

# Optimal Strategies of Educational Resources Allocation and the Challenges Encountered By Primary Schools in Minority Regions

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## Abstract

In this study, nine primary schools in Jinshan Bai Nationality Township, Lijiang, northwestern Yunnan Province, were used to explore the optimization strategies and challenges of primary school education resource allocation in ethnic minority areas. A self-created questionnaire which was validated by experts and pilot tested for reliability and validity was used to gather data. A combination of qualitative and quantitative methods was utilized with 200 teachers and 128 parents. This study identified three potential variables: human resources, material resources and financial resources. 14 observable variables were identified: social environment, campus space construction, information technology, empirical technology, e-books, experimental equipment, hardware system facilities, teaching facilities, public facilities, foreign exchange facilities, welfare benefits, incentive mechanisms, teaching reform costs, and cultural and sports costs. Through the investigation and analysis of the principal component analysis method and the structural equation (SEM) research method, the structural model of primary school education resource allocation in ethnic minority areas is finally constructed. The researchers propose a strategy for the optimal allocation of primary education resources in ethnic minority areas.

## Keywords

Minority regions; Primary Schools; Challenges; Optimal Strategies.

## 1. Analysis and Interpretation

In this study, qualitative and quantitative methods were used to investigate the satisfaction of educational resource allocation among 200 teachers and 128 parents who had worked for more than five years with self-designed questionnaires.

### 1.1. The Level of Satisfaction of the Respondents as to the Current Strategies Applied in Educational Resource Allocation

**Table 1.** Human Resource Satisfaction Analysis

human resources indicators	Mean	Std. Deviation	Description Interpretation	Rank
Social Environment	3.36	0.8595	Generally satisfied	1
Campus space	3.36	0.8554	Generally satisfied	1
Information technology	3.33	0.9167	Generally satisfied	2
Experiential teaching	3.02	0.876	Generally satisfied	5
Electronic book	3.13	0.9472	Generally satisfied	4
Composite Mean	3.24	0.89096	Generally satisfied	3
Legend: 4.51-5.00, Very satisfied;3.51-4.00, Relatively satisfied;2.51-3.50, Generally satisfied;1.51-2.50, Not satisfied;1.00-1.50, Very dissatisfied.				

Table 1 shows the human resource satisfaction analysis. As shown, the total mean value is 3.24, interpreted as “generally satisfied”, which means that the respondents are just fairly content and pleased with the aforementioned indicators. Although all indicators were rated by

respondents as “generally satisfied”, indicators “Social Environment” and “Campus Space” got the highest mean of 3.36. This demonstrates that respondents are generally satisfied with the current educational environment. This is to some extent acceptable, but something must be done to ensure that the school atmosphere facilitates the proper application of the curriculum for Excellence, which has four primary goals: successful learners, confident persons, responsible citizens, and effective contributors. Different spaces within schools must respond to these purposes in their own unique way, and as walking through many of the new schools reveals, the challenge is to make spaces fulfill more than one function (and, for 'all-through' campuses, to make these multi-function spaces cater to a diverse age range). The emphasis on school design is not only on creating spaces that will enable academic excellence but also on creating spaces that will help to develop individuals' skills as a whole, taking learning outside of the classroom and providing the right mix of spaces within a school for children and young adults to socialize. Schools must also educate students for life outside of the classroom, and the design of social spaces inside schools may aid in this transition by fostering social contact (ANDS, 2022).

Meanwhile, “experiential teaching” got the lowest mean of 3.02, interpreted as “generally satisfied”. This reflects the kind of teaching that teachers are giving to students. According to Educare (2022), experiential teaching is engaging students to “learn by doing” and by reflecting on the experience. Experiential teaching entails observation, creativity and active interactions into early years education. It allows children to see purpose and to enjoy their learning experience. This is synonymous with transformational learning since learning is seen as a process that is both constructive and reflective. In this process, a learner's knowledge emerges as a result of critically reflecting on their experiences. Learning should take place in settings other than the conventional classroom in order to promote a transformation of viewpoints. This is seen by Chinese parents and teachers as something that needs to be given more attention to, perhaps through teacher training in their pedagogies and strategies for better teaching-learning process. Thus, human resource in this regard is seen to be something that needs to be harnessed and enhanced through improved resource allocation.

**Table 2.** Material Resource Satisfaction Analysis

Material Resources Indicators	Average	Std. Deviation	Description Interpretation	Rank
Experimental Facilities	2.92	0.7852	Generally satisfied	1
Hardware Equipment	2.80	0.9675	Generally satisfied	3
Teaching Facilities	2.92	0.7757	Generally satisfied	1
Public Facilities	2.86	0.7747	Generally satisfied	2
Foreign Student Resources	2.78	0.7902	Generally satisfied	4
Composite Mean	2.85	0.81866	Generally satisfied	
Legend: 4.51-5.00, Very satisfied;3.51-4.00, Relatively satisfied;2.51-3.50, Generally satisfied;1.51-2.50, Not satisfied;1.00-1.50, Very dissatisfied.				

Table 2 imparts the material resource satisfaction analysis. Respondents are generally satisfied with their material resources which means that in a way, the thing needs to level up if it were to serve its purpose. The composite mean is 2.85, interpreted as “generally satisfied” which is close to dissatisfaction. But in fairness, of all indicators, “Teaching facilities and experimental facilities got the highest mean of 2.92 which is interpreted as “generally satisfied”. This implies that resource allocation gives weight to these two facilities. According to Andrews (2019), no matter the nation, having adequate teaching facilities may have a significant impact on both the

academic achievement of students and the quality of instruction provided by teachers. Studies have shown that these facilities have an effect on the overall quality of the educational experience for both students and instructors, even on the recruitment and retention of teachers. Meanwhile, "Foreign Student Resources" got the lowest mean of 2.78, which is still interpreted as "generally satisfied". This means that the resource allocation in this regard is seen to have the least priority. It is a fact that China is one of the most advanced nations in terms of the growth of its economy and industry, and its educational system provides pupils with many prospects for success in the future. Many people have the impression that the Chinese educational system is a good place to cultivate highly educated future professionals. On the other hand, despite the fact that schools in big cities seem to provide high-quality education, schools in rural regions are not nearly as developed. They often have a shockingly inadequate number of teaching personnel, and as a result, the educational options available to students and the general atmosphere in the classroom are quite different from those found in major urban centers. Moreso, with facilities intended for foreign students. The majority of China's greatest international schools may be found in its major metropolitan areas, such as Shanghai and Beijing, as well as in other popular expat locations in China. These schools have earned an outstanding reputation. The educational systems of the United Kingdom and the United States, as well as other national school programs such as those of Germany, France, and others, are among the options available to expat children. In addition to this, the Foreign Baccalaureate is taught at a large number of China's international schools (IB). This is an excellent option for expat parents who often relocate their children or who place a high emphasis on living in a diverse community. However, when a foreigner is being relocated to a town that is not as large as this one, he or she may not have access to all of these opportunities (Internations, 2022).

**Table 3.** Financial Resource Satisfaction Analysis

Financial Resources Indicators	Average	Std. Deviation	Description Interpretation
Welfare Benefits	1.93	0.2608	Not satisfied
Incentive Mechanisms	2.56	0.6745	Generally satisfied
Teaching Reform Costs	3.56	0.8184	Relatively satisfied
Cultural And Sports Cost Input	3.30	0.8888	Generally satisfied
Composite Mean	2.83	0.660625	Generally satisfied
Legend: 4.51-5.00, Very satisfied;3.51-4.00, Relatively satisfied;2.51-3.50, Generally satisfied;1.51-2.50, Not satisfied;1.00-1.50, Very dissatisfied.			

Table 3 reveals the financial resource satisfaction analysis. It can be seen from the aforementioned table that Composite Mean garnered a mean value of 2.83, which is interpreted as "generally satisfied". This implies that the respondents are just fairly satisfied with the resource allocation in this regard. Nonetheless, "Teaching Reform Costs" got the highest mean of 3.56 which is interpreted as "generally satisfied". Respondents view it as one of the indicators that are given premium. RTOP (2022) affirms that teaching reform signals a paradigm shift from the traditional teacher-centered lecture-driven class to a student-centered, activity-based learning environment that typically includes multiple opportunities for collaboration among students. It maintains coherence with the fundamentals of scientific investigation, reflects scientific values, aims to reduce the anxiety associated with learning, and extends beyond the boundaries of the school.

Meanwhile, "Welfare Benefits" got the lowest mean of 1.93, which is interpreted as "not satisfied". Respondents are outrightly honest that they are not pleased with the benefits that they receive from this allocation. Welfare benefits refer to things like medical, prescription,

dental, disability, employee life, group life, accidental death, and travel accident insurance. These are things that are either provided or arranged by the Company or any Subsidiary to be provided to the Company's employees. Liu (2018) affirms that when it comes to health, the Chinese government gives medical insurance, but it only covers a very narrow range of topics, and there are stringent restrictions on the use of medication. This means that if one wants to keep costs down, they generally can't make use of imported medicine. Retirement insurance provides a certain sum as a pension when the time comes for people to retire. It varies quite a little especially when an employee resigned from the government, he or she would receive a lot more money; on the other hand, if from a private firm, his or her pension could not even be enough to meet basic living expenses.

## **2. Structural Model of Primary School Education Resource Allocation in Ethnic Minority Areas**

China is a socialist country with a socialist system and a nine-year compulsory education system. The allocation of primary education resources mainly depends on the state and the government.

### **2.1. Hiring of the Best, Reasonable Allocation Strategists**

Primary education schools in ethnic minority areas should set up posts according to their needs and ensure that every post is filled with people. If a school lacks physical education teachers, it will be filled with physical education teachers; if a school lacks art teachers, it will be filled with art teachers; if a school lacks information technology support personnel, it will be staffed with information technicians. Primary education resources in minority areas are allocated to central schools by the government, and then distributed to all primary schools. In order to ensure that every primary school has adequate staffing for every post, it is necessary to establish a provincial-level, city-district-central school teaching staff allocation system. First of all, each primary school will be the lack of this year's teaching staff report to the central school, central school statistics after the unified report to the higher level of education management department, thus reported level by level. According to the reported data, provincial education authorities allocate them to local primary schools. Secondly, recruitment should be carried out according to job demands. In the recruitment process, we should adhere to the principle of selection and pay attention to the household registration of interviewees. We should try our best to select excellent applicants with local household registration, which is more conducive to retaining teachers. Finally, according to the actual situation of each school, the educational management department will allocate the teaching staff reasonably.

### **2.2. Improvement of the Salary Structure for Primary School Staff in Ethnic Minority Areas**

The salary of primary school staff in ethnic minority areas is composed of many items, including national salary, class hour allowance, job allowance, border area allowance and so on. In the interview process, it was found that many non-local teachers did not have housing subsidies or rent subsidies, and the teaching staff dormitory provided by the school was in poor condition. In order to solve this problem, it is necessary to perfect the salary structure of primary school staff in minority areas, add housing or rent subsidies according to the needs, eliminate the housing difficulties of non-local staff, improve the dormitory conditions of staff, configure necessary household appliances and furniture, so that staff can live at ease.

### **2.3. Improvement of the Teacher Training Mechanism**

The level of teaching of teachers directly determines the quality of teaching effect. In order to ensure the teaching level of primary school education in ethnic minority areas, it is necessary

to establish a sound teacher training mechanism. Teachers are trained in schools according to specific teaching needs. First of all, the situation of "old leading to new" teachers in schools is implemented. Experienced veteran teachers lead young teachers to improve their teaching standards. Secondly, let teachers "go out" in batches, go to schools with better teaching quality to learn on the job, learn advanced teaching methods, and improve teachers' teaching ability. In addition, from the perspective of cost-saving, the education management department purchases or develops a teacher's online learning platform for teachers to learn and use, in order to ensure the effect of online learning, it is necessary to regularly evaluate the learning effect of teachers. Finally, the school carries out various teacher teaching activities, such as teaching ability competitions, teacher lecture competitions, etc., to create an atmosphere of learning all the time, learning everywhere, and lifelong learning among the teaching staff, and improve the teaching ability of teachers.

The optimal allocation of material resources for primary school education in ethnic minority areas is an indispensable way to achieve the effective use of limited primary education resources and maximize their marginal benefits. Under the planned economic system, the resources for primary school education in ethnic minority areas are uniformly allocated by the government education management department, and schools lack autonomy. Schools in the allocation of primary school education resources in ethnic minority areas have no autonomy, nor can they be optimized. It can only be optimized by improving the efficiency of the use of material resources.

#### **2.4. Improvement of the Utilization Rate of Necessary Material Resources at this Stage and Maximization of their Use Efficiency**

To improve the utilization rate of existing material resources and maximize the efficiency of their use, it is required that primary schools in ethnic minority areas make full use of the educational material resources they have, so that each kind of material resources can be used to the greatest extent in the training of teachers, teaching activities, and social services, and maximize their benefits. For example, some primary school teaching equipment is idle, experimental equipment is idle, and the low utilization rate of these material resources and idle use are serious wastes of limited educational resources. As long as there is such a phenomenon in primary schools in ethnic minority areas, it means that some material resources have not been optimally allocated, and there is a need for optimal allocation.

#### **2.5. Adjustment of the Material Resources at Any time and allocation in a Timely Manner**

The material resources and utilization rates possessed by primary schools in ethnic minority areas cannot be the same at all times, and some primary schools use material resources that are relatively inefficient. These material resources are inefficient for this school, but may not be available in other schools or the use efficiency will be greatly improved, and such material resources must be adjusted at any time to maximize the efficiency of use. This requires the education management departments in ethnic minority areas to clarify the material resources of each school and its use, and arrange special personnel to be responsible for the management, verification and allocation of the fixed assets of each school. Each school needs to arrange special personnel to manage and inventory material resources, clarify responsibilities, responsibilities to people, timely report the school's material resources to the education management department, and cooperate with the higher education management department to ensure that the educational material resources are fully and reasonably allocated and utilized.

##### **Sharing of Material Resources**

The material resources of each school cannot be used at the same time or in the same space, some schools use them for a certain period of time, some schools use them for another period

of time, and the distance between primary schools in ethnic minority areas is small, so realizing the sharing of material resources is a feasible way to improve the efficiency of the use of material resources. For example, network resources can be shared.

The optimal allocation of financial resources is the scientific and rational allocation of the primary school financial resources formed by the investment in education, which is used to further expand and enrich the human resources, material resources and other resources of the primary school, and to support human resources, material resources and other specific loss costs generated in the process of use. Only by optimizing the financial resources of education in ethnic minority areas can we expand the total amount of limited financial resources, determine the scientific and reasonable flow of financial resources in terms of human resources, material resources, and other resources, and ensure the appreciation of some financial resources in the process of use.

## **2.6. Increase in Government Investment**

Fan Kun (2011) revealed the Article 2 of the Compulsory Education Law of the People's Republic of China stipulates that the state shall establish a guarantee mechanism for compulsory education funds to ensure the implementation of the compulsory education system. Article 44 stipulates: The funding of compulsory education shall be carried out in a system in which the State Council and local people's governments at all levels share the burden according to their duties, and the people's governments of provinces, autonomous regions, and municipalities directly under the Central Government are responsible for overall planning and implementation. At the same time, the "Notice of the State Council on Deepening the Reform of the Rural Compulsory Education Funding Guarantee Mechanism" proposes to "improve the level of public funding guarantee for primary and secondary schools in the rural compulsory education stage". Governments at all levels in ethnic minority areas need to strictly implement national policies and give priority to the incremental part of fiscal expenditure for investment in primary education.

## **2.7. Improvement of the Management System for Education Funds and s strengthening of the Auditing and Supervision of Education Funds**

Education management departments need to strengthen the management and allocation of funds, in the case of limited funds, according to the specific needs of all types of schools at all levels, to achieve the distribution according to needs, while sending people responsible for auditing and supervising the use of funds in each school, to ensure that the use of financial resources is maximized. Schools in the progressive use of school financial resources to consider the investment in teaching reform costs, increase the investment in teaching reform costs to a certain extent can improve the quality of teaching.

### **Broadening of Access to Capital**

Education funding mainly relies on financial appropriations, but education management departments at all levels and all types of schools at all levels can also broaden the channels of funds and obtain financial support. Education administrations can engage in dialogue with capable entrepreneurs in the region as needed, obtain funding, and support schooling. Schools can sponsor schools through friendship with well-known alumni or initiate private investment in running schools.

## **Acknowledgments**

Fund Project: 2022 scientific research fund project of Yunnan Provincial Department of Education - Research on the measurement of the development level of high-quality integration of urban and rural education in Northwest Yunnan (2022j1491).

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