
A STUDY ON THE NEEDS OF ETHNIC MINORITY PREPARATORY STUDENTS AT BAISE UNIVERSITY

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Abstract

This study used an explanatory sequential mixed-methods design to explore ethnic minority preparatory students' needs at Baise University, analyze gaps in the university's management system, and propose optimization recommendations. A questionnaire survey of 342 students and in-depth interviews with 16 were conducted. Results showed students strongly need personalized academic support, professional psychological counseling, and systematic developmental guidance; existing systems have issues like insufficient transparency and weak participation. Structural, policy, and resource gaps in the management system were identified. Six recommendations were put forward to build a "culturally responsive and developmentally supportive" educational management system, providing references for transforming preparatory education from "management-oriented" to "development-oriented."

Keywords : Needs, Ethnic Minority, Preparatory Students, Baise University

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Research Background

Within China's higher education system, preparatory education for ethnic minorities is an important policy initiative, aiming to enhance the educational level in ethnic regions, promote national unity, and advance coordinated regional development. Ministry of Education of the People's Republic of China (2005: 3) clearly states that this system is designed to provide transitional educational support for ethnic minority students and improve their access to higher education. This measure not only reflects the state's emphasis on ethnic minority education but also serves as a crucial approach to advancing educational equity and social harmony.

Guangxi, as one of the provincial-level administrative regions with the largest population of ethnic minorities in China, has notably representative practices in preparatory education. According to the administrative regulations issued by the Education Department of Guangxi Zhuang Autonomous Region (2012: 5), preparatory education is committed to helping students achieve a smooth transition from secondary to higher education through a one-year intensive teaching program. Baise University, which undertakes the task of cultivating nearly half of the preparatory students in the entire autonomous region, has implemented a comprehensive evaluation mechanism integrating "academic performance, conduct, and social practice" (Baise University. 2024: 2). This mechanism comprehensively guides students' development in moral, intellectual, physical, and aesthetic aspects, laying a solid foundation for their subsequent undergraduate studies.

However, in the actual operation process, preparatory students generally face specific challenges, such as weak academic foundations, limited improvement in comprehensive quality, and significant pressure in psychological adjustment. Existing studies mostly focus on policy description or macro-management analysis, lacking student-centered micro-level needs research based on mixed methods—this gap is particularly prominent in the research on preparatory student groups in grass-roots universities like Baise University. Specifically, previous studies have obvious shortcomings in the following aspects: In terms of research methods, most adopt descriptive research with a single method, lacking mixed-methods designs that integrate quantitative and qualitative data; in terms of research objects, in-depth investigations targeting preparatory student groups in local universities such as Baise University are relatively insufficient; in terms of theoretical foundations, existing studies fail to fully incorporate theoretical frameworks such as student development theory, multicultural education theory, or social integration theory, resulting in a lack of theoretical depth and explanatory power in the research.

To address these gaps, this study, based on student development theory and multicultural education theory, constructs an analytical framework covering six dimensions: academic support, ideological norms, cultural and sports activities, social practice, evaluation system, and future development support. These dimensions are not only derived from the practical basis of the "Detailed Rules for Comprehensive Evaluation of Preparatory Students" of Baise University (2024) but also align with the core vectors of student development theory, such as capacity building, emotional management, and autonomy development. Meanwhile, they echo the emphasis on cultural responsiveness and educational equity in multicultural education theory.

In summary, investigating the real needs and challenges of preparatory students at Baise University holds practical value. It informs improvements in institutional management, optimizes resource allocation, and provides empirical evidence to refine local ethnic education policies.

Research Objectives

With the advancement of China's ethnic policies and the push for educational equity, ethnic minority preparatory education has played a key role in improving educational standards in ethnic regions and reshaping higher education structures. However, whether these policies translate into positive student experiences requires empirical investigation. Although Baise University has established management and evaluation systems, there is limited systematic research on how well these structures meet students' diverse needs in academics, daily life, mental health, and personal development.

This study aims to examine the actual needs of Baise University's ethnic minority preparatory students across six key areas: academic support, ideological guidance, cultural and sports activities, social practice, evaluation systems, and future development support. By identifying policy blind spots and uncovering "silent needs" within current management, the study seeks to provide data-driven insights and strategic recommendations to enhance educational quality and student development outcomes.

1. To identify the core needs and differentiated patterns of ethnic minority preparatory students at Baise University in terms of academics, daily life, and personal development.
2. To analyze whether the university's current management systems effectively address student development needs and to identify gaps between institutional provisions and student expectations.
3. To propose feasible recommendations for improving management and support services based on empirical data and student feedback, with the goal of enhancing the quality of preparatory education and increasing student satisfaction.

Literature Review

Related Research

In recent years, China's increased investment in ethnic education has brought greater attention to ethnic minority preparatory education as a key strategy for promoting educational equity and improving human capital in minority regions. Existing research mainly centers on three areas: (1) policy and institutional design, (2) management and evaluation mechanisms, and (3) student development and needs.

1. Policy and Institutional Design: Ethnic minority preparatory education, as a distinct element of China's higher education system, reflects policies of "orientation" and "compensation." The *Administrative Measures* (Ministry of Education, 2005) position it as a strategic tool for advancing national unity and educational equity, particularly in remote ethnic regions, through a "lower admission thresholds and centralized training" model to support academic and psychological transitions. Scholars agree it combines "preferential" and "transitional" functions (Bai, 2020), with local adaptations based on socio-economic and student characteristics. Ren (2023) identified challenges like uniformity and regional imbalances, urging better alignment between macro policies and student-level realities. In Guangxi, which has China's largest ethnic minority population, local guidelines emphasize "centralized schooling, unified management, and quality-based development" (Guangxi Department of Education, 2012).

2. Management and Evaluation Mechanisms: Preparatory education management faces challenges due to students' diverse academic backgrounds, limited timeframes, and constrained resources. Dang (2019) criticized the continued use of high-school-style management, which hampers students' adjustment and integration. Some institutions, like Baise University, are refining evaluation systems by combining 85% academic results with 15% conduct and social practice to promote well-rounded development. Zhang (2019) stressed that student rights to information and participation must be upheld, cautioning that an overemphasis on "technical fairness" may obscure perceived injustices. However, empirical research on the actual impact of these evaluation models remains limited.

3. Student Learning, Psychological, and Developmental Needs: Recent studies have shifted to student-centered concerns, exploring academic stress, identity, and well-being. Zhang (2020) reported that over 60% of students experience significant stress, especially in language and English learning. Cultural diversity also contributes to challenges in adaptation and relationships, often resulting in hidden anxiety. Tian (2022), in a case study from Guangxi, identified "silent needs" such as academic resources, counseling, and guidance. Zhou (2020) urged institutions to address "developmental anxiety" through career planning, peer mentoring, and personalized support. Internationally, Zhou and Brown (2015) linked educational adaptability to cultural identity, noting that lack of belonging worsens academic fatigue. Banks (2008) also emphasized the integration of minority students' cultural experiences into curricula to improve inclusiveness and learning outcomes.

Related Theories

This study is primarily based on two core theoretical frameworks: Student Development Theory and Multicultural Education Theory, aiming to provide a more comprehensive perspective for analyzing the needs of ethnic minority preparatory students.

1. Student Development Theory: Student Development Theory provides a core framework for understanding the growth and changes of preparatory students during the university transition period. The theory posits that the goals of higher education extend far beyond knowledge transmission; they are more focused on promoting students' holistic development in cognitive, emotional, social, and moral dimensions (Evans et al., 2009). For ethnic minority preparatory students, who are in a critical phase of transitioning from secondary to higher education, they face multiple challenges such as academic adaptation, psychological adjustment, identity construction, and future planning. This theory enlightens us that the management and support service system of preparatory education should go beyond single-dimensional academic guidance, and systematically focus on and promote students' all-round development in these core dimensions, thereby helping them successfully transition to and integrate into university life.

2. Multicultural Education Theory: Multicultural Education Theory emphasizes the importance of educational equity and cultural responsiveness, providing a key perspective for this study to examine the specific needs of ethnic minority students. The theory critiques the hidden cultural hegemony in traditional educational systems and advocates that education should recognize, respect, and integrate students' cultural backgrounds, life experiences, and identity, thereby providing equal opportunities for success to all students (Banks, 2008). Banks points out that multicultural education is not only about the reform of curriculum content, but also involves the construction of the entire school environment, including teaching strategies, teachers' attitudes, assessment methods, and campus culture. For the ethnic minority

preparatory students at Baise University, who come from diverse ethnic cultural backgrounds, they may face issues such as adaptation to the dominant culture, language differences, and potential cultural biases. Therefore, based on this theory, the management and services of preparatory education must be culturally sensitive and responsive, aiming to create an inclusive, equitable, and empowering educational environment for every student, rather than simply assimilating all students with uniform standards.

Research Gaps and the Value of This Study

Existing studies on ethnic minority preparatory education are mostly focused on policy analysis or summaries of management experience. They lack "student-centered" needs identification based on large-sample data; in particular, the application of mixed-methods design is insufficient in terms of methodology, making it difficult to deeply reveal the underlying reasons behind quantitative data. Furthermore, existing studies often lack the support of explicit theoretical frameworks, which results in their analyses remaining at the level of superficial description. Regarding research objects, micro-level studies targeting preparatory student groups in grass-roots universities in Guangxi (such as Baise University) are particularly inadequate.

Against this backdrop, this study attempts to adopt an explanatory sequential mixed-methods design to fully capture the real needs profile of ethnic minority preparatory students at Baise University. Taking Student Development Theory and Multicultural Education Theory as frameworks, it further analyzes the adaptability of the university's evaluation system and service system in responding to these needs. Ultimately, this study aims to provide theoretical support and practical pathways for local universities to enhance the scientific nature of educational management, and improve students' satisfaction and development potential.

Research Methodology

Research Design

This study adopts an explanatory sequential mixed-methods design. This design is implemented in two sequential phases: First, quantitative data are collected through questionnaires, aiming to extensively identify the current status of needs and core issues of preparatory students across six dimensions, namely academic studies, ideological development, cultural and sports activities, social practice, evaluation systems, and development support. Subsequently, based on the results of the quantitative analysis, a targeted interview outline is developed, and qualitative data are obtained through in-depth interviews. These qualitative data are used to explain, deepen, and enrich the underlying reasons behind the preliminary quantitative statistical results.

Research Instruments

1. Questionnaire: A structured questionnaire titled Needs Assessment Survey for Preparatory Students at Baise University was developed for this study, consisting of a total of 30 items distributed across six dimensions. These six dimensions were determined based on the Student Development Theory and combined with the 2024 version of the Detailed Rules for Comprehensive Evaluation of Preparatory Students at Baise University. The questionnaire was used to measure students' satisfaction levels and expectation degrees regarding various types of services and institutional arrangements. A five-point Likert scale was used, with values ranging from 1 to 5, where 1 indicates "strongly disagree" and 5 indicates "strongly agree" higher values representing stronger agreement with the statements. The questionnaire was evaluated and revised by four experts, with all items achieving an Item-Objective Congruence (IOC) index greater than 0.8. A pilot test was subsequently conducted on a small sample to assess the instrument's

internal consistency. The results showed that the overall Cronbach's alpha coefficient of the questionnaire was 0.912, indicating high reliability and validity.

2. Interview Protocol: To gain deeper insights into students' real experiences and latent issues, an interview protocol titled Interview Guide for Needs of Preparatory Students at Baise University was developed. It covers the same six dimensions along with general open-ended questions, including: curriculum and learning adaptability, awareness and acceptance of behavioral norms, motivation and barriers in participating in cultural and sports activities, experiences in organizational practices, evaluation of the comprehensive assessment system, and academic planning and development support. Semi-structured interviews were conducted to allow interviewees to express themselves freely under guided prompts.

3. Sample Source and Sample Size: Baise University currently enrolls 2,125 ethnic minority preparatory students. To ensure representativeness and statistical power, the study employed stratified random sampling based on Taro Yamane's sampling formula. A total of 350 students were selected to complete the questionnaire. Stratification criteria included gender, school category, and academic discipline to ensure balanced representation across subgroups. For the qualitative component, in-depth interviews were conducted with 16 students. The interviewees were selected to reflect diversity in gender, ethnicity, institutional affiliation, discipline, academic performance, and level of participation, thereby ensuring varied perspectives and comprehensive data.

Data Collection and Analysis

1. Survey Data: Survey data were input into SPSS for statistical analysis. Interpretation of mean scores followed the reference scale:

- 1.00–1.50 = very low demand/satisfaction
- 1.51–2.50 = relatively low demand/satisfaction
- 2.51–3.50 = moderate demand/satisfaction
- 3.51–4.50 = relatively high demand/satisfaction
- 4.51–5.00 = very high demand/satisfaction

Descriptive statistics, including tables and figures, were used to present the students' current demand levels and levels of satisfaction with institutional services.

2. Interview Data: Interview data were simultaneously recorded through audio recording and interview notes. After collation, thematic coding analysis was conducted. To enhance coding reliability, two researchers independently performed coding, and consensus was reached through discussions to ensure intercoder reliability. Some interview transcripts were returned to the interviewees for member checking, so as to confirm that the content truly reflected their original intentions.

3. Data Integration and Analysis Strategy: The integrated analysis of quantitative and qualitative data constitutes the core link of this study. A "connection" strategy was adopted for integration: specifically, the key findings derived from the quantitative analysis phase provided direct basis and focus for designing interview questions in the qualitative phase. During the analysis phase, the qualitative themes obtained from interviews were juxtaposed and compared with the corresponding quantitative statistical results. Vivid interview narratives and direct quotations were used to explain and elaborate on the overall trends, outliers, or contradictory findings presented by the quantitative data, thereby forming a more comprehensive, coherent, and interpretively in-depth analysis outcome.

4. Research Ethics: This study strictly adhered to ethical standards in educational research. All participants provided informed consent before participating in the survey or interviews. The collected data was used solely for academic purposes, and the research findings do not contain any personally identifiable information.

Research Findings

1. Demographic Statistics of Student Sample

A total of 350 questionnaires were distributed, and 342 valid responses were collected. As shown in Table 1, among the 342 student respondents, male and female students accounted for 46.2% and 53.8%, respectively. Students from universities and colleges accounted for 57.9% and 42.1%, respectively. Students from the science (physics) and liberal arts (history) streams accounted for 81.6% and 18.4%, respectively. The sample distribution closely reflects the overall population of ethnic minority preparatory students at Baise University, indicating that the findings are representative.

Table 1 Demographic Statistics of Student Sample

Category	Frequency	Percentage
Male	158	46.2%
Female	184	53.8%
University	198	57.9%
College	144	42.1%
Science Track	279	81.6%
Arts Track	63	18.4%

2. Student Needs or Satisfaction with Needs Fulfillment

This study collected and analyzed data on the needs or satisfaction with needs fulfillment of ethnic minority preparatory students at Baise University across six dimensions: academic support, ideological guidance, cultural and sports activities, social practice, evaluation systems, and future development support. The specific findings are as follows:

2.1 Academic Support

Table 2 Needs or Satisfaction with Needs Fulfillment in the Academic Dimension

Survey Item	Mean	SD	Interpretation
I hope the school provides more learning resources.	4.60	0.63	Very high level of need
I think the academic evaluation system is fair and reflects my efforts.	4.06	0.69	Relatively high satisfaction
I think the current course difficulty is appropriate and I can keep up.	3.61	0.72	Relatively high satisfaction
I think the curriculum design of the school is reasonable.	3.32	0.78	Moderate satisfaction
I like the teaching methods used during the preparatory phase.	2.45	0.86	Relatively low satisfaction
Average	3.61	0.74	Relatively high satisfaction

Survey results show a generally high level of need and satisfaction with academic support among Baise University's ethnic minority preparatory students, averaging 3.61 across five items. The highest demand was for additional learning resources (4.60), reflecting a strong desire for more accessible academic materials. Perceived fairness in academic evaluation also scored well (4.06), suggesting students find the

system fair and motivating. Course difficulty adaptability scored 3.61, indicating most students can manage their workload. However, curriculum design received a moderate rating (3.32), and teaching methods scored lowest (2.45), revealing significant dissatisfaction with instructional styles and classroom interaction. While overall views on academic support are positive, improvements in teaching methods and resource allocation are needed.

2.2 Ideological Norms

Table 3 Needs or Satisfaction with Needs Fulfillment in Ideological and Behavioral Norms

Survey Item	Mean	SD	Interpretation
I hope to receive more guidance on personal moral and character development.	4.53	0.63	Very high level of need
I believe the criteria for extra points in conduct evaluations are reasonable.	4.12	0.68	Relatively high satisfaction
I believe the criteria for point deductions in conduct evaluations are reasonable.	4.08	0.70	Relatively high satisfaction
I hope the school offers more support in psychological counseling and guidance.	4.07	0.73	High level of need
I am clear about the behavioral norms required by the school and faculty.	3.48	0.79	Moderate satisfaction
Average	4.06	0.71	Relatively high satisfaction

Survey results show a high overall level of need and satisfaction regarding ideological and behavioral norms among Baise University's ethnic minority preparatory students, with an average score of 4.06 across five items. The strongest need was for moral and character development guidance (4.53), reflecting strong interest in value-oriented education. Psychological support also scored high (4.07), indicating demand for emotional and stress management services. Students viewed the conduct evaluation system positively, with reward and penalty criteria scoring 4.12 and 4.08, respectively. However, clarity on behavioral norms scored lowest (3.48), suggesting gaps in students' understanding of institutional rules. Overall, students accept institutional norms but seek more support in moral education and mental health, highlighting the need for clearer communication and expanded developmental content.

2.3 Cultural and Sports Activities

Table 4 Needs or Satisfaction with Needs Fulfillment in Cultural and Sports Activities

Survey Item	Mean	SD	Interpretation
I hope the school offers more platforms for enhancing my interests and skills.	4.54	0.63	Very high level of need
I hope to have more opportunities to participate in arts, sports, and other interest-based activities.	4.22	0.68	High level of need
I understand how participation in cultural and sports activities contributes to overall evaluation.	4.02	0.72	Relatively high satisfaction
I encounter time conflicts or academic pressure when participating in activities.	2.38	0.83	Low satisfaction
I think the cultural and sports programs provided by the school are diverse and meet my interests.	2.37	0.87	Low satisfaction

Average	3.51	0.75	Relatively high satisfaction
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Survey results indicate a “relatively high” overall level of student need and satisfaction regarding cultural and sports activities, with an average score of 3.51. The highest demand was for platforms to develop personal interests and talents (4.54), and for more opportunities to participate in interest-based activities (4.22), highlighting strong student initiative and enthusiasm. Students also understood the role of these activities in overall evaluations (4.02). However, satisfaction with the diversity of activities (2.37) and scheduling (2.38) was low, suggesting a mismatch between offerings and students’ actual needs. Overall, while students are eager to engage, improvements are needed in activity variety, scheduling, and support structures to enhance participation and development.

2.4 Civic Engagement and Social Practice

Table 5 Demand or Satisfaction Level Regarding Organizational Participation and Social Practice

Survey Item	Mean	SD	Interpretation
I believe social practice and organizational work are practically helpful for improving my abilities.	4.36	0.66	Relatively high level of demand
I hope to receive clearer participation opportunities and guidance methods.	4.28	0.65	Relatively high level of demand
I hope to have more opportunities to participate in social practice or volunteer activities.	4.21	0.70	Relatively high level of demand
I understand the relationship between serving as a student leader, participating in activities, and evaluation scores.	4.17	0.68	Relatively high satisfaction level
I am willing to serve as a student leader or join student organizations.	3.84	0.72	Relatively high level of demand
Average	4.17	0.68	Relatively high level of demand or satisfaction

Survey results show that ethnic minority preparatory students at Baise University reported a relatively high level of need or satisfaction regarding participation in organizations and social practice ($M = 4.17$). The highest-rated item “Social practice and organizational work improve my abilities” ($M = 4.36$)—reflects broad recognition of their value in developing competence, communication, and responsibility. Students also expressed strong interest in clearer participation opportunities and guidance ($M = 4.28$), as well as more chances for social or volunteer activities ($M = 4.21$). The perceived link between organizational involvement and evaluation scores was also affirmed ($M = 4.17$), suggesting effective policy communication. Although the willingness to serve as student leaders scored slightly lower ($M = 3.84$), it still indicates a generally positive attitude, despite possible constraints from academic workload.

In summary, students showed a strong positive attitude toward civic engagement and social practice. The university is encouraged to further improve the platform for student practice and optimize guidance mechanisms to support students’ holistic development.

2.5 Evaluation System

Table 6 Demand or Satisfaction Level Regarding the Evaluation System and Process

Survey Item	Mean	SD	Interpretation
I think the evaluation process is open, fair, and impartial.	4.08	0.70	Relatively high satisfaction level

Survey Item	Mean	SD	Interpretation
I understand the content, scoring components, and grading criteria of the comprehensive evaluation.	3.95	0.72	Relatively high satisfaction level
I believe the current evaluation system is reasonable and fair to all students.	3.92	0.75	Relatively high satisfaction level
I believe the evaluation system effectively motivates students to perform better.	3.84	0.77	Relatively high satisfaction level
If I have objections to the evaluation, I know through which channels I can appeal.	2.46	0.89	Low satisfaction level
Average	3.65	0.77	Relatively high level of demand or satisfaction

Survey results indicate that ethnic minority preparatory students at Baise University reported a relatively high level of demand or satisfaction with the evaluation system, averaging 3.65 across five items. Most students understood the evaluation criteria ($M = 3.95$), perceived the system as fair and reasonable ($M = 3.92$), and viewed the process as open and impartial ($M = 4.08$), reflecting effective communication and institutionalization. The system also moderately motivated students to improve ($M = 3.84$). However, a key weakness emerged: the lowest score ($M = 2.46$) was for awareness of appeal channels, revealing limited understanding of feedback or objection procedures and a need to improve transparency.

In conclusion, while students largely recognized the structure and fairness of the evaluation system, the university should strengthen its efforts in explaining the procedures and publicizing the appeals process to improve students' trust and engagement with the system.

2.6 Future Development

Table 7 Demand or Satisfaction Level Regarding Support for Future Development

Survey Item	Mean	SD	Interpretation
I hope the university will offer more consultation and guidance on major selection.	4.67	0.63	Very high demand
I clearly understand the regulations for promotion or repetition and the rules for major selection in the transition from the preparatory program to undergraduate studies.	4.13	0.72	Relatively high satisfaction
Preparatory experience has been very helpful for adapting to undergraduate studies.	4.09	0.70	Relatively high satisfaction
My overall competence and abilities have significantly improved through the preparatory program.	3.98	0.75	Relatively high satisfaction
My academic performance significantly improved during the preparatory stage.	3.15	0.84	Average satisfaction
Average	4.00	0.73	Relatively high demand or satisfaction

Survey results show that ethnic minority preparatory students at Baise University reported a relatively high level of demand or satisfaction regarding future development support, with an average score of 4.00 across five items. The strongest demand was for consultation on major selection ($M = 4.67$), indicating a pressing need for personalized guidance during the transition to undergraduate studies. Students also reported a clear understanding of promotion and major selection rules ($M = 4.13$), and felt the

preparatory experience aided their adaptation to undergraduate life ($M = 4.09$). They rated improvements in overall qualities and abilities positively ($M = 3.98$). However, academic performance improvement received a lower score ($M = 3.15$), suggesting only moderate satisfaction—likely due to varied learning foundations or instructional support.

2.7 In-depth interviews revealed that preparatory students face a range of practical academic and daily life needs. Academically, they seek more diverse courses, personalized tutoring, and expanded teaching resources. In ideological development and discipline, they expect systematic psychological support and stricter management.

For extracurricular activities, students desire more variety and better alignment with academic schedules. In terms of social practice, they urgently need more participation opportunities and clearer information channels. Regarding the assessment system, students call for greater transparency, diversified evaluation methods, and clear appeal procedures. For future development, they emphasize the need to strengthen academic foundations, receive career guidance, and pursue well-rounded personal growth.

These findings reflect students' strong awareness of self-development and their high expectations for enhanced educational support—issues that warrant serious institutional attention.

Table 8 Summary and Analysis of Interview Results on Student Needs

Dimension	Specific Needs	Analysis of Needs
Academic Support	More diverse courses	The current curriculum is relatively monotonous; students hope for featured or university-adaptation courses.
	Personalized tutoring	Current teaching methods are uniform; students expect more personalized approaches.
	Richer teaching resources	Students hope the university provides more resources, such as study materials and past exam papers.
Ideological Norms	Mental health support	Students experience significant stress and need effective counseling and psychological education.
	Improved discipline management	Dormitory and classroom management enforcement is weak; students' self-discipline needs strengthening.
	Guidance for ideological growth	Activities focused on discipline, education and ideological development are needed.
Extracurricular Activities	More diverse activity types	Students expect more modern sports and cultural entertainment programs.
	Platforms for interest development	Students hope for more training platforms for hobbies and interests.
	Coordination of academics and activities	Students hope the administration can better balance academic schedules with extracurricular activities.
Social Practice	More opportunities	Students want more chances to participate in field research, volunteer services, etc.

Dimension	Specific Needs	Analysis of Needs
Assessment System	Information channels	Students hope for more accessible channels to obtain information about practice opportunities.
	Enriched social activities	Students hope for more large-scale events to improve social and organizational skills.
	Clearer assessment methods	Special briefings or training sessions are needed to ensure full understanding of evaluation methods.
	More diverse evaluation criteria	Students suggest reducing the weight of academic scores in comprehensive evaluations.
Future Development	Transparent appeal mechanisms	Students want to clearly understand the procedures and channels for filing appeals.
	Enhanced academic foundations	Students hope for stronger instruction in fundamental courses to greatly improve their academic performance.
	Career and academic planning	Students expect more lectures on major introductions and career planning.
	Development of overall competencies	Students need related courses or activities to enhance their comprehensive qualities.

3. Effectiveness Evaluation of the Current Management System

Based on the aforementioned data on students' needs and satisfaction, this study conducted a preliminary evaluation of the effectiveness of the preparatory education management system at Baise University. Overall, the current system plays an important role in providing basic guarantees and establishing an institutional framework; however, there remains a significant gap in responding to students' diverse and personalized development needs, which is mainly reflected in the following three aspects.

3.1 Structural Gaps: The design of the management system tends to be unified and standardized, which is insufficiently compatible with the inherent diversity of the preparatory student group. For instance, the striking contrast between the extremely low satisfaction with "teaching methods" ($M=2.45$) in academic support and the extremely high demand for "learning resources" ($M=4.60$) reveals that the teaching management system lacks flexible and stratified classification mechanisms, making it difficult to meet the learning rhythms and styles of students with different academic foundations.

3.2 Policy Gaps: There is a disconnect between the promotion and implementation of key systems, which affects the perceived fairness and effectiveness of policies. Although students recognize the overall fairness of the evaluation system ($M=4.08$), the score for "awareness of appeal channels" is extremely low ($M=2.46$). This indicates that the rights protection clauses inherent in the system design have not been effectively communicated to students due to insufficient promotion and communication, resulting in a situation where "institutional fairness" and "experiential unfairness" coexist.

3.3 Resource Gaps: The supply of supportive services is insufficient and unevenly distributed, which restricts the achievement of developmental goals. Students have shown extremely high demands in areas such as "mental health support" ($M=4.07$), "platforms for interests and strengths" ($M=4.54$), and "major selection consultation" ($M=4.67$). This directly reflects the shortcomings in the university's investment in software and hardware resources, such as mental health counseling faculty, activity facilities and venues, and career development guidance, making it difficult to fully implement the management goals.

4. Preliminary Directions for Management Optimization

In response to the issues identified in the aforementioned needs analysis and institutional effectiveness evaluation, this study has initially refined the core directions for future management optimization, providing a basis for proposing specific recommendations in subsequent stages.

4.1 Promote the Transformation of Teaching Management from "Unified Provision" to "Targeted Support". This direction focuses on addressing students' demands for personalized teaching and resource access. It is necessary to explore and construct a more flexible curriculum system and diverse teaching methods.

4.2 Enhance Transparency and Sense of Participation in Institutional Implementation. This direction prioritizes resolving information asymmetry issues in areas such as evaluation appeals, activity information, and rule promotion. Efforts should be made to strengthen the construction of communication and feedback mechanisms in management processes.

4.3 Increase Investment in and Integration of Developmental Resources. This direction emphasizes the deployment of mental health services, comprehensive quality development platforms, and career planning guidance systems. Resources should be tilted toward key areas that facilitate students' long-term development.

4.4 Establish a Seamless "Preparatory-Undergraduate" Support Channel. This direction focuses on addressing students' adaptation anxiety during the transition to undergraduate studies and confusion about major selection. It is essential to establish and improve proactive mechanisms for major introduction and academic transition guidance.

Discussion

This study adopted an explanatory sequential mixed-methods approach to systematically explore the needs of ethnic minority preparatory students at Baise University and the underlying management logic. The following is a comprehensive discussion centered on three research objectives.

1. Reinterpretation of Preparatory Students' Core Needs from a Theoretical Perspective

First, this study identified the core needs of preparatory students across six dimensions: academic studies, ideological development, cultural and sports activities, social practice, evaluation systems, and development support. Data show that students hold high expectations for personalized learning support ($M = 4.60$), mental health services ($M = 4.07$), interest development platforms ($M = 4.54$), and major selection guidance ($M = 4.67$). These needs are by no means isolated; instead, they are a concentrated reflection of preparatory students' status at a specific developmental stage.

Student Development Theory provides a core framework for understanding these needs. The vectors of "developing competence", "managing emotions", and "establishing identity" proposed by Chickering and Reisser (1993) are fully verified in this study. For example, students' dissatisfaction with teaching methods ($M = 2.45$) and their calls for "more interactive sessions and basic tutoring" (S07: "The teacher lectures too fast, and I can't keep up") directly reflect the "competence development" dilemmas and emotional anxiety they face during the transition from secondary to higher education. This not only confirms Zhang's (2020) finding that preparatory students generally experience high academic pressure but

also further traces the root of such pressure to the mismatch between teaching models and developmental stages, revealing the limitations of unified teaching management in responding to individual differences.

Meanwhile, Multicultural Education Theory (Banks, 2008) provides another perspective for interpretation. This theory emphasizes that the educational environment should fully respect and respond to students' cultural backgrounds. During interviews, some students mentioned, "I hope the curriculum can integrate some cultural elements we are familiar with" (S12), which implies a certain disconnection between the current curriculum and cultural practices. This indicates that students' needs are not only academic but, at a deeper level, a demand for their cultural identities to be recognized and accepted. Therefore, this study expands the connotation of "silent needs" identified by Tian (2022), pointing out that such needs are not only demands for resource access but also a desire for culturally responsive education. If administrators of preparatory education only focus on "remedying academic deficiencies" while ignoring the unique advantages and challenges brought by students' cultural backgrounds, it will be difficult to truly empower students.

2. Critical Examination of the Management System's Effectiveness

Evaluating the effectiveness of the management system should not stop at measuring students' satisfaction; it is more necessary to critically analyze the underlying structural, policy-related, and resource-related gaps. This study reveals that while the current management system has gained basic recognition in terms of "procedural justice" (e.g., fairness of evaluation, $M=4.08$), it has significant shortcomings in "substantive justice" and "developmental effectiveness".

First, the structural gap is reflected in the fundamental contradiction between the homogenization tendency in system design and the diverse needs of students. For instance, the coexistence of high willingness to participate in cultural and sports activities ($M=4.22$) and low satisfaction (diversity of activities, $M=2.37$) stems from the conflict between activity arrangements and academic schedules at the system design level. This is not due to poor organization of individual activities, but rather the lack of overall consideration for the special schedules and time pressure of preparatory students in top-level design—this confirms the persistence of the inertial thinking of "managing college students with senior high school logic" as pointed out by Dang (2019).

Second, the policy-related gap manifests in the communication and implementation of key systems. The extremely low awareness of evaluation appeal channels ($M=2.46$) is a typical example. It exposes the disconnect between policy formulation and policy communication: a system intended to safeguard fairness, due to insufficient transparency and accessibility, may instead intensify students' sense of alienation from the system. This questions the effectiveness of purely technical improvements, indicating that without attaching importance to the "human factor" in the policy implementation process, even the best system design may fail.

Finally, the resource-related gap is a practical bottleneck restricting management effectiveness. Students' urgent needs for psychological counseling and career planning guidance directly reflect the shortage of professional faculty and systematic service programs. This echoes the appeal made by Lu et al. (2020); however, this study further points out that resource investment should not be fragmented. Instead, it should be based on a systematic development support framework, integrating scattered resources into a

clear support chain to respond to the holistic development goal advocated by Student Development Theory.

3. Policy and Practical Recommendations for Management Optimization

Based on the above discussion, the third research objective of this study has been achieved, namely, proposing optimization recommendations that are both targeted and feasible. These recommendations are rooted in empirical findings and integrated with the frameworks of Student Development Theory and Multicultural Education Theory.

3.1 Policy Implications: Promote the Shift of System Design from "Management-Oriented" to "Development-Oriented"

Educational administrative departments and universities should issue policies to encourage innovation in the management model of preparatory education. The key lies in endowing preparatory education management with greater flexibility and autonomy. For example:

Support the development of modular and optional curriculum packages to address differences in students' academic foundations (in line with the "developing competence" vector of Student Development Theory);

Clearly require reducing the weight of academic performance in comprehensive evaluation and adding dimensions such as "cultural adaptation" and "social participation" to guide the evaluation system toward diversification (Banks. 2008);

Incorporate the support rates for preparatory students' mental health and career planning into the assessment indicators of institutions, guiding resource investment from a policy perspective.

3.2 Practical Implications: Construct an Operational System Guided by Both "Cultural Responsiveness" and "Developmental Support"

For frontline practitioners such as those at Baise University, efforts should be focused on the following aspects:

Curriculum and Teaching Reform: Implement a "stratified teaching" system and a "peer tutoring" system, and encourage teachers to develop a case teaching database integrated with local ethnic cultures. This approach aims to realize "culturally responsive teaching" while improving the effectiveness of academic support (Hu & Wei. 2022). The finding of this study regarding the gap between satisfaction with teaching methods and demand for learning resources further confirms the importance and urgency of this perspective. In response to the common feedback from students regarding the overly simplistic curriculum and insufficient teaching resources, it is recommended to develop a diversified curriculum system that incorporates university adaptability courses, academic skills enhancement courses, and distinctive ethnic culture courses.

Strengthening Support Services: Establish "preparatory student development files" to conduct targeted needs assessment, and form a "triangular support team" consisting of counselors, professional teachers, and senior undergraduates to provide comprehensive guidance ranging from psychological counseling to academic planning. Universities should establish a more scientific psychological intervention mechanism, such as providing psychological assessment, individual counseling, and group counseling services (Lu et al.. 2020). This study not only confirms the importance of this direction but also

further proposes specific implementation paths, such as the establishment of a "triangular support team" and "targeted needs assessment".

Optimization of Cultural and Sports Platforms and Mechanism Innovation: Expand the types and content of activities, with a focus on adding ethnic cultural activities (e.g., ethnic song and dance performances, traditional sports competitions) and modern cultural and sports programs (e.g., photography exhibitions, music festivals) to fully cover the diverse interest needs of students. In addition, establish a scientific "activity-academic" coordination mechanism and implement a system for publicizing the semester's cultural and sports activity calendar. This mechanism should provide alternative participation channels for students with heavy academic pressure, ensuring the balanced advancement of students' academic studies and interest development.

Construction of Practical Systems and Process Guidance: To address the insufficient practical opportunities and weak guidance, a dual-path practical education system featuring "resource integration and process guidance" should be constructed. Expand off-campus practical bases by establishing stable cooperation with local governments, ethnic communities, enterprises, and non-profit organizations, and develop a diversified practical project database covering volunteer services, social surveys, and cultural experiences. Meanwhile, strengthen practical process guidance by assigning full-time teachers to each project to provide whole-process counseling, and organizing regular exchanges and achievement exhibitions to enhance the effectiveness and standardization of practical education.

Reform of Evaluation Systems and Procedural Justice: Optimize the evaluation structure by appropriately reducing the weight of academic performance and incorporating additional dimensions such as social engagement, cultural practice, and innovative literacy to reflect students' all-round development (Education Department of Guangxi Zhuang Autonomous Region. 2021). The finding in this study that students have a low level of awareness of the appeal mechanism indicates a significant gap between policy texts and implementation outcomes, which urgently needs to be addressed by enhancing transparency and establishing an appeal mechanism. Schools can conduct rule interpretation sessions and compile student assessment guidelines to ensure all students fully understand the procedures and standards; meanwhile, they should improve the appeal and feedback mechanism, and clarify the channels and processes for appeals.

Career Education and Connection Mechanism Construction: Systematically carry out career education through career planning courses, major introduction lectures, and tutor guidance to enhance students' adaptability in major selection and future development (Che. 2024). This study expands on this perspective, highlighting the special necessity of constructing a systematic career education system in grass-roots universities. In addition, preparatory education institutions should cooperate with undergraduate departments to develop "preparatory-undergraduate connection courses" and "major experience camps". These initiatives help students gain early understanding of their intended majors, reduce selection anxiety, and substantially promote the integrated cultivation of "preparatory-undergraduate" education (Zhang. 2019). This study supports this proposition, emphasizing the establishment of a "preparatory-undergraduate" joint cultivation mechanism to address the insufficient academic and psychological preparation of students during the transition period.

The above discussion starts with theoretical interpretation, proceeds through critical analysis of institutional effectiveness, and finally focuses on specific policy and practical implications. It responds to the three research objectives in a progressive manner. This discussion not only confirms the conclusions of existing studies regarding the widespread pressure faced by preparatory students, but also uses mixed methods to deeply explore the institutional and cultural roots behind such pressure. Furthermore, it provides optimization paths based on empirical evidence and theoretical frameworks.

Conclusion

Through an empirical investigation of ethnic minority preparatory students at Baise University, this study systematically identified their practical needs across six dimensions—academic support, ideological norms, cultural and sports activities, social practice, evaluation systems, and future development support. It also evaluated the effectiveness of the current educational management system in responding to these needs, and proposed optimization paths based on Student Development Theory and Multicultural Education Theory.

First, preparatory students demonstrate strong and diverse needs in academic, psychological, cultural-sports, practical, and developmental aspects. Their demands are particularly prominent in areas such as personalized teaching, mental health services, interest development platforms, and major selection guidance. These needs not only stem from the phased characteristics of their academic foundations and psychological preparation, but also reflect their in-depth dilemmas regarding cultural adaptation, identity recognition, and future development.

Second, while the current management system has achieved certain results in terms of institutional integrity and procedural standardization, there remain significant gaps at the structural, policy-related, and resource-related levels. The unified management model struggles to adapt to the differentiated development needs of students; insufficient transparency in institutional implementation and unbalanced resource supply further weaken the effectiveness of management and students' sense of gain.

Finally, based on empirical findings and theoretical guidance, this study proposes that an educational management system guided by both "cultural responsiveness" and "developmental support" should be constructed. Through paths such as curriculum reform, service enhancement, platform optimization, and mechanism innovation, the inclusiveness, supportiveness, and continuity of preparatory education can be systematically improved. This not only holds practical guiding significance for Baise University, but also provides a referable reform framework for preparatory education in similar local universities.

Suggestions for Future Research

1. Expanding the Research Scope: The current study takes Baise University as the research sample. In subsequent studies, the scope can be extended to multiple universities offering preparatory education in Guangxi or even across the country. This expansion will enable comparisons of the demand differences among preparatory students in institutions of different regions and academic levels, as well as an analysis of the impacts of regional culture and educational resources on preparatory education.

2. Innovating Research Methods: Longitudinal tracking research can be adopted to conduct a 3 – 5-year long-term follow-up of the same group of preparatory students. This approach will help analyze the long-term effects of preparatory education on students' academic performance and career development.

Meanwhile, combining qualitative research methods will allow in-depth exploration of in-depth psychological issues of preparatory students, such as cultural adaptation and identity recognition.

3. Deepening Research Content: Existing research focuses on needs analysis and macro-level recommendations. Future studies can carry out specialized research on specific fields, such as "An Empirical Study on the Effectiveness of Stratified Teaching for Ethnic Minority Preparatory Students," "Pathways and Effectiveness Evaluation of Ethnic Culture Integration in Preparatory Education," and "Breakpoints and Optimization Strategies for Preparatory-Undergraduate Curriculum Connection." Such specialized research will provide more precise empirical support for the reform of preparatory education.

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