A study of "forced-ad resistance" leading to "Skip Ad" on YouTube

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Abstract

The current policy of YouTube forces viewers to watch ads for at least 5 seconds before appearing "Skip Ad" button to continue watching the video. Recent studies show that a large percentage of watchers skip YouTube ads whenever possible but the factors behind such viewers behavior has not been analyzed so far. This paper presents two concepts aiming understanding of YouTube users' behavior and maximizing the ad effectiveness by exploring; "forced-ad resistance" (FAR) and "ad-characteristics resistance" (ACR) factors. Current study aims to discuss to what extent ad-skipping behavior is affected by the influence of each one of these two factors, and to explore the significant impact of four demographic characteristics: age, gender, education, and income. The data were collected from 2531 of YouTube users through an online questionnaire. The validity and reliability of the results were tested by using a set of statistical measures through SPSS. Based on our findings, recommendations for academics and practitioners in the field of advertising are made.

Keyword: YouTube, Skip Ad, advertisement, social media.

1. INTRODUCTION

The number of active internet users in the end of year^{2020} exceeded 4.66 billion, out of a total population of 7.8 billion people [1], including 4.14 billion on social media networks [2], with growth rate reached 9.2% [3]. These statistics clearly indicate the trend towards more engagement in social networking through virtual world [4] [5].

YouTube is the topmost popular video platform for more than 2 billion active users, the second most popular social networks after Facebook, and the second search engine after Google [2]. Therefore, advertisers rely on the YouTube to implement their marketing campaigns, and in need to rationalize the expenditures of advertising budgets which are allocated by investors for this target. So, the worldwide advertising revenues of YouTube during the 3rd quarter of year^{2020} exceeded 5.04 billion USD, compared to 3.8 billion of the same quarter of year^{2019} [2], with an increasing percentage more than 32%. The rule of "The greater number of active users, the more chance to attract new customers" explains the annual increasing continuously of YouTube advertisement activities. Despite the acceptance of this rule, it has a major condition, that there is a question about the effectiveness of forcing ads before/during playing videos. Most audiences avoid forced ads on TV [6], or online platforms [7]. But recently, YouTube follows a current policy of running its ads for at least 5 seconds before allowing the option of ad-skipping, so do users really watch ads after this period, or skip it directly? The answer to this question is not only important for YouTube company, but also necessary for advertisers and investors to evaluate the return on investments directed to ads on the long term of this important platform [5]. The current study discusses the answers to the following questions:

RQ_1: To what extent the YouTube users accept the policy of forcing 5 seconds/or more of ads before/during running the videos they want to show?
RQ_2: To what extent the behavior of ad-skipping impacted by resistance of "forced-ads" and "ad-characteristics"?
RQ_3: Are there significant differences among YouTube users in their behavior towards "skip ad", according to their demographic characteristics?

Rest of the paper is divided into 5 sections, where Section 2 introduces theoretical framework, while method, results, and discussions are made in Section 3, 4 and 5, respectively. Section 6 concludes the papers.

2. LITERATURE REVIEW

2.1. YouTube impact

YouTube was founded in year[2005], then Google bought it in year[2006], and now it represents one of its most important services [2] [8]. This platform presents its services for free of charge and simple access [4], that helped in enabling YouTube to be the most important video-resource of information and entertainment [9]. Therefore, YouTube-ads revenue represents a major share out of different Google revenues, as it reached the following increased weights of annual reports: Year[2017] (7.3% of 110.55 billion USD), Year[2018] (8.1% of 136.36 billion USD), and Year[2019] (9.4% of 160.74 billion USD) [2]. With the continuous rising of internet users' numbers in general, and YouTube users in particular, advertisers have tended to display their ads on this online platform to communicate with their audience at the virtual world. Researchers are increasingly interested in studying the wide impact of YouTube in general, and especially the issues of advertising effectiveness. Figure 1 shows the results of a short meta-analysis that was conducted on WOS databases during the years[2006-2020] to search for scientific articles whose titles included the word “YouTube” and it is constantly increasing since its inception in year[2006] to exceed 2143 scientific papers.

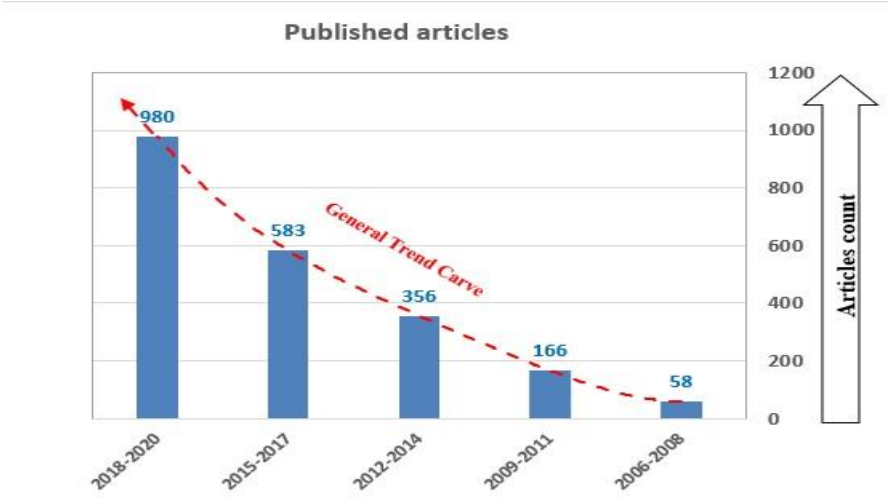

Fig. 1: Published articles included "YouTube" in title, on WOS databases through 2006-2020

YouTube is characterized by a set of advantages that have been behind attracting large audiences of users to the virtual world, the following are four reported characteristics: ease of use for all human generations [10], diversity of interest areas that suit various interests, free viewing of videos on the platform, and making profit opportunities available to customers through their vlogs [3] [11] [12]. Furthermore, YouTube ranks high among online platforms, not only in the number of active users, but also in its customer satisfaction evaluation, which exceeded 75% according to the American Customer Satisfaction Index ACSI for the year[2020] [13].

2.2. YouTube Ad-Skipping (YAS)

Ad-skipping feature allows users to skip viewing the advertisement once the mandatory viewing period ends, and perhaps leave the online platform completely during it. Some previous studies estimate that around 84% of users skip ads within the first 15 seconds of skippable ads [14]. On the other side, previous literature recommends not allowing “Skip Ad” button, to increase advertising effectiveness and maximizing the number of its viewers, and decrease the customers irritation situation by enhancing temporal certainty [15] [14], especially in necessary areas such as health issues [16]. Some researchers suggest that individuals who skip specific ads often are less likely to recall the brand or engage in search of related terms of these ads [15], while other authors suggest that purchases often increase from the advertised brand with the increase in the number of advertisements for that brand, and thus the degree of skipping its ads decreases [6]. A group of studies also concluded that men and younger viewers are more likely to skip long ads, compared to older and female users [10] [7]. Furthermore, entertaining content of ads attracting watchers to complete the skippable ads after ending the mandatory period, through movies, music, or some other ways [17]. On the other side, Statista reports show noticeable changes in the number of active YouTube users according to their interest areas between the years 2018-2020 as follows: gaming (↑) from 7% to 31% and blogs (↑) from 19% to 32%, while music (↓) from 20% To 5% and fun (↓) from 25% to 10% [2]. The need of this subject is more required than before, because forced -ds on YouTube are no longer only 5 seconds long, but rather another ad format called In-Stream commercials is displayed, which extends the mandatory period of displaying to 30 seconds [6].

2.3. Demographic impact on YAS

YouTube users' behaviors are varied in terms of the size and type of their follow-up to the platform's videos, according to their different interests. Most literatures suggest that one or more of demographic characteristics of users are playing significant roles with this behavioral diversity, according to age, gender, education, and income [17] . Regarding to

gender impact, literatures vary in the extent of discussing this effect of gender on the behavior of YouTube users [18]. A group of previous studies ignored this impact on YouTube users and did not refer to gender except in describing the sample [5] [14] [19], while others considered differences between males and females in terms of their interesting areas [20] [3], activities [20] [12], usage average [9], and their engagement with the videos they watch in terms of liking, disliking, sharing, or comments [17] [12]. For example, males are more interested in gaming videos, and more likely to "dislike" videos [12], while females are more interested in lifestyle clips [3]. Men also show a higher level of engagement on the platform, and women show a higher level of empathy [17]. Females spend less time online than males [9] [12], but watch ads for longer [7] [3]. Both males and females tend to skip ads on YouTube [14], but men are more likely to skip ads faster than women [3] [7].

Despite that internet is used by all human generations, but young people are the most active category in the virtual world, especially on social networks including YouTube [10] [16]. Most of what young people watch is funny, challenging and playing clips [16]. The ease of YouTube using is not only to watch videos, but also helps children aged five/or under to create and manage their own influential channels [22], attract followers, and make profits [3] [14]. Results of some studies indicate that youngers tend to see shorter ads than older persons [7]. Perhaps it is expected that there is positive relationship between income and the volume of expenditures, as well as between expenditures and interest in advertising for the purpose of purchase. Therefore, the level of income may also affect viewing/or skipping ads on YouTube, but the results of some studies have not confirmed that [14]. Regarding to the fourth demographic variable is the level of education; YouTube plays a fundamental role in self-learning via the internet. Therefore, it may influence directly/indirectly on the decisions of users and their choices about what they watch or skip [18].

2.4. The independent factors FAR and ACR

Some previous study estimated that at least 84% of YouTube users skip ads whenever they can [14], and 65% of reasons to keep watching skippable ad due to its attractiveness, while the percentage reaches 70% for un-skippable ads [17]. These large percentages of ad skipping raises a question in the field of marketing that concerns both academics and practitioners about the impact of specific two factors on the decisions of YouTube users to skip the advertisement after the completion of the compulsory viewing period or continue watching. First factor is the Forced-Ad Resistance (FAR) which refers to the YouTube users' resistance against the forced ad in general, while second one is their resistance towards the ad due to its characteristics, which is called Ad-Characteristics Resistance (ACR). YouTube does not apply its peer-review system on all published videos, except for copyright complaints, so users can upload and publish any types of videos easily [4]. Therefore, YouTube users may face some problems with the quality and accuracy of content of the videos they watch [20]. That may affect their trust in what is displayed on this platform, and thus their mistrust in its advertisements, even if it is sometimes created and presented by governmental organizations or academic institutions [4]. Audiences decide to watch videos and ads that match their interests, needs, ethics, and which they trust at the same time [17]. Compulsive use happens when users be unable to limit their use on YouTube, that is likely more in case of entertainment objective but less for information searching aim, and their personality characteristics play an important role in that [9].Previous literature indicates a set of tools that attract YouTube users and make them feel entertainment, including attractive presenting, stories, clips, and music [17]. Effective advertising does not only aim to increase the number of views, but also to have a positive impact on the audience, which is called engagement. A group of scholars view engagement term as a multidimensional concept that comprises not only actions but also the aspects of thoughts, feelings, and participation [12]. This perspective of engagement understanding includes several behaviors such as liking, disliking, commenting, reading comments, sharing, and uploading, not only view [11]. The importance of perceived negative impressions towards a forced ad is that users may later avoid all ads of the same brand because this kind of ad annoy them while enjoying the videos, they want [17] [15].

2.5. Research hypotheses

The research questions and its objectives can be covered through the following four hypotheses:

- H_1: Forced-Ad Resistance (FAR) of YouTube users impacts significantly on YouTube Ad-Skipping (YAS).
- H_2: Forced-Ad Resistance (FAR) of YouTube users impacts significantly on their Ad-Characteristics Resistance (ACR).
- H_3: Ad-Characteristics Resistance (ACR) of YouTube users impacts significantly on YouTube Ad-Skipping (YAS).
- H_4: YouTube Ad-Skipping (YAS) is significantly impacted by the demographic characteristics of users according to (H_{4a}: gender, H_{4b}: age, H_{4c}: income, and H_{4d}: education).

3. METHODOLOGY

Current study adopts a practical perspective through several aspects and a set of multiple analyzes to answer the research questions and test its hypotheses. This part of the paper is designed to answer two main questions; how is the research instrument of this study built to be reliable and valid? And how are the study sample data collected to analyze and extract the results? The current research does not follow the study of specific ads as previously done in some

articles, so as not to reach results that are limited only to those selected ads or designed scenarios. Rather, the study relies on an actual measurement of the degree to which users skip ads on YouTube, and the extent of their resistance to forced ads or the characteristics of each ad. This study followed an appropriate method aligned to research objectives in a way that provides higher added value to academicians and practitioners.

3.1 Instrument building and validity

The process of building the research instrument and confirming its validity, passed through five sub-studies. First, listing the previously published research regarding YouTube through preparing a short meta-analysis study that counted 2,143 articles during the years 2006-2020 (Figure 1). Second, exploring measurements and results of the most recent studies about why to watch or skip YouTube ads? Third, managing a group of interviews and discussions with more than 45 of experts and YouTube active users to brainstorming and identifying the research factors and variables more fitted than what listed through the literature review. Fourth, checking the validity of the instrument was tested by a group of experts in the relevant academic and professional fields, and building the pre version of the questionnaire after fulfilling the experts’ recommendations. Fifth, sending the semi-final questionnaire to a sample of 30 volunteers of YouTube active users to know the extent to which its expressions are clear and consistent with the measurement objectives and taking their comments and recommendations in consideration of improving. After that, the final form of research instrument was ready to be sent to the study sample, it included 13 related items, which were grouped in two main factors: FAR (7 items) and ACR (6 items), but one of the seven FAR items was rejected after statistical analysis of the sample date as shown through the results section of this study. The independent variable regarding to YouTube Ad Skipping (YAS), is measured by asking participants about the average ads that they skip out of every 10 ads on YouTube, as shown in table 3.

3.2 Data collection and sampling

Data were collected electronically through an open access link to be more reliable by avoiding any bias from the author. The e-questionnaire was built based on Google-form and its URL was available for three months between Nov. 2020 and Jan. 2021. There are 2531 accepted responses after rejecting 9 responses came from participants never use YouTube. Table 1 shows the demographic characteristics of the research sample.

Table 1:
Sample Characteristics

Characteristics	Items	Frequencies (2531)	Percentage %
Gender	Male	1352	53.4
	Female	1179	46.6
Age	Younger than 18	123	4.8
	18-24	689	27.2
	25-39	619	24.5
	40-55	911	36.0
	56 and older	189	7.5
Education	Postgraduate	850	33.6
	Graduate/Undergraduate	1498	59.2
	Secondary or lower	183	7.2
Income	High live comfortably	59	2.3
	Meet basic needs with little over	1119	44.2
	Just Meet basic needs	1089	43.1
	Do not meet basic needs	263	10.4

4. RESULTS

This part of current study shows the findings of the statistical tests through three main sub-sections: Confirmatory Factor Analysis, Descriptive data, and Hypotheses test results.

4.1 Confirmatory Factor Analysis CFA

Table 2:
Exploratory Factor Analysis EFA

Factors/items	Mean	SD*	SE*	Factor loading	CI on .05 level*	α*	AVE*	CR*
FAR:						.913	.649	.917
1. It exploits me.	4.34	0.618	0.039	.859	4.264 ≤ 4.417			
2. I hate it.	3.89	0.922	0.058	.829	3.776 ≤ 4.004			
3. I do not trust it.	3.65	0.920	0.058	.827	3.536 ≤ 3.764			
4. It wastes my time.	4.11	0.718	0.045	.785	4.021 ≤ 4.199			
5. It coerces me.	4.35	0.564	0.035	.783	4.280 ≤ 4.420			
6. It distracts my focus.	4.54	0.366	0.023	.745	4.495 ≤ 4.585			
ACR:						.879	.619	.906
7. Trivial content.	3.34	.921	0.058	.899	3.226 ≤ 3.454			
8. Unattractive intro.	3.18	0.933	0.059	.817	4.065 ≤ 4.296			
9. Unwanted products.	4.00	0.717	0.045	.808	3.911 ≤ 4.089			
10. Boring repeating.	4.53	0.380	0.024	.754	4.483 ≤ 4.577			
11. Long duration.	3.95	0.674	0.042	.723	3.867 ≤ 4.034			
12. Unethical content.	3.02	.961	0.060	.702	2.901 ≤ 3.139			

* SD: Standard Deviation, CI: Confidence Interval, AVE: α: Cronbach's alpha, Average Variance Extracted, and CR: Composite Reliability.

Current study depended on multi statistical tests to confirm the validity and reliability of collected data, and the fit of the used instrument to measure the research factors and its impacts. Table 2 shows the results of Confirmatory Factor Analysis CFA which was used through this study to confirm that items belong to the measured factor and suitable to measurement purposes [24]. The reliability of collected data was tested by Cronbach's α values which exceeded the recommended value (≥.7) as follows: α for all items together = .895, α for FAR = .913, α for ACR = .879, and α value of items are between .702 - .899, except one of FAR items was rejected due to the result of statistical analysis. This rejected item is "It wastes my money", Mean: 2.51/5, SD: 1.487, SE 0.094, α: .441. All Cronbach's α values which indicates that the scale is well-constructed. Table 2 shows the relations between each group of items with the two factors which were confirmed based on the recommended values of the Average Variance Extracted AVE (≥.5), and Composite Reliability CR (≥.7).

4.2 Descriptive data

Table 3 describes the participants' responses about the average of ads that they skip once the mandatory period ends out of every 10 ads they watch. It shows that 80.7% of respondents choose "Skip Ad" immediately as soon as it appears, in addition to 11.5% of them skip around 7-9 out of 10 ads, which means 92.2% of them are not interested in these ads for some reasons.

Table 3:
Descriptive data of the sample, ad-skipping average out of every 10 ads.

Average of skipping	Frequencies (2531)	Percentage%
Skip all ads	2042	80.7
7-9	290	11.5
4-6	109	4.3
1-3	89	3.5
Null (watch all ads)	0	0

4.3 Hypotheses test results

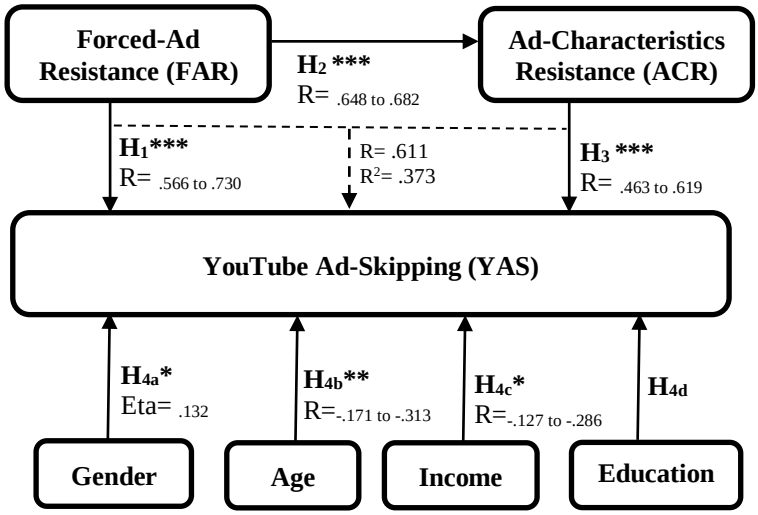

Figure 2: The results structure of research hypotheses

Significant of significance level, (*) $p < .05$, (**) $p < .01$, and (***) $p < .001$.

Based on the results of statistical analysis of the collected data all hypotheses were supported after testing by more than one measure for each hypothesis, as shown by table 4 and figure 2. The test results of H_1 confirm the positive impact of FAR on ACR significantly (R= .566 up to .730, $p < .001$). Also, the results of H_2 testing indicate that FAR have a positive impact on ACR significantly (R= .641 up to .682, $p < .001$). Furthermore, the test results of H_3 confirm that YAS is positively impacted significantly by ACR (R= .463 up to .619, $p < .001$). The statistical results of H_4 confirm that YAS is significantly affected inversely by age (R= -.171 up to -.313), and income (R= -.127 up to -.286). Also, YAS is impacted significantly by gender (Eta= .132), that males are more likely to skip ad more than females. Finally, there is no significant impact on YAS was confirmed by education variable.

Table 4:
Hypotheses test results.

Hypotheses	Path	Statistical tests	Sig. results [a]	Test results
H_1	FAR → YAS	Pearson (.579)	***	Supported
		Spearman (566)	***	
		Gamma (.730)	***	
H_2	FAR → ACR	Pearson (.658)	***	Supported
		Spearman (.682)	***	
		Gamma (.641)	***	
H_3	ACR → YAS	Pearson (.528)	***	Supported
		Spearman (.463)	***	
		Gamma (.619)	***	
H_{4a}	Gender → YAS	Eta (.132)	*	Supported
		One-way ANOVA	*	
H_{4b}	Age → YAS	Kruskal-Wallis	*	Supported
		Pearson (- .171)	**	
		Spearman (- .198)	**	
		Gamma (- .313)	***	
H_{4c}	Income → YAS	Kruskal-Wallis	*	Supported
		Pearson (-.127)	*	
		Spearman (-.130)	*	
		Gamma (-.286)	*	
H_{4d}	Education → YAS	Kruskal-Wallis	Null	Not supported
		One-way ANOVA	Null	
		Pearson	Null	
		Spearman	Null	
		Gamma	Null	

(a): Significant of significance level, (*) p < .05, (**) p < .01, and (***) p < .001.

5. DISCUSSION

Current study provides a major contribution by introducing the two terms of FAR and ACR and examine their impact on YAS, which is expected to lead to better understanding of ad skipping on YouTube platform. Statistical results indicate that FAR has a positive impact significantly on both ACR and YAS, which means that users' resistance against forced-ad leads to ad-skipping and decreasing the evaluation of presented ad.

Most previous studies just compared the interests of YouTube users according to their demographic characteristics, while only a few articles that focused on examining the significant differences among them users in YAS. One more added value of this study is that test findings of the effect of demographic characteristics on YAS, as follows. The positive impact of gender on YAS is supported by this study with confirming significant differences between males and females, that men are more likely to skip ad than women, that is consistent with the suggestions of [21] [20] [3] [7]. Regarding to age impact, results indicate to a significant reverse relation between age and YAS, which means that younger users are lower likely to skip ad on YouTube, this result agree with the findings of [7]. On the same context, the results support the significant reverse correlation between users' income and their YAS, that means lower ad-skipping is expected from users who have higher income, that is consistent with the results of [14]. But results did not support the significant impact of education on YAS, that disagree with the suggestions of [18].

This research helps in better understanding the ad-skipping behavior of most YouTube users, and maximizing the ad-effectiveness and its returns for both marketers, advertisers, and investors. It also supports the inevitability of reconsidering the forced-ad policy that YouTube is increasingly adopting and indicates the need to avoid its negative effects on users which may lead to de-marketing against the long-term interests of both advertisers and YouTube together. Marketers, advertisers, and other stakeholders of YouTube ads should take all these results in consideration during the planning and implementing of their future advertising campaigns to achieve more effectiveness.

6. CONCLUSION

One of the major academic and practical contributions of this study is to shed light on the importance of two key terms for those interested in the advertising industry: (1) Forced-ad resistance FAR, and (2) Ad-characteristics resistance ACR. The study indicated their significant correlation between them, in addition to their impact on YouTube Ad Skipping YAS, which supports the negative influence of forced ad on all beneficiaries and stakeholders. In other words, this article emphasized the importance of the ad-effectiveness besides to the criterion of ad-efficiency, by taking quantitative and qualitative indicators into account during planning, implementation, and evaluation of advertising activities. Although forced ads may increase the number of views on the short term, but they lead to unwanted results on the long term, not only against forced ads and advertisers, but also against YouTube itself. So, YouTube's insistence towards this mode of advertisement with ignoring of users' dissatisfaction about them, it is very likely that customers will switch to other alternative platforms as a logic result.

Our study recommends considering demographic characteristics among YouTube users in their behavior of YAS. It confirms that both age and income have a significant reverse impact on YAS, and there are significant gender differences among users, while results do not support the significant impact of education variable. The study concluded that its findings should be paid attention during planning of any advertising campaign targeting YouTube users by avoiding negative impacts of this ad-type on the long term and noted that nearly 92% expressed their rejection for this type of ads in general despite the difference of their gender, age, income, and education.

7. LIMITATIONS AND FUTURE RESEARCH

This paper just focused on YouTube-ads skipping and did not discuss all other influences on users' behavior. Thus, the current study can inspire future researchers to measure long term impacts of both FAR and ACR on advertising effectiveness through different social media platforms.

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