

# The Influence of Information Attributes and Recipient Characteristics on the Process of Information Dissemination

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## **Abstract:**

With the sustained economic and social development, the deep integration of the Internet and user life, and the prosperity and growth of the we media industry, how to carry out effective marketing, shape merchandise and make the value concept of brands and products deeply rooted in the hearts of the people has become the focus of current marketing activities. By studying the two key factors of information attribute and recipients in the process of communication, and through descriptive statistics, this paper tries to find the information attribute that can most promote users to give positive feedback in Internet communication activities, provide suggestions for improving the efficiency of information communication, and classify according to the different characteristics of sink by means of factor analysis, cluster analysis, correlation analysis and regression analysis, Get the requirements of different types of users for information characteristics and the necessary factors for positive feedback, so as to provide suggestions for enterprises to set push for different specific users.

**Keywords:** *Information interaction, Positive affect, Mobile communication network.*

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## 1. INTRODUCTION

The concept of relationship marketing urges operators to increase the output of information to users, and the strategy of relationship marketing has been deepened in recent years, Manisha Mathur's findings show that social media marketing capabilities enable firms in mitigating the adverse impact of cybersecurity risk in declining firm reputation and value [1]. At the same time, many companies' Information Push Based on social media is also increasing. However, it is worth considering whether this process can effectively input marketing information to users.

Yin Zhou's findings indicate that a moderate level of relational embeddedness is optimal, but very closely embedded relationships are detrimental to partnerships as they induce more opportunism [2]. This means that as many companies carry out relationship marketing, there are certain restrictions on the dissemination of information. Previous scholars have done a lot of research on the influencing factors of information dissemination. Yao Yao 'results verify the propagation threshold and show that the different relationships between information have different impact on information propagation.[3] Guanghui Wang further explained on this basis the traditional information characteristics (information content) and information source attributes (user-level factor) are not the only key factors affecting information dissemination, while the information channel (network structure) is worth more consideration. [4] The former studies mostly study information dissemination from specific communication situations, which is limited by the characteristics of different groups. In order to find the most essential factors affecting people's information acceptance, we choose Hovland's model [5]. Which divided factors affecting communication and persuasion into three categories: information source; communication content; and information receiver.

## II. THEORY FOUNDATION AND METHODOLOGY

### 2.1 Variable Design

**TABLE I. Independent variable design**

DEPENDENT VARIABLE	DEFINITION	DECOMPOSE	VALUE	BEHAVIORAL INTERPRETATION
NETWORK INFORMATION DISSEMINATION EFFECT Y	invalid	Rebellious	1	Reporting, hacking and customs clearance
		ignore	2	Unread
	Effective	accessible	3	Read
		interaction	4	Like, collect and reward
		increment	5	Forward

**TABLE II. Description and statistics of objective attributes of information**

**MODIFIED QUANTITATIVE DESCRIPTIVE ANALYSIS**

QUESTION	N	MI N	MA X	MEAN VALU E
WHEN THE INFORMATION YOU RECEIVE IS TRUE AND RELIABLE (THERE IS EVIDENCE), HOW WILL YOU DEAL WITH THIS INFORMATION	42 6	1	5	3.8
WHEN THE INFORMATION YOU RECEIVE IS HIGHLY ACCURATE (OFFICIALLY RELEASED BY THE AUTHORITY), HOW WILL YOU DEAL WITH THIS INFORMATION	42 6	1	5	3.71
WHEN YOU RECEIVE INFORMATION ABOUT RECENT HOT TOPICS, HOW DO YOU DEAL WITH THIS INFORMATION	42 6	1	5	3.28
WHEN THE INFORMATION YOU RECEIVE IS COMPLETE AND COHERENT, HOW DO YOU DEAL WITH IT	42 6	1	5	3.26
WHEN YOU RECEIVE A MESSAGE THAT IS RELATED TO YOU, HOW DO YOU DEAL WITH IT	42 6	1	5	3.22
WHEN YOU RECEIVE A MESSAGE THAT MATCHES THE PICTURE AND TEXT, WHAT WILL YOU DO WITH THIS MESSAGE	42 6	1	5	3.12
WHEN YOU RECEIVE AN EYE-CATCHING MESSAGE IN THE SUMMARY, WHAT WILL YOU DO WITH IT AFTER READING IT	42 6	1	5	2.96
WHEN YOU RECEIVE AN EYE-CATCHING MESSAGE WITH A TITLE, WHAT WILL YOU DO WITH IT AFTER READING IT	42 6	1	5	2.84
NUMBER OF VALID CASES (IN COLUMNS)	42 6			

According to the TABLE I and TABLE II, people's attitudes are also different for different objective attributes of information. When the information is true and reliable, it is easier for users to actively interact, including reads, likes, favorites, and rewards. The average score of actions taken by users with high accuracy is 3.71, which is a positive positive response. The above objective attributes are sorted according to the user behavior scores. They are authenticity, accuracy, hot topics, completeness, Relevance, graphic and text match, abstract attracts attention, and title attracts attention. When the title attracts attention, the average score

is 2.84, indicating that consumers' attitudes towards information processing of the title attracting attention are mostly between the unread and read states. Headline attracting attention is not a key factor that affects users' positive reactions. Only the information is true and accurate can prompt people to make positive interactions such as likes and forwards.

**TABLE III. Objective attribute description statistics of information (information source)**

<b>MODIFIED QUANTITATIVE DESCRIPTIVE ANALYSIS</b>				
	<b>N</b>	<b>MIN</b>	<b>MAX</b>	<b>Mean Value</b>
WHEN THE NUMBER OF WORDS RECEIVED IS AS FOLLOWS, YOUR PROCESSING METHOD IS - WHEN THE MESSAGE IS LESS THAN 1000 WORDS	426	2	5	3.19
WHEN THE MESSAGE IS 1000-3000 WORDS	426	1	5	2.71
WHEN THE MESSAGE IS MORE THAN 3000 WORDS	426	1	5	2.33
NUMBER OF VALID CASES (IN COLUMNS)	426			

As we can see from the TABLE III, when the number of information words is less than 1000 words, users tend to interact actively and more like to read. However, when number of words exceeds 3000, the effect of active interaction is the worst.

**TABLE IV. Information source list**

<b>MODIFIED QUANTITATIVE DESCRIPTIVE ANALYSIS</b>				
	<b>N</b>	<b>MIN</b>	<b>MAX</b>	<b>MEAN VALUE</b>
WHEN THE INFORMATION COMES FROM GOVERNMENT DEPARTMENTS AT ALL LEVELS	426	1	5	3.53
WHEN THE INFORMATION COMES FROM MEDICAL TREATMENT, UNIVERSITIES, AND PUBLIC WELFARE INSTITUTIONS	426	2	5	3.52
WHEN INFORMATION COMES FROM INDIVIDUALS OR NON-PROFIT	426	1	5	2.91

ORGANIZATIONS				
WHEN THE INFORMATION IS A PERSONAL BUSINESS SOURCE	426	1	5	2.63
NUMBER OF VALID CASES (IN COLUMNS)	426			

TABLE IV shows that, when the information comes from government departments and non-profit organizations, users are more inclined to make positive interaction behavior. And the information comes from personal sources, users' positive interaction willingness decreases. Among them, the interaction effect of personal non-profit organizations is higher than that of personal commercial sources.

## 2.2 Variable aggregation

Firstly, through factor analysis, the attributes such as relevance, integrity, title attraction, word number and source are combined into a total score variable to describe the evaluation of the overall positive objective attribute information.

**Table V. Kmo and bartlett test**

<b>KMO and Bartlett test</b>				
KAISER-MEYER-OLKIN MEASURE OF SAMPLING ADEQUACY.				0.607
BARTLETT'S TEST OF SPHERICITY	TEST	OF	Approx. Chi-Square	367.183
			df	36
			Sig.	0

It can be seen from the above Table V, that the kmo value is over 0.6, indicating that the data is suitable for factor analysis, and the significance is less than 0.05, indicating that the result of factor analysis is reliable.

**TABLE VI. Composition matrix**

<b>ROTATED COMPONENT MATRIX.</b>	
	<b>COMPONENT</b>
	1
WHEN YOU RECEIVE AN EYE-CATCHING MESSAGE WITH A TITLE WHAT WILL YOU DO WITH IT AFTER READING IT	.559

WHEN YOU RECEIVE AN EYE-CATCHING MESSAGE IN THE SUMMARY, WHAT WILL YOU DO WITH IT AFTER READING IT	663
WHEN YOU RECEIVE INFORMATION FROM A COMMERCIAL SOURCE, HOW DO YOU DEAL WITH IT	326
WHEN YOU RECEIVE A MESSAGE THAT IS RELATED TO YOU, HOW DO YOU DEAL WITH IT	393
WHEN YOU RECEIVE A MESSAGE THAT MATCHES THE PICTURE AND TEXT, WHAT WILL YOU DO WITH THIS MESSAGE	446
WHEN THE INFORMATION YOU RECEIVE IS HIGHLY ACCURATE (OFFICIALLY RELEASED BY THE AUTHORITY), HOW WILL YOU DEAL WITH THIS INFORMATION	531
WHEN THE INFORMATION YOU RECEIVE IS COMPLETE AND COHERENT, HOW DO YOU DEAL WITH IT	304
WHEN THE INFORMATION YOU RECEIVE IS TRUE AND RELIABLE (THERE IS EVIDENCE), HOW WILL YOU DEAL WITH THIS INFORMATION	482
WHEN YOU RECEIVE INFORMATION ABOUT RECENT HOT TOPICS, HOW DO YOU DEAL WITH THIS INFORMATION	499

In TABLE VI, the above objective attributes are combined into a variable, namely objective attribute score. In this variable, the proportion of abstract attracting eyeballs to extracted components is the highest, followed by title attracting eyeballs and high accuracy

**TABLE VII. Analysis of related factors affecting the interaction score**

<b>PEARSON CORRELATION</b>		
<b>INDEPENDENT VARIABLE</b>	<b>DEPENDENT VARIABLE [TOTAL SCORE]</b>	<b>P-VALUE</b>
	<b>CORRELATION COEFFICIENT</b>	
NUMBER OF YOUR MOST FREQUENTLY USED INSTANT MESSAGING SOFTWARE FRIENDS	0.071	0.145
THE GROUPING OF YOUR FRIENDS	.137**	0.005
THE TIME OF READING INFORMATION ON YOUR MOBILE PHONE	-.135**	0.005

GENDER	-0.085	0.079
EDUCATION	0.071	0.143
AGE	-0.009	0.847
REGION	-0.023	0.639
AVERAGE MONTHLY INCOME	-0.02	0.678
MARITAL STATUS	0.018	0.709
OCCUPATION TYPE	-0.076	0.117

It can be seen from the a TABLE VII that the total score is significantly correlated with "friend grouping" and "in which time period to receive information" at the level of 0.01, and has no correlation with the other factors such as "the number of communication software", "education", "age", "income", "region", "marriage", "occupation". When people with different income face the same positive information, their response has nothing to do with occupation. The information interaction, the total score, is related to the time period in which information is received and the grouping of friends, which is positively related to the grouping of friends. The question codes of grouping of friends from small to large are: no grouping, 1 ~ 3 grouping, 4 ~ 6 grouping, 7 ~ 9 grouping, 10 grouping and more, that is, the more groups, people tend to give more positive interaction in the face of positive messages. The interaction score has a negative correlation with the time period of information reception. The codes of information reception from small to large are: 8:00-11:00, 11:01-13:30, 13:31-17:00, 17:01-21:00, 21:01-7:59. Watch at any time. This shows that the earlier the time period of receiving information, the more inclined to give a more positive interactive response to positive information. The later the time, even if it is positive information, users tend to give a less positive response.

### III. CONCLUSIONS AND RECOMMENDATIONS

First, among many objective factors, accuracy and authenticity are the key factors to promote the information receiver to make a positive response. After data analysis, we can find that for information with different objective attributes, users have different ways of interaction and response. When the information is true and accurate, people tend to give a more positive response. For the information and consultation that want to be actively disseminated, authoritative certification, authenticity and accuracy are easier to arouse people's praise and forwarding.

Second, the attractive title can promote the occurrence of users' opening reading behavior, but it will not promote more positive likes, comments and forwarding. The attractive title can urge people to open information and read, but it cannot promote praise, comment and

forwarding behavior, which shows that only when the information quality is high and the accuracy is high, can it promote the secondary forwarding behavior. Only the eye-catching title is difficult to realize the secondary communication.

Last, personal attributes such as age and gender are not the main factors causing different processing methods of the same information. The information receiving time period will affect people's processing methods of the same information. Different information receiving time periods have different processing methods for information. The earlier the time period, the more positive the processing direction for the same information. Therefore, push at different times can be set for different information to achieve the best effect.

## **ACKNOWLEDGEMENTS**

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