A Study of Social Media Marketing Strategy of Macau Tourism Based on 4i Theory

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Abstract

The tourism industry in Macau has the long-term goal of developing into a world tourism, leisure center. Tourism is the leading industry in Macau which involves various industries. Under the circumstances of COVID-19, Macau government turned the crisis into an opportunity and launched a series of promotions to create a new image for Macau tourism. Based on this circumstance, this research selected Macau as a sample to study the application of tourism marketing strategy in the destination.

This study elaborates on relevant marketing theories and analyzes the market of Macau social media, SWOT factors, STP theory and 4I marketing theory. Referring to the COVID-19 response strategies of Macau Tourism Office in recent years according to the reports on the website as the reference data. Moreover, this study employs qualitative and quantitative research analysis, using STP and 4I theories as the basis to analyze the feasibility of relevant strategies, identify current problems, and propose corresponding strategies. The study combines various external and internal factors concerning the current social situation of Macau, analyzing its current status of tourism marketing.

Through research studies and analysis, the paper combines 4I marketing theory to provide suggestions on Macau's social media marketing strategy. Macau is striving to build a world tourism and leisure center. This study is relevant insights on Macau's destination tourism market, enhancing Macau's marketing strategy and improving its tourism market image, expecting to provide a realistic reference for other regions' marketing strategies. The study found that social media is the best supporter to utilize the information network for destination marketing purposes. The content area uses the 4I marketing theory to set objectives that are in line with the development of tourism industry. This requires an in-depth knowledge of social media to accomplish tourism industry marketing based on the factual situation.

Keywords: *Macau Tourism, Macau Tourism Destination, Social Media Marketing, 4I Marketing Strategy*

1. Introduction

In recent years, there has been a rapid increase in the development of online technologies, and different types of social platforms have emerged at the same time, allowing platform users to begin communicating on the internet. This has given each individual in a different environment the ability to disseminate and create information, leaving the creation of content entirely up to the individual, regardless of geography or space. It is because of the rapid development of technology and the advancement of social media that the tourism industry has been driven by this development and the traditional way of doing tourism has changed due to the development of technology and the general trend of the environment, with social platforms playing a particularly important role (Li, Larimo, & Leonidou, 2021).

In 2022, social media reached the peak due to the rapid growth of interactive digital media, more and more people started using social platforms to communicate (Pazgal & Sikka 2001). As a result, social platforms have become a major channel for companies to promote their products or services, and many government agencies and companies have set up official web-related websites or official social accounts to promote their products or services. Macau, which is located in one of the Special Administrative Regions in the southern part. Macau's tourism industry is an important source of income for the city and adds to its service sector. In recent years, Macau has been actively developing as a diversified city, aiming as a world centre for tourism and leisure. However, under the impact of the COVID-19 in late 2019, inbound tourists have plummeted and gaming revenue has dropped significantly, even by 90%, which directly affected Macau's main income and livelihood. In this new challenging environment, this paper chooses to apply social media marketing strategies to Macau's tourism industry, proposing appropriate solutions and plans for

Macau's tourism industry, in order to enhance Macau's tourism development and drive Macau's economic development.

In the rapid development of social media marketing, this paper takes Macau tourism as an example, firstly using the SWOT factor analysis to collate Macau tourism marketing problems and other factors, secondly using the STP theory to analysis the Macau tourism market objectives, from market segmentation, target market selection and market positioning to make an analysis of Macau tourism destination, using the 4I theory as an analytical tool, including interesting, interests, interaction and individuality. This paper presents a detailed analysis of the problems in the Macau tourism market from these four aspects, and proposes a corresponding strategy. Based on the 4I theory, the current social media marketing strategies are enriched, and the planning and positioning theories are improved to enhance the effectiveness of Macau tourism.

2. Objectives

1) Analyzing of Macau tourism market
2) Analyzing the effects of social media on tourist while visiting Macau
3) To propose the strategy combined with STP theory and 4I marketing theory for improve tourism market

3. Materials and Methods

This paper used Semi-structured interviews and questionnaires to collect visitors' habits, feelings, suggestions and satisfaction with the use of social media in Macau. The questionnaire was distributed online to a group of mainland China residents who had visited Macau at least once for the purpose of tourism. The survey was published through online social media platforms as WeChat, Weibo. The survey period was from early November 2022 to early December 2022.The respondents were mainly Mainland Chinese tourists who had visited Macau at least once, and they were surveyed on their experiences, opinions and understanding of using social media before, during and after their visit to Macau. The survey was conducted with a random sample of respondents from different regions, ages, education levels and habits. After collecting the data and analyzed the data, combine it with the 4I theory to consolidate the collected content and analyze the results.
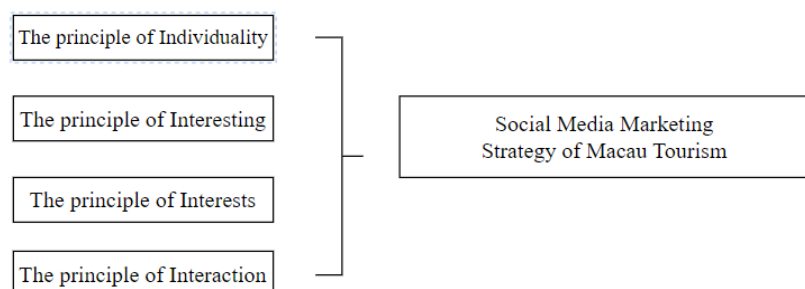
The interviews with these 20 individuals were used to study the different respondents for qualitative analysis. Semi-structured interviews were conducted in which the author asked questions that were appropriate to the response record or situation at the time. A total of 20 respondents were interviewed for this study. In this interview, 40% of the respondents were male and 60% were female. The average number of trips to Macau was 7.8. In terms of age, they ranged from 23 to 55 years old.

A total of 204 valid questionnaires were received from people who had visited Macau and used social media. The survey was conducted anonymously. The questionnaire was a closed-ended question. A seven-point Likert scale was used to determine travellers' habits and perceptions of social media use, with options based on the following seven levels: never, rarely, occasionally, usually, often, mostly and always. The statistical methods used in this section include descriptive statistical analysis, reliability analysis, correlation analysis and regression analysis. There is a significant positive correlation between the effectiveness of social media marketing in Macau.

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4. Results and Discussion

The qualitative findings of this study are divided into four sections, including social media usage, travel planning in Macau, the habit of using social media while traveling in Macau, including before, during and the end of the trip and the evaluation of travel in Macau while using social media.

From the results of the respondents, the comments and suggestions are mainly focused on the following points: Firstly, to gain a deeper understanding of the deeper demand preferences of tourist attractions. The main function of social media marketing is to share real-time information and promotions of attractions, explore the needs of consumers through big data, enhance interaction, improve user experience and understand the preferences of travelers. Travelers receive the initial information from social media, later travelers post their real feelings on social media after experiencing. Therefore, the way to make them as disseminators of information. Social media platforms can be used to conduct initial communication and surveys with customers to proactively address the issues they encounter. In this role the social media marketing platform serves both the visitor and the destination (Nusair, Bilgihan & Okumus, 2013). Under these conditions, it is important to understand the needs and preferences of visitors. This is another way to take advantage of visitors to deliver information and experiences about the destination. Secondly, the market positioning of the tourism market should be clearly defined to meet the needs of travelers. In other words, the market should find the exact position to develop its market.

A total of 204 valid questionnaires (N=204) were received from people who have visited Macau and used social media. This paper collects visitors' satisfaction with social media in Macau and combines the 4I theory. To ensure that all research questions are addressed, SPSS software is used to collect data as an analytical tool for data analysis in this paper. More than half of the sample were male, 49.02% were female. Most of the sample was aged 30 to 34, accounting for 18.63% of the total. The proportion of those with bachelor's degree was 66.67%. On average, more than 40% of the sample chose to spend between 3000 and 5999 on leisure and entertainment each month.

Table 1 Reliability Statistics

	Cronbach's Alpha	
		based on ronbach's standardized item Alpha
questionnaire	0.899	0.899

Validity analysis is the degree to which the desired psychological and behavioral characteristics can be unambiguously detected by some tests. The smaller the significance level of Bartlett's sphericity test ($p<0.05$), the more meaningful the relationship among the variables studied. KMO value greater than 0.7 and a Bartlett sphericity test statistic with a significance of 0.000<0.01 is considered to have good data validity.

Table 2 KMO and Bartlett test

KMO Sampling Measurements		0.903
Bartlett's Test of Sphericity	Approx. Chi-Square	1321.551
	Degree of freedom	66
	Significance	0.000

The table below shows the frequency of the social media commonly used by respondents. Specifically, the response rates and popularity rates of WeChat, TikTok and Weibo are significantly higher than those of the other items. The most common way of social media sharing by respondents can be seen from the data in the table below. The most common ways of sharing on social media are video, photo and text, and the response rate and popularity rate of the above three items are significantly higher than other items.

Table 3 Summary table of response rate and penetration rate

Item	N	Response rate	penetration rate（n=204）
WeChat	142	20.64%	69.61%
QQ	43	6.25%	21.08%
Tik Tok	117	17.01%	57.35%
Red	104	15.12%	50.98%
Speedy	95	13.81%	46.57%
Weibo	109	15.84%	53.43%
Zhihu	78	11.34%	38.24%
Total	688	100%	337.25%

The most common way of social media sharing by respondents can be seen from the data in the table 4. The most common ways of sharing on social media are video, photo and text, and the response rate and popularity rate of the above three items are significantly higher than other items.

Table 4 Summary table of response rate and penetration rate on most common way to share on social media

Item	N	Response rate	penetration rate（n=204）
live	77	17.04%	37.75%
video	133	29.42%	65.20%
photo	126	27.88%	61.76%
text	116	25.66%	56.86%
total	452	100%	221.57%

The table 5 is a descriptive statistical analysis that measures the level of each variable through the mean and standard deviation. A high mean means that the average level of the indicator is higher, while a dispersion trend is used to describe the dispersion of the data, like the standard deviation which indicates the difference between different samples on the same item. In this questionnaire, dimensional observations are mainly measured on a scale, and the higher the score, the higher the agreement level. From the table below, it can be seen that those who clicked on social media to advertise deals and coupons about Macau's attractions/hotels/restaurants had higher scores, indicating that the subjects were more positive about it; those who posted photos, videos or feelings (Kusumasondjaja, 2018) about traveling in Macau on social media had lower scores, indicating that the subjects' agreement was weaker.

The table 5 shows that " I should experience the travelling in my life due to the information of social media " scored higher, indicating that the subjects agreed more with it.

Table 5 statistic on fundamental analysis

Item	Variable	Average	Standard Deviation	Cases
Have you subscribed or liked the things in Macau?	The principle of Interaction	4.68	1.798	204
Have you searched any information about viewpoint, hotel and restaurant in Macau?	The principle of Interesting	4.66	1.800	204
Have you Clicked any about promotions and coupon about viewpoint, hotel and restaurant in Macau on social media?	The principle of Interests	4.71	1.748	204
Have you renew the status the viewpoint visited in Macau in social media?	The principle of Interaction	4.69	1.769	204
Have you uploaded photo, video or comment in the tournament of Macau in social media?	The principle of Interaction	4.64	1.810	204

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Item	Variable	Average	Standard Deviation	Cases
Will your friends and family ask your suggestion frequently about travelling	The principle of Individuality	4.68	1.801	204
I feel excited and fresh about this travelling due to the information of social media	The principle of Interesting	4.65	1.812	204
I should experience the travelling in my life due to the information of social media	The principle of Interesting	4.72	1.736	204
I feel the resident is enthusiasm in this travelling due to the information of social media	The principle of Individuality	4.70	1.763	204
I feel free and relax in this travelling due to the information of social media	The principle of Interesting	4.64	1.774	204
I come to a great place due to the information of social media	The principle of Individuality	4.66	1.786	204
I have experienced the culture in this travelling due to the information of social media	The principle of Individuality	4.69	1.811	204

When two or more variables are analyzed, the nature of their relationship and the degree of correlation are analyzed using correlation analysis. When the relationship between the variables is stated, the symbol * is marked on the right side of the coefficient. When there is no relationship, it is not marked. When the coefficient > 0, it proves that the two variables are positively correlated, and if it is < 0, it proves that the relationship is negative.

In this analysis, all the four items of social media marketing effectiveness in Macau and the principles of fun, benefit, interaction, and personality showed significant correlation, and the correlation coefficient values were 0.408, 0.387, 0.359, and 0.355, and the correlation coefficient values were > 0, which means that the social media marketing effectiveness in Macau and the principles of fun, benefit, interaction, and personality had positive correlation. There are positive correlations among the four items.

Table 6 Correlation

	Cronbach's Alpha	
		based on ronbach's standardized item Alpha
questionnaire	0.899	0.899

The regression analysis provides a clearer picture of the quantitative relationship between variables and feedback on the interaction of variables. In this study, we use the stepwise regression method to gradually put in the cites and exclude the cites that have no significant effect on the dependent variables, and build the regression equation model to verify the direction and closeness of the influence between variables.

According to table 6, the R-squared value of the model is 0.185, which means that the principle of interest and interactive can explain 18.5% of the variation in the effectiveness of social media marketing in Macau. When the model was tested for F, it was found that the model passed the F test (F=22.850, p=0.000<0.05), which means that at least one of the principles of interest and interaction would have an influence on the effect of social media marketing in Macau. In addition, the multiple co-linearity of the model was examined and it was found that all the VIF values in the model were less than 5, which means that there is no co-linearity problem.

The regression coefficient value of the interest principle is 0.278 (t=3.735, p=0.000<0.01), which means that the interest principle have a significant positive influence on the effect of social media marketing in Macau. The regression coefficient of the principle of interaction was 0.145 (t=2.140, p=0.034<0.05), implying that the principle of interaction would have a significant positive influence on the effectiveness of

social media marketing in Macau. Other variables with significance greater than 0.05 have no significant effect on the dependent variable, have a smaller effect, and have been excluded from the model.

Table 7 Regression Analysis-coefficient

Model	Unstandardized Coefficients		standardized Coefficients	t	Significance	collinearity	
	B	Standard error	Beta			Tolerance	VIF
1 constant	2.931	0.291		10.085	0.000		
The principle of interest	0.376	0.059	0.408	6.357	0.000	1.000	1.000
2 constant	2.703	0.307		8.804	0.000		
The principle of interest	0.278	0.074	0.302	3.735	0.000	0.621	1.611
The principle of interaction	0.145	0.068	0.173	2.140	0.034	0.621	1.611
R=.185			F=22.850	P<0.05			

a. Independent variable : The marketing effect onocial media in Macau

Table 8 Regression Analysis-excluded variable

model	Beta	t	significance	Partial correlation	collinearity		Minimum tolerance
					Tolerance	VIF	
1 The principle of interest	0.190b	2.034	0.043	0.142	0.467	2.139	0.467
The principle of interaction	0.173b	2.140	0.034	0.149	0.621	1.611	0.621
The principle of personality	0.164b	2.007	0.046	0.140	0.608	1.645	0.608
2 The principle of interest	0.139c	1.417	0.158	0.100	0.417	2.396	0.417
The principle of personality	0.113c	1.273	0.204	0.090	0.514	1.945	0.514

a. Independent variable of the marketing effect on social media in Macau

b. The predicted variable in the model: constant, the principle of interest

c. The predicted variable in the model: constant, the principle of interest and the principle of interaction

4.1 Discussion

After conducting interviews and questionnaires with visitors to Macau, analysis of the social media habits and perceptions of visitors to Macau was conducted, and the 4I theory is the basic principle of integrated marketing. Marketing strategy refers to strategic planning in accordance with the company's objectives. Using the various resources of the enterprise to achieve the company's strategic goals. 4I marketing theory is the newest way to develop the new market on the social media market. Basically, this is the way from traditional to audience-oriented approaches. publicity has led to a clearer concept of customer orientation with the 4I market, so social media marketing theory is suitable in use in the new technological society (Saravanakumar & SuganthaLakshmi, 2012).

4.1.1 Interesting

Highlighting the creativity of the product through topics, relevant activity planning. Enhancing interest in terms of content innovation, functional innovation and participation experience. In the new social media generation, the most attractive are creativity, interest, functionality and experience. In the social media market, there is a direct correlation between how much users pay attention to the media, how long they last, how much they engage with and how interesting the content is.

Among the most common methods of social media sharing, the highest response rate is video, photo and text. The lowest response rate is live, which is significantly lower than the above three methods. The reason is that interesting feedback is significantly less effective in the live interactive mode (Al-Zyoud, 2018). In the marketing of interesting social media, all creativity is focused on producing interesting content that users like to follow, repost and comment, which requires the media to approach content innovation of various form elements to enhance communication and to use diverse forms of social media.

4.1.2 Interests

Users are the fundamental way to achieve the original purpose of marketing for the benefit of creating value. Value marketing is formed by focusing on customers and realizing product differentiation and value-added services as the main content. Social media is a low-cost demand channel, through social media can realize the demand side of the rapid display and the purpose to achieve the maximum benefit, which is the important point of the benefit of social media marketing. In the descriptive analysis, "Clicking on social media to advertise deals and coupons about Macau's attractions/hotels/restaurants." scored the highest, suggesting that the respondents were more positive about this; "Posted photos, videos or feelings about traveling in Macau on social media" indicates a weak level of agreement.

From another point of view, the audience tends to get information of value from social media, and advertisements of offers and coupons can bring the most direct feeling to the audience. Photos and videos have a lower degree of feeling means that the value-to-cost ratio in the audience's mind is the closest, so photos and videos alone can only bring direct perception, but not the feeling of benefit. One of the benefit-based marketing strategies is to share experiences to transmit values. Weibo, WeChat, Red and self-media videos involve a lot of product experience sharing, such as food sharing, which are targeted at potential objects, and through sharing, value exchange, which is a win-win situation for social media marketing.

4.1.3 Interaction

The level of user interaction on social media and communication on social media may easily create a sense of trust between each other. Interaction is the essence of social media. The analyzed of Woodcock, Green, & Starkey (2011), individuality provided that integrate online and offline marketing to increase interactivity and influence between each other. According to Woodcock, Green, & Starkey (2011), carry out interactive marketing on social media, the first thing is to create an atmosphere and close the distance, trust is achieved through interaction. Posting real-life details on social media and analyzing intimate life experiences can often lead to unexpected results. In social media marketing, the frequency of interaction can lead to a sense of intimacy. The interactive element of social media can bring the audience to marketing. The regression coefficient for the interaction principle is 0.14（t=2.140，p=0.034<0.05）, as measured by the regression line. This means that the principle of interaction has a significant positive impact on the effectiveness of social media marketing in Macau. The purposeful achievement of a transaction is the only factor that influences marketing.

4.1.4 Individuality

The correlation coefficient for Individuality is 0.355, which is the lowest factor. As a result, social media marketing in Macau lacks personalization and creativity to attract other groups of tourists. There is a lack of recognition of customers' individual needs and a failure to respond to marketing accordingly. On the one hand, Macau's social media lacks creativity, which is an area that does not attract more customers. Timeliness and personalization are the key elements to catch customers quickly. Therefore, marketing on social media must be linked to the personalized needs of customers. The level of user interaction on social media in turn affects the level of activity on social media. By meeting the personal needs of customers, marketing is made more personalized. The brand image through social media makes its own highlight.

Marketing is achieved through personalized sharing on social media to appeal to a distinctive demographic, in order to generate popular fashion trends. Big Data has access to records of users' reading and browsing information. Finally, the personalized needs are captured and relevant content is distributed.

5. Conclusion

There is a significant positive correlation between the effectiveness of social media marketing in Macau and the principles of individuality, interesting, interests and interaction, with the core influences being interests and interaction. To improve the effectiveness of social media marketing in Macau, we can start from the above aspects. The four key research strategies in this paper combine to attract the attention of visitors in a variety of ways that resonate with them and lead to buying behavior. This is because when people want to know about a city, the first thing is about what the city has to offer or benefit them and also the attractively of the city.

The impact of social media on the travel industry is manifested at two levels; firstly, how social media affects consumers' travel behavior. The dissemination of information through social media is a conscious act by tourists. It is also their real thoughts. Therefore, the information they post is more acceptable to the public and impact on their travel behavior. Comments and discussions through social media further reinforce. Information and opinions show that visitors interact and communicate in a virtual world to deepen their knowledge of the relevant products. Moreover, it has an impact on other consumers' shopping decisions. Secondly, social media is a catalyst for business marketing. By analyzing consumers' information on social media, companies are able to provide consumers with the right information in a timely manner to promote consumption. At the same time, social media can be used to accurately advertise their tourism products and present them to customers in the form of vivid images, thereby increasing their desire to buy. Travel-related WeChat public websites have gained prominence in online marketing which becoming another important element of a company's online marketing.

Social media marketing is characterized by the ability to change information and services. The Internet is the best channel for the market. The Internet has changed the way consumers buy products and companies get information about their customers. Social media marketing has strong advantages over traditional media, firstly because it is user-centric. The second is the abundance of online resources, online marketing information spreads quickly and has a strong interactive nature. The combination of traditional marketing models and new technologies, the use of new technologies in social media marketing; the understanding of customers and their markets starting with market research; the use of good information networks for advertising and image building functions.

The proposed O2O (online to offline) approach to selling travel products, whether tangible or intangible, means offline experience and online sales. Sales activities post online so that travellers can be the first to know about the latest promotions, the latest itineraries and special offers. These are also a low-cost way to advertise. In addition, social media can be used to promote the products in a comprehensive manner, with interactive activities to increase the sense of participation in the tour. Due to the rapid development of Internet technology, the intangible nature of travel goods well-suited for online sales. Social media can influence consumers' travel behavior. Posting information on social media is a conscious act by visitors and reflects their true thoughts. Social media provides consumers with the right information at the right time to promote consumption. At the same time, social media can be used to accurately advertise the tourism products and present to the travellers thus increasing their desire to buy. Timeliness and personalization are the key to quickly capturing customers. Distinctive products and services can often be a surprise. Marketing on social media therefore needs to link the individual needs of users together, truly recognizing that behind social media are real individuals with attitudes and personalities. Therefore content and precise services need to be differentiated around the individual needs of users. By meeting the personal needs of the customer, marketing becomes more personalized, so that it can build its own brand image through social media, thus making it its own highlight.

The social media marketing strategy help MGTO increase its online presence in China and other countries. Thereby gaining visibility as a tourist city and attracting visitors from China and around the world.

In order to make it easier for users to find the places tourists want to visit. Travel information websites need to analysis user preferences and behaviors. Through data analysis, user behavior can be more accurately targeted, evaluated, predicted and guided in marketing activities. Macau tourism products mainly focus on "food", "travel" and "tourism" as the main themes. These are the main objectives of tourists coming to Macau from the Mainland, so visitors need to pay special attention when choosing a destination to visit Macau. In order to choose the leisure venues to enjoy the various services and facilities that Macau offers. For tourists, shopping venues can provide them with all the goods and services and facilities they need. The in-depth development of Macau's tourism resources enhances the taste of Macau's tourism products. The characteristics of Macao's tourism resources not only directly affect its attractiveness, but also have a significant impact on its economic development. Therefore, it is important to explore the depths of its resources. This can highlight the individuality and characteristics of its resources. Enhance the quality of its products to enhance its market competitiveness.

Due to COVID-19, only Mainland China was visited and interviewed in this study, which was quite restrictive. It hopes to develop more visitors from different countries as the target of the study, so as to conduct more in-depth analysis and research with a more precise regional and cultural distribution.

6. Acknowledgements

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