

The Influence of Social Media on College Choice among Undergraduates Majoring in Big Data Management and Application in China: Taking Guilin University of Electronic Technology as an Example

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Abstract: This study aims to investigate the influence of social media on college choice among undergraduates majoring in Big Data Management and Application in China. The study attempts to reveal how information on social media platforms such as Weibo, WeChat, and Zhihu influences the cognition and choice process of prospective students. By employing an online quantitative survey questionnaire, data were collected from the 2022 and 2023 classes of new students majoring in Big Data Management and Application at Guilin University of Electronic Technology. The aim was to evaluate the role of social media in their college choice process and understand the features and information that most attract prospective students. Social media has become a key factor influencing the college choice decision-making of undergraduates majoring in Big Data Management and Application in China. Students tend to obtain school information through social media platforms and use this information as an important reference in their decision-making process. Higher education institutions should strengthen their social media information dissemination, providing accurate, timely, and attractive information. It is also necessary to ensure effective management of social media platforms, maintain a positive reputation for the school on social media, and increase the interest and trust of prospective students. Simultaneously, educational decision-makers should consider incorporating social media analysis into their recruitment strategies to better attract new student enrollment. This study provides a new perspective for understanding higher education choice behavior in the digital age, particularly by revealing the importance of social media in the educational decision-making process. This has important practical and theoretical implications for higher education institutions, policymakers, and social media platform operators.

Keywords: Social media; Big Data Management and Application; Undergraduate college choice; Student decision-making behavior; Chinese higher education

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1. Introduction

In the digital wave of the 21st century, social media has become a part of people's lives worldwide, exerting a profound influence on the younger Generation Z. Social media has not only changed the way people communicate but also reshaped information seeking and decision-making processes, profoundly impacting the field of higher education, with an increasing number of new students relying on social media to learn about relevant information about universities. As the major of Big Data Management and Application has emerged globally, higher education institutions in China have also begun to offer such majors to meet the growing market demand. Therefore, understanding how social media influences the college choice decisions of prospective undergraduates is crucial for higher education institutions^[1]. Not only does it help schools formulate effective promotional strategies on social media, but it also enables them to better meet the information needs of prospective students, thereby attracting more outstanding students. Simultaneously, it helps unveil how information technology influences decision-making behavior patterns in the age of big data.

In recent years, with the rapid popularization of social media platforms such as Weibo^[2], WeChat^[3], and Zhihu^[4] in China, they have become important channels for students to obtain university information. Social media platforms provide a highly interactive and information-rich environment, enabling prospective university students to easily access detailed information about higher education institutions, academic programs, and student life. Existing research has begun to focus on the influence of social media on higher education choices^[5,6], but these studies are largely concentrated in Western countries such as Europe and the United States, with relatively less research on China's unique social media environment and the specific needs of the Big Data Management and Application major.

This study aims to fill this gap by analyzing the influence of social media on the college choice decision-making of undergraduates majoring in Big Data Management and Application in China, providing an in-depth understanding of higher education choice behavior in the context of the digital age. Furthermore, this study also aims to provide strategic recommendations for higher education institutions to more effectively attract and recruit students on social media.

2. Literature review

2.1. Factors influencing college choice

The factors influencing college choice is an important area in higher education research, exploring the various factors students consider when choosing a college. These factors can vary greatly depending on individual preferences, socioeconomic backgrounds, academic and career goals, and more. Hazelkorn discussed how academic reputation and university rankings influence students' decisions^[7]. She examined the transformation of rankings, the impact of rankings on the relationship between higher education and nations, and the implications of these changes for accountability, quality, and geopolitics in the higher education sector. Hazelkorn also examined the broader consequences of rankings on the global order of higher education, including changes in power and resource allocation, as well as the challenges and opportunities rankings bring to policy, institutional decision-making, and international competitiveness. Song and Petracchi explored the impact of family savings on college enrollment for students from low-income households and the mediating role of parental expectations and discussions about college^[8]. The study found that family savings for children's college education were significantly positively correlated with parental expectations for their children to attend college and discussions with their children about college planning. The effect of family savings on enrollment in two-year or four-year colleges was realized through the two mediating variables of parental

college expectations and college-related discussions with their children. These findings provide policy and practice guidance for developing college savings plans targeting low-income families and encouraging parents to engage in college planning discussions with their children. Barringer *et al.* found that campus culture, student community, and extracurricular activities were also important considerations influencing students' choice of a particular university^[9]. Morales-Rodríguez surveyed 433 higher education students from different disciplines and universities on the prevalence and formation of professional identity (PI)^[10]. Factors influencing PI such as familiarity with the professional culture, self-empowerment, social capital, and cultural capital were examined. The results showed that more than half of the students actively identified with the values and practices of their chosen profession. Greater familiarity with the profession, higher self-empowerment, higher social capital, and cultural capital were key predictors of stronger PI. This study highlights that how universities attract students through their graduates' employment rates and career development services should be an important consideration for university admissions departments. Wu *et al.* explored the reasons why international students choose to study in China, a topic that has received less research attention than global student mobility from developing to developed countries^[11]. The study employed a push-pull model to classify motivations and, through focus groups and questionnaire surveys with students at five coastal universities in China, identified seven main drivers prompting this choice. These included seeking novelty in learning, China's future prospects, education quality, and value for money. The study also examined how demographic backgrounds influenced these motivations, providing insights into the complex decision-making process of international students and implications for universities in China and other emerging countries aiming to attract more international students.

2.2. Influence of social media on college choice

In recent years, with the proliferation of digital media and online social networking platforms among younger generations, the influence of social media on college choice has become an increasingly studied area of research. Research on the influence of social media on college choice has primarily focused on how social media, as an information source, influences the perceptions, attitudes, and ultimately the choice decisions of prospective students. Lansigan *et al.* compared the considerations for choosing a school between 2012 (previous freshmen) and 2013 (current freshmen) admitted students in the Computer Science program at one university in Manila^[12]. The two groups of students had similar demographic characteristics, such as major, gender, home location, socioeconomic status, etc. The study found that the main factors influencing school choice for both groups of students were friends/peers, parents, and relatives. Social media, particularly Facebook, was a popular channel for obtaining information but had little direct influence on the enrollment decision. There were some differences in considerations between the two groups of students: current freshmen placed more importance on facilities, campus safety, and the influence of family/relatives compared to previous freshmen. Even for similar student groups, school choice factors are dynamic and can change within a short time span, highlighting the necessity for continued marketing and improving the school's image to attract future students. Peruta and Shields' research explored the use of social networking in U.S. higher education, focusing on how colleges and universities communicate with students, parents, alumni, and other stakeholders through Facebook^[13]. The study found that social networks have become an important channel for colleges and universities to communicate with stakeholders, with Facebook being the most popular platform. Additionally, schools need to focus on non-academic aspects of campus life to increase student engagement and satisfaction. The paper also examined the interactive relationship between schools and fans on social media, finding that frequent posting by schools may lead to decreased fan interaction, affecting fans' perceptions and favorability toward the school. Therefore,

while increasing page views, schools should focus on improving content quality to increase fan engagement and loyalty. Rutter *et al.* primarily investigated the performance of UK higher education institutions as brands on social media and the impact of social media interaction, verification, and website linking on university recruitment performance ^[14]. The study employed quantitative methods, analyzing Facebook and Twitter data from 60 UK universities. The results showed that social media interaction and website linking significantly impacted university recruitment performance, and university rankings and geographical location influenced the use of social media interaction and website linking. Additionally, the study found that universities' performance on social media was related to their brand management strategies. Šola *et al.* surveyed 170 students at Oxford's business school and found that Facebook was their most frequently used social media platform, significantly influencing their choice of higher education institution ^[15]. Social media has become an important means of attracting students, and social media has become an important marketing tool for higher education institutions (HEIs). The results showed a significant relationship between social media and students' choice of HEI and a strong positive influence on students' HEI choice. Facebook was the main channel for searching for courses and HEIs, and HEIs should primarily interact with prospective students via social media, providing information on educational opportunities, student experiences, and university introductions.

3. Methodology

3.1. Research design

This study employed a quantitative research method to explore the influence of social media on the college choice decision-making of undergraduates majoring in Big Data Management and Application. Through a questionnaire survey, data were collected to statistically analyze the association between social media usage and college choice decisions.

3.2. Questionnaire design

To ensure sample diversity, the study used a random sampling method. The Big Data Management and Application major at Guilin University of Electronic Technology currently has two classes of new students, the 2022 and 2023 classes, totaling 606 students. In this study, using a confidence level of 95%, a confidence interval of 10%, and a population of 606, the sample size was 83, as shown in **Figure 1**. The questionnaire content included demographic information of the respondents, social media usage habits, types of social media information influencing college choice decisions, trust in social media information, and the degree of influence of social media on the final college choice decision.

The image shows a web-based calculator titled "Determine Sample Size". It has the following fields and controls:

- Confidence Level:** Two radio buttons, with "95%" selected and "99%" unselected.
- Confidence Interval:** A text input field containing the value "10".
- Population:** A text input field containing the value "606".
- Buttons:** Two buttons labeled "Calculate" and "Clear".
- Output:** A text input field at the bottom labeled "Sample size needed:" containing the value "83".

Figure 1. Sample size calculation

3.3. Data collection and analysis

Data collection was conducted in the form of an online questionnaire, which was distributed to the survey respondents through Tencent Questionnaire. Statistical software (Excel, SPSS) was used for data analysis, including descriptive statistics, to identify potential connections between social media usage and college choice decisions.

3.4. Research ethics

Before conducting the questionnaire survey and interviews, the research purpose, participation method, and principles of anonymized data processing and confidentiality were explained to the participants. All participants were ensured to sign an informed consent form, clearly stating their voluntary participation in this study and their ability to withdraw at any time.

4. Results

4.1. Basic information of respondents

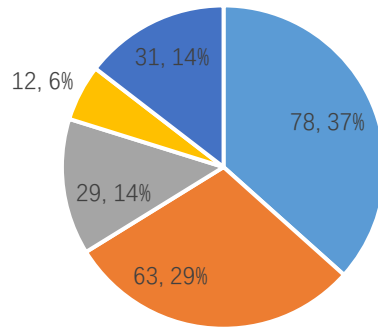
As shown in **Table 1**, a total of 83 questionnaires were distributed, and 83 were received, with a response rate of 100%. The ages of all respondents in this survey were between 18 and 23 years old. Among the 83 respondents, 42 were male (50.6%), and 41 were female (49.4%). In terms of family residence, 56 (67.5%) were from rural areas, and the remaining 27 (32.5%) were from urban areas.

Table 1. Basic information of respondents

Item	Frequency (<i>n</i>)	Proportion (%)	
Gender	Male	42	50.6%
	Female	41	49.4%
Age	18–23	83	100%
Residence	Rural areas	56	67.5%
	Urban areas	27	32.5%

4.2. Social media platform usage

As shown in **Figure 2**, WeChat and TikTok are the most popular social media platforms, with 78 and 63 respondents indicating frequent use, respectively. In contrast, the number of users for Weibo and Kuaishou is relatively lower, with 29 and 12 respondents, respectively. Additionally, 31 respondents chose the “Other” option, indicating that besides mainstream social media platforms, some specific platforms are also favored by some students.



■ WeChat ■ TikTok ■ Weibo ■ Kuaishou ■ Other
Figure 2. Social media platform usage (multiple choices allowed)

4.3. Social media usage time

Regarding the time spent on social media daily, the survey results shown in **Figure 3** indicate that most students' social media usage time is concentrated within 1–5 hours. Specifically, 25 respondents reported using social media for 1–3 hours per day, 31 respondents reported using it for 3–5 hours, and 29 respondents reported using it for more than 5 hours per day. Only two respondents reported using social media for less than 1 hour per day.

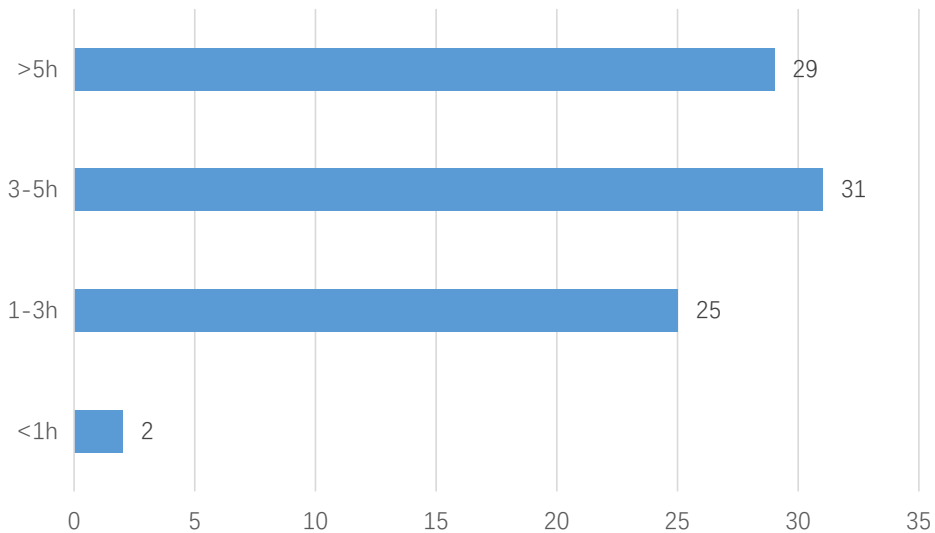


Figure 3. Social media usage time

4.4. Main purposes of using social media

The survey results shown in **Table 2** indicate that entertainment and leisure are the main purposes for respondents to use social media, with 82 respondents (98.8% of the total) stating that they use social media primarily for entertainment and leisure. Learning and education is the second most common purpose, with 64 respondents (77.1%) using social media to obtain education-related information. Obtaining news and information is also an important purpose, with 57 respondents (68.7%) using social media to access news and information. Additionally, 24 respondents (28.9%) and 25 respondents (30.1%) chose college choice information and other purposes, respectively.

Table 2. Main purposes of using social media

Item	Frequency (n)	Proportion (%)
News and information	57	68.7%
Entertainment and leisure	82	98.8%
Education-related information	64	77.1%
College choice information	24	28.9%
Other	25	30.1%

4.5. Obtaining college choice information through social media

As shown in **Figure 4**, 75 respondents (90.4%) obtained relevant information through social media when choosing a university and major. From **Figure 5**, it can be seen that official accounts are the main source for respondents to obtain college choice information, with 64 respondents choosing this option, representing the highest proportion. Alumni sharing is also an important source of information, with 50 respondents obtaining college choice information through content shared by alumni. Educational consulting accounts rank third, with 40 respondents learning about information through this type of account. Furthermore, 34 respondents obtained information through other types of accounts. These may include non-official educational forums, personal blogs, news media accounts, and various other informal channels.

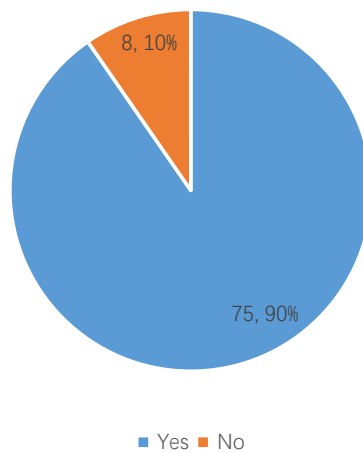


Figure 4. Whether college choice information was obtained through social media

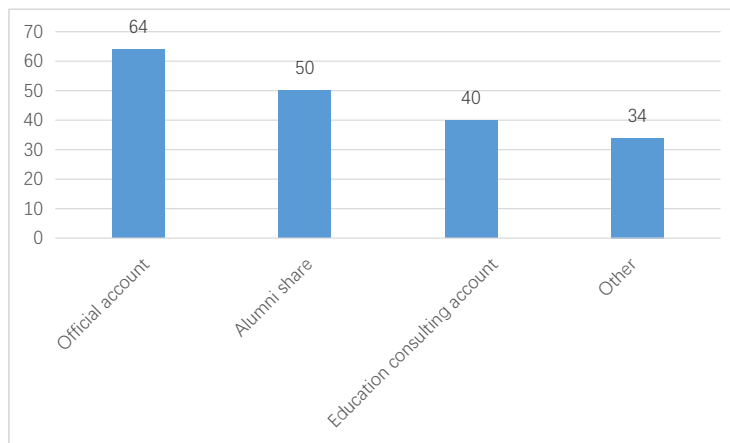


Figure 5. Social media channels for obtaining college choice information (multiple choices allowed)

4.6. Influence of college choice information on social media on decision-making

We used a 5-point Likert scale to survey the influence of college choice information on social media on decision-making, and the results are shown in **Table 3**. The results show that 0% of respondents chose “No influence,” 3.6% chose “Slight influence,” and 28.9% chose “Moderate influence.” However, 67.4% of respondents cumulatively chose “Significant influence” and “Very significant influence.” Over half (55.4%) of respondents believed that information on social media would have a “Significant influence,” which was the most frequently chosen option in the entire rating.

Table 3. Influence of college choice information on social media on decision-making

Grade	Description	Frequency (<i>n</i>)	Proportion (%)
1	No influence	0	0
2	Slight influence	3	3.6%
3	Moderate influence	24	28.9%
4	Significant influence	46	55.4%
5	Very significant influence	10	12%

4.7. Trust in college choice information on social media

We also used a 5-point Likert scale to survey the trust in college choice information on social media, and the results are shown in **Table 4**. The results show that 0% of respondents chose “No trust,” and only 2.4% chose “Low trust.” However, more than half of the respondents, 51.8%, chose “Moderate trust.” 45.8% of respondents cumulatively chose “High trust” and “Very high trust.”

Table 4. Trust in college choice information on social media

Grade	Description	Frequency (<i>n</i>)	Proportion (%)
1	No trust	0	0
2	Low trust	2	2.4%
3	Moderate trust	43	51.8%
4	High trust	35	42.2%
5	Very high trust	3	3.6%

4.8. Influence of social media information categories on college choice decisions

Table 5 examines the influence of different types of college choice information on social media on decision-making among rural youth. The results show that information about majors and prospects had the greatest influence, with 81 respondents choosing this option, accounting for 97.6%. Information about school facilities and environment ranked second, with 72 respondents choosing this option, accounting for 86.7%. Information about student life and student organizations, as well as scholarship and financial aid information, had relatively less influence, with only 30.1% and 25.3% of respondents choosing these options, respectively. Other categories of information had the least influence.

Table 5. Influence of social media information categories on college choice decisions (multiple choices)

Item	Ranking	Frequency (<i>n</i>)	Proportion (%)
Information about majors and prospects	1	81	97.6%
School facilities and environment	2	72	86.7%
Student life and student organizations	3	25	30.1%
Scholarship and financial aid information	4	21	25.3%
Other	5	12	14.5%

4.9. Aspects of information authenticity and reliability

The results shown in **Figure 6** indicate that when obtaining college choice information through social media, the aspects students were most concerned about included the source of information and the level of detail, with 70 and 72 respondents indicating their concern, respectively. Additionally, user comments and feedback were also an important point of concern, with 70 respondents indicating their concern. Relatively fewer students (44) were concerned about the frequency of information updates, while nine respondents chose “Other,” indicating that there were some specific concerns not listed.

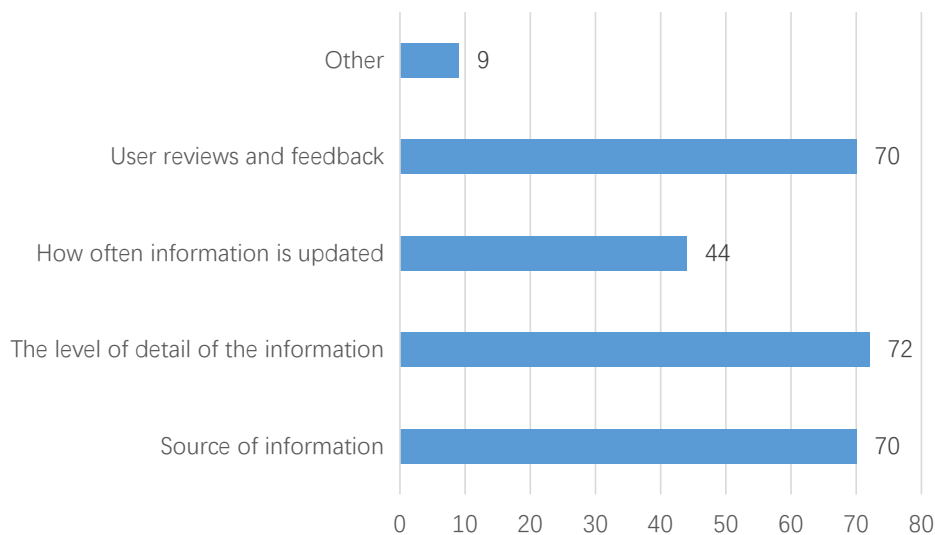


Figure 6. Aspects of information authenticity and reliability

5. Discussion

5.1. The importance of social media and the selection process

The study results show that the vast majority of respondents (90.4%) used social media to obtain relevant information in the college choice process, highlighting the importance of social media in contemporary educational decision-making. Official accounts, as the most trusted source of information, indicate that students tend to obtain authoritative and accurate information from official channels. However, the popularity of alumni sharing and educational consulting accounts also reflects students' high regard for insights from peers and third-party experts. This finding suggests that educational institutions and decision-makers need to balance official dissemination and user-generated content in their social media strategies to build a comprehensive and interactive information ecosystem.

5.2. Information categories and decision influence

In this study, information about majors and prospects was considered to have the greatest influence on decision-making, reflecting students' concern for career development and future opportunities when choosing their educational path. Information about school facilities and environment followed closely, highlighting the importance of hardware resources in attracting students. This emphasizes that educational institutions need to comprehensively showcase their advantages on social media, not limited to academic achievements but also including campus life, facilities, and student support services.

5.3. Trust in social media information

Although social media information significantly influenced the decision-making of most respondents, their level of trust in the information showed a distribution from moderate to high levels. This indicates that students maintain a certain degree of caution when using social media information and have reservations about the sources and reliability of the information. Therefore, when disseminating information on social media, educational institutions need to ensure the transparency and truthfulness of the content to enhance its influence and trustworthiness.

6. Conclusion and prospects

Social media has become an important channel for contemporary youth to obtain college choice information. By understanding the preferences and needs of the audience, educational institutions can better leverage these platforms to realize their potential in student recruitment and brand building. Future research could further explore best practices in social media strategies and how to leverage social media to improve educational equity, particularly in rural and remote student populations.

The findings of this study provide valuable insights for educational institutions on how to interact more effectively with prospective students on social media. Institutions should emphasize the role of social media as a tool for recruitment and brand building, employing diverse content strategies to meet students' different information needs. Additionally, institutions should consider establishing alumni engagement programs and leveraging positive alumni sharing to enhance institutional attractiveness. Finally, by regularly updating and verifying the accuracy of information, educational institutions can increase their credibility on social media, further attracting and retaining prospective students.

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Disclosure statement

The authors declare no conflict of interest.

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