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(Work in Progress)

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ABSTRACT

Several YouTubers have become an important channel for ad spending, as an influential part of the internet celebrity economy. Thus, this paper has presented a two-stage integrated hierarchical structure of evaluation for analyzing the evaluation factors of user attention to a sponsored ad by a YouTuber. That is, we use the AHP method analyze the key factors that influence the success of sponsored ads by YouTubers in attracting users. Specifically, "C1.3 Attractive Contents", "C6.4 Curious", and "C4.2 Personality" were the three highest key factors in the priority of evaluation factors of consumers' attention to a sponsored ad by a YouTuber.

Keywords: social media, analytic hierarchy process, sponsored Ads, YouTube.

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INTRODUCTION

Social media has grown explosively over the last decade, and another burst of expansion is in full swing involving some digital streaming media. Social media refers to any website that provides a network of people with a virtual space to make connections. That is to say, social media is all about making a personal connection between audience and brand. YouTube is one of the most popular social media websites. According to Alexa Internet, a web traffic analysis company, one billion hours of content are watched on YouTube every day and it is currently ranked as the second most popular website in the world. Users not only want to build connections with other persons but also establish themselves as authorities on YouTube. Thus, a YouTuber is a kind of internet celebrity who has gained popularity through the video-sharing website, YouTube.

In the modern age where the volume of new information explodes every minute, we have to admit a truth: customers' trust in ads is falling ever lower. Most people only trust recommendations from people they themselves know or trust. Hence, it is crucial to develop the strategy of influencer marketing. Several YouTubers have become an important channel for ad spending, as an influential part of the internet celebrity economy. Significantly, some YouTubers have corporate sponsors, who pay for product placement within videos instead of a separate online ad. This impacts on what audiences buy and think. Therefore, to find the key factors of sponsored ads by YouTubers that influence consumers' attention has become a necessary and important subject of research. Existing research on social media sellout indicates that YouTubers are regarded as opinion leaders. They also cooperate with brand sponsors to advance products on YouTube (Schwemmer & Ziewiecki, 2018). On the other hand, users are indirectly and directly influenced by multiple criteria when purchasing products online. A study of users' perceptions of YouTubers in Turkey shows that the factors of video perception, content sharing, and perceived benefit influence users' purchase decisions (Gümüş, 2018). However, a substantial amount of research has focused on evaluating the effect of YouTube ads to discuss purchase intentions (Dehghani *et al.*, 2016). This ignores the problem and charm of the internet celebrity. Thus, it is necessary to include the specific characteristics of each YouTuber when considering the factors influencing consumer attention to sponsored ads by YouTubers.

Analytic Hierarchy Process (AHP) is a method to discover the key factors influencing a complex decision-making issue. In practice, the AHP method has been applied to numerous fields and aspects of daily life involving decision-making problems, including, for example, evaluating supply chain competitiveness, selecting appropriate software for particular engineering courses, risk management, sustainable construction in construction management, and so on (Verma & Singhal, 2018; Dorado *et al.*, 2014; Darko *et al.*, 2018). The current paper, taking account of the crucial role YouTubers play in providing entertainment and information to Millennials, seeks to focus on the key factors that influence users' attention in viewing videos of sponsored ads on YouTube in Taiwan. That is, we use the AHP method analyze the key factors that influence the success of sponsored ads by YouTubers in attracting users. Section 2 discusses and summarizes the existing research about the AHP method and the idea of influencer marketing. Section 3 details the proposed hierarchical structure of evaluation for attention factors of consumers with regard to sponsored ads. Section 4 demonstrates the priority of key factors via the evaluation of weight. Finally, we discuss the findings and make some specific suggestions regarding sponsored ads.

LITERATURE REVIEW

Analytic Hierarchy Process

Among decision-making methods and studies, the Analytic Hierarchy Process (AHP) can be regarded as a classic decision-making method. This method can structuralize complex decision-making issues into a hierarchical evaluation model in which all elements

on each level are independent (Saaty, 1977). To ensure the consistency of various criteria, it provides goal weights, guidelines, and alternatives (Mahdavi *et al.*, 2008). The method proceeds by generating a pairwise comparison matrix through a quantitative data analysis to calculate an eigenvalue. Following this, the strength or weakness of each matrix is evaluated via the eigenvalue. This process has been widely applied in situations characterized by uncertainty such as setting priorities, predicting outcomes, risk assessment, conflict resolution, and so on. The AHP process is depicted in Figure 1.
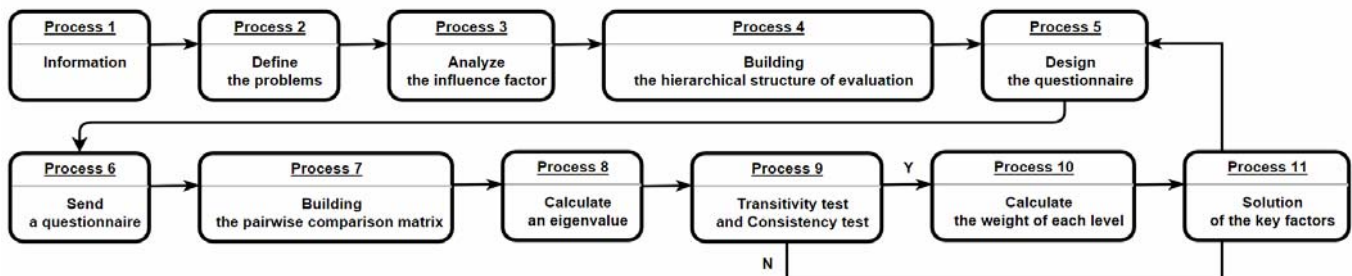
Figure 1: The AHP process

Influencer Marketing

The term "internet celebrity" could almost be called one of the most popular keywords of 2018, and influencer marketing is gradually becoming one of the most influential subjects in marketing today. The main tasks of influencer marketing are creating a relationship between a brand or product and potential customers through a key influencer (Brown & Hayes, 2008). In addition, it seeks to recommend brands and products to a wider audience through the public influence of internet celebrities. Influencer marketing has also become one of the internet marketing strategies most frequently used to promote product reputation in recent years. It goes without saying that any person with a fan base on the internet represents significant business opportunities. This is because customers prefer to trust opinions expressed on social media rather than information about the product obtained directly from a brand or company. Generally, influencer marketing consists of five steps, as shown in Figure 2.
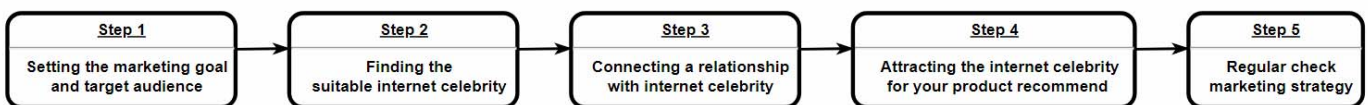
Figure 2: The Five Steps of Influencer Marketing

RESEARCH MODEL

In this section, based on related literature and the background of YouTubers, we apply AHP method to analyze the factors influencing the attention of consumers to YouTubers' sponsored ads.

Selection of Dimensions and Factors

YouTube is a video-sharing website that offers users the opportunity to upload, view, comment on videos, subscribe to other users, and so on. Most of the content on YouTube is uploaded by individuals. In other words, YouTube caters to any form of user-generated video content, made available publicly or privately on that service. Thus, the quality of video content seems to be particularly important. On the other hand, to gain good publicity and improve product awareness, sponsors have begun to involve internet celebrities in product marketing. In view of these facts, considering the content and characteristics of videos, we classified user-concerned factors into six dimensions, namely, "D1. The Story", "D2. Visual Experience", "D3. Auditory Experience", "D4. Role", "D5. Image", and "D6. Emotion". Further, through expert consultation and background literature, we suggested 24 sub-factors under the 6 evaluation dimensions as shown in Table 1. As defined and explained below, the six evaluation dimensions measure how the video.

Define of Evaluation Dimensions

D1. The Story: refers to users' feeling a resonance with the content and plot of the video of the sponsored ad.
D2. Visual Experience: refers to the users' visual experience of watching video content of the sponsored ad.
D3. Auditory Experience: refers to the users' auditory experience of watching video content of the sponsored ad.
D4. Role: refers to users' feeling of resonance with the expression of characteristic roles in video content of a sponsored ad.
D5. Image: refers to connection felt between users and brand through watching the video content of the sponsored ad.
D6. Emotion: refers to users' emotions generated by watching the video content of the sponsored ad.

Table 1: Definitions of Evaluation Factors and Sub-Factors

Dimension	Sub-Factors	Definition
D1. **The** **Story**	C1.1 Creative Contents	As for a customer, watching the video of the sponsored ad could redefine connections with people and promote thinking out of the box.
	C1.2 Topicality of Contents	As for a customer, watching the video of the sponsored ad could generate discussions in various areas.
	C1.3 Attractive Contents	As for a customer, watching the video of the sponsored ad could attract more users' attention.
	C1.4 Dramatic Content	As for a customer, watching the video of the sponsored ad could create the experience of a dramatic plot.
	C1.5 Novel Contents	As for a customer, watching the video of the sponsored ad could feel novel and unique.
	C1.6 Purpose of Contents	As for a customer, watching the video of the sponsored ad could express the goal of an ad.
D2. **Visual** **Experience**	C2.1 Colorful Color	As for a customer, watching the video of the sponsored ad could feel bright and full of contrast.
	C2.2 Special Effects	As for a customer, watching the video of the sponsored ad could feel true and not unexpected.
	C2.3 Textual Description	As for a customer, watching the video of the sponsored ad could express an idea or concept more clearly.
	C2.4 Length of Time	As for a customer, watching the video of the sponsored ad could successfully build in a connect to a customers' attention at a valid time.
	C2.5 Angle of Shot	As for a customer, watching the video of the sponsored ad could control a characteristic of the ad via the angle of shot.
D3. **Auditory** **Experience**	C3.1 Sound Effects	As for a customer, watching the video of the sponsored ad could give the experience of surround sound or sound of presence.
	C3.2 Special Language	As for a customer, watching the video of the sponsored ad could resonate from the heart, thanks to a special language, such as an aboriginal language.
	C3.3 Mood Music	As for a customer, watching the video of the sponsored ad could make a deeper impression via background music.
D4. **Role**	C4.1 Appearance	As for a customer, watching the video of the sponsored ad could showcase the appearance of a person who could attract users' attention.
	C4.2 Personality	As for a customer, watching the video of the sponsored ad could showcase a personality of role or a clear-cut stand.
	C4.3 Acting	As for a customer, watching the video of the sponsored ad could showcase natural, vivid expression, and sincerity of acting.
D5. **Image**	C5.1 Brand Relationship	As for a customer, watching the video of the sponsored ad could promote a connection between the brand and people.
	C5.2 Product Trust	As for a customer, watching the video of the sponsored ad could build trust towards the product.
D6. **Emotion**	C6.1 Pleasant	As for a customer, watching the video of the sponsored ad could create a pleasant mood.
	C6.2 Touching	As for a customer, watching the video of the sponsored ad could create a touching mood.
	C6.3 Reluctant	As for a customer, watching the video of the sponsored ad could create a reluctant mood.
	C6.4 Curious	As for a customer, watching the video of the sponsored ad could create a curious mood.
	C6.5 Surprised	As for a customer, watching the video of the sponsored ad could create a mood of surprise.

Establishment of Evaluation Hierarchical Framework

Our purpose was to analyze the priority of key factors for evaluating consumers' attention to YouTubers' sponsored ads. Therefore, based on this decision purpose, the hierarchical structure of evaluation is depicted in Figure 3.
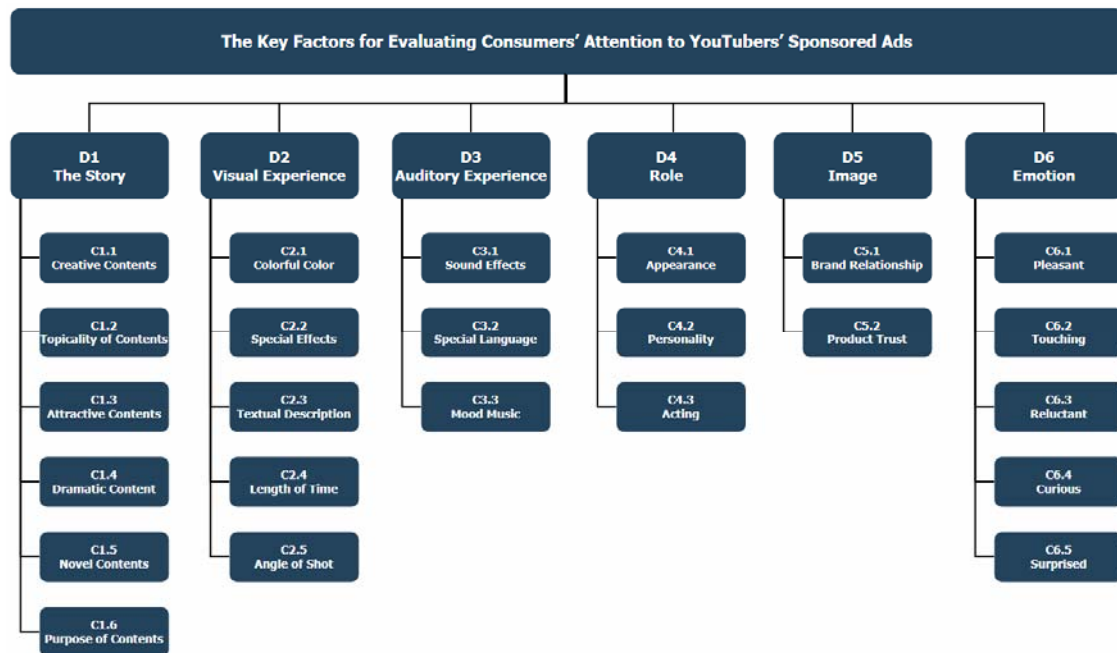
Figure 3: Hierarchical Structure of Evaluation

RESULT ANALYSIS

Descriptive Statistics Analysis

In this study, we interviewed 10 users and invited them to reply to a questionnaire regarding the factors attracting customers' attention to a sponsored ad by a YouTuber. To ensure the effectiveness of each completed questionnaire, we conducted a transitivity test and a consistency test for verifying the responses. The demographic information of questionnaire participants is depicted in Table 2.

Table 2: Demographic Information of Participants

Profiles	Sample composition	Count	Percentage
Gender	Male	5	50.0%
	Female	5	50.0%
Age	21-25	4	40.0%
	26-30	5	50.0%
	31-35	1	10.0%
Education	College	3	30.0%
	Graduate school	7	70.0%
Job	Student	2	20.0%
	Service Industry	1	10.0%
	Information Industry	4	40.0%
	Administration Industry	3	30.0%

Besides, the users' experiences in using YouTube services to watch sponsored ads were queried. Also, the three most popular YouTubers (TGOP, Tsai A-Ga, AmoGood) were queried for and included in our statistical results. The statistics results are depicted in Table 3.

Table 3: Users' Experiences of Using YouTube Services

Item	Type	Count	Percentage
The average time using YouTube for a day	Less than 1 hour	4	40.0%
	Between 1 hour to 3 hours	4	40.0%
	Between 3 hours to 5 hours	2	20.0%
The average time watching sponsored ad for a week in YouTube	Less than 1 hour	1	10.0%
	Between 1 hour to 3 hours	5	50.0%
	Between 3 hours to 5 hours	1	10.0%
	Between 7 hours to 9 hours	1	10.0%
	More than 9 hours	2	20.0%
Have you watched the sponsored ad by YouTuber	TGOP	10	100.0%
	AmoGood	7	70.0%
	HowHow	6	60.0%
	Tsai A-Ga	6	60.0%
	Ray Du English	6	60.0%
	Saint	4	40.0%
	WawaKu	3	30.0%
	Kyon	2	20.0%
	Others	9	90.0%

Note: The others refers to the other YouTubers about ninety percent, including Dodo, Anjou, Xiaoyu, Jasper, CROWD, Louis, ILLY and LEAN, Joeman, A-han.

Evaluation of weight

Our questionnaire was designed to elicit a pair-wise comparison matrix in the 1-9 scale to obtain each question factors' priority. All the weights of the questionnaire passed the transitivity test and consistency test, with values of less than 0.1 (Saaty, 1990). In addition, questionnaire participants were requested to make a paired priority comparison for the six dimensions and 24 sub-factors. Finally, all the questionnaire scores were put through the AHP analysis to obtain the relative weights of each dimension and sub-factors. As shown in Table 4, "D1. The Story"(0.342) had the highest weight value in the dimension hierarchy.

Table 4: Weight of Dimensions and Factors

Dimension	Relative Weights	Sub-Factors	Relative Weights
D1. **The** **Story**	0.342 (1)	C1.1 Creative Contents	0.141
		C1.2 Topicality of Contents	0.141
		C1.3 Attractive Contents	0.264
		C1.4 Dramatic Content	0.160
		C1.5 Novel Contents	0.149
		C1.6 Purpose of Contents	0.144
D2. **Visual** **Experience**	0.151 (3)	C2.1 Colorful Color	0.099
		C2.2 Special Effects	0.084
		C2.3 Textual Description	0.164
		C2.4 Length of Time	0.285
		C2.5 Angle of Shot	0.367

Table 4: Weight of Dimensions and Factors (cont.)

Dimension	Relative Weights	Sub-Factors	Relative Weights
D3. **Auditory** **Experience**	0.052 (6)	C3.1 Sound Effects	0.455
		C3.2 Special Language	0.086
		C3.3 Mood Music	0.459
D4. **Role**	0.150 (4)	C4.1 Appearance	0.161
		C4.2 Personality	0.433
		C4.3 Acting	0.406
D5. **Image**	0.097 (5)	C5.1 Brand Relationship	0.360
		C5.2 Product Trust	0.640
D6. **Emotion**	0.209 (2)	C6.1 Pleasant	0.291
		C6.2 Touching	0.058
		C6.3 Reluctant	0.054
		C6.4 Curious	0.349
		C6.5 Surprised	0.248

Priority of Evaluation Factors

Through the pair-wise comparison matrix, we obtained the relative weights of factors in the whole hierarchical structure of evaluation. Subsequently, for the purpose of the essential ranking of all evaluation factors, we calculated the absolute weights by multiplying the relative weights of each dimension and sub-factors. This indicated that "C1.3 Attractive Contents"(0.090), "C6.4 Curious"(0.073), and "C4.2 Personality"(0.065) were the three highest key factors in the priority of evaluation factors of consumers' attention to a sponsored ad by a YouTuber. The priority of evaluation factors are depicted in Table 5.

Table 5: The Priority of Evaluation Factors

Evaluation factors	Absolute Weights	Priority
C1.1 Creative Contents	0.048	13
C1.2 Topicality of Contents	0.048	12
C1.3 Attractive Contents	0.090	1
C1.4 Dramatic Content	0.055	8
C1.5 Novel Contents	0.051	10
C1.6 Purpose of Contents	0.049	11
C2.1 Colorful Color	0.015	20
C2.2 Special Effects	0.013	21
C2.3 Textual Description	0.025	16
C2.4 Length of Time	0.043	14
C2.5 Angle of Shot	0.055	7
C3.1 Sound Effects	0.023	19
C3.2 Special Language	0.004	24
C3.3 Mood Music	0.024	18
C4.1 Appearance	0.024	17
C4.2 Personality	0.065	3
C4.3 Acting	0.061	6

Table 5: The Priority of Evaluation Factors (cont.)

Evaluation factors	Absolute Weights	Priority
C5.1 Brand Relationship	0.035	15
C5.2 Product Trust	0.062	4
C6.1 Pleasant	0.061	5
C6.2 Touching	0.012	22
C6.3 Reluctant	0.011	23
C6.4 Curious	0.073	2
C6.5 Surprised	0.052	9

CONCLUSIONS

This paper has presented a two-stage integrated hierarchical structure of evaluation for analyzing the evaluation factors of user attention to a sponsored ad by a YouTuber. The analysis of six evaluation dimensions shows that "D1. The Story" (0.342), "D6. Emotion" (0.209), and "D2. Visual Experience" (0.151) received the highest priority among the six evaluation dimensions. It is worth mentioning that "D3. Auditory Experience" (0.052) received the lowest priority. Besides, the analysis of sub-factors through the AHP method indicated that "C1.3 Attractive Contents" (0.090), "C6.4 Curious" (0.073), and "C4.2 Personality" (0.065) were the most significant factors for attracting users' attention to a sponsored ad. On the other hand, factor "C3.2 Special Language" (0.004) was found to be at the bottom of all the sub-factors. Specifically, people watch a video on YouTube for nothing more than relaxation and entertainment. That is why users only noticed the content and plot of the sponsored ad video, even if it used canned music. Further, according to the priority of sub-factors, in comparison with naturalness and sincerity of acting (C4.3 Acting), "C5.2 Product Trust" is what drew more user attention in the whole evaluation hierarchical model. Our results reflect the available facts. Presently, more users are choosing to trust information about products received from others on the internet instead of ads on TV or information coming from brands or companies.

In view of these facts, we suggest that YouTubers should explore more techniques for diversified photography or camera work in the future, including stills, pans, jump-cuts, montages, and so on so that users can become more absorbed in YouTubers' sponsored ads. On the other hand, based on our hierarchical structure, YouTubers should also target specific customers and increase users' curiosity for an ad. Finally, to create a win-win situation, YouTubers and suppliers of products should work towards the highest quality of video content and excellent service to garner users' attention.

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