptop, mobile and tab.

4. The period of playing video games, frequency of playing video games and time spent (number of hours) playing video games by the children determine the extent of impact of various elements related to in-game advertising. It is revealed that 44 per cent of the children had been spending their time on video games since more than 6 years and 20 per cent for the past 1-2 years on video games.
5. Acknowledgement of parents while the children engage on video games is also one of the crucial elements in this analysis and it was identified that 92 per cent of the children have acknowledged that their parents were aware of it.
6. There are various types of video games available online for the children to engage and its impact varies. In sports games, cricket is most preferred (82 per cent) compared to football (8 per cent) by the children. Among role playing games, smash (69 per cent) has been the children's choice. Among first person shooter games, 60 per cent of the children preferred Nova3 game. In fighting games shadow fight (33 per cent) and boxing (35 per cent) were preferred by the children. In adventure games, temple run is mostly preferred game (72 per cent) of the children. In strategy oriented games, 52 per cent of the children like to play subway surfers. In racing games, 27 per cent of the children favoured cycling game. Among action oriented games Tekken (31 per cent) and WWE (30 per cent) are most liked by children. With regard to puzzle games, 65 per cent of the children preferred Work puzzle, sudoko, candy crush. Among the driving involved games, 51 per cent children desire to play Dr Driving.

7. It was found out that 94 per cent of the children observed advertisements in games played in experiment study.
8. The number of products and brands were listed out as per the response given by the children under study. The extent of observations of the children were categorized into three levels such as category 1(9-10%), category 2(5-7.5%) and category 3 (Below 5%). Children recalled product advertisements like cars(10.75),bikes (9. 8%), clothes(9.5%), shoes (7.4 %) and mobiles(6.6%).
9. Specifically, certain brands and products were recalled by 100 per cent of children. The brands such as Adidas, Nike, skybags, MRF, Audi, Firefox, Fly Emirates, Komani, Colgate, Kukumbara and Vickey, had high recall by the children.
10. The study demonstrates the impact of in-game advertising on the congruity, integration and prominence of in-game advertising by the children who engage themselves on online video games. It is evident from the analysis that the congruity, integration and prominence of in-game advertising were identified similarly by the children while playing online video games. There were no differences identified among these elements as per the children's response.
11. The response of the children towards the congruity, integration, prominence, interest and purchase intention and overall impact of In-Game Advertising is further analysed and found out that 3 per cent of the children agree on congruity, 64 per cent agree on the integration, 60 per cent agree on the prominence of the in-game advertising while playing video games online. With regard to the interest and purchase intention 56 per cent agree on overall impact of In-Game Advertising.

12. In-Game Advertising uses billboards, posters, rope advertisements, graphic locations, advergames, etc to promote products. Through Rank Analysis the weighted scores of each factor is evaluated. It is found out that billboards were the most influencing type and ranked first which impacts the intentions of children to purchase a product. The posters in the game environment has ranked second in its influence on children.
13. The children were influenced by the most familiar brand which ranked first in the order. Price information is ranked second influencing feature that affects the buying behaviour of the children which is followed by product information, celebrity endorsers, etc. in the order.
14. The most frequently purchased product after watching online advertisements is mobile which ranked first in order. Vehicles stand second in the order and followed by accessories. The results imply that children exercise pester power and influence parents decisions in purchase of products in the family.
15. The intensity of playing online games is assessed on the basis of age, gender, occupation of the parents, etc. It was disclosed that gender has a significant impact on the intensity of playing online games.
16. Age is one of the important determinants to assess the intensity of playing online games. It was clear from the analysis that children of younger cohort (13 years) comparatively have high interest (52 per cent) in online video games than children of 15 years. The children of 15 years are in 10th class where their focus is on the academic pursuits. As it was also revealed in prior data analysis that parental acknowledgement is also more among the children while playing video games. This could be also one of the vital factors influencing the intensity of playing video games of older cohort.

17. The study reveals that the fathers' occupation has a very significant impact on the intensity of playing video games. Children's (50 per cent) whose fathers' are in professional jobs have high intensity in playing video games. It was also revealed that there is no significant impact of mothers' occupation on children's intensity of playing online games.
18. An Association between the intensity of playing video games and congruity is assessed and is identified statistically that there is no significant association between the intensity of playing video games and congruity of in-game advertising.
19. There is a significant association between the intensity of playing video games and prominence of in-game advertising. The children with low intensity agree (72 per cent) high with the prominence of in-game advertising.
20. The interest and purchase intention of the children who engage in online video games are considered to be the most determining factor to assess the impact of in-game advertising. The analysis disclosed that there is no significant impact of intensity of playing video games on the interest and purchase intention of the children. The data analysis reveals that there is no significant association between intensity of playing online games and overall impact of in-game advertising. Children with low intensity agree at 59 per cent and children with high intensity agree at 61 per cent with regard to the overall impact of in-game advertising.

It was found out that 94 per cent of the children noticed advertisements in the games in experiment study. On the whole the study indicates the influence of billboards and posters both in the survey and in experiment study with high impact on the children to purchase the product with high weighted scores. Based on the weighted scores rendered to the priorities of the

children, it was revealed that children prefer the brand that they were familiar with and trust with a weighted score of 2615. Secondly, they prefer to learn the product information displayed in the advertisements with a weighted score of 2231. The celebrity endorsement was also given importance by the children in the experiment study .

Children in the survey preferred to watch advertisements related to clothes at a weighted score of 3686 which is followed by toys at a weighted score of 3117. The least preferred products in survey were accessories at 14th in the list with a weighted score of 1103. On the other hand cars and bikes were attracted most in the experiment study. The vehicles advertisements are generally have high action and speed which might have attracted the immediate attention of children while playing games in experiment study. The results imply the children's pester power purchasing decisions of parents in the family. The correlation between the gender of the children and their opinion on the congruity of in-game advertisements was also noticed. The hypotheses proposed that the congruity, integration, prominence, interest of in-game advertising has a significant association with the level of playing online video games by the children is proved as the overall impact also indicates the similar results at 0.05% level of significance. It is identified statistically that there is no significant association between the intensity of playing video games and congruity of in-game advertising in experiment study but found statistically significant results in the survey. The association between the intensity of playing online games and integration in experiment study shows no significant association between the both but significant association was found in survey. There is no significant impact of intensity of playing video games on the interest and purchase intention of the children both in the experiment study and survey.

But the proposed hypothesis of association between the level of playing online games and overall impact of In-Game advertisements would be greater in survey than experimental study is not statistically supported.