



Research on the Promotion Path of Part-Time Graduate Students' Social Identity in Era of Big Data: Based on NVivo 12 Software Analysis

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Abstract. In the context of the big data era, this paper examines the current situation of part-time graduate students' social identity with 'situation,' 'emotion,' and 'symbolic' dimensions derived from a model of interactive ritual chain and compares positive and negative microblog comments using the NVivo 12 software. By integrating the positive and negative reference points of each dimension, it was discovered that part-time graduate students currently experience a social identity dilemma. Therefore, improving the social identity of part-time graduate students urgently requires to a new path, so as to advance the development of education.

Keywords: Big data era · Part-time graduate students · Social identity · Interactive ritual chain · NVivo 12 software

1 Introduction

The social identity of part-time postgraduates has always been a major element in representing the educational value of part-time postgraduates. According to Schoenberg, "Big Data has ushered in a new era, gradually altering the way people live and understand the world." The pervasiveness of information in all aspects of people's lives and its significance are widely acknowledged (Wang 2021). In this context, traditional ideas and ways of thinking have been altered and transformed, heralding new opportunities for part-time graduate students to strengthen their social identity.

Nevertheless, the complexity and ambiguity of the era of big data indicate that the promotion of the social identity of part-time graduate students will face new obstacles. It is necessary to examine and analyze from an omnidirectional multiview. In order to encourage the development of part-time graduate education, the purpose of this study is to investigate the current state of the social identity of part-time graduate students in this technological context, analyze the main challenges of improving the social identity of part-time graduate students, and explore ways to improve the social identity of part-time graduate students so that they can adapt to the era of big data.

2 Theoretical Analysis Model and Data Selection of Research

2.1 Theoretical Analysis Model of Interactive Ritual Chain

American sociologist Collins combined pertinent sociological theories and proposed the renowned interactive ritual chain theory, which focuses on situation, emotion, and symbol and has an internal connection with the social identity of part-time graduate students.

As the origin of interactive ritual, the situation has a significant impact on its occurrence. In the age of big data, the social identity of part-time graduate students is shaped by context (Zhou 2021). Secondly, under the mapping of the situation, the stable emotional energy exerts a direct effect on the dynamic propulsion of interactive ritual. Ultimately, fueled by emotional energy, the interactive ritual advances and produces cultural symbols that represent the group, which is a reflection of the overall training quality and outcomes of part-time graduate education. This paper constructs a theoretical analysis model from the three dimensions of situation, emotion, and symbol (see Fig. 1) and analyzes the social identity of part-time graduate students in the era of big data from a novel theoretical perspective.

2.2 Selection of Research Data

The relevant discussion on microblog topics serves as the analysis text for this study because, in the era of big data, microblog has become the center of social attention and a hub for social emotion among Internet users. This paper will analyze the comment "multiple voices require equal treatment for part-time education" in light of the research questions, as it received a large number of impressions and comments. The topic for this comment includes a comprehensive analysis of the internal and external education environment of part-time graduate education, the attitude and performance of students, and the overarching quality of part-time graduate education. The content of the review corresponds to the central focus of interactive ritual chain theory. Therefore, selecting this specific topic is advantageous for this study due to its sufficient data, which enables

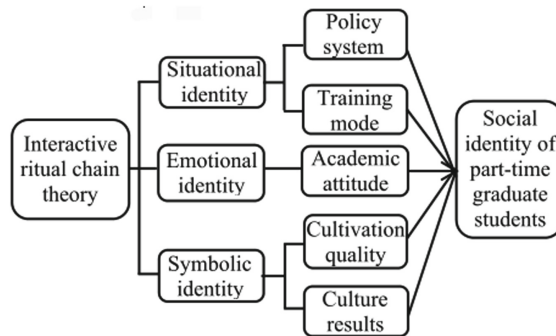


Fig. 1. Social identity analysis model of part-time graduate students in the era of big data

capturing the public's notion and attitude toward part-time graduate students and illuminating the current social identity situation of part-time graduate students in the era of big data.

3 Analysis on the Current Situation of Social Identity of Part-Time Graduate Students in the Era of Big Data

This study collects 2,535 comments from microblog topics using Python software, encodes the comment data according to the three dimensions of situation, emotion, and symbol, and compares positive and negative comments by integrating positive and negative reference points for each dimension, and concludes with an interactive ritual chain theory-based summary of the current social identity situation of part-time graduate students in the era of big data.

3.1 The Current Situation of Situational Identity of Part-Time Graduate Students

The context of part-time graduate education can be classified into two categories: the current policy system and the training mode. Comments on Weibo are either positively or negatively coded according to the two categories of the context dimension. The current context identity situation of part-time postgraduate is synthesized through a comparative analysis of the coded reference points (see Table 1). The majority of individuals are familiar with the current part-time graduate system based on the current policy structure. However, some individuals mistake part-time postgraduates for full-time working postgraduates, and different colleges and universities have varying admission test scores, making it impossible for society to evaluate part-time and full-time postgraduates equally. Just like the comment that *"The part-time postgraduates competition is not so fierce, the actual admission score of the first volunteer is also lower."* Positive responses, on the other hand, assume that the only differences between part-time and full-time postgraduates are in their learning methods and duration and when they both adhere to the same training standard and should be treated equally. The majority of negative comments on the training model assert that the learning duration of part-time postgraduates is unstable and the learning investment is insufficient. Generally, society accepts the part-time education system based on the review analysis, but there are still misunderstandings and disagreements regarding the system's rationality and the reformed part-time postgraduate training mode (Tables 2 and 3).

3.2 The Current Situation of Emotional Identity of Part-Time Graduate Students

The driving force behind the promotion of the interactive ritual is the concentration of emotional energy. Stable emotional energy will have an immediate impact on the creation of subsequent symbols. Evidently, based on the analysis of comments, some individuals do not recognize the attitude of part-time graduate students during the training process. These individuals believe that part-time graduate students have not been in school for a significant amount of time, that their learning motivation is minimal, and that they do

Table 1. Situational identity of part-time graduate students

Situational identity	Category	Attribute	Reference points	Comment example
	Policy system	Positive	39	Part-time postgraduates and full-time postgraduates all belong to general higher education together. They should be strict in their entry and exit. They should be promised the same legal effect as full-time postgraduates!
		Negative	26	The part-time postgraduates competition is not so fierce, the actual admission score of the first volunteer is also lower.
	Training mode	Positive	18	Everything is the same in the exam, the difference between living in school and having classes on weekends or at ordinary times. Why can't we treat them equally?
		Negative	33	In fact, I don't think it's fair. People spend time going to school full-time. If they are the same, it's not fair.

not communicate effectively with their teachers. In light of the positive feedback, some individuals believe that not all part-time postgraduates should be considered unacceptable. Many part-time postgraduates possess a superior emotional investment and attitude than full-time postgraduates. As for the part-time postgraduates with “mixed diplomas,” this is primarily due to the school’s improper administration. In netizen comments, the academic attitude of part-time postgraduates varies little; however, some part-time postgraduates are not committed to the training process, and the “mixed diploma” mentality has affected the general perception of part-time postgraduates.

3.3 The Current Situation of Symbolic Identity of Part-Time Graduate Students

Under the influence of circumstance and emotion, the ritual is performed continuously, resulting in the gradual formation of a cultural symbol representing a specific group,

Table 2. Emotional identity of part-time graduate students

Emotional identity	Category	Attribute	Reference points	Comment example
	Academic attitude	Positive	12	Please don't deny all part-time graduate students. My senior students work and attend classes simultaneously. Evening class is mandatory for my senior students. My seniors sleep nearly five hours per day, but still manage to accomplish two diplomas. Why should so much effort be rejected by the word "not"?
		Negative	14	Many people spend money to find a fill-in for them in class, to work on the thesis, and to press for the midterm report for months. Finally, many people pay money to write on behalf of others or for their class. If I were the local government official, I would not recognize them!

which is embodied in the training quality and outcomes of part-time graduate students. In terms of training quality, the critical assessment is more prominent. The majority of individuals believe that the training quality of part-time postgraduates is demonstrably inferior to that of full-time postgraduates, whereas the positive evaluation asserts that there is no discernible difference between the training quality of part-time and full-time postgraduates. The outcomes of the training indicate that part-time graduate students are treated more unfairly in graduate employment and that recruiting parties are generally skeptical of their training results. The majority of positive comments concur that part-time postgraduates are a part of higher education. They receive both a degree certificate and a certificate of graduation upon graduation, and they should be entitled to the same employment opportunities and benefits based on their training results. Based on the

Table 3. Symbolic identity of part-time graduate students

Symbolic identity	Category	Attribute	Reference points	Comment example
	Training quality	Positive	6	Despite the fact that the national policy applies equal effort to all students and employs distinct training methods for each cluster, there are disparities in training quality and graduation requirements, but a standardized examination.
		Negative	17	Poor paper quality, poor PowerPoint presentation, and poor oral defense are likely to result in a reprimand or even postponement for full-time graduate students.
	Training results	Positive	4	Part-time graduate students may be given the green light to graduate. Part-time graduate students are the same as full-time graduate students in that they earn double degrees. They are members of general higher education alongside full-time students. How come part-time candidates can not be equally accepted?
		Negative	7	Many part-time graduate students are unqualified to apply for jobs as civil servants, in institutions, or in businesses.

analysis of comments, it is evident that the majority of the public has doubts about the training quality of part-time postgraduates, and the unfair treatment of part-time postgraduates in graduate employment is a direct reflection of society's disapproval of the training results of part-time graduate students.

Currently, part-time postgraduates face the dilemma of situation, emotion, and symbol, as indicated by the review analysis results. Consequently, enhancing the social identity of part-time postgraduates is also fraught with challenges.

4 The Main Challenges of Improving the Social Identity of Part-Time Graduate Students in the Era of Big Data

4.1 Situational Challenges: Limited Information Transmission and Barrier of Virtual Space

While the situational elements of the interactive ritual are encountering obstacles, the crisis issues will have an effect on the promotion of the entire ritual. Currently, the sensitivity and surveillance of big data technology, there are essential facts that cannot be communicated to the general public. It influences the development of social identity among part-time graduate students. In addition, the use of the Internet to transfer teaching resources has become the preferred method in the field of education, and since part-time graduate students must balance work and study, online learning has become the predominant teaching method. The social identity of part-time graduate students is hampered further by such an Internet-based teaching method, which lacks the crucial condition of "physical presence" in interactive rituals.

4.2 Emotional Challenges: Discrete Focus and Lack of Shared Emotion

Affected by a variety of factors, part-time graduate students frequently use the Internet for learning, and the information immediacy and diversity pique their interest. This has caused a shift in focus and a fragmented learning process in the learning. In addition, teaching behind a computer screen lacks the sense and atmosphere of a traditional classroom, which influences the learning experiences of both teachers and students. Simultaneously, the interaction process between teachers and students is impeded by the virtual space; the exchange of information cannot replace the real interaction of language communication, which manifests in conservative interactive behaviors such as classroom silence and emotional separation (Wan 2022), and ultimately causes the emotional exchange between teachers and students to break down and the symbol output quality of the classroom to be compromised.

4.3 Symbolic Challenges: Data Generation Ambiguity and Public Opinion Guidance Deviation

According to the interactive ritual chain theory, the group symbol is a reflection of the interactive ritual's overall operation, which directly reflects the overall level of part-time graduate education. The opening process, paper exchange, and evaluation examination

for part-time graduate students are networked on a regular basis. Due to a lack of face-to-face supervision and management, the output quality of periodic symbols is ambiguous, which affects teachers' overall evaluations of students. Moreover, the online content of some information is confusing or provocative. Deceptive remarks have a snowball effect on the public's subjective perception of part-time postgraduates (Ma 2019). As a result, the majority of recruiting parties believe that the quality of part-time postgraduates is limited, making it more challenging for them to strengthen their social identity.

The era of big data provides part-time graduate students with an excellent opportunity to enhance their social identity, but it also poses particular challenges. To adapt to this era, it is essential to maximize the benefits of the era of big data and investigate means of enhancing the social identity of part-time graduate students.

5 Exploration on the Path to Enhance the Social Identity of Part-Time Graduate Students in the Era of Big Data

5.1 Situational Exploration: Expand Network Publicity and Innovate Training Methods

The situation is crucial for enhancing the emotional “charging” of an interactive ritual and ensuring its steady progression. Enhancing the social identities of part-time graduate students must therefore take into account the era of big data, maximize the advantages of the technology, and foster a conducive educational environment. The first step is to increase public awareness of the accomplishments of part-time graduate students by maximizing their online presence. To compensate for the lack of “physical presence” elements in virtual space, the second step is to develop enriching training methods and training situations in an effort to create a communication platform that combines online and offline components.

5.2 Emotional Exploration: Enrich Communication Contents and Build an Interactive Platform

Diverse emotional experiences influence the ritual's promotion in distinct ways. How to enhance emotional identity has become a new challenge for the improvement of the social identity of part-time graduate students in the era of big data. First, teachers should improve the content of their communications with part-time graduate students and decrease the distance between them and their students. Second, teachers should actively build an interactive platform in the form of rich content and make full use of the network to consciously build an interactive platform, provide an appropriate dialogue mode or structure in conjunction with the most popular trending information, and encourage students to actively express their views and provide personal opinions in order to promote emotional blending between teachers and students.

5.3 Symbol Exploration: Implement Cross Supervision and Pay Attention to the Dynamics of Public Opinion

As the carrier of emotional energy, symbols are “totems” that are closely related to specific groups even when they leave the interactive ritual situation (Deng 2020). To

improve symbol recognition comprehensively, it is necessary to investigate a flexible promotion strategy in conjunction with the benefits of the big data technology. First, colleges and universities should strengthen oversight, optimize network utilization, and implement flexible man-machine cross management. Develop flexible and varied examination and supervision forms to ensure the validity of examination results. Second, relevant departments should always pay attention to the development of network public opinion of part-time graduate education, analyze public opinion, and utilize all communication channels to carry out positive publicity of part-time graduate education and progressively improve the social identity of part-time graduate students.

6 Conclusions

As exploratory research, this paper considers the influence of time factors and emotional factors on the social identity of part-time graduate students, suggests a beneficial exploration path for the development of the social identity of part-time graduate students. Nevertheless, the social identity of part-time graduate students is complex and fluid. Future research must be discussed in depth from the perspective of a new era in order to gradually improve the social identity of part-time postgraduates in an era characterized by swift and manifold changes.

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