

A Study of Strategies for Improving Chinese Postgraduate Students Satisfaction

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Abstract: Graduate student satisfaction is an important dimension and indicator to reflect, monitor and evaluate the quality of graduate education. With the popularisation and development of higher education, how to improve postgraduate students' satisfaction and promote their all-round development is one of the urgent problems of current postgraduate education. This study constructed a questionnaire on the evaluation of postgraduate students' satisfaction and influencing factors, and carried out a survey among 5886 postgraduate students in more than 20 colleges of Dalian University of Technology, to explore the problems and deficiencies in the current mode of postgraduate students' management through a systematic study of postgraduate students' satisfaction with the management of postgraduate education. The study found that most of the postgraduates have high satisfaction, but there is still much room for improvement; among them, the satisfaction of ideological education, the satisfaction of employment guidance, the satisfaction of teaching quality, the satisfaction of management system and service system, social practice, campus culture and other aspects have a positive impact on the satisfaction of postgraduates' education, and the study puts forward the targeted strategy of improving postgraduates' satisfaction from the above dimensions to enrich the management theoretical system, and improve the management level of colleges and universities.

Keywords: Postgraduate Students, Satisfaction, Social Survey, Enhancement Strategy

1. Introduction

1.1. Research Background

In recent years, China's higher education system has been developing continuously, and the quality and effect of the management of postgraduate education, as a key stage in the cultivation of high-level professionals, is directly related to the level of national scientific and technological innovation and talent cultivation. As an important evaluation index, postgraduate education management satisfaction, focusing on students' feelings and feedback on all aspects of the education management process, has become an important perspective for deepening education reform and improving education quality. Therefore, carrying out an in-depth study on the satisfaction of postgraduate education management is of positive significance for promoting the sustainable development of higher education.

Chinese colleges and universities face multi-level and

diversified challenges when managing graduate education. On the one hand, the scale of postgraduates is expanding and the fields of specialization are becoming more and more refined, which makes the management of postgraduate education face more complicated tasks. On the other hand, society's demand for the quality of postgraduate training is gradually rising, expecting postgraduates to be better adapted to the needs of scientific and technological innovation and social development. In this context, the study of postgraduate education management satisfaction becomes particularly urgent, which helps to deeply understand the needs of postgraduate students in the process of education management and improve the effectiveness and quality of postgraduate training.

Past studies have mainly focused on hard factors such as institutional mechanism of postgraduate education and faculty strength, while relatively little attention has been paid to students' subjective feelings and expectations of postgraduate education management. However, students'

satisfaction is not only affected by hard conditions, but also constrained by soft factors such as communication, service and support in the process of education management. Therefore, an in-depth study of students' satisfaction with postgraduate education management not only helps to gain a more comprehensive understanding of the actual effects of university management, but also provides a strong theoretical basis for proposing practical improvement measures.

1.2. Research Status

The project team read a large number of academic journals, policy documents, books and writings related to the content of postgraduate student satisfaction, and analysed the domestic and international research on postgraduate student satisfaction in a more comprehensive way, so as to grasp the development of the field of postgraduate student satisfaction surveys and the current status of research. Through the analysis, it is found that the National Survey of Students' Study Engagement (NSSE) in the United States and the National Survey of Students (NSS) in the United Kingdom are more mature satisfaction surveys for college students in foreign countries [1]. In China, the number of related studies is small and relatively linear and stable. Postgraduate student satisfaction mainly originates from the concept of American Consumer Satisfaction (ACSI) [2], and researchers in China have constructed several evaluation systems on the basis of drawing on the demand hierarchy theory, input-output theory, two-factor theory, consumer satisfaction theory, etc., for example, Wang Xin examines the current situation and problems within the professional degree from the three phases of input, process, and output [3], and some researchers compile their own questionnaires on the survey of postgraduate student satisfaction in some universities [4].

The more authoritative one in Chinese academia is the postgraduate student satisfaction survey of Degree and Postgraduate Education, which has been conducted for ten years since 2012 [5], and is oriented to more than 100 colleges and universities, including several survey dimensions such as course teaching, scientific research and training, instructors, management and service data, etc., which is relatively representative and scientific, but what is insufficient is that the survey is mainly focusing on the analysis of the current situation, and the investigation on the influence of satisfaction [6]. However, the shortcomings are that the survey mainly focuses on the analysis of the current situation, and the exploration of the factors affecting the satisfaction is not deep enough; the scope of the survey is wide, and the experience is difficult to be promoted and applied in our university. Meanwhile, the Chinese Academy of Educational Sciences has organised the national higher education satisfaction survey for three consecutive years, which involves higher vocational colleges, undergraduate colleges and postgraduate colleges, and is also of great reference significance to this study [7].

1.3. Purpose and Significance of the Study

Postgraduate student satisfaction refers to the subjective feelings and satisfaction of postgraduate students about the educational process, service quality, and overall learning experience they receive [8]. This concept emphasises students' evaluation of the educational process, including but not limited to a variety of aspects such as curriculum, teaching quality, supervisory guidance, academic support, and life services [9].

The main purpose of the study is to gain a comprehensive understanding of postgraduate students' satisfaction with educational management and to make targeted recommendations for improvement based on this understanding. Specifically, the first is to deeply analyse postgraduate students' satisfaction with education management [10]. Through meticulous surveys and analyses, we comprehensively understand how postgraduate students feel about various aspects of education management, including but not limited to teaching quality, tutor guidance, discipline construction, life services and so on. Through a multi-angle and omni-directional perspective, the internal mechanism of postgraduate student satisfaction is revealed. Second, to discover the key factors affecting postgraduate students' satisfaction [11]. Digging deeper into the factors affecting postgraduate students' satisfaction, it covers both hard conditions such as curriculum and practice opportunities, and soft factors such as academic support and campus culture [12]. By identifying the key influencing factors, it helps to make more targeted management improvement suggestions. Thirdly, feasible improvement measures and strategies are proposed. Based on a comprehensive understanding of postgraduate students' satisfaction, the study identifies the problems and deficiencies of the current management model, and puts forward a series of feasible improvement measures and strategies with a view to improving the overall quality and level of postgraduate education.

The significance of the study mainly includes several points: firstly, through the in-depth study of postgraduate education management satisfaction, it can effectively reflect the learning experience of students, provide guidance for the construction of efficient course evaluation indexes, improve the education system and talent cultivation [13]; secondly, it further understands the ideological dynamics of the postgraduate student group, and provides the basis for the creation of a more energetic and efficient mechanism and system, and the more connotative quality and exciting university culture, in order to strengthen the university governance system and the university management system, and to improve the overall quality and level of the university education [14]. Finally, through the postgraduate student satisfaction survey, we can effectively understand what students want and need, provide suggestions for improving school conditions, upgrading the intelligent campus, enhancing the quality of service and security, and provide scientific decision-making basis for colleges and universities, so as to promote the sustainable development of the higher

education system. At the same time, by improving the management of postgraduate education, the effectiveness and adaptability of postgraduate training can be improved, which will help to cultivate high-level professionals who are more in line with the needs of the society [15].

2. Postgraduate Student Satisfaction Survey

2.1. Survey Scope and Target

This study was conducted in Dalian University of Technology, which is a national key university directly under the Ministry of Education of the People's Republic of China, a national "double first-class" construction university, and a national "985 project" and "211 project" construction university. It is a national key university under the Ministry of Education of the People's Republic of China, a national "double first-class" construction university, a national "985 project" and "211 project" construction university, which can better reflect the diversity and complexity of higher education in China.

A variety of methods, such as questionnaire survey and in-depth interview, are used, aiming to comprehensively obtain the subjective feelings and suggestions of postgraduate students. It is used for large-scale data collection, while in-depth interviews can provide more detailed and in-depth information for the study. After the first draft of the questionnaire is completed, dialogue is initiated with each functional department of the university regarding the questionnaire form and questionnaire topics, and the opinions of each functional department are fully solicited, combining with the actual needs of the students and the actual situation of the university, so as to make the questionnaire setting more feasible and operable.

The content of the survey will cover a variety of aspects such as teaching quality, tutor guidance, discipline construction, life services and so on. Design a reasonable index system, including but not limited to satisfaction scores, feedback on key issues and so on. Through the selection of the above research scope and methodology, a comprehensive understanding of postgraduate students' satisfaction with education management will be achieved to ensure the scientific and operable nature of the study. The questionnaire will be recovered and processed, and the questionnaire data will be analysed using data analysis software such as SPSS. Through a combination of quantitative and qualitative methods, the underlying reasons for postgraduate students' satisfaction will be revealed, which will provide strong support for improving postgraduate education management.

2.2. Survey Method and Process

This study will adopt a combination of quantitative and qualitative methods, mainly including questionnaires and in-depth interviews. A structured questionnaire is designed to cover various aspects such as teaching quality, tutor guidance,

discipline construction and life services in order to obtain large-scale data. In-depth interviews are conducted for a part of the samples to obtain more detailed and in-depth information and to make up for the shortcomings of the questionnaire survey on certain more subjective issues.

The first step is to design the questionnaire, based on the research purpose and literature review, design the questionnaire covering multiple aspects to ensure the clarity of the questions, starting with the pre-testing of the questionnaire, which is a small-scale pre-testing of the questionnaire prior to the formal survey in order to identify potential problems and amend them accordingly. Then the questionnaire was distributed, and the amended questionnaire was sent to postgraduate students through the online platform or in paper form to guarantee the wide coverage of the sample. The third is in-depth interview selection, where a portion of postgraduate students are selected from the questionnaire for in-depth interviews to ensure that the sample covers different disciplines, grades, and satisfaction levels. Finally, in-depth interview implementation, in-depth interviews were conducted face-to-face or online to obtain more detailed and subjective views of postgraduate students on education management.

2.3. Survey Content and Indicators

The content of the survey covers postgraduates' feelings and evaluations of various aspects of education management [16], including but not limited to:

Teaching quality: Teaching quality is one of the core factors of graduate student satisfaction. Factors including, but not limited to, course curriculum, teaching methods, and quality of teaching materials have a profound impact on students' academic satisfaction. Specifically, it includes the course curriculum, the level of teachers, and the use of teaching materials.

Supervision: Supervisors' guidance at the graduate level is a key factor affecting satisfaction. The professional level of the supervisor, his/her concern for the students and the timeliness of the guidance are directly related to the students' academic progress and overall satisfaction. It involves the professional level of the supervisor, the concern for supervising graduate students, and the timeliness.

Discipline construction: discipline construction involves the development level and disciplinary strength of the field of specialisation studied by the graduate students. Graduate students' satisfaction with the construction of disciplines is directly related to their recognition of their majors and assessment of their development potential. The assessment of graduate students' recognition of their majors and the strength of their disciplines.

Life service: the evaluation of services in the areas of food and accommodation arrangement, campus environment, social practice, and so on. Students' satisfaction with these aspects directly affects their perception of the overall school environment and their commitment to their studies.

Academic support: library resources, laboratory facilities and other aspects of academic support. These supports can

provide students with better academic conditions and thus affect their satisfaction with the academic environment.

In order to quantify postgraduate student satisfaction, a series of indicators will be designed. Firstly, the satisfaction score: the overall satisfaction score will be calculated by scoring each aspect of the problem. The second is issue importance: to understand how important postgraduates feel about different issues so that suggestions for improvement can be made in a more targeted manner. By analysing these indicators together, a comprehensive assessment of graduate student satisfaction can be developed. These indicators are able to quantify students' subjective feelings as well as provide specific problems and suggestions, providing strong support for subsequent data analysis and the development of improvement strategies.

2.4. Research Hypotheses

In order to verify the research hypotheses, we constructed the following structural equation model and set four research hypotheses to explore in depth the possible impact of different factors on postgraduate student satisfaction:

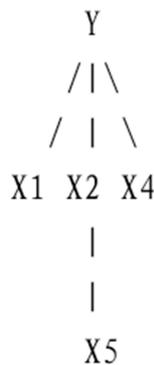


Figure 1. Structural Equation Model.

Hypothesis 1 (Y ← X1)

Main variable: Satisfaction with Civic and Political Education (X1)

Hypothesis: Students' satisfaction with Civic and Political Education is positively correlated with their overall graduate education satisfaction. That is, an increase in the satisfaction of Civic and Political Education will significantly contribute to the increase of students' satisfaction with the overall graduate education.

Hypothesis 2 (Y ← X2)

Main variable: Satisfaction with career guidance (X2)

Hypothesis: Students' satisfaction with career guidance is positively related to their overall graduate education satisfaction. That is, an increase in satisfaction with career guidance will significantly contribute to an increase in students' satisfaction with overall graduate education.

Hypothesis 3 (Y ← X4)

Main variable: Satisfaction with teaching quality (X4)

Hypothesis: There is a positive relationship between students' satisfaction with the quality of teaching and their overall satisfaction with graduate education. That is to say,

an increase in satisfaction with the quality of teaching will significantly contribute to the increase in students' satisfaction with the overall graduate education.

Hypothesis 4 (Y ← X5)

Main variable: Satisfaction with management system and service system (X5)

Hypothesis: Students' satisfaction with the management system and service system is positively related to their satisfaction with overall graduate education. That is, an increase in satisfaction with the management system and service system will significantly contribute to an increase in students' satisfaction with overall graduate education.

By testing the above hypotheses, we can gain a deeper understanding of the actual impact of each factor on the satisfaction of graduate education, and provide strong theoretical support and practical suggestions for improving the management level of graduate education. Mediator variable: In paths 1, 2, 3 and 4, we introduced students' satisfaction with campus culture construction and social practice (mediator variable M) to examine its mediating role between the service system of ideological education, career guidance, teaching quality and management system and satisfaction with graduate education.

Control variables: Since individual differences may affect the satisfaction of postgraduate education, we introduced a series of control variables, including students' personal characteristics (e.g., gender, age), academic performance, family background, etc.

Through the above design, we expect to gain a deeper understanding of the direct and indirect effects of the service system of ideological education, career guidance, teaching quality and management system on the satisfaction of postgraduate education, so as to provide empirical support and suggestions for the management of postgraduate education.

2.5. Results of Survey Conduct

The research team conducted a social survey in 2023 for 5886 students from different disciplines/more than 20 colleges of Dalian University of Technology, of which 78.2% were masters, 21.8% were PhDs, and 63.8% of the respondents were male; in terms of disciplines, it covered a wide range of fields such as science and technology, literature, history and philosophy, and social sciences, in order to comprehensively understand the special needs of different disciplines and to ensure that the study is broadly representativeness.

By comprehensively analysing the data from the questionnaire, the satisfaction of postgraduate education (Y): the mean value is 4.0, and the standard deviation is 0.2, presenting an overall higher level of satisfaction. Satisfaction with Civic and Political Education (X1): The mean value is 4.1, and the standard deviation is 0.3, which shows that postgraduates generally have a high level of satisfaction with Civic and Political Education. Satisfaction with Career Guidance (X2): The mean value is 4.0, and the standard deviation is 0.2, indicating that postgraduates as a whole hold

a high level of satisfaction with career guidance. Satisfaction with Teaching Quality (X4): The mean value is 4.1 and the standard deviation is 0.2, reflecting the overall higher satisfaction of students with teaching quality. Satisfaction with management system and service system (X5): The mean value is 4.1 and the standard deviation is 0.2, indicating that postgraduates are generally satisfied with the management system and service system.

Regarding the reliability test, the internal consistency of each satisfaction scale was examined by Cronbach's alpha, and satisfaction with Civic and Political Education (X1): the reliability was 0.85, with high internal consistency. Satisfaction with career guidance (X2): the reliability is 0.82, showing good internal consistency. Satisfaction with Teaching Quality (X4): The reliability is 0.87, showing good internal consistency. Satisfaction with management system and service system (X5): the reliability is 0.88, showing high internal consistency. Satisfaction with Campus Culture Construction and Social Practice (M): the reliability is 0.78, indicating good internal consistency of the mediating variables.

Then comes the validity test. Through Pearson correlation coefficient, path coefficient estimation of structural equation modelling and factor analysis, we get the following results: Relationships between variables: Satisfaction with Civic and Political Education (X1), Satisfaction with Career Guidance (X2), Satisfaction with Teaching Quality (X4), Satisfaction with the Management System and Service System (X5) and Satisfaction with Postgraduate Education (Y) show a significant positive correlation between them and the correlation coefficients are all greater than 0.6. The fit of the structural equation model is good, and the coefficients of each path show significance.

In terms of disciplinary differences, engineering students' satisfaction with tutorial guidance is significantly higher than that of arts students, which is 4.6 and 4.2 respectively, while in terms of disciplinary construction, the satisfaction scores of arts students are slightly higher than that of engineering students, which is 4.3 and 4.2 respectively. This indicates that there are some differences in the evaluation of education management among postgraduates of different disciplines.

Regarding the grade difference, there is a difference between master's students and doctoral students in terms of their satisfaction with their supervisors' guidance and discipline building. Masters students scored slightly higher on satisfaction with mentoring, while PhD students scored slightly higher on satisfaction with discipline building. This may be related to the fact that master's students are more focused on mentoring, while doctoral students are more focused on in-depth construction of their disciplines.

Among other group differences, there is a difference between male and female students' satisfaction with life services, with male students having a satisfaction score of 4.0, while female students have a satisfaction score of 3.7. This may be related to the gender-differentiated demand for life services, and providing more attentive services for female students may help to increase satisfaction.

Through the above analyses, we come to the following conclusions: satisfaction with civic education, satisfaction with career guidance, satisfaction with teaching quality, satisfaction with management system and service system all have a significant positive effect on satisfaction with graduate education. The mediating variables campus culture construction and social practice satisfaction play a positive mediating role in these relationships. The results of the data support the research hypotheses and reinforce the actual impact of each satisfaction on satisfaction with graduate education. These findings will provide empirical support for postgraduate education management and provide a strong basis for improving management strategies and enhancing educational satisfaction.

3. Research on Strategies to Enhance Postgraduate Students' Satisfaction

3.1. Strengthening Daily Management Services

In the process of cultivating the comprehensive development of postgraduates, improving the ideological and moral level of postgraduates and constructing a positive campus culture are of far-reaching significance in moulding outstanding talents [17]. Colleges and universities should invite experts and scholars specialising in ideology and politics to carry out academic lectures and symposiums on a regular basis, to discuss important ideological and political issues in depth, and to guide students to a deeper understanding of social development. To build a cross-disciplinary platform for Civic and Political Education, to promote the collision and exchange of ideas from different disciplines, so that students can better develop the ability of comprehensive thinking in an interdisciplinary atmosphere.

In order to strengthen academic exchanges and enhance students' attention to current affairs, academic salons are designed and organised once a month or once a quarter, inviting well-known scholars, experts and industry players at home and abroad to share the latest research results and industry dynamics. The topics of academic salons include politics, economy, culture and other aspects, covering popular issues, guiding students to pay attention to social hotspots and cultivating their comprehensive literacy. Interactive sessions are set up in the Academic Salon to encourage students to ask questions and communicate with the guests, so as to promote the collision of ideas and in-depth exchange of knowledge.

3.2. Strengthening Employment Guidance

Employment after graduation of postgraduates has always been the focus of students' attention. Enhancing students' knowledge of career development through strengthening career guidance will help improve their employment competitiveness and thus satisfaction. Career assessment tools are introduced to develop appropriate career plans for students by testing their interests, personalities and career

inclinations. Setting up a career guidance team comprising professional tutors and career planning experts to provide students with personalised and specialised career planning services to help them better plan their future careers.

Establish long-term partnerships with off-campus enterprises and integrate enterprise resources to provide more internship and employment opportunities. Regularly organise industry-specific job fairs and invite enterprise representatives to campus to have face-to-face exchanges with students, so as to promote interaction between students and employers and increase employment opportunities.

Encourage students to participate in various internships and practical activities to enhance their professionalism through actual work experience and improve their competitiveness in the job-seeking process. Invite alumni to return to campus to share their experience in different industries and provide students with practical guidance in the workplace. Postgraduate students can choose to participate in research reports on different industries according to their interests to understand the industry trends and future employment directions.

3.3. Strengthening the Management of Daily Life

The quality of life of students is directly related to their well-being and satisfaction during their school years. By strengthening the management of daily life and upgrading living services, a better learning and living environment can be created for students. Improvement of accommodation services, provision of diversified dietary choices, optimisation of canteen management, and improvement of dormitory environment ensure that students have a good basis for living. Setting up a student service centre. A student service centre is set up to provide a full range of counselling and service support, including psychological counselling, legal assistance, etc., to help students solve all kinds of problems in their lives. Setting up an information dissemination area in the centre to provide campus life information and help students better understand campus dynamics.

Carry out life skills training and organise life skills training courses, including time management, cooking, financial management, emotional management, etc., to help students better adapt to independent living and improve their quality of life. To establish an emergency response mechanism to deal with emergencies encountered by students in campus life to ensure their safety and health.

To promote communication and cooperation among students, create a student community and organise regular community activities, including cultural performances and sports competitions, to bring students closer together and enrich campus cultural life. A problem-solving platform is set up in the community so that students can give feedback on the problems they encounter in their lives through the platform and get them solved in time. Encourage students to organise various kinds of cooperative projects in the community to cultivate their teamwork spirit and organisational and management skills.

3.4. Enhancing Teaching Quality and Effectiveness

Teaching quality and effect are the core of postgraduate education. Through innovative teaching methods and optimised curriculum, students' interest in learning can be stimulated and their academic satisfaction increased. Promote innovative teaching methods, introduce innovative teaching methods such as problem-driven learning and group co-operative learning to stimulate students' interest in the subject and increase their willingness to learn actively. Update course content, introduce the latest cutting-edge knowledge and research results, and ensure that students are exposed to the latest developments in the discipline.

Introducing advanced educational technology, building an online learning platform, introducing advanced educational technology, providing diversified subject resources and improving the teaching effect. Provide diversified course resources on the platform, including recorded courses and online lectures, so that students can study according to their interests and needs. Create online discussion communities so that students can engage in academic exchanges and discussions in the virtual space to promote the formation of an academic atmosphere.

Strengthen course evaluation and feedback, set up a student evaluation mechanism, encourage students to make suggestions on the teaching process, and make timely adjustments to the curriculum and teaching methods. Practical case studies, introducing practical case studies in the course, enabling students to combine theoretical knowledge with practical situations and improving the practicality of the course. Promote the teaching team to adopt interactive teaching methods, including group discussion and case study, to improve students' participation and learning effect.

3.5. Improve the Postgraduate Management System and Service System

A good management system and service system is an important guarantee for students' learning and life. By improving the management system and service system, we can provide more comprehensive and efficient support for students. Establishing a sound postgraduate management system, clarifying the rights and obligations of students through the formulation of postgraduate manuals, rules and regulations and other documents, and providing students with clear guidelines for their study and life. Strengthening the subject tutor system, establishing subject tutors to provide students with more personalised subject guidance and career planning advice, and promoting closer cooperation between postgraduates and tutors. Building an intelligent service platform, using information technology to build an intelligent service platform to provide students with convenient information enquiry, service application and other functions to improve service efficiency.

3.6. Strengthening Campus Culture and Social Practice Activities

Campus culture and social practice activities are an important part of the growth and development of postgraduates. By strengthening campus culture construction and social practice activities, it can cultivate students' comprehensive quality and enhance their social adaptability. Enrich campus cultural activities and organise colourful cultural activities on a regular basis, such as cultural evenings and speech contests, to enhance students' cultural heritage and sense of belonging to the campus. Promote social practice projects, encourage students to actively participate in social practice projects, provide practice opportunities, and cultivate students' teamwork ability and innovative spirit. Build a volunteer service platform. Set up a volunteer service platform to guide students to participate in community services and develop a sense of responsibility and social accountability.

3.7. Other Innovative Measures and Suggestions

To better meet the diversified needs of students, schools can develop innovative training programmes and provide diversified academic experiences such as elective courses, practical projects and international exchanges to meet the individual needs of different students.

Construction of cross-disciplinary research platforms, in order to promote exchanges and cooperation between disciplines, the university can build cross-disciplinary research platforms to provide graduate students with broader academic horizons and opportunities for cooperation, and to promote cross-disciplinary innovation.

Strengthen the construction of academic community, through the establishment of academic community, academic salon, thesis seminar and other activities, to promote academic exchanges, strengthen the cooperation between students, to provide students with a more in-depth academic atmosphere.

4. Conclusion and Prospect

4.1. Summary of Research Conclusions

Through the in-depth study on the satisfaction of postgraduate education management, we were able to gain a comprehensive understanding of the current challenges and problems faced by postgraduate education, and also achieved certain results through the implementation of a series of strategies. Combined with the previous research, the following conclusions are drawn:

After the implementation of strategies for different aspects, overall graduate student satisfaction has been improved. Enhanced Civic Education, personalised career guidance, one-stop life services and improvements to the quality of teaching and learning have effectively met the needs of postgraduate students in terms of academic, life and career planning, resulting in greater satisfaction with the overall

educational experience.

Among the series of strategies implemented, the enhancement of ideological and political education, the establishment of university-enterprise cooperation service teams, and the construction of life service centres have achieved remarkable results. These strategies not only gained high recognition among students, but also played an important role in enhancing overall satisfaction.

However, while achieving remarkable results, some problems have been identified. During the implementation of the strategies, there were discrepancies in the implementation of some strategies, which led to some unsatisfactory results. Meanwhile, students' perception of certain services and programmes still needs to be improved, which requires further in-depth research and improvement.

4.2. Research Shortcomings

The sample of this study mainly focuses on Dalian University of Technology, there may be geographical and disciplinary specificities, future research can consider expanding the sample range to increase the representativeness. Meanwhile, this study mainly adopts quantitative research methods, and the excavation of some in-depth issues is more limited. In the future, qualitative research methods such as in-depth interviews and case studies can be introduced to more comprehensively understand the real feelings and needs of students.

4.3. Looking Ahead to Future Research Directions

Cross-cultural research, with the development of internationalization, future research can focus on postgraduate students from different cultures and backgrounds to understand their differential perceptions of satisfaction. Multi-factor analysis, future research can introduce more factors, such as family background, discipline characteristics, etc., on the basis of the current study to conduct a more comprehensive multi-factor analysis of postgraduate students' satisfaction. Long-term tracking study, to conduct a longer-term tracking study to understand the development of graduate students after graduation, so as to better assess the impact of education on their career.

4.4. Implications and Suggestions for Postgraduate Education

Strengthening personalised service, personalised service is the key to improving postgraduate students' satisfaction. Schools can further optimise the tutor system to provide each graduate student with more personalised academic and career planning consulting services to meet the needs of different students. Introducing new technologies. With the development of science and technology, schools can actively introduce new technologies, such as online learning platforms and intelligent service systems, to enhance the convenience and efficiency of teaching and life services. Construction of academic exchange platforms, strengthen the construction of academic exchange platforms, and regularly organise activities such as academic salons and

industry sharing sessions to enhance the academic atmosphere and professionalism of students. Establish a mechanism for continuous improvement, maintain sensitivity to postgraduate education through constant evaluation and adjustment, identify problems in time and take effective measures to ensure that the education services are constantly adapted to the needs of postgraduates.

In summary, through the study of satisfaction with graduate education management, we were able to gain a more comprehensive understanding of the current status and problems of graduate education. A comprehensive, innovative and humane graduate education management system is exploratively proposed to enhance the satisfaction of graduate students' growth and development. These strategies cover a wide range of aspects such as ideological education, career guidance, life management, teaching quality, management system and service system, campus culture construction, and social practice activities, aiming to provide more comprehensive support and services for graduate students' growth. In the future, we will continue to conduct in-depth research and improve education management in order to better serve the learning and development of graduate students.

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Conflicts of Interest

All the authors do not have any possible conflicts of interest.

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