Research on the Impact of College Students' Social Media Community Interaction on Offline Social Migration

Jinglin Xu

College of Music, Guizhou University, Guizhou, China Corresponding author: 18216771339@163.com

Abstract:

In the era of highly popularized social media, college students frequently interact through interest groups and campus life groups on platforms such as WeChat, QQ, Douyin, and Bilibili. The migration mechanism and influencing factors from online interaction to offline socialization are in urgent need of exploration. This study employed a questionnaire survey to investigate the characteristics of community interaction, offline migration willingness, and influencing factors of 243 college students. The results show that Bilibili, Douyin, and Weibo are the main interaction platforms, with the "campus life group" and "star fan group" having the highest participation rates. 36.21% of the students interact multiple times a day. Over half of the students are "very willing" to participate in offline migration, and 89.71% have had offline experiences. The main reasons are communityorganized activities, expanding social networks, and highfrequency interaction trust. The main obstacles are time cost, satisfaction of online needs, and concerns about trust and security. 64.61% of the students believe that online interaction significantly promotes offline socialization, and 48.15% believe that emotional depth significantly affects the willingness to meet. The research indicates that high-frequency online interaction significantly promotes offline migration, and interest-oriented platforms and campus life-related communities have higher migration frequencies. It is suggested to optimize offline conversion by strengthening community organization and enhancing member trust.

Keywords: Social media; community interaction; offline social migration; college students.

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1. Introduction

With the deep integration of social media into the lives of college students, their social patterns have shifted from single offline interaction to a blend of online and offline activities [1]. This study focuses on the current situation where the social patterns of college students have changed from single offline interaction to a combination of online and offline activities in the context of the deep integration of social media into their lives. As an important carrier for college students to expand their social circles, social media communities, although they carry the function of information exchange and serve as the starting point for the migration of offline social activities, the mechanism by which online interaction is transformed into offline relationships and the key factors influencing the willingness to migrate still need to be clarified [2]. This research is of great significance for enriching the theoretical perspective of youth social behavior and providing a practical basis for the management of campus communities and the guidance of online social activities. This study mainly unfolds from three aspects: the interaction characteristics of college students' social media communities, the willingness to migrate to offline social activities, and the influencing factors. By using the literature analysis method to sort out the existing social migration theories and combining the questionnaire survey method (with 243 college students as samples, collecting data around 12 core questions), it systematically analyzes the correlation between platform usage preferences (such as high-frequency use of Bilibili and Douyin), community types (with a prominent proportion of campus life groups and fan groups), interaction frequency and the willingness to migrate [3]. The ultimate research goal of this study is to reveal the influence mechanism of the transformation of social media community interaction to offline social activities, providing theoretical support for promoting the benign transformation of online and offline social activities of college students and optimizing the operation strategies of campus communities. To achieve this goal, the study analyzes the role paths of core variables such as high-frequency interaction, trust, and community organization through empirical data, with the aim of providing a micro perspective for the research on youth social behavior in the digital age [4].

2. Methods

This study employs the questionnaire survey method, which is characterized by its advantages of standardized data collection, large-scale sample coverage, and quantitative analysis. Regarding the dynamic issue of college students' social media community interaction, the questionnaire survey can systematically capture the behavioral

characteristics and psychological tendencies of the group through structured questions. For instance, it can precisely measure abstract social behaviors by using quantitative indicators such as "interaction frequency" and "willingness to migrate offline". Moreover, this method facilitates cross-sample comparisons and can effectively reveal the correlations between different community types (such as campus life groups and fan groups) and offline migration behaviors, aligning with the research's exploration of the "interaction-migration" mechanism.

Firstly, the development of scales has become more mature. For example, scales such as "community trust" can be designed by drawing on Dunbar's social network theory, or the "depth of online interaction emotions" index can be constructed by adopting Mehrabian's emotional transfer model. Secondly, the popularity of mixed research methods has increased, with some scholars combining questionnaire surveys with in-depth interviews to enhance data validity. Thirdly, statistical techniques have been upgraded. Through structural equation modeling (SEM), the mediating effects between variables (such as the mediating role of trust in interaction frequency and migration willingness) can be analyzed, making causal inferences more rigorous.

2.1 Questionnaire Design

This study sets "the willingness and experience of offline social migration" as the dependent variable, with community interaction behaviors (including platform preference and interaction frequency), community types (such as learning communities, interest communities, etc.), community trust and emotional depth as independent variables; meanwhile, "time cost perception" and "security concerns" are introduced as moderating variables to examine their moderating effects on the relationship between community interaction and offline social migration.

The questionnaire questions are adapted from mature scales (such as "trust" referring to Rotter's Trust Scale), and supplemented with open-ended questions (such as "other reasons") to collect qualitative data, ensuring measurement reliability (pre-survey shows Cronbach's $\alpha = 0.82$).

2.2 Data Collection

This study primarily targeted college students across the country as its research subjects, collecting data through questionnaires. The respondents' ages were mainly between 18 and 25 years old, with a gender ratio of approximately 1:1. The geographical distribution covered universities in eastern (42%), central (31%), and western (27%) China. The majority of the respondents were sophomores and juniors, accounting for 68% of the total. The questionnaires were distributed through the online platform

"Wenjuanxing", and a total of 261 questionnaires were collected. After eliminating those with logical contradictions and incomplete answers, 243 valid questionnaires were obtained, with an effective recovery rate of 93.1%. The questionnaire items were distributed as follows: The first three questions focused on the basic characteristics of community interaction behaviors, including the choice of interaction platforms, types of communities, and interaction frequencies. Questions 4 to 7 centered on the migration of offline social activities, exploring the respondents' willingness to migrate, actual experiences, influencing factors, and security concerns. Questions 8 to 12 delved into the impact mechanism of migration, including the promoting role of communities, trust levels, perception of time costs, participation habits, and the degree of emotional connection. The questionnaire balanced descriptive questions (such as "Have you ever had an offline meeting experience?") with explanatory questions (such as "What are the main factors influencing offline meetings?") to construct a systematic and comprehensive research analysis framework.

2.3 Data Analysis Tools

This study utilized statistical software to analyze the questionnaire data, mainly covering three aspects: descriptive statistics, inferential statistics, and reliability and validity tests.

Firstly, in the descriptive statistics section, the proportion of each option (such as the proportion of using Bilibili as the main interaction platform being 47.33%) and the mean were calculated to visually present the overall distribution characteristics of the sample in terms of community interaction behaviors, revealing the usage habits of college students in terms of platform preferences and interaction frequencies.

Secondly, in the inferential statistics analysis, the Chisquare test was used to examine the correlation between categorical variables, such as the association between "community type" and "offline migration intention". Meanwhile, through the Multiple Linear Regression model, the predictive effect of variables such as "trust" and "emotional depth" on offline migration behavior was explored to verify the hypothesized path of "high-frequency interaction \rightarrow emotional deepening \rightarrow increased migration intention".

Finally, in the reliability and validity tests, Cronbach's α coefficient was used to assess the internal consistency of the scale, ensuring the reliability of the questionnaire measurement tool. Additionally, Exploratory Factor Analysis (EFA) was employed to extract potential influencing factors and to summarize and optimize the structural validity of each measurement dimension.

Through quantitative analysis, the key driving factors (such as community organization and trust) and hindering factors (time cost and safety concerns) for the offline migration of college students' social media community interactions were revealed, verifying the hypothesized path of "high-frequency interaction \rightarrow emotional deepening \rightarrow increased migration intention", and providing data support for subsequent suggestions.

3. Results

3.1 Distribution of Social Media Platform Usage Preferences and Community Types

The survey (Table 1) shows that the social media platforms used by college students present a diversified feature. The college student community interaction platforms show the characteristics of "interest-oriented platforms taking the lead and traditional social platforms providing the foundation". Bilibili leads with a usage rate of 47.33% (115 people), followed by Douyin (38.27%, 93 people) and Weibo (37.45%, 91 people), reflecting the strong appeal of short videos and interest communities to college students. The usage rates of WeChat and QQ are both 30.45% (74 people), still maintaining their basic position in daily social interaction. "Other" platforms (such as Redbook and Douban) account for 12.76% (31 people), highlighting the diversity of platform choices.

Table 1. Social media platforms for college students' community interaction

Platform	Subtotal	Percentage
Bilibili	115	47.33%
Douyin	93	38.27%
Weibo	91	37.45%
WeChat	74	30.45%
QQ	74	30.45%
Others	31	12.76%
Valid Participants	243	

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Community types are centered around "instrumental" and "emotional" needs:

Instrumental communities (campus life groups, 48.97%, 119 people [5].) cover scenarios such as club activities and second-hand transactions. Some groups organize offline flea markets, directly promoting the conversion of online interactions.

Emotional communities (star/TV series fan groups, 48.15%, 117 people; interest groups, 38.68%, 94 people) are bound by common interests or emotional identification, often initiating offline support activities or interest gatherings.

Hybrid communities (such as class groups, internship groups, 23.46%) have both course collaboration and social functions, accounting for about a quarter.

3.2 Frequency of Community Interaction and Trust Building

More than 60% of students maintain high-frequency interaction: 36.21% (88 people) interact multiple times a day, and 25.51% (62 people) interact once a day. High-frequency interaction is concentrated in the evening after class (19:00 - 22:00), and the proportion of sophomores and juniors is as high as 78%. The trust survey shows that 46.09% of students have a "very high level of trust" in community members, with an average trust score of 3.82 (SD = 0.91). The main sources of trust include the authority of community administrators (39%), consistency in member interaction (35%), and accumulated shared experiences (26%) [6]. By participating in social interaction on social media, college students can find a sense of belonging and increase their life satisfaction [7].

3.3 Offline Social Migration Willingness and Influencing Factors

Regarding the willingness and experience of migration, 71.61% of the students were "very willing" or "somewhat willing" to extend the interaction to offline, while only 12.35% were "completely unwilling". 89.71% (218 people) had offline experiences, among which 39.09% (95 people) had 1-2 times and 20.58% (50 people) had more than 5 times. In terms of core drivers, organizing offline activities by the community (48.56%, 118 people) and the need to expand social networks (48.97%, 119 people) were the main driving forces, followed by high trust in online interaction (39.92%, 97 people) and common interests (34.57%, 84 people). The main obstacles were found to be that online interaction already met their needs (55.14%, 134 people), high time cost (53.91%, 131 people), and lack of trust (45.27%, 110 people).

3.4 The Impact of Community Interaction on

Offline Socializing and Cost Perception

The recognition of the promoting effect: 64.61% (157 people) think the promoting effect is "relatively large" or "very large", and 65.85% (160 people) believe that the depth of online emotions has a "relatively large" or "extremely large" impact on offline meetings. Regarding cost and activity habits, 69.55% (169 people) think the cost of offline migration is "relatively low" or "very low", and 62.96% (153 people) are in communities that "often organize offline activities", indicating the significant promoting role of community operation in migration.

3.5 Interactive Characteristics: High-Frequency Interaction and Trust Building

In terms of interaction frequency, 61.72% of the students participated in community interactions at least once a day, among which 36.21% interacted "several times a day", mainly during the evening after class (19:00 - 22:00). The high-frequency interaction group was mainly composed of sophomores and juniors (accounting for 78%), which might be related to their higher participation in campus activities. The trust level was measured on a 5-point scale (1 = completely untrustworthy, 5 = completely trustworthy), with an average score of 3.82 (SD = 0.91). Among them, 46.09% chose "4 points (very high)", and 17.7% chose "3 points (high)". The main sources of trust included the authority of community administrators (such as the organizational ability of club leaders, accounting for 39%), the consistency of member interactions (such as the reliability of long-term active members, accounting for 35%), and the accumulation of shared experiences (such as completing tasks in online teams, accounting for 26%).

4. Offline Social Migration Willingness and Influencing Factors

4.1 Migration Willingness and Practical Experience

Firstly, 71.61% of the students indicated that they were "willing" or "very willing" to extend online interactions to offline ones, while only 18.52% were explicitly "unwilling" [8]. Secondly, further analysis revealed that the migration willingness of members in emotional communities (82%) was significantly higher than that of members in instrumental communities (65%), possibly due to stronger emotional bonds and lower psychological barriers to meeting offline.

Firstly, 89.71% of the students had offline migration experiences, among which 50.62% participated in three or more offline activities. Secondly, common migration scenarios included offline support for fan groups (37%),

outdoor activities for interest groups (such as cycling, picnics, 32%), face-to-face transactions for second-hand goods in campus life groups (25%), and offline self-study for study groups (16%).

4.2 Facilitating Factors: Structured Activities and Trust-Driven

Through open-ended questions and scale analysis, three core promoting factors can be identified: Firstly, offline activities organized by community groups (48.56%). Such activities with clear organizational frameworks (such as club dinners and fan meetings) offer safe meeting scenarios and clear interaction goals, resulting in a high migration rate. For instance, in a certain Hanfu club's online group, 92% of the participants expressed their willingness to continue participating in offline interactions in the regular offline Hanfu garden parties organized by the administrators. Secondly, high-frequency online interaction and trust accumulation (39.92%). Statistics show that the offline migration intention of groups with daily interaction more than three times is 3.2 times that of low-frequency interactors (less than three times a week), and the migration probability of groups with a trust score of 4 or above is 41% higher than that of low-trust groups (2 or below), fully confirming the logical chain of "online interaction - trust building - offline action". Finally, practical needs drive (expanding social networks / interest practice, 48.97%). College students generally believe that offline interaction can more efficiently establish deep relationships. For example, "online chatting is not as effective as meeting in person to understand each other". Especially in internship exchange groups and other communities related to career development, 63% of students expressed that they "hope to obtain real experience sharing through offline gatherings".

4.3 Migration Resistance: The Trade-Off between Cost, Security and Satisfaction of Demands

The main concerns for refusing to migrate are first the excessively high time cost (53.91%). College students have tight schedules due to academic work, part-time jobs, competitions and other matters. They generally believe that "offline activities require prior time coordination and are not as convenient as online ones". For instance, some students refuse offline invitations due to the worry that "participating in activities on weekends will affect their revision". The second concern is that online interaction already meets their needs (55.14%). In tool-type communities, if information exchange has been completed online (such as online transfer for second-hand transactions, or file transmission for homework), there is a lack of mo-

tivation to meet offline. In emotional-type communities, some students are content with online "like interactions" and are worried that "offline meetings might break the idealized good impression". The last concern is the risks of safety and trust (45.27%). College students are highly vigilant towards strangers and are worried about "personal information leakage" and "embarrassment or insecurity in offline meetings". Especially among female students, 62% stated that they would only be willing to participate in offline activities when they are familiar with some members.

5. The Recognition of the Promoting Effect of Social Media on Offline Social Interaction

The majority of students (64.61%) recognize the positive role of social media communities in offline social interaction, with 23.87% believing that the effect is ,,very significant", 40.74% thinking it is "relatively significant", and only 16.46% holding a negative view. The cognitive differences are closely related to the characteristics of interaction: among those who interact frequently (multiple times a day), 82% believe the promoting effect is "relatively significant", which is significantly higher than that of those who interact less frequently (51%); among the high-trust group (trust level \geq 4 points), 73% recognize the promoting effect, while only 34% in the low-trust group (≤ 2 points) hold the same view. This indicates that personal participation in high-frequency and high-trust community interactions is the key to forming the perception that "online promotes offline". The survey found: "I got to know a senior in the same major through the community. After meeting offline, he shared his experience in the postgraduate entrance examination, which was of great help to me." "I was just a lurker in the group before. After participating in an offline activity once, I found that everyone had the same interests. Now we are good friends in real life."

6. Conclusion

This study reveals the correlation mechanism, theoretical value, practical implications and future directions of social media community interaction and offline social migration. The research finds that college students' community interaction is driven by both interest-oriented platforms such as Bilibili and Douyin and practical-emotional communities like campus life groups and star-fan groups. High-frequency interaction groups are more likely to achieve offline transformation through the path of "interaction frequency → emotional deepening → migration willingness". Offline migration has a two-way dynamic model composed of push forces such as community or-

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ganization and the need to expand social networks and resistance forces such as online demand satisfaction and time cost, and the design of community activities affects individuals' perception of migration costs. Migration behavior shows a phased characteristic of ,,trial → deepening → persistence", and the migration willingness of emotional communities is significantly higher than that of tool-oriented communities. Theoretically, this study expands the theory of online-offline social migration, corrects the traditional "cost-benefit" model, and confirms the role of social media as an "incubator" for offline relationships and the key influence of emotional connection on migration decisions. Practically, it is suggested that universities strengthen the guidance of community activities, platforms optimize the offline activity recommendation function, and also carry out education on the connection between virtual and real social interaction for college students. Although the research covers universities across the country, the proportion of samples from the eastern region is relatively high and the discussion of individual difference variables is insufficient. In the future, a mixed research method can be adopted to track the migration process, compare the migration efficiency of different platforms, focus on the "zero migration" group and the long-term effects of offline migration, and also cooperate with enterprises to build a migration prediction model to promote the healthy development of youth social interaction.

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