Inclusive Education Perspective: An In-depth Analysis and Development Strategies for the Professional Workforce Construction of Special Education Resource Teachers

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Abstract – **In the context of inclusive education, building a team of special education resource teachers is a critical component in achieving educational equity. This study focuses on 216 resource teachers from Guangdong Province, China, using questionnaire surveys and empirical analysis to systematically explore the structural characteristics, current professional competence, and development bottlenecks of the resource teacher workforce. The findings reveal that the resource teacher team exhibits balanced gender and age distribution but has low academic qualifications and professional titles (88.89% with bachelor's degrees or lower, only 4.17% holding full senior professional titles), as well as imbalances in professional background and regional distribution (42.59% lack special education backgrounds, with the Pearl River Delta region accounting for 41.67%). Scores on the professional skills dimension are significantly lower than those on professional attitudes and knowledge (3.052 vs 3.519/3.520). Practical abilities are notably weak, and full-time teachers have significantly better professional skills compared to part-time teachers (p=0.002). The study proposes four-dimensional development strategies: constructing a "pre-service training-post-service development" professional pathway, improving policy support for "qualification certification-title evaluation," establishing a "cross-disciplinary collaboration-dynamic assessment" support system, and promoting "regional balance-digital empowerment" resource integration. The research provides theoretical and practical evidence for optimizing the support mechanisms of inclusive education and enhancing the quality of special education, offering significant reference value for improving the construction of Chinese-characteristic resource teacher teams.**

Keywords – **inclusive education; resource teachers; team building; professional development; special education;**

I. INTRODUCTION

Research background

In the global development of education, inclusive education has become a core trend in special education. Since the publication of the Salamanca Declaration in the 1990s, the concept of inclusive education has spread widely around the world, emphasizing that all students, regardless of whether they have disabilities or special needs, should receive fair and high-quality education in regular educational settings. China has actively responded to this international educational trend, vigorously promoting the practice of inclusive education. The inclusion model, as an important form of localization in inclusive education, has become a key pathway for the development of special education.

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Currently, China's special education has achieved significant progress, with the number of special education schools steadily increasing and the scale of inclusive education students continuously expanding. However, many challenges have also become increasingly evident during this development process. Among these, the construction of resource teacher teams has become a key factor constraining the improvement of inclusive education quality. Resource teachers, as the critical force on the front lines of inclusive education, bear multiple important responsibilities, including providing personalized educational support to students with special needs, assisting regular teachers in teaching, and communicating and collaborating with parents. However, at present, there are obvious shortcomings in the quantity, quality, and professional competence of resource teacher teams, making it difficult to meet the rapidly growing demands of inclusive education. Strengthening the construction of resource teacher teams in special education has become an urgent and important issue that needs to be addressed in China's special education sector.

In the past five years, China's special education sector has developed rapidly, with its scale continuously expanding. According to data released by the Ministry of Education, the number of special education schools has steadily increased, growing from 2,192 in 2019 to 2,345 in 2023; the number of full-time teachers has risen from 62,400 in 2019 to 78,000 in 2023; and the number of students with special needs has also significantly increased, from 794,600 in 2019 to 912,000 in 2023 (data source: National Special Education Development Statistical Bulletin of the Ministry of Education, 2019-2023). The expansion of the special education sector means that the demand for special education teachers is also on the rise. Resource teachers, as an essential part of the special education workforce, play a crucial role in providing professional educational support to students with special needs. In inclusive education models and special education classes within regular schools, the specialized services provided by resource teachers can meet the individual learning needs of these students, helping them better adapt to school life and improve their academic performance. Therefore, strengthening the team of resource teachers is a necessary choice to meet the growing demands of the special education sector.

Theoretical significance

This study systematically explores the construction of resource teacher teams, providing three theoretical supports for the development of inclusive education theory systems: First, deepening the theory of resource classroom construction and clarifying the core role of resource teachers in the operation of resource classrooms; Second, promoting

the localization of inclusive education theory and improving practical approaches through empirical research; Third, expanding the theory of special education teachers to offer new perspectives on teacher professional development.

Practical significance

Research has three practical values: First, optimizing the functions of resource classrooms to ensure the effective use of special education resources by enhancing teachers' professional capabilities; second, building a support system for inclusive education to provide specialized guidance on special education to regular teachers; third, implementing the right to education for special students by formulating individualized education plans to promote their social integration.

Current research status in China

Research in China focuses on the following dimensions: In terms of role positioning, scholars such as Xiao Fei and Liu Huili emphasize that resource teachers should undertake composite functions including teaching implementation, professional consultation, and planning formulation; regarding competency requirements, Shen Renhong and Peng Xiguang propose that they must possess special education philosophy, professional knowledge, and rehabilitation skills; in the field of professional development, Li La and Sun Quanhong point out that the professionalization of resource teachers is a core element in advancing inclusive education; concerning training mechanisms, Li Zehui et al. believe it is still in its early stages, while Zou Guangwan et al. suggest strengthening the cultivation of special education competencies among general education teachers. The research also addresses practical challenges such as staffing shortages and insufficient professional capabilities, proposing optimization strategies.

International research status

International research exhibits three characteristics: In terms of functional positioning, Linares JJC et al. propose that resource teachers should undertake comprehensive functions such as teaching support, curriculum development, and academic research; European special education institutions emphasize their reflective practice capabilities; regarding model effectiveness, Lindsay Geoff et al.'s empirical studies show that the resource classroom model has more advantages than traditional education; in pre-service training, Nougaret A.A. et al. explore interdisciplinary training pathways, while Waitoller P. et al. propose a multi-party collaborative training mechanism.

Summary and prospect of research status

Current research has produced foundational outcomes such as the recognition of necessity, standard construction, and problem diagnosis. However, there are three limitations: the theoretical framework needs to deepen its conditions and standards, as well as cultivation goals; interdisciplinary integration is insufficient, lacking a multidimensional perspective from education, psychology, and medicine; and regional differentiation studies are weak. Future research can expand in three directions: theoretical deepening, interdisciplinary integration, and layered practice, to build a more guiding theoretical system.

II. CORE CONCEPTS AND THEORETICAL BASIS

Inclusive education

Inclusive education (ECE) emphasizes the equal right to education for all students in a general educational environment, promoting the comprehensive development and social integration of students with special needs through personalized support. The Salamanca Declaration established its core content as the inclusion of students with various disabilities in regular classes and providing them with full-cycle educational services. In China, inclusive education has achieved co-learning between students with special needs and those without through the practice of mainstreaming, advancing educational equity.

Resource classroom

The Resource Classroom, as a support center for special education, is equipped with professional facilities and teaching resources. It provides multidimensional services to students with learning, behavioural, or social challenges (including those with intellectual disabilities, learning difficulties, visual and auditory impairments, and autism). These services include educational assessments, subject tutoring, life skills training, and rehabilitation support. Its core function lies in creating a supportive environment that helps students overcome their obstacles and integrate into mainstream education.

Resource teachers

Resource teachers are the professional leaders of resource classrooms, responsible for the core functions of educational support for students with special needs. These include needs assessment, development of individualized education plans, implementation of personalized teaching, interdisciplinary collaboration, and guidance to parents. They must possess both specialized knowledge in special education and an understanding of general education principles. By integrating educational resources, they lead the operation of resource classrooms, promoting the adaptive development of students with special needs within the general education system.

Return to mainstream theory

The theory originated from the special education reform in the United States in the 1960s, advocating for integrating students with special needs into the general education system through transitional measures such as resource classrooms. Its core lies in breaking down segregated educational models and creating an environment with minimal restrictions. Early practices were limited due to an incomplete support system, but later developments of the

"failure-rescue" model have promoted more precise educational placement.

Inclusive Education theory

The concept was established in the 1970s by the Wollaston Report in the UK, proposing an integration of three dimensions: place, society, and function. At its core, it advocates for setting up specialized classrooms (place integration) in regular schools to facilitate co-learning between students with special needs and those without (society integration), while providing partial time support based on individual differences (function integration). This theory has evolved into an inclusive education model in Japan and the Taiwan, China region, with resource classrooms becoming a key practical vehicle.

Integration of educational theories

As an evolutionary form of the former two, inclusive education theory was established as an international consensus in the 1994 Salamanca Declaration. Its core concepts include: all children have the right to receive regular education nearby; achieving equal participation through personalized support; emphasizing holistic development with respect for differences. China's practice of mainstreaming is a localized exploration of this theory, where the construction of resource classrooms and the professionalization of resource teachers have become key mechanisms to ensure the quality of inclusive education, requiring teachers to possess differentiated instruction skills and cross-system collaboration competencies.

III. RESEARCH METHODS

Research subjects

This study adopted a convenience sampling method and conducted surveys on resource teachers for inclusive education in urban areas of Guangdong Province, China, using the Questionnaire Star APP. A total of 220 questionnaires were distributed, and after excluding those with significant missing content, full marks, or extreme values, 216 valid responses were collected, with an effective rate of 98.18%. Among these, 90 responses came from the Pearl River Delta region, accounting for 41.67%; 72 responses from the eastern part of Guangdong Province, accounting for 33.33%; 25 responses from the western part of Guangdong Province, accounting for 11.57%; and 29 responses from the northern part of Guangdong Province, accounting for 13.43%.

Research tools

This study adopted the "Resource Teacher Professional Development Questionnaire" compiled by Feng Yajing and Zhu Nan (2018) as the research tool. The construction of this questionnaire is based on three aspects: first, systematically reviewing theoretical frameworks regarding the role positioning and capability standards of resource teachers in domestic and international literature; second, integrating statutory responsibilities of resource teachers from policy documents of inclusive education policies across provinces and cities; third, soliciting revision suggestions from educational administrative managers and scholars in special education at universities through expert review methods. The questionnaire consists of two modules: the first part covers demographic information (such as title, education level, teaching experience, training history, and years of service as a resource teacher), using closed-ended multiple-choice questions; the second part focuses on professional literacy assessment (including knowledge, skills, and attitudes) (comprising 33 questions), divided into three levels: professional attitude (7 questions), professional knowledge (9 questions), and professional skills (17 questions). Among these, the dimension of professional knowledge emphasizes the theoretical knowledge that resource teachers need to master, including policy norms (such as standards for resource classroom construction), work processes (inclusive education support systems), and characteristics of special student development; the dimension of professional skills highlights operational skills such as educational assessment implementation, cross-role collaboration (teacher/parent/rehabilitationist), remedial instructional design, application of resource equipment, individualized education planning (IEP) formulation, and action research; the dimension of professional attitude points to the value recognition of inclusive education, the scientific nature of special child development perspectives, and awareness of collaborative education. All items use a five-point Likert scale (1= "strongly disagree" to 5= "strongly agree"), with total scores reflecting professional competence levels, where higher scores indicate stronger capabilities. Using factor analysis for information condensation research, the first step is to determine whether the data are suitable for factor analysis. As shown in the table above: KMO is 0.971, greater than 0.6, meeting the prerequisite requirements for factor analysis, indicating that the data can be used for such studies. Additionally, the data passed the Bartlett's test of sphericity ($p<0.05$), confirming that the research data are appropriate for factor analysis. The overall internal consistency coefficient (Cronbach's Alpha) of the questionnaire is 0.837, with the internal consistency coefficients for professional skills (Cronbach's Alpha) being 0.971, professional attitude (Cronbach's Alpha) 0.944, and professional knowledge (Cronbach's Alpha) 0.956, all indicating good reliability of the questionnaire.

Research results

Basic information of resource teachers:

Gender and Age: Among the resource teachers surveyed, 115 are male, accounting for 53.24%, and 101 are female, accounting for 46.76%, indicating a relatively balanced gender ratio. In terms of age, 31 teachers are 25 years old or younger, making up 14.35%; 89 teachers are between 26 and 35 years old, accounting for 41.2%; 61 teachers are between 36 and 45 years old, accounting for 28.24%; and 35 teachers are 46 years old or older, accounting for 16.2%. The age distribution of teachers is relatively even (Table I).

TABLE I SHOWS THE GENDER AND AGE OF THE SURVEYED TEACHERS

Gender	N	%	age	N	%
Male	115	53.24	Under 25	31	14.35
			26-35 years old	89	41.2
Female	101	46.76	Age 36-45	61	28.24
			Over 46 years old	35	16.2
Total	216	100	amount to	216	100

Educational Background and Professional Titles: Among the surveyed resource teachers, 91 have a junior college degree or lower, accounting for 42.13%. The most common is a bachelor's degree, with 101 teachers, or 46.76%. There are 17 with a master's degree, making up 7.87%, and 7 with a doctoral degree, representing 3.24%. This indicates that the number of teachers with master's and doctoral degrees is relatively low. In terms of professional titles, the majority have a junior title or lower, totaling 151 teachers, or 69.91%. There are 31 with intermediate titles, or 14.35%,25 with associate senior titles, or 11.57%, and 9 with full senior titles, or 4.17%. This suggests that the overall professional titles of resource teachers are relatively low, with the proportion of those holding senior titles being the lowest (Table II).

TABLE II SHOWS THE EDUCATIONAL BACKGROUND AND PROFESSIONAL TITLE OF THE SURVEYED TEACHERS

Record of formal schooling	N	%	Professional ranks and titles	N	%
Specialist And below	91	42.13	Primary and below	151	69.91
Undergraduate Course	101	46.76	middle rank	31	14.35
Master	17	7.87	Associate senior	25	11.57
Doctor	7	3.24	Senior level	9	4.17
Total	216	100	amount to	216	100

Teaching Experience and Duration of Serving as Resource Teachers: In the current team of resource teachers, 51 have less than one year of teaching experience, accounting for 23.61%; 87 have between one to five years, making up 40.28%; 48 have between six to ten years, representing 22.22%; and 30 have over ten years, or 13.89%. The distribution of teaching experience is relatively balanced. In terms of the duration of serving as resource teachers, 18 have less than one year, accounting for 8.33%; 60 have between one to two years, or 27.78%; 71 have between three to four years, or 32.87%; and 67 have five years or more, or 31.02%. This indicates that resource teachers generally have shorter durations in their roles, with most being "new resource teachers" (Table III).

TABLE III SHOWS THE TEACHING EXPERIENCE AND THE TIME OF SERVING AS A RESOURCE TEACHER OF THE SURVEYED TEACHERS

School age	N	%	Served as a resource teacher	N	%
Less than one year	51	23.61	Less than one year	18	8.33
1-5 years	87	40.28	1-2 years	60	27.78
Six to ten years	48	22.22	3-4 years	71	32.87
More than 10 years	30	13.89	At least 5 years	67	31.02
amount to	216	100	amount to	216	100

Professional Background and Job Nature: In terms of professional background, 124 teachers surveyed have a major in special education, accounting for 57.41% of all resource teachers, while 92 have a non-special education background, making up 42.59%. This indicates that a significant portion of the teachers do not have a professional background in special education. Regarding job nature, 158 are full-time resource teachers, representing 73.15%, and 58 are part-time resource teachers, accounting for 26.85% (Table IV), indicating that the majority of positions are for full-time resource teachers.

TABLE IV SHOWS THE PROFESSIONAL BACKGROUND AND JOB NATURE OF THE SURVEYED TEACHERS

Whether you have a background in special education	N	%	Nature of position	N	%
yes	124	57.41	Full-time resource teacher	158	73.15
deny	92	42.59	Part-time resource teacher	58	26.85
Total	216	100	amount to	216	100

Distribution of Trained and Teachers by Region: Among the surveyed resource teachers, 19 have not received any special education training in the past year, accounting for 8.8%; 162 have received 1 to 2 trainings, making up 75%; 25 have received 3 to 4 trainings, representing 11.57%; and 10 have received 5 or more trainings, which is 4.63%. This indicates that teachers as a whole receive fewer trainings. Among the surveyed resource teachers, 90 are from the Pearl River Delta region of Guangdong Province, accounting for 41.67%; 72 are from the eastern part of Guangdong Province, accounting for 33.33%; 25 are from the western part of Guangdong Province, accounting for 11.57%; and 29 are from the northern part of Guangdong Province, accounting for 13.43%. The distribution shows that more teachers are from the Pearl River Delta region, while fewer are from other regions, indicating that resource teachers in Guangdong Province are mainly concentrated in the Pearl River Delta (one of the most economically developed city clusters in China) (Table V).

TABLE V SHOWS THE DISTRIBUTION OF TEACHERS SURVEYED BY TRAINING AND REGION

Number of training sessions	N	%	Teachers' own areas	N	%
Ten times	19	8.8	The Pearl River Delta region in Guangdong Province, China	90	41.67
1-2 times	162	75	Eastern Guangdong Province, China	72	33.33

3-4 times	25	11.57	Western Guangdong Province, China	25	11.57
Five or more	10	4.63	Northern Guangdong Province, China	29	13.43
amount to	216	100	amount to	216	100

Analysis of the current situation and differences of professional quality of resource teachers

The overall professional competence of resource teachers: Data shows that the highest score among the three sub-dimensions is 3.520 for professional knowledge, followed by 3.519 for professional attitude, with the lowest being 3.052 for professional skills. The average value of the professional skills dimension is only slightly higher than the theoretical median of 3 on the 5-point Likert scale, significantly lower than the averages of the professional attitude and professional knowledge dimensions. This indicates that resource teachers currently lack sufficient skills in dealing with special children in inclusive classes and need further improvement. In contrast, resource teachers have shown a relatively positive attitude towards their professional attitude and knowledge regarding inclusive education (Table VI).

TABLE VI TOTAL SCORE OF PROFESSIONAL QUALITY OF RESOURCE TEACHERS AND SCORES OF EACH DIMENSION (N=216)

Name	Mean ± Standard Deviation
Specialized Skill	3.052±0.958
Professional Attitude	3.519±1.048
Professional Knowledge	3.520±1.026

Analysis of Differences in Professional Competence Among Resource Teachers: Using t-tests (full name independent samples t-test) or ANOVA (full name one-way ANOVA), with gender, age, highest education level, title, teaching experience, cumulative years as a resource teacher, whether they have a background in special education, number of special education training sessions received in the past year, current job nature, and region of origin as independent variables, and the average scores across dimensions as dependent variables, a one-way ANOVA was conducted (Table VII). The results are as follows:

There were no significant differences ($p>0.05$) in the scores of three dimensions—gender, age, highest education level, title, teaching experience, cumulative years as a resource teacher, whether having a background in special education, number of special education training sessions received in the past year, nature of current position, and region of origin—among resource teachers from different regions in this study. This indicates that gender, age, highest education level, title, teaching experience, cumulative years as a resource teacher, whether having a background in special education, number of special education training sessions received in the past year, nature of current position, and region of origin do not significantly influence professional competence among resource teachers.

In terms of job characteristics, the t-test (full name independent samples t-test) was used to study the differences in professional skills, professional attitude, and professional knowledge among current job types. As shown in Table (VII): samples with different current job characteristics do not show significant differences in professional attitude and professional knowledge ($p>0.05$), indicating that samples from different job types exhibit consistency in their professional attitude and professional knowledge, showing no significant differences. However, there is a significant difference in professional skills ($p<0.05$), suggesting that different job types have varying levels of professional skills. Specifically, the job type shows a 0.01 level of significance for professional skills ($t=3.118$, $p=0.002$). A detailed comparison reveals that the average value for full-time resource teachers (3.17) is significantly higher than that for part-time resource teachers (2.72).

TABLE VII ANALYSIS OF DIFFERENCES IN PROFESSIONAL QUALITY OF RESOURCE TEACHERS

	Variable	Specialized Skill	Professional Attitude	Professional Knowledge
Gender:	Males (n = 115)	2.96±0.96	3.51±1.05	3.53±1.05
	Females (n = 101)	3.15±0.95	3.53±1.05	3.51±1.00
	t	-1.484	-0.092	0.107
Age:	Under 25 years (n = 31)	3.26±0.95	3.40±1.10	3.46±1.02
	26-35 years (n = 89)	3.02±0.95	3.56±1.03	3.53±1.00
	36-45 years (n = 61)	2.98±0.97	3.53±1.04	3.56±1.04
	Over 46 years (n = 35)	3.08±0.98	3.51±1.10	3.47±1.11
	F□	0.643	0.189	0.099
Highest degree	Specialist and below (n = 91)	3.02±0.97	3.52±1.04	3.51±1.07
	Undergraduate (n=101)	3.14±0.95	3.49±1.07	3.55±0.99
	Master's (n = 17)	2.90±0.92	3.43±0.99	3.27±1.13
	Doctoral (n = 7)	2.56±1.01	4.14±0.91	3.78±0.85
	F□	1.047	0.89	0.508
Professional title	Primary and below (n = 151)	3.05±0.95	3.50±1.08	3.43±1.06
	Intermediate (n = 31)	3.03±1.00	3.68±1.01	3.78±1.03
	Associate Senior (n = 25)	3.06±1.00	3.51±0.85	3.75±0.76
	Senior level (n = 9)	3.16±1.04	3.30±1.17	3.48±1.01
	F□	0.041	0.392	1.497
Years of teaching experience	Less than 1 year (n = 51)	3.09±0.93	3.29±1.09	3.32±1.03
	1-5 years (n = 87)	3.06±0.97	3.52±1.05	3.53±1.05
	6-10 years (n = 48)	3.02±0.96	3.59±1.03	3.56±0.98
	More than 10 years (n = 30)	3.01±1.03	3.80±0.95	3.76±1.02
	F□	0.063	1.609	1.217
Cumulative years as a resource teacher:	Less than 1 year (n = 18)	3.14±0.90	3.24±1.09	3.03±1.12
	1-2 years (n = 60)	2.79±0.92	3.73±1.03	3.74±0.96
	3-4 years (n = 71)	3.16±0.99	3.47±1.03	3.55±1.05
	5 years or more (n = 67)	3.14±0.95	3.46±1.06	3.42±1.00
	F□	2.105	1.41	2.518

Whether you have a background in special education	Yes (n = 124)	3.05±0.98	3.48±1.04	3.48±1.02
	No (n = 92)	3.06±0.94	3.58±1.06	3.57±1.04
	t	-0.064	-0.705	-0.622
Number of special education and training sessions received in the past year:	0 times (n = 19)	3.20±1.03	3.34±1.08	3.23±1.14
	1-2 times (n = 162)	3.01±0.95	3.54±1.03	3.54±1.01
	3-4 times (n=25)	3.19±0.97	3.53±1.10	3.61±1.00
	5 or more (n = 10)	3.06±1.04	3.53±1.29	3.52±1.22
	F□	0.403	0.205	0.592
Nature of current position	Full-time resource teacher (n = 158)	3.17±0.96	3.46±1.07	3.46±1.03
	Part-time resource teachers (n = 58)	2.72±0.87	3.69±0.98	3.67±1.00
	t□	3.118**	-1.473	-1.329
Where you come from	Pearl River Delta, Guangdong Province, China (n = 90)	2.93±0.96	3.61±1.04	3.61±0.99
	Eastern Guangdong Province, China (n = 72)	3.15±0.97	3.38±1.07	3.44±0.97
	Western Guangdong Province, China (n = 25)	3.03±0.99	3.60±1.04	3.51±1.17
	Northern Guangdong Province, China (n = 29)	3.20±0.88	3.51±1.06	3.46±1.17
	F□	0.976	0.716	0.388

IV. ANALYSIS AND DISCUSSION

Overall, the current ratio of male to female resource teachers in our country is relatively balanced, with a more even age distribution among teachers. The number of teachers with master's and doctoral degrees is relatively low, and the overall professional titles are relatively low, with the proportion of senior titles being the lowest. The distribution of teaching experience is relatively even, with most teachers having a relatively short tenure. Most teachers are "new resource teachers," and a significant portion do not have a background in special education. The nature of their positions is primarily as full-time resource teachers, and the overall number of training sessions received by teachers is relatively low. In Guangdong Province, China, resource teachers are mainly concentrated in the Pearl River Delta region (one of the most economically developed city clusters in China). Currently, the professional skills of resource teachers are relatively lacking (only 3.052 points), which needs further improvement. Full-time resource teachers' professional skills are significantly stronger than those of part-time resource teachers.

Structural characteristics and potential problems of resource teachers

The data of this study show that the current resource teachers have the following characteristics in terms of gender, age, education and professional title:

Balanced gender and age distribution: The ratio of male and female teachers is close, and the majority of them are middle-aged and young (69.44% of 26-45 years old), indicating that the team has certain vitality, but the accumulation of experience may be insufficient.

Overall low educational background and professional title: 88.89% of the teachers have a bachelor's degree or less, and 69.91% have a junior professional title or less, which reflects the lack of occupational attraction for resource teachers and the imperfect professional training mechanism.

Imbalance between Professional Background and Job Nature: 57.41% of teachers have a background in special education, but 42.59% lack the necessary foundation; full-time teachers account for 73.15%, while part-time teachers have significantly lower professional skills (t=3.118, p=0.002), indicating that the professional support capabilities of the part-time teacher team need urgent improvement.

Uneven regional distribution: The proportion of resource teachers in the Pearl River Delta region is 41.67%, far exceeding that in other regions, which may be related to the level of economic development and policy resources, exacerbating the regional differences in educational equity.

The core issue lies in the mismatch between the growth in the number of resource teachers and the improvement in their quality. Despite the expansion of teacher numbers driven by national policies, shortcomings in professional skills (with an average score of 3.052) and high turnover (63.89% of teachers have less than 5 years of teaching experience) limit the effectiveness of inclusive education support. Moreover, the narrow path for professional advancement (only 4.17% reach the top level) undermines job satisfaction and further affects team stability.

The current situation and influencing factors of professional quality

The research shows that resource teachers scored the lowest in the dimension of professional skills (3.052), significantly lower than professional attitude (3.519) and professional knowledge (3.520). Specifically, it is manifested as follows:

Lack of practical ability: weak operational skills such as IEP formulation, interdisciplinary collaboration and rehabilitation technology application, which are difficult to meet the individual needs of special students.

Limited training effect: 75% of teachers receive 1-2 training sessions per year, but the training content is theoretical (such as policy interpretation), and lacks contextual and case-oriented practical guidance.

Lack of integration of disciplines: Only 3.24% of teachers have doctoral degrees, and there is a shortage of interdisciplinary talents in education, psychology and medicine, which leads to the lack of scientific and systematic support programs.

V. STRATEGIES TO STRENGTHEN THE CONSTRUCTION OF TEACHERS IN CHINA'S SPECIAL EDUCATION RESOURCES

The principle of combining universality with particularity

Resource teachers, as professionals in the field of special education, need to possess both the basic qualities of regular teachers and the professional skills required for special education. In their career development, they must adhere to the teaching standards and management methods of regular teachers, emphasizing the general principles of education, such as focusing on students' all-round development and following educational laws; at the same time, they should deeply understand the uniqueness of special education and master assessment, intervention, and teaching methods tailored for students with special needs, providing personalized educational support. For example, during the teaching process, they should use regular educational methods to impart knowledge while also adopting individualized instruction and tiered teaching based on the characteristics of students with special needs, to meet their unique learning requirements. Additionally, in terms of attitude towards students, they should uphold the love, patience, and responsibility of regular teachers, offering ample care and encouragement, while also having a deeper understanding and tolerance of the special psychological and behavioural needs of students with special needs, helping them overcome difficulties and achieve comprehensive physical and mental development.

The principle of combining theory with practice

Special education is a discipline that emphasizes both professionalism and practicality. The cultivation and development of resource teachers require a close integration of theory and practice. For a long time, the training of special education teachers in China has been overly focused on theory at the expense of practice. This has led to some resource teachers possessing a certain level of theoretical knowledge but lacking the ability to solve problems in actual work. Therefore, in the process of building a team of resource teachers, it is essential to base efforts on solid theoretical knowledge and enhance their practical skills through methods such as practical teaching, internships, and case analysis. For example, increasing the proportion of practical courses in the curriculum, arranging students to intern at special education schools and resource classrooms, allowing them to apply their theoretical knowledge in real-world scenarios and accumulate practical experience. At the same time, encouraging resource teachers to engage in teaching research and practical exploration, elevating issues encountered in practice to a theoretical level for analysis and resolution, continuously summarizing experiences, and improving their professional standards.

The principle of combining internationality and nationality

Inclusive education is the mainstream trend in international special education development. China's special education resource teacher team building should actively draw on advanced international experiences while combining with China's national conditions and cultural characteristics to explore a development path suitable for China. Countries around the world have accumulated rich experience in teacher training, resource classroom construction, and inclusive teaching models, such as individualized education planning in the United States and Inclusive Education practices in the United Kingdom. These experiences provide valuable references for China. However, China has vast territory, with uneven economic and cultural development across regions, and differences in special education needs. Therefore, when introducing and drawing on international experiences, localization must be applied to adapt them to China's educational system, cultural traditions, and social environment. For example, in terms of teacher training models, the "dual certificate" model can be referenced internationally, but it should be optimized based on the actual situation of teacher education in China, ensuring that trained resource teachers possess both an international perspective and meet the practical needs of China's special education development.

The principle of combining singularity and comprehensiveness

Special education is an interdisciplinary field that integrates knowledge from various domains such as pedagogy, psychology, medicine, and sociology. Resource teachers, as implementers of special education, need to possess not only specialized skills like teaching in special education and rehabilitation training but also the ability to apply multidisciplinary knowledge to solve practical problems. Currently, there is a issue of single-minded professional skills among special education teachers in China. Teachers trained under the psychological-rehabilitation model lack competence in compensatory subject teaching; those primarily focused on teaching skills have shortcomings in educational rehabilitation. Therefore, in building the team of resource teachers, it is essential to emphasize the cultivation of comprehensive qualities and enhance the integration and penetration between disciplines. For example, in curriculum design, disciplinary boundaries should be broken down, and interdisciplinary courses should be established. This allows resource teachers to study knowledge from multiple disciplines such as pedagogy, psychology, and medicine, and through case studies and project-based learning, develop their ability to integrate and apply this knowledge to solve real-world problems in special education.

Improve the support policy for resource teachers

A sound support policy is a crucial guarantee for the development of resource teacher teams. In terms of teacher qualification policies, China should accelerate the improvement of the qualification certification system for resource teachers. Currently, the special education teacher qualification system needs further refinement, and most resource teachers are ordinary teachers with low rates of holding special education qualifications. The state should increase efforts to expand the number of resource teachers

who have both an ordinary teacher qualification certificate and a special education teacher qualification certificate. Through training and assessment, more ordinary teachers can obtain special education teacher qualifications. At the same time, the special education teacher qualification certificates should be categorized, with a professional category for inclusive education, clearly defining the professional standards for resource teachers. Additionally, in the general teacher qualification exams, basic knowledge of special education and inclusive education should be added to enhance the overall professional level of inclusive education teachers and expand the preparatory resource teacher team.

Teacher education policies play a guiding role in the professional development of resource teachers. Currently, China's policies for resource teachers are mostly subordinate to those for special education teachers, lacking independence and systematisms. The state should improve teacher education policies and formulate specific policies for the training, certification, access, and lifelong education of resource teachers. In terms of training policies, clear goals and models should be established, with increased investment in the cultivation of resource teachers; regarding training policies, a tiered and categorized training system should be set up to provide targeted courses based on the different needs and stages of development of resource teachers; concerning access policies, strict standards for entry into the resource teacher workforce must be enforced to ensure that individuals entering this group possess the necessary professional capabilities; in terms of lifelong education policies, resource teachers should be encouraged to continuously learn and advance, enhancing their professional competence.

Improving the policy for resource teachers is crucial for stabilizing the teaching workforce. Due to the uneven development of special education in China, issues regarding the treatment and staffing of some resource teachers have yet to be effectively resolved. The state should clarify the policies for ensuring the well-being of resource teachers and increase support for this group. In terms of staffing, separate positions should be established for resource teachers to ensure their numbers meet actual needs; regarding treatment, the salary and subsidy standards for resource teachers should be raised, with full consideration given to performance evaluations, excellence awards, and promotions (titles). This will allow resource teachers to feel a sense of professional fulfillment and achievement, thereby attracting and retaining top talent.

Establish a management system for resource teachers

A scientific and rational management system is key to building a team of resource teachers. Enhancing the professional status of resource teachers requires joint efforts from society, schools, and families. Society should increase publicity for special education, change perceptions of resource teachers, and raise their social recognition. Schools must earnestly implement policies that integrate resource teachers into the management of special education teachers, improve their salaries and benefits, and enhance their working environment. At the same time, establish communication platforms for inclusive education, strengthen cooperation and exchange between regular class teachers, parents, and social workers with resource teachers, and boost their social prestige. For example, by organizing exhibitions showcasing the achievements of special education, society can better understand the value of resource teachers 'work; schools should regularly organize teacher exchange activities to deepen regular teachers' understanding and support for resource teachers' work.

To improve the access system for resource teachers, strict professional entry standards must be established. As the core figures in resource classrooms, the professional capabilities of resource teachers directly impact the functionality of these classrooms. The professional entry standards should cover aspects such as the teacher's educational development record, ability to analyze individualized education cases, proficiency in applying anticipated teaching methods, assessment skills, capacity to handle unexpected issues, and mastery of special needs for students. By evaluating these areas, it ensures that resource teachers possess solid professional knowledge and practical skills. At the same time, strengthen pre-service evaluation and training for resource teachers to ensure they meet the professional entry standards before taking up their positions.

Encouraging innovative teaching by resource teachers is a crucial approach to enhancing the quality of special education. Resource teachers work with students who have unique needs, requiring diverse teaching methods and strategies. In selecting teaching content, they should choose appropriate materials based on the specific needs and levels of different students, such as life skills for students with intellectual disabilities and targeted remedial subjects for those with learning difficulties. For teaching methods, flexible use of individualized instruction, group cooperative learning, and situational teaching can improve outcomes. In terms of evaluation, a variety of assessment approaches should be chosen according to student characteristics and teaching content, including formative and performance evaluations, to comprehensively and objectively assess students' learning achievements.

Strengthen the pre-service training of resource teachers

Strengthening the pre-service training of resource teachers is fundamental to enhancing the overall quality of the resource teacher workforce. Setting up diversified training objectives should fully consider the uniqueness and complexity of resource teachers' work. Resource teachers not only need knowledge in teacher education but also must master knowledge in psychology, medicine, and other fields. Therefore, the training objectives should include cultivating professionals who possess Inclusive Educational concepts, specialized knowledge and skills in special education, and interdisciplinary comprehensive qualities. For example, the United States clearly defines the relationship between inclusive education goals and teacher education training objectives in the "Every Student Succeeds Act," providing institutional support for the professional development of mainstream classroom teachers and resource teachers. China should also cover mainstream classroom teachers, resource teachers, and itinerant teachers in the training objectives for special education majors and general teacher education

programs to meet the diverse needs of special education development.

Establishing a composite resource teacher training model is an effective approach to cultivating high-quality resource teachers. Currently, China mainly adopts the targeted training model, which results in relatively single professional capabilities among trained teachers, making it difficult to meet the job requirements of resource teachers. The "4 + 1" training model can be promoted, where students complete four years of special education teacher or general teacher training before undergoing one year of basic education or special education knowledge study, and obtain both a "Teacher Qualification Certificate" and a "Special Education Teacher Qualification Certificate." This model integrates the advantages of two teacher training models, ensuring that teachers possess not only the professional knowledge and skills of general education but also the specialized skills of special education, thereby enhancing the relevance and effectiveness of resource teacher training.

Developing a modular curriculum system is a crucial measure to ensure the professional development of resource teachers. In the context of inclusive education, the traditional special education teacher training system can no longer meet the needs of mainstreaming students. It is necessary to optimize and integrate knowledge and skills in "special education, general education, and inclusive education" to build a modular curriculum system. At regular normal universities, basic special education courses should be offered to enhance students' knowledge and abilities in inclusive education; at specialized normal universities for special education, courses on general teaching knowledge and skills should be provided to cultivate resource teachers who can both engage in mainstreaming work and guide such efforts. Additionally, strengthening cooperation between normal universities and medical colleges, adding rehabilitation and special education courses, encouraging interdisciplinary learning, and broadening the pathways for cultivating resource teachers.

Improve post-service training for resource teachers

Enhancing the post-service training of resource teachers is a crucial approach to promoting their professional development. The addition of diverse training content should fully consider the actual needs of resource teachers. Training content covers both professional knowledge and skills. In terms of professional knowledge, for general teachers, special education-related topics such as psychology of special children and teaching methods for special education should be added to deepen their understanding and recognition of special education. For special education teachers, additional skills include behaviour correction, psychological counseling, and rehabilitation training for students with special needs, enhancing their professional capabilities. When selecting training content, it is important to respect the suggestions of the resource teacher team, gather challenges from schools, and develop targeted solutions based on these issues to ensure that the training is well-targeted.

Set flexible training schedules to meet the work and study needs of resource teachers. Short-term training is insufficient for establishing a comprehensive educational system, while long-term training can interfere with teachers' work and life arrangements. Therefore, resource centers or schools in various districts should organize regular inter-school learning and exchange activities based on school timetables, such as teaching observations and case studies, allowing resource teachers to learn and improve through practice. Schools with the necessary conditions can select experienced teachers for systematic training, cultivating them into expert-level educators who can then provide periodic training for other resource teachers, breaking the time constraints of traditional short-term training.

Create diverse training methods to enhance the effectiveness and quality of training. Currently, teacher training in China mainly adopts lecture formats, which have certain limitations. For resource teachers, a combination of online research and concentrated training can be used, leveraging network platforms to present training content in the form of videos and online courses, making it convenient for resource teachers to learn anytime and anywhere. In more underdeveloped areas, outstanding resource teachers can be selected for rotational guidance, with fixed monthly visits to schools for knowledge and skills training, thereby improving the professional level of local resource teachers.

Establish a scientific evaluation mechanism for resource teachers

A scientific evaluation mechanism is a crucial component of building a team of resource teachers. It is essential to recognize that resource teachers are both subjects and objects in the evaluation process. Self-assessment by resource teachers can help them gain self-awareness and reflection, exploring more effective teaching methods and strategies. Schools and educational administrators should value the self-assessment work of resource teachers, providing them with opportunities and platforms for self-evaluation. At the same time, peer evaluation also holds significant importance. Resource teachers can learn from each other and improve together through mutual evaluations. For example, organizing teaching observation and peer evaluation activities among resource teachers can promote communication and collaboration among teachers.

Emphasize the parallel evaluation of teaching outcomes and process to comprehensively and objectively assess the quality of work by resource teachers. Traditional evaluations of teaching effectiveness primarily rely on student test scores, which can be unfair to students with special needs, as their learning achievements cannot be measured solely by grades. The primary role of resource teachers is to implement individualized education plans, and the implementation process and outcomes of these plans should be key components in the evaluation. By observing students' performance and progress during the implementation of individualized education plans, as well as changes in behaviour and improvements in social adaptability, a comprehensive assessment of the teaching work of resource teachers can be achieved.

Construct a coordination mechanism for evaluation involving multiple stakeholders to ensure the fairness and objectivity of the assessment. The "Guidelines for Basic Education Curriculum Reform" explicitly calls for establishing an evaluation system with multiple stakeholders

involved in teacher evaluations. For evaluating resource teachers, it should include ordinary class teachers, parents, and students as key participants. Evaluations from ordinary class teachers can reflect how resource teachers impact inclusive education; parental evaluations can demonstrate the development of special needs students after receiving services from resource teachers; student evaluations can provide feedback on whether the teaching plans and methods used by resource teachers are reasonable and effective. By integrating the opinions of multiple stakeholders, comprehensive feedback is provided to resource teachers, promoting continuous improvement in their work.

Student support system

Demand diagnosis mechanism: Build a "three-dimensional evaluation system": use Wechsler scale and other standardized tools for developmental assessment, integrate home-school rehabilitation files to carry out background analysis, combine classroom observation to implement functional behaviour assessment, and form a special needs diagnosis report.

IEP Dynamic Management: Establish a "Goal-Strategy-Evaluation" closed-loop system: Develop SMART goals based on assessment data (such as breaking down "improving language expression skills" into quarterly vocabulary growth targets), create differentiated teaching strategy packages (including assistive technology adaptation plans), and implement a multi-faceted evaluation that combines formative and summative assessments.

Individualized Intervention Programs: Given that the educational targets of resource classrooms encompass students with various special needs, and given the significant differences in their characteristics and developmental needs, it is crucial to provide them with targeted individual training. This training aims to maximize the potential of students, compensate for their physical and psychological deficiencies, and enhance their learning abilities and social adaptability. Establish an integrated intervention model combining "medicine-education-psychology": (i) For hearing-impaired students: use auditory oral methods + sign language bilingual support; (ii) For intellectually disabled students: implement cognitive-behavioural therapy + vocational skills training; (iii) For autistic students: apply ABA therapy + social story intervention; (iv) For visually impaired students: conduct orientation walking training + large-print textbook adaptation.

Teacher collaboration system

IEP collaborative development: Establish a "double-teacher consultation" mechanism: formulate screening criteria (score deviation ≥1SD), implement "three-stage diagnosis" (screening-observation-referral), and develop target decomposition tools (such as dividing mathematical ability goals into 12 micro-skills).

Teaching Support Model: Innovative "Dual-Teacher in the Same Hall" Teaching: Resource teachers adopt embedded tutoring (such as seat-side strategy guidance in regular classes) and extracurricular remediation (special training in resource classrooms twice a week) combined to build a "1+X" support network (1 resource teacher + X subject teachers).

Professional Development Support: Develop the "Three-Stage Training System": (i) Foundation Level: Integrating educational concepts + Basic knowledge of special education; (ii) Advanced Level: IEP formulation + Application of assistive technology; (iii) Practice Level: Behavioural intervention + Communication skills between home and school. Establish teacher growth portfolios and implement reflective practice assessments.

Family cooperation system

Family Support Framework: Build a "Cognition-Emotion-Behaviour" intervention model: (i) Cognitive restructuring: Adjust parental expectations through stress management workshops; (ii)Emotional support: Establish parent support groups to conduct narrative therapy; (iii) Behavioural training: Implement a family rehabilitation skills certification program.

Home-School Collaboration Mechanism: Establish a "Three-Stage Participation" Model: (i) Diagnosis Stage: Parents participate in selecting evaluation tools; (ii)Planning Stage: Jointly determine the weight of educational goals; (iii) Implementation Stage: Daily feedback forms track goal achievement, and develop family resource packages (including training manuals + guidelines for using auxiliary equipment).

Parent Empowerment Strategy: Implement the "Dual Track Training Program": (i) Basic Skills: Medical Care (hearing aid maintenance, etc.) + Life Skills Training; (ii)Advanced Abilities: Special Education Law Interpretation + Career Transition Planning; (iii) Establish a Parent Mentor System to foster family self-help organizations (operational characteristics: forming a "student-teacher-parent" triangular interaction system, achieving precise, professional, and systematic support services through evaluation tools, collaboration mechanisms, and training systems).

VI. CONCLUSION AND PROSPECT

Research conclusions

This study delves into the issues related to the development of special education resource teachers under the perspective of inclusive education. The research finds that building a team of resource teachers is crucial for the advancement of special education, the implementation of mainstreaming programs, and the growth of students with special needs. By tracing the development process of the resource teacher team, it summarizes their characteristics and future trends, providing historical references and guidance for team building. In terms of the operational model of resource teachers, specific content and methods for serving and supporting students with special needs, regular class teachers, and parents are clarified, offering practical guidelines for the work of resource teachers.

At the same time, the study analyzed the current status and existing problems of teacher team building in China's special education resources, including inadequate policy implementation, an incomplete teacher training system, poor

team stability, and insufficient professional competence. In response to these issues, principles and strategies for strengthening the teacher team in resource areas were proposed, emphasizing the need to combine universality with specificity, theory with practice, internationality with nationality, and singularity with comprehensiveness. Efforts should be made from improving support policies, establishing management systems, enhancing pre-service training, upgrading post-service training, and developing scientific evaluation mechanisms to comprehensively improve the quality and capabilities of the teacher team in resource areas.

Research Prospects

Despite the achievements made in this study regarding the development of special education resource teachers, many issues still warrant further research. In terms of theoretical research, future efforts should focus on in-depth exploration of professional development theories for resource teachers, aiming to build a more comprehensive theoretical framework. Further research is needed to examine the relationship between inclusive education theory and the development of resource teacher teams, exploring how to better integrate inclusive education concepts into the training, development, and practical work of resource teachers. Both theoretical construction and practical exploration have room for deeper investigation, and future research could concentrate on the following directions:

Theoretical System Innovation: Construct a three-dimensional theoretical model of "inclusive education-special education-resource teachers," deepen research on the professional development mechanisms of resource teachers; develop an interdisciplinary theoretical framework, integrating theories of individual differences in psychology, medical rehabilitation techniques, and sociological support network theories. Establish a cross-national comparative research database to analyze differences in the cultivation models of resource teachers under different cultural backgrounds; develop localized inclusive education toolkits to share Chinese experiences.

Deepening Practical Research: Conduct nationwide sam pling surveys to establish a resource teacher development d atabase; implement the "tracking evaluation-effect feedback -scheme optimization" closed-loop research, and develop to ols for assessing the effectiveness of teacher training. Explo re the application of AI intelligent assessment systems in sp ecial needs diagnosis; develop VR immersive teaching scen arios and build a "virtual resource classroom" support platfo rm. Construct a tiered development model of "Eastern demo nstration-Central transition-Western support"; design a mix ed service model of "circuit guidance + remote support" for rural areas. Establish a three-dimensional support system o f "policy guarantee-financial investment-professional devel opment"; develop a teacher career life cycle development m odel and improve dual-track promotion channels. Build a fo ur-dimensional collaborative network of "family-school-co mmunity-enterprise"; conduct social cognition intervention studies and develop public Inclusive Education literacy asse ssment tools.

In terms of research methodology, it is necessary to strengthen mixed research design, use big data mining technology to analyze policy texts, apply neuro-education methods to study the effectiveness of teaching interventions, and promote the transformation of theoretical achievements through action research. Ultimately, this will form a resource teacher development theory system with Chinese characteristics, providing intellectual support for achieving educational equity and social justice.

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