Research on Short Video Communication Strategy of Local Culture Based on Rural Revitalization Strategy——Taking shadow play culture in Huanxian County of Gansu Province as an example

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Abstract. In this paper, based on the 5W theory of American scholar, Harold Dwight拉斯维尔, the research model of short video transmission of shadow play culture in Huanxian County, Gansu Province is constructed. Through empirical research methods, this paper aims at the influence of 5W theory: Who, What, Which, Who, With What Effect. It is found that star communication has a significant positive impact on the transmission of shadow play culture, local villagers have a significant negative impact on the transmission of shadow play culture, and professional teams have a significant positive impact on the transmission of shadow play culture. Text communication, picture communication, live video communication and cartoon communication all have a significant positive impact on the communication power of shadow play culture.

1. Introduction
In order to speed up the continuation and inheritance of local culture, realize rural revitalization, enrich the people and strengthen the Gansu, which decided to carry out the "Cultural Continuation and Rural Revitalization" activity in the whole province from 2018. How to start from the new format, do a good job in rural revitalization in Gansu, build a cultural province, and solve the plight of local people's livelihood in Gansu is an important proposition that needs to be studied and solved urgently. This study aims to solve three problems through interdisciplinary research, quantitative analysis, empirical research and other methods: (1) to build an evaluation index system of promoting rural revitalization by local culture, establish its coupling mechanism model. Studying their action mechanism and operation mechanism, and find the key indicators of promoting rural revitalization by local cultural communication elements; (2) Establish the development model of rural revitalization driven by local cultural communication, quantitatively evaluate the contribution value of local cultural communication to rural revitalization in Gansu, and theoretically establish the position of characteristic local cultural communication in rural revitalization in Gansu; (3) Through the empirical study of typical and representative local culture regions in Gansu, the construction model of rural revitalization characteristics driven by local culture communication that can be demonstrated and popularized is constructed, and its applicable conditions are scientifically defined. The research results and their application can not only promote the process of rural revitalization and construction in regions with rich...
local cultural resources, but also provide scientific support and paradigm for Gansu to carry out "cultural continuation and rural revitalization".

2. Literature review

2.1. Study on local culture communication
The Rural Culture has always been one of the hot issues studied by scholars at home and abroad, and the local culture communication is an important research field of cultural communication. Foreign studies on local culture communication mainly focus on communication, Sociology, Cult urology, Pedagogy, Anthropology and other fields. Foreign scholars usually use field investigation, participatory observation, literature research and case study to study the Historical review, Realistic motivation and Significance of local culture communication. Most scholars emphasize the "Constructive" and "Absolute protection" of rural cultural communication. Chinese scholars' research on local culture communication focuses on taking a certain area as an example from a micro perspective, in terms of the concept of local culture, historical development, current communication status, solution strategies, communication mode and so on. In recent ten years, foreign countries have turned their research direction to the impact of local cultural communication. Graham B(2006), Pudianti (2008), Hjalager (2017) and others have gone deep into the quantitative research of local cultural communication path factors. The research method of local culture communication has also experienced the historical process of qualitative research-experimental research-quantitative research-qualitative and quantitative combination. Word segmentation by Jieba of Python technology, topic clustering, emotion analysis and other methods are also gradually applied in local cultural communication, and have been used for reference by domestic scholars.

2.2. Research on Short Video Communication Strategy of Local Culture
In 2014, China entered the era of 4G, and short videos gradually became more and more popular, becoming an important carrier of contemporary cultural communication. In 2018, “No.1 Central Committee” issued a document on rural revitalization, which has become a research topic for scholars. At present, the research how to spread local culture through short videos mainly focuses on the value, strategy, characteristics, contents and media of local culture. Sun Li (2018), Chen Yifan (2019), etc. pointed out that the users are both producers and communicators in the new media era, and the spread of local culture should vividly show the image of "new generation farmers", which can arouse the emotional resonance of the audience through the self-expression of local villagers. Tang Jiayu (2020) pointed out that it is necessary to take advantage of short videos, dig deep into local cultural resources, build cultural brands, and realize rural revitalization through the integration of tourism industry. These studies are basically qualitative, using participatory observation, in-depth interviews, content analysis and other research methods. Put forward the communication strategy of combining the characteristics of short video with local culture. However, there is little research on how to specifically spread local culture and how to improve the transmission path coefficient through model construction. This also shows that this topic has great research space.

2.3. Study on Local Culture Communication of Shadow Play in Huanxian County, Gansu Province
Searching from CNKI with the keyword "Gansu+shadow", there are 82 documents in total, including 28 master's thesis and 9 papers on Gansu shadow play culture communication. These articles basically from the concept, characteristics, historical development, current communication status and existing problems of shadow play culture in Huanxian County, Gansu Province, finally put forward solutions. From a qualitative point of view, through literature review, field investigation and other methods, the questionnaire survey and interview are carried out, and finally the summary is made, and the corresponding solutions are put forward. There is only one document about the dissemination of shadow play culture in the new media environment. Guan Xian (2020) put forward in "Analysis of Gansu Shadow Play Communication Strategy from the Perspective of New Media" that Gansu shadow play
culture should appear on the stage with new communication modes, such as short video communication, but this article did not deeply analyze how to use short video to disseminate shadow play culture, which is one of the problems that need to be solved urgently in this study.

3. Theoretical framework
On the basis of fully drawing lessons from the research results of existing indicators, as shown in Figure 1: starting from the respective operation mechanism of local culture dissemination and rural revitalization system, analyzing the logical relationship of various evaluation factors, following the principles of scientificity, pertinence, applicability, measurability and operability, it is proposed to establish an evaluation index system and structural level model from six dimensions of rural material revitalization, rural economic revitalization, rural social revitalization, rural environmental revitalization, rural cultural revitalization and rural system revitalization, respectively adopting.

![Figure 1. Construction of Evaluation Index System of Rural Revitalization Driven by Characteristic Local Culture Communication.](image)

4. Model Construction and Research Hypothesis
4.1. Study the theoretical basis of hypothesis
In 1948, Harold Dwight Lasswell, the founder of communication studies, put forward the "5W" theory for the first time in "Structure and Function in Communication Society". 5W is the five basic elements of Who, What, Which, who and With What Effect. Short video is an important carrier to spread shadow play culture. In this study, the index system is constructed according to the 5W theoretical model of American scholar Lasswell. The five basic elements of the dissemination process are the disseminator, the media, the content, the addressee and the dissemination effect. The model is constructed by 5W theory, as shown in Figure 2. As a dependent variable Y. The strength and weakness of shadow play culture transmission are reflected by four indicators: Play volume, Praise volume, Transmit volume and Comment volume. Communicators refer to stars, local villagers and professional teams in this topic. The medium of short video refers to the four forms of text, pendenictures, live-action videos and cartoon to spread shadow play culture. Communicators and media are the indept variables of this subject, and whether each observed variable will influence the propagation of shadow play culture is measured by Likert Scale 5.
4.2. Research assumptions

Communicator → communication effect:

Communicator is simply the producer of platform information. In mobile Internet era, today.
Everyone has a mobile phone and any user can become the producer and communicator of information.
Since the media era, the public has also been given the right of self-expression to be respected, especially
the working people in remote mountainous areas, who also have the same right to speak as the elite.
According to the Caogeng and professional content production of users, the vibrato platform divides
communicators into three types: stars, Caogeng users and professional teams. Therefore, according to
the type of vibrato users and the characteristics of shadow play culture, this study makes the following
assumptions:

H1: Star communication shadow play culture has a positive influence on communication power
H2: Star's dissemination of shadow play culture has a negative influence on communication power.
H3: The dissemination of shadow play culture by local villagers has a positive influence on the
dissemination ability.
H4: The dissemination of shadow play culture by local villagers has a negative influence on
communication power.
H5: The professional team's dissemination of shadow play culture has a positive influence on
communication power.
H6: The professional team's dissemination of shadow play culture has a negative influence on
communication power.

Media → Communication Effect

The media is the basic component of the communication process and the material means to realize
the communication behavior. Media, namely intermediary or intermediary, exists in the movement of
things. Media in the sense of communication refers to the material entity that transmits information symbols. Wilbur Schramm, a communication scholar, mentioned in his classic book Introduction to Communication: "Media is a tool inserted into the process of communication to expand and extend information transmission". We can call it the mass media, which includes newspapers, magazines, radio, television, movies, books and so on. Means of media communication: It refers to what the media uses to spread information, that is, what symbols are used to spread. This is the foundation of distinguishing media and the starting point of understanding the characteristics of media. Therefore, according to the characteristics of short video content production, this study is divided into four types: text communication, picture communication, real person appearance and cartoon communication, and makes the following assumptions:

- H7: The shadow play culture of writing communication has a positive influence on communication power.
- H8: Shadow play culture of character communication has a negative influence on communication power.
- H9: Shadow play culture of picture communication has a positive influence on communication power.
- H10: Shadow play culture of picture communication has a negative influence on communication power.
- H11: The transmission of shadow play culture by real people has a positive influence on communication power.
- H12: The transmission of shadow play culture by real people has a negative influence on communication power.
- H13: The shadow play culture of cartoon communication has a positive influence on communication power.
- H14: The shadow play culture of cartoon communication has a negative influence on communication power.

5. Research Design and Empirical Analysis

5.1. Questionnaire design and variable measurement
This paper collects data in the form of questionnaire. The questionnaire is divided into two parts. The first part is nine latent variables, which are four latent variables under the media: text communication, picture communication, real person appearance communication and cartoon communication; There are three potential variables of communicators: star communication, local villagers communication and professional team communication; There are two latent variables under propagation effect: strong propagation and weak propagation. The second part is the basic information of the investigator, including gender, age, education background, occupation and location. The designed questionnaire is sent to experts in the field of journalism for review. According to the expert opinion, the initial questionnaire is formed. The initial questionnaire was sent to 50 respondents for pre-investigation, and was revised according to the pre-investigation results to form the final questionnaire.

5.2. Data collection and sample description
In this survey, a total of 600 questionnaires were distributed by snowballing through Questionnaires, WeChat and QQ, and 578 questionnaires were recovered. Because this paper mainly investigated the groups watching shadow play culture, through the questionnaire screening method and to ensure the validity of questionnaire filling quality, the author eliminated the answer time less than one minute, and finally got 578 valid questionnaires, with an effective rate of 96.3%. Statistical analysis is shown in Table 1. The sample data shows that watching shadow play culture is mainly male, accounting for 54.8%; The age group is mainly over 30 years old, accounting for 75.4%, and the age is too large; The education level is not high, and the professional population is mainly farmers, individual and freelancers, which is consistent with reality.
Table 1. Demographic variable description statistics.

| Projects     | Category                     | Frequency | Percentage |
|--------------|------------------------------|-----------|------------|
| Gender       | male                         | 317       | 54.8       |
|              | female                       | 261       | 45.2       |
|              | 20 years old and under       | 19        | 3.3        |
|              | 21-30 years old              | 123       | 21.3       |
|              | 31-40 years old              | 166       | 28.7       |
|              | Over 40 years old            | 270       | 46.7       |
|              | high school and below        | 199       | 34.4       |
|              | technical secondary school   | 224       | 38.8       |
| Age          | College/undergraduate        | 140       | 24.2       |
|              | Master degree or above       | 15        | 2.6        |
|              | Students                     | 28        | 4.8        |
|              | Enterprise staff             | 109       | 18.9       |
|              | Public institutions          | 41        | 7.1        |
| Education level | Individual management      | 165       | 28.5       |
|              | Farmers                      | 76        | 13.1       |
|              | Other                        | 159       | 27.5       |
|              | Rural towns                  | 301       | 52.1       |
| Occupation   | Non-rural town               | 277       | 47.9       |
|              | Total                        | 578       | 100        |

Firstly, 578 samples were statistically described, and described and statistically analyzed by text type short video, real people appearance type short video, picture type short video, cartoon type short video, star spreading rural culture, local villagers spreading rural culture, and professional team spreading rural culture. The results are shown in Table 2. The minimum value of all variables is 1, the maximum value is 5, the median value is 3.5 or 4, and the average value is greater than 3, which shows that the values among all variables are relatively stable.

Table 2. Descriptive statistical analysis (N=578).

| Variable      | Average | Median | Standard deviation | Minimum | Maximum |
|---------------|---------|--------|--------------------|---------|---------|
| Text          | 3.789   | 4.000  | 1.052              | 1.000   | 5.000   |
| People        | 3.863   | 4.000  | 1.024              | 1.000   | 5.000   |
| Picture       | 3.748   | 4.000  | 1.041              | 1.000   | 5.000   |
| Cartoon       | 3.764   | 4.000  | 1.059              | 1.000   | 5.000   |
| Star          | 3.499   | 3.500  | 1.138              | 1.000   | 5.000   |
| Villagers     | 3.917   | 4.000  | 1.040              | 1.000   | 5.000   |
| Professional team | 3.867  | 4.000  | 1.015              | 1.000   | 5.000   |

5.3. Reliability and validity test
The reliability and validity of the scale were tested by SPSS23.0 and AMOS23.0. Since all dimensions of this questionnaire have been determined, confirmatory factor analysis can be directly carried out. The
validity is tested from three aspects: aggregate validity, construct validity and discriminant validity. Firstly, the reliability and aggregation validity of the questionnaire are verified. Results as shown in Table 2, the load factors of the topics corresponding to each latent variable are all greater than 0.5, indicating that the topics to which the observed variables belong are representative and can explain the latent variables well. At the same time, the reliability of the questionnaire is tested by SPSS23.0, and the overall Cronbach’s α of the questionnaire is 0.954, indicating that the internal consistency and stability of the questionnaire are better. KMO=0.912, Bartley and Spherical Test P=0.00 < 0.01, which shows that the correlation coefficient between variables is very strong and suitable for factor analysis. At the same time, AVE value > 0.5, CR>0.8, Cronbach'sα>0.8, which indicate that the scale has good aggregation validity. The data are shown in Table 3, which shows that the scale has good internal consistency.

| Variable          | Question options | Estimate | Cronbach'sα | AVE   | CR   |
|-------------------|------------------|----------|-------------|-------|------|
| Picture           | B3               | 0.932    |             |       |      |
|                   | B2               | 0.939    | 0.958       | 0.884 | 0.958|
|                   | B1               | 0.950    |             |       |      |
|                   | C4               | 0.927    |             |       |      |
| People            | C3               | 0.973    |             |       |      |
|                   | C2               | 0.953    |             |       |      |
|                   | C1               | 0.920    |             |       |      |
| Cartoon           | D2               | 0.947    |             |       |      |
|                   | D1               | 0.947    |             |       |      |
|                   | A3               | 0.920    |             |       |      |
| Text              | A2               | 0.928    |             |       |      |
|                   | A1               | 0.928    |             |       |      |
|                   | Z1               | 0.534    |             |       |      |
| Strong Spread     | Z2               | 0.579    |             |       |      |
|                   | Z3               | 0.591    |             |       |      |
|                   | Z4               | 0.602    |             |       |      |
| Weak Spread       | J2               | 0.721    |             |       |      |
|                   | J1               | 0.688    |             |       |      |
| Star              | E1               | 0.939    |             |       |      |
|                   | E2               | 0.926    |             |       |      |
| Villagers         | F1               | 0.930    |             |       |      |
|                   | F2               | 0.959    |             |       |      |
| Professional team | G1               | 0.941    |             |       |      |
|                   | G2               | 0.969    |             | 0.904 | 0.966|
|                   | G3               | 0.942    |             |       |      |
6. Modelling verification

Figure 3. Modelling verification.

In this paper, AMOS23.0 is used to judge the fitting degree of the theoretical model and data. The data are shown in Table 4, and the $\chi^2/df$ value is 1.824, which is in line with the recommended value of the contracted fitness of the model ($1.00 < \chi^2/df < 3.00$). GFI value is 0.932, CFI value is 0.985, NFI value is 0.954, AGFI value is 0.908, all of which meet the recommended value of value-added fitness (> 0.9), and RMSEA value is 0.052, which is less than 0.08. On the whole, the model fitting indexes of this study all meet the recommended values, and the model fits well.

Table 4. Model fitting index

| Fitting index | $\chi^2 / df$ | GFI  | AGFI | CFI  | NFI  | RMSEA |
|---------------|---------------|------|------|------|------|-------|
| Recommended value | <3            | >0.90| >0.80| >0.90| >0.90| <0.08 |
| Actual value   | 1.824         | 0.932| 0.908| 0.985| 0.954| 0.052 |

The model is verified by AMOS23.0 software, and the SEM analysis diagram of path coefficient and significance level among variables is drawn according to the results, as shown in Figure 3. The inspection results are as follows:

For shadow play culture communication, the path coefficients of star communication, local villagers communication, professional team communication and strong communication effect are 0.336***, -0.185***, 0.179***, respectively. It shows that in this research model, star communication has a significant positive impact on shadow play culture communication, local villagers' communication has a significant negative impact on shadow play culture communication, and professional teams have a significant positive impact on shadow play culture communication. That is, the research assumes that H1 and H5 are valid, but H3 is not.

The path coefficients of text communication, picture communication, real people video communication, cartoon communication and strong communication effect are 0.701***, 0.147***, 0.374***, 0.4
10***. Respectively, it shows that in this research model, text communication, picture communication, real-life video communication and cartoon communication all have a significant positive impact on the communication power of shadow play culture. That is, H7, H9, H11 and H13 are assumed to hold. Among them, the path coefficient of weak effect of picture propagation and propagation force is 0.052, which indicates that the propagation force of picture propagation to shadow play culture is not significant in this research model, that is, H10 is assumed to be false.

Figure 4. Standardized path coefficient diagram.

Note: * means significant at 0.05 level, ** means significant at 0.01 level and *** means significant at 0.001 level

7. Conclusions
Based on the 5W theory of American scholar, Harold Dwight Lasswell, this paper establishes the communication effect model of users watching short videos, and tests the theoretical model and research hypothesis through empirical research. The research shows that in this research model, star communication has a significant positive impact on shadow play culture communication, local villagers' communication has a significant negative impact on shadow play culture communication, and professional teams have a significant positive impact on shadow play culture communication. Text communication, picture communication, real people video communication and cartoon communication all have a significant positive impact on the communication power of shadow play culture. Therefore, we put forward the following suggestions for this study:

First, in the dissemination of shadow play culture, we can combine various forms of communication, such as star communication. Through the flow of stars, we can quickly let the public know the shadow play culture and walk into the local culture, which is also conducive to the development of tourism, attracting more tourists to walk into the local area and understand the local culture. With the development of the Internet and the popularity of smart phones, we all have a camera. As of June 2019, China has 847 million mobile Internet users and 759 million online video users, of which 648 million...
are short video users, accounting for 75.8% of the total Internet users. Data show that people are increasingly inclined to obtain information through mobile terminals, and mobile short video media has become an important platform for people to obtain, share and disseminate information. Therefore, the local government can vigorously encourage local villagers to implement local shooting plans, encourage everyone to create short videos, and spread their local culture through local villagers, which is more real, more grounded and more sympathetic to the audience. At the same time, we can also vigorously promote professional teams to create short videos of local culture. In addition to the strong support of national policies, the corresponding short video platforms should also vigorously promote the creation activities of local culture, such as actively guiding and holding short video creation competitions of local culture, which has an important influence on promoting China's intangible culture.

Secondly, from the point of view of the form of media, video, as a comprehensive form of communication integrating words, sounds, images, colors and other forms of communication, has enriched the presentation and dissemination of content. A French scholar, Jean-Francois Lyotard, puts forward the concept that "perception and experience are superior to abstract objects, and images are superior to words and language". With the upgrading and iteration of technology, people's preferred content forms have shifted from abstract linear words to images and videos that pay attention to sensory stimulation. Compared with the traditional way of spreading words and pictures, short videos have more information and impact because of their rich audio and picture contents. Its characteristics of short and pithy, concentrated content, strong specificity and strong sensory stimulation are especially suitable for the fast-paced life and fragmented reading era, which are more easily accepted and recognized by users, and help to increase the information arrival rate and lasting and powerful influence. We can spread shadow puppet culture through pictures, live people's outbound communication, cartoon communication and other forms, and the description of words plays a vital role in the introduction of local culture. At the same time, good copywriting and background music are in harmony with each other, which can better resonate with the audience.

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