

RESEARCH ARTICLE

A Study on Job Satisfaction of Special Education Teachers in Zhuhai, China

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ABSTRACT

As a cornerstone of China's education system, special education relies primarily on special education teachers as its core implementers. While existing literature has begun to focus on and investigate the job satisfaction of special education teachers and its influencing factors, such studies have mostly been confined to analyzing material-oriented satisfaction dimensions—most notably the salary levels of full-time special education teachers. Consequently, research into the professional development and psychological fulfillment of full-time special education teachers holds greater academic and practical significance. Guided by the diversified education theory, this study developed a questionnaire to collect data from full-time special education teachers at special education schools in Zhuhai. After conducting questionnaire screening and data cleaning, the study analyzes both the overall job satisfaction level of full-time special education teachers in the region and the specific factors influencing their job satisfaction. Furthermore, based on the questionnaire findings, this study puts forward targeted recommendations to enhance the job satisfaction of special education teachers in Zhuhai, thereby contributing to the high-quality development of education in the city.

Keywords: Special Education Teachers; Job Satisfaction; Diversified Education Theory

1. Introduction

Education, science and technology, and human resources serve as the foundational and strategic pillars of Chinese-style modernization. Deepening the comprehensive reform of education and accelerating the development of a high-quality education system constitute crucial pathways to delivering education that serves the people. Among various components of China's education system, special education has long been a relatively underdeveloped segment; however, its development has gradually garnered attention from both the state and all sectors of society in recent years [1]. This trend stems not only from societal concern for the rights and interests of vulnerable groups but also reflects the inherent developmental needs of the education system itself. In the name of educational equity, research on special education is continuously advancing, with the goal of providing a better learning environment and development opportunities for every student.

In recent years, China's special education sector has achieved rapid development. Particularly since 2014, the state has successively implemented two phases of the Special Education Promotion Plan, leading to significant improvements in compulsory education for children and adolescents with disabilities. By the end

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of 2024, there were 2,396 special education schools nationwide, an increase of 316 compared to previous periods; the number of students receiving special education reached 915,900, a rise of 424,200; and the number of full-time special education teachers stood at 81,300, an increase of 28,100. In contrast, the growth rate of full-time special education teachers in China is far lower than that of special education students, resulting in a widening gap in the number of teachers. This gap has inadvertently increased the teaching pressure on full-time teachers. Additionally, challenges persist, such as a shortage of high-level special education teachers, inadequate support mechanisms for full-time teachers, uncertainties regarding their career development, and gaps in professional training. In response, the Third Plenary Session of the 20th Communist Party of China Central Committee explicitly proposed to "improve the support mechanisms for preschool education, special education, and specialized education," strengthen the top-level design for the reform and development of special education, and place special education in a prominent position in regional educational development and people's livelihood improvement. This ensures the implementation of a modern education system that leaves no one behind.

In the current practice and development of special education, there exist pain points and bottlenecks such as the complexity of students' needs, teachers' stress and occupational burnout, and the inadequacy of support systems.

Specifically, first, the complexity of students' needs faced by full-time special education teachers is not only reflected in the diversity of students' disability types but also in the differentiation and specialization of individual students' internal cognitive styles, learning paces, and communication methods. This high heterogeneity makes it impossible for full-time teachers to adopt traditional unified curricula or fixed teaching methods in their instruction. It is precisely this inherent complexity of students' needs that gives rise to the necessity of the Diversified Education Theory intervening in the work of full-time special education teachers. Second, full-time special education teachers have long been confronted with high occupational burnout rates and staff turnover. Teachers need to continuously handle tasks such as teaching and student care, resulting in prolonged emotional exhaustion characterized by "high investment with slow feedback" or even "no feedback." Additionally, most members of the public currently have an insufficient understanding of special education, which may lead to the isolation and underappreciation of full-time special education teachers. These various stressors may cause full-time special education teachers to experience low motivation, work burnout, and reduced personal accomplishment—yet the coping strategies of traditional teachers for stress and burnout are mostly inapplicable to full-time special education teachers. The Diversified Education Theory requires the education system to construct a comprehensive special education ecosystem from all aspects, including teacher training, personal development, logistical support, and school culture building. Third, the deficiency in the special education support system stems from the singularity and rigidity of guiding theories. Most support measures for special education lack a systematic and sustainable theoretical framework to guide all support activities. Furthermore, most policies overly focus on students, while neglecting teachers, the crucial and key implementers. The Diversified Education Theory is not a single theory; it can fundamentally reshape the support framework to address problems with targeted solutions.

As a "pilot site" for special education development, Zhuhai City has gradually recognized the pivotal role of the diversified education theory in special education. In recent years, Zhuhai has committed itself to providing equitable and high-quality education for every student with special needs. From a policy perspective, Zhuhai has promptly responded to national calls by issuing a series of policies, including the Zhuhai Municipal Action Plan for the Development and Advancement of Special Education (2023-2025). In 2025, Zhuhai was successfully selected as a "National Special Education Reform Pilot Zone," launching a

new round of exploration into special education reform. From the perspective of teacher support, Zhuhai has implemented a policy requiring non-special education teachers to obtain certificates before taking up teaching positions, organized professional competency competitions, promoted inclusive education in schools, and leveraged smart education to empower special education. Furthermore, Zhuhai has advanced the “integration of vocational education and special education” and explored an integrated “education-training-employment” model to expand employment pathways for students with special needs.

Against this backdrop, this study explores: Under the guidance of the Diversified Education Theory, what is the job satisfaction of full-time special education teachers? And which key factors currently affect the job satisfaction of full-time special education teachers? This holds significant importance for improving the special education curriculum system, fostering students in special education, and promoting teachers' personal development.

2. Literature review

2.1. Diversified education theory

The term "diversification" refers to the combination of objects with distinct characteristics. In the current globalized educational context, the concept of diversified education has emerged as a key driver for advancing educational reform and development. Diversified education has long been a critical research focus; this paradigm emphasizes respect for individual differences, advocates for inclusive education, and its core goal is to promote social justice and educational equity for all students [2]. Specifically, diversified educational approaches exert a significant influence on school curricula and teaching strategies. At its essence, it encompasses ideas and methods aimed at providing equal educational opportunities for students from diverse social strata, cultural groups, and with special needs. It primarily achieves this through diverse teaching methods, curriculum content, and learning environments to meet the learning needs and unlock the developmental potential of different student groups. Among relevant scholarly perspectives, some scholars emphasize the importance of ethnic identity and group rights, which have become the core ideology and strategy underlying multicultural education policies [3]. For instance, Finnish education is often characterized by equality for all, with strong support for legislative guarantees of equal opportunities and equal access to education [4], a framework that significantly safeguards the right to education for students with special needs. Certainly, the most pivotal distinction between the Diversified Education Theory and traditional teaching approaches lies in the theory's greater emphasis on teamwork, it mandates the establishment of a collaborative support network encompassing teachers, therapists, parents, and other relevant parties. Specialized support staff can effectively share the burden of daily administrative and management tasks, which in turn alleviates the workload burden on teachers. Meanwhile, the sense of team belonging and perceived support derived from this collaborative framework can systematically restructure the teachers' work environment.

To date, existing studies have explored the impact of teachers' multicultural educational attitudes, diversified competencies, and personality traits on students' national pride. These studies consistently demonstrate the pivotal role of teachers in the educational process: they play a crucial part in embracing students from diverse backgrounds and guiding students to respect diversity [5]. Moreover, teachers can foster or cultivate positive attitudes in students toward life and learning within school and classroom settings [6]. Meanwhile, strong social-emotional competencies are essential for teachers in their instructional practice. These competencies include high levels of self-awareness, social awareness, and perspective-taking, enabling teachers to recognize that their decisions affect others. Additionally, such teachers exhibit respect and cultural sensitivity toward others, and possess self-management skills—including the patience to support

students in mastering key competencies. Teachers' social-emotional competencies are evidenced through classroom practices that enhance teacher-student relationships^[7].

Overall, some scholars view teachers as advocates for equity and educational transformation. Notably, the level of teachers' professional competencies has consistently been shown to influence their teaching practices, thereby exerting a broad impact on teaching quality, student achievement, and classroom efficiency^[8]. With the growing diversity of student populations, there is a need for systematic and professional transformation of traditional school systems and curricula to adapt to current diversified educational needs. However, research on diversified education theory has not directly focused on the work pressure of special education full-time teachers and whether schools have corresponding specialized management and auxiliary personnel.

2.2. Job satisfaction of special education teachers

Domestically, research on special education in China is currently in a critical stage of transition from scale expansion to connotative development. Within the realm of special education research, domestic scholars have devoted far more attention to teaching methods and the construction of special education systems than to the job satisfaction of full-time special education teachers.

From the perspective of external influencing factors, "extrinsic" elements such as compensation and benefits, and working environment are core determinants of teachers' job satisfaction^[9]. For instance, a study on the influencing factors of job satisfaction among full-time special education teachers in Xinjiang found that these teachers generally reported a "good" level of job satisfaction, with factors like salary income and performance bonuses identified as key influencing variables^[9]. Domestic research clearly indicates that teachers' job satisfaction is jointly shaped by internal drivers and external objective conditions. The current promotion of diversified education presents both opportunities and challenges for full-time special education teachers. Job satisfaction itself is a complex construct influenced by multiple factors; beyond internal and external conditions, "teachers' sense of gain" also constitutes a key focus of our research.

Internationally, research on the job satisfaction of special education teachers shares some common ground with domestic studies. Among international studies, several influencing factors align with those identified in domestic research, as detailed below: 1. External material factors: Economic incentives, the size of special education caseloads^[10], and access to material resources all contribute to teachers' job satisfaction^[11]. Additionally, numerous scholars have investigated factors underlying high teacher turnover, such as leadership competence, job fit, and working conditions. These studies found that such factors significantly impact teachers' job satisfaction, thereby leading to high turnover rates among both general and special education teachers^[12]. 2. Internal factors: A key distinction from domestic research lies in the emphasis on lack of classroom autonomy among some teachers in recent years—a factor identified as a reason for some teachers leaving the profession entirely^[13]. This is because when teachers perceive a lack of freedom to make decisions in the classroom, their self-efficacy and performance may decline, which can ultimately hinder job satisfaction^[14].

In summary, regarding research on the job satisfaction of full-time special education teachers, scholars both at home and abroad have recognized the role of objective external factors such as salary rewards, working environment, leadership management, and age. They have also explored internal factors like teachers' personal feelings and professional identity, yielding in-depth insights into the determinants of full-time teachers' job satisfaction. However, with the rise of the diversified education theory, developments such as the diversified adjustment of curricula and teaching practices, and the in-depth transition of special education models toward diversified collaborative teaching exert dual impacts on full-time special education

teachers. Consequently, scholars, governments, and school institutions worldwide have begun to focus on investigating the differential effects of diversified education on the job satisfaction of full-time special education teachers. Against this backdrop, building on the research of scholars at home and abroad and grounded in the diversified education theory, this study investigates the factors influencing the job satisfaction of full-time special education teachers in Zhuhai.

3. Survey on job satisfaction of special education teachers in Zhuhai

3.1. Data source of the special education satisfaction survey

As a pioneer in China's reform and opening-up, Guangdong Province is advancing its special education from the stage of ensuring "access to education" to pursuing "quality education". Through systematic policy support, continuous increases in financial investment, and diversified placement models, the province strives to safeguard the right of adolescents with disabilities to receive equitable education and promote their all-round development. Among regions in Guangdong, Zhuhai ranks among the nation's forefront in special education, demonstrating unique research value particularly in terms of the comprehensiveness of its policy system, the pioneering nature of its practical exploration, and the openness of its regional cooperation. Therefore, to comprehensively assess the job satisfaction of special education teachers, this study distributed questionnaires to full-time teachers at special education schools in Zhuhai, covering dimensions such as basic information, salary and benefits, and personal rights.

3.2. Questionnaire design

To understand the job satisfaction of special education teachers in Zhuhai, this study adopted a random questionnaire survey method and distributed questionnaires to teachers at four public special education schools in the city. The questionnaire used in this study included 59 items categorized into six dimensions: personal feelings, work conditions, future career development, leadership and management, salary and benefits, and overall satisfaction. Additionally, the questionnaire incorporated current hot topics of public concern, such as "whether residential supervisors are available," "career development and protection," and "social recognition."

The Likert 5-point scale was employed for the questionnaire responses, where each item was rated by teachers based on their perceived alignment with the statement, with options including: Very satisfied, Satisfied, Average, Dissatisfied, Very dissatisfied. Targeting the research topic of job satisfaction among full-time special education teachers, the required items were structured into a questionnaire for distribution to full-time special education teachers in Zhuhai. A total of 96 valid questionnaires were retrieved. After questionnaire collection, SPSS software was used to analyze the job satisfaction of full-time special education teachers in Zhuhai. Specific questionnaire indicators related to the job satisfaction of special education teachers are presented in Table 1.

Table 1. Evaluation Indicators of Job Satisfaction for Full-Time Special Education Teachers in Zhuhai

Overall Satisfaction	I am satisfied with my current job
	Job Stability
	Social Recognition
	Job Autonomy
Personal Feelings	Material Life
	School Atmosphere
	I can gain a sense of accomplishment from my work
	My work is recognized and affirmed by others
	Special education work has a positive impact on my family life
	The work of special education teachers is trivial and repetitive, causing annoyance
	Special education work provides me with opportunities to experience different things, and I am satisfied with this
Work Conditions	Teachers' non-teaching workload is extremely heavy
	Students actively cooperate with my teaching
	The office conditions at my school make me feel comfortable
	Teaching work has a negative impact on my physical health
	I believe my students are diligent and motivated
	Evaluation of one's own workload (Reverse Coded)
Competence and Career Prospects	Evaluation of the extent to which one's work enthusiasm is exerted
	Perception of promotion opportunities provided by the school
	Perception of school equipment and resources
	Relationship with students
	Relationship with colleagues
School Management	School leaders and management systems
	Current professional title evaluation system of the school
	The school's reward and punishment system is implemented based on facts
	Satisfaction with the balance between work input and remuneration
	Satisfaction with current financial income
Salary Income	Level of special education subsidies compared with other cities
	Salary compared with friends (with similar age and education level)
	Satisfaction with the services of school administrative staff
	Overall feeling towards current work situation
	Overall feeling towards work pressure
Overall Satisfaction	School internal environment
	Leaders often encourage and support teachers to pursue learning and development opportunities

3.3. Reliability and validity testing of the questionnaire

This study used Cronbach's Alpha coefficient, a commonly applied statistic in reliability analysis. In general, a higher Cronbach's Alpha value indicates greater reliability of the questionnaire: a value above 0.8 indicates excellent reliability, a value between 0.60 and 0.80 indicates good reliability, and a value below

0.60 is considered unreliable. As shown in Table 2, the reliability analysis results for the questionnaire on job satisfaction of special education teachers in Zhuhai revealed that the Cronbach's Alpha coefficient for the questionnaire was 0.86. Since the reliability coefficient exceeds 0.8, this collectively indicates high reliability of the data, which is suitable for further analysis.

Table 2. Cronbach's reliability analysis

Number of Terms	Cronbach's Alpha
59	0.86

注: 标准化 Cronbacha 系数=0.88。

Furthermore, this study aimed to further examine the factors influencing the job satisfaction of full-time special education teachers in Zhuhai. Therefore, it was necessary to conduct the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity on the collected questionnaire data to determine whether the data were suitable for factor analysis. As presented in Table 3, the KMO value was 0.801, which is greater than 0.6, this meets the prerequisite for factor analysis, meaning the data can be used for factor analysis research. Additionally, the data passed Bartlett's test of sphericity ($p < 0.05$), indicating that the research data is suitable for subsequent analytical procedures.

Table 3. KMO and Bartlett's tests

KMO	0.801	
	Chi-square	1746.580
Bartlett's tests	df	231
	p Value	0.000

4. Analysis of survey respondents' job satisfaction

4.1. Analysis of overall job satisfaction

Table 4 presents the overall job satisfaction of full-time special education teachers in Zhuhai. Among the respondents, 17 reported "very satisfied," 36 reported "satisfied," 32 reported "average," 9 reported "dissatisfied," and 2 reported "very dissatisfied." The combined number of teachers who chose "very satisfied" or "satisfied" was 53, accounting for 54.21% of the total; in contrast, those who reported "dissatisfied" or "very dissatisfied" totaled 11, representing 11.46%. In terms of overall satisfaction, the job satisfaction level of full-time special education teachers in Zhuhai is relatively high, even reaching an above-average level.

Table 4. Overall Job Satisfaction of Special Education Full time Teachers in Zhuhai City

Very satisfied	17	17.71%
Satisfied	36	37.50%
Average	32	33.33%
Dissatisfied	9	9.38%
Very dissatisfied	2	2.08%
Total	96	100%

4.2. Analysis of Specific Influencing Factors

4.2.1. Job Satisfaction Analysis by Teacher Gender

In terms of gender distribution, the questionnaire included 28 male full-time special education teachers and 68 female full-time special education teachers, accounting for 29.17% and 70.83% of the sample, respectively. The number of male teachers was significantly lower than that of female teachers, indicating a substantial gender imbalance among full-time special education teachers. However, results from an independent samples t-test on job satisfaction across genders revealed no significant differences in job satisfaction between male and female special education teachers. Detailed results of the difference analysis are shown in Table 5.

Table 5. Results of Independent Samples t-Test

Dimension	Group	N	Mean	St.d	Mean Difference	95%CI	t	df	p
Personal Feelings	Male	28	28.68	8.66					
	Female	68	27.43	5.54	1.25	-2.335~4.839	0.708	36.435	0.484
	Total	96	27.79	6.58					
Work Conditions	Male	28	30.18	5.39					
	Female	68	27.68	3.75	2.50	0.245~4.759	2.244	38.212	0.031*
	Total	96	28.41	4.41					
Competence and Career Prospects	Male	28	12.75	2.76					
	Female	68	12.47	2.23	0.28	-0.787~1.346	0.520	94.000	0.604
	Total	96	12.55	2.38					
School Management	Male	28	20.71	3.85					
	Female	68	19.53	3.02	1.18	-0.459~2.829	1.455	41.360	0.153
	Total	96	19.88	3.31					
Salary Income	Male	28	15.71	5.43					
	Female	68	14.34	3.77	1.38	-0.898~3.650	1.225	38.193	0.228
	Total	96	14.74	4.34					
Overall Satisfaction	Male	28	14.68	3.91					
	Female	68	14.22	2.71	0.46	-1.178~2.094	0.567	38.147	0.574
	Total	96	14.35	3.09					

* $p < 0.05$ ** $p < 0.01$

4.2.2. Job Satisfaction Analysis by Teacher Age

Analysis of job satisfaction across different age groups revealed that significant differences existed in all six indicators among teachers of different ages. For five dimensions—personal feelings, competence and career prospects, school management, salary income, and overall satisfaction, the p-values were ≤ 0.01 , indicating statistically significant differences across age groups. Post-hoc tests further showed that teachers in the 21–30, 41–50, and above-50 age groups scored significantly higher than those in the 31–40 age group. This finding aligns with the previously discussed research conclusion that the job satisfaction of full-time special education teachers follows a "U-shaped" trend with increasing age.

A notable exception emerged in the "work conditions" dimension: while significant differences were also observed across age groups, post-hoc tests indicated that teachers in the 21–30, 31–40, and 41–50 age

groups scored significantly higher than those above 50. This discrepancy may be associated with the survey item "work is detrimental to health". As teachers age, their physical health gradually declines, leading older special education teachers to report significantly stronger negative perceptions of this issue compared to younger counterparts.

Table 6. Results of ANOVA by Age Group

Dimension	Age Group	N	Mean	St.d	F	p	Post-hoc Tests
Personal Feelings	21-30	26	27.92	6.21			
	31-40	37	25.41	6.60			Above 50 Years > 31-40 Years;
	41-50	27	29.89	6.43	3.890	0.011*	41-50 Years > 31-40 Years; 21-30 Years > 31-40 Years
	>50	6	32.50	2.95			
	Total	96	27.79	6.58			
Work Conditions	21-30	26	28.31	3.75			
	31-40	37	26.86	3.76			31-40 Years > Above 50 Years;
	41-50	27	30.96	5.05	5.461	0.002**	41-50 Years > Above 50 Years;
	>50	6	26.83	3.06			21-30 Years > Above 50 Years
	Total	96	28.41	4.41			
Competence and Career Prospects	21-30	26	12.50	2.32			
	31-40	37	11.81	2.73			Above 50 Years > 31-40 Years;
	41-50	27	13.26	1.83	3.100	0.031*	41-50 Years > 31-40 Years; 21-30 Years > 31-40 Years
	>50	6	14.17	0.41			
	Total	96	12.55	2.38			
School Management	21-30	26	19.69	3.18			
	31-40	37	18.89	3.49			Above 50 Years > 31-40 Years;
	41-50	27	20.74	2.81	3.610	0.016*	41-50 Years > 31-40 Years; 21-30 Years > 31-40 Years
	>50	6	22.83	2.56			
	Total	96	19.88	3.31			
Salary Income	21-30	26	14.85	4.08			
	31-40	37	13.32	4.40			Above 50 Years > 31-40 Years;
	41-50	27	16.33	4.14	2.814	0.044*	41-50 Years > 31-40 Years; 21-30 Years > 31-40 Years
	>50	6	15.83	3.92			
	Total	96	14.74	4.34			
Overall Satisfaction	21-30	26	14.23	2.75			
	31-40	37	13.19	2.99			Above 50 Years > 31-40 Years;
	41-50	27	15.37	3.07	5.490	0.002**	41-50 Years > 31-40 Years; 21-30 Years > 31-40 Years
	>50	6	17.50	1.76			
	Total	96	14.35	3.09			

* $p < 0.05$ ** $p < 0.01$

4.2.3. Job Satisfaction Analysis by Teacher Educational Background

Analysis of job satisfaction across different educational backgrounds showed that no significant differences in satisfaction scores were found in the "competence and career prospects" dimension. However, significant differences ($p < 0.05$) were observed in the remaining five dimensions. Post-hoc tests revealed

that, in four indicators (personal feelings, school management, salary income, and overall satisfaction), full-time special education teachers with a bachelor's degree reported significantly lower job satisfaction than those with other educational backgrounds. Conversely, in the "work conditions" dimension, post-hoc tests indicated that teachers with a master's degree had significantly lower satisfaction scores than those with other educational backgrounds.

Table 7. Results of ANOVA by Educational Background

Dimension	Educational Background	N	Mean	St.d	F	p	Post-hoc Tests
Personal Feelings	Junior College	33	29.36	4.88	4.415	0.006**	Junior College > Bachelor's Degree; Master's Degree > Bachelor's Degree; Others > Bachelor's Degree
	Bachelor's Degree	60	26.43	6.93			
	Master's Degree	1	33.00	/			
	Others	2	40.00	0.00			
	Total	96	27.79	6.58			
Work Conditions	Junior College	33	27.52	2.75	5.843	0.001**	Junior College > Master's Degree; Bachelor's Degree > Master's Degree; Others > Master's Degree
	Bachelor's Degree	60	28.52	4.71			
	Master's Degree	1	28.00	/			
	Others	2	40.00	0.00			
	Total	96	28.41	4.41			
Competence and Career Prospects	Junior College	33	13.18	1.96	2.550	0.061	No significant differences
	Bachelor's Degree	60	12.10	2.52			
	Master's Degree	1	16.00	/			
	Others	2	14.00	0.00			
	Total	96	12.55	2.38			
School Management	Junior College	33	20.45	2.73	3.623	0.016*	Junior College > Bachelor's Degree; Master's Degree > Bachelor's Degree; Others > Bachelor's Degree
	Bachelor's Degree	60	19.30	3.42			
	Master's Degree	1	25.00	/			
	Others	2	25.00	0.00			
	Total	96	19.88	3.31			
Salary Income	Junior College	33	15.79	2.94	4.805	0.004**	Junior College > Bachelor's Degree; Master's Degree > Bachelor's Degree; Others > Bachelor's Degree
	Bachelor's Degree	60	13.82	4.63			
	Master's Degree	1	19.00	/			
	Others	2	23.00	0.00			
	Total	96	14.74	4.34			
Overall Satisfaction	Junior College	33	14.94	2.47	3.588	0.017*	Junior College > Bachelor's Degree; Master's Degree > Bachelor's Degree; Others > Bachelor's Degree
	Bachelor's Degree	60	13.82	3.23			
	Master's Degree	1	16.00	/			
	Others	2	20.00	0.00			
	Total	96	14.35	3.09			

*p<0.05 **p<0.01

4.2.4. Job Satisfaction Analysis by Teacher Professional Title

Unlike the findings in the earlier literature review, the survey results showed that professional title did not exert a significant differential impact on the job satisfaction of full-time special education teachers in Zhuhai. This phenomenon may stem from the combined effects of the unique value orientations of this professional group and external environmental factors. Potential reasons include the following: First, the field of special education possesses a strong "ethical profession" attribute. Teachers' professional identity and sense of accomplishment are largely derived from witnessing students' growth and internal ethical motivation. This intrinsic sense of fulfillment, rooted in dedication and humanistic care, forms a stable psychological compensation mechanism. Second, from a policy perspective, the current professional title evaluation system may not fully align with the professional characteristics of special education. Common issues include misalignment between evaluation criteria and teaching practice, narrow promotion channels, and unclear advancement prospects. These problems result in similar "career ceilings" for teachers at both junior and senior professional title levels, which inadvertently weakens the incentive effect of professional titles themselves. Third, in terms of sample composition, Zhuhai is an emerging region in special education development. The proportion of teachers with senior professional titles in the city may be inherently low, or the sample may exhibit high homogeneity. This could lead to insufficient statistical power, making it difficult to detect potential subtle differences.

In summary, it is the unique context—shaped by strong professional ethics, a relatively flat policy incentive structure, and universal resource constraints—that explains why professional title, a significant influencing variable in general education, has no significant impact on the job satisfaction of special education teachers in Zhuhai.

Table 8. Results of ANOVA by Professional Title

Dimension	Professional Title	N	Mean	St.d	F	p
Personal Feelings	Senior Teacher	16	27.75	6.61	0.786	0.537
	Mid-Level Teacher	4	27.25	8.50		
	Junior Teacher	16	29.06	7.20		
	Other	52	28.02	6.24		
	No Professional Title	8	24.13	7.00		
Work Conditions	Total	96	27.79	6.58	0.539	0.708
	Senior Teacher	16	27.94	5.60		
	Mid-Level Teacher	4	31.25	5.85		
	Junior Teacher	16	28.81	5.02		
	Other	52	28.15	3.89		
Competence and Career Prospects	No Professional Title	8	28.75	3.45	0.324	0.861
	Total	96	28.41	4.41		
	Senior Teacher	16	12.25	2.59		
	Mid-Level Teacher	4	11.50	1.73		
	Junior Teacher	16	12.56	2.31		
	Other	52	12.73	2.37		
	No Professional Title	8	12.50	2.83		

Dimension	Professional Title	N	Mean	St.d	F	p
School Management	Total	96	12.55	2.38	0.379	0.823
	Senior Teacher	16	19.94	3.47		
	Mid-Level Teacher	4	18.50	4.43		
	Junior Teacher	16	20.50	3.10		
	Other	52	19.87	3.44		
	No Professional Title	8	19.25	2.19		
Salary Income	Total	96	19.88	3.31	0.139	0.968
	Senior Teacher	16	15.25	4.52		
	Mid-Level Teacher	4	13.50	7.37		
	Junior Teacher	16	14.56	4.93		
	Other	52	14.73	3.75		
	No Professional Title	8	14.75	5.65		
Overall Satisfaction	Total	96	14.74	4.34	0.271	0.896
	Senior Teacher	16	14.38	3.72		
	Mid-Level Teacher	4	14.00	4.00		
	Junior Teacher	16	14.88	3.01		
	Other	52	14.35	2.83		
	No Professional Title	8	13.50	3.70		
Total		96	14.35	3.09		

Table 8. (Continued)* $p < 0.05$ ** $p < 0.01$

4.2.5. Job Satisfaction Analysis by Teacher Teaching Experience

Analysis of job satisfaction across different teaching experience groups yielded the following results: In the "personal feelings" and "overall satisfaction" dimensions, significant differences were observed in satisfaction scores among teachers with different teaching experience ($p < 0.01$). Post-hoc comparisons further showed that teachers with more than 30 years of teaching experience reported significantly lower job satisfaction than those with other experience levels. In the "work conditions" dimension, significant differences were also found ($p < 0.01$). Post-hoc tests indicated that teachers with less than 10 years of teaching experience had significantly lower satisfaction scores than those with other experience levels. In the "competence and career prospects" and "school management" dimensions, significant differences were observed ($p < 0.05$). Post-hoc tests revealed that teachers with 10–20 years of teaching experience reported significantly lower satisfaction than those with other experience levels. Additionally, as shown in the table below, teaching experience had no significant impact on the "salary income" dimension.

Table 9. Results of ANOVA by Teaching Experience

Dimension	Teaching Experience	N	Mean	St.d	F	p	Post-hoc Tests
Personal Feelings	< 10	39	26.95	6.80			
	10–20	26	25.31	6.24			
	21–30	26	30.65	5.77	4.316	0.007**	Less Than 10 Years > More Than 30 Years; 10–20 Years > More Than 30 Years; 21–30 Years > More Than 30 Years
	>30	5	32.40	3.29			
	Total	96	27.79	6.58			
Work Conditions	< 10	39	27.77	3.50			
	10–20	26	26.81	4.28			
	21–30	26	31.38	4.71	6.840	0.000**	More Than 30 Years > Less Than 10 Years; 10–20 Years > Less Than 10 Years; 21–30 Years > Less Than 10 Years
	>30	5	26.20	2.95			
	Total	96	28.41	4.41			
Competence and Career Prospects	< 10	39	12.31	2.57			
	10–20	26	11.77	2.63			
	21–30	26	13.42	1.65	3.026	0.034*	Less Than 10 Years > 10–20 Years; More Than 30 Years > 10–20 Years; 21–30 Years > 10–20 Years
	>30	5	14.00	0.00			
	Total	96	12.55	2.38			
School Management	< 10	39	19.46	3.51			
	10–20	26	18.81	3.25			
	21–30	26	21.08	2.64	3.476	0.019*	Less Than 10 Years > 10–20 Years; More Than 30 Years > 10–20 Years; 21–30 Years > 10–20 Years
	>30	5	22.40	2.61			
	Total	96	19.88	3.31			
Salary Income	< 10	39	14.18	3.98			
	10–20	26	13.65	4.66			
	21–30	26	16.46	4.19	2.319	0.081	No significant differences
	>30	5	15.80	4.38			
	Total	96	14.74	4.34			
Overall Satisfaction	< 10	39	14.10	2.91			
	10–20	26	12.96	2.96			
	21–30	26	15.58	2.98	5.229	0.002**	Less Than 10 Years > More Than 30 Years; 10–20 Years > More Than 30 Years; 21–30 Years > More Than 30 Years
	>30	5	17.20	1.79			
	Total	96	14.35	3.09			

* $p < 0.05$ ** $p < 0.01$

4.2.6. Job Satisfaction Analysis by Weekly Teaching Hours

Analysis of job satisfaction across different weekly teaching hour groups showed that weekly teaching hours exerted a significant differential impact on teacher satisfaction in four dimensions: personal feelings, work conditions, competence and career prospects, salary income, and overall satisfaction ($p < 0.01$). Post-hoc tests further indicated that, across these four dimensions, teachers with 10–15 weekly teaching hours reported the lowest job satisfaction. In contrast, weekly teaching hours had no significant impact on satisfaction in the "school management" dimension.

Table 10. Results of ANOVA by Weekly Teaching Hours

Dimension	Weekly Teaching Classes	N	Mean	St.d	F	p	Post-hoc Tests
Personal Feelings	<10	3	25.00	4.36			
	10-15	25	24.36	5.40			Less Than 10 Classes > 10-15
	16-20	52	28.52	6.69	4.672	0.004**	Classes; 16-20 Classes > 10-15
	21-25	16	31.31	6.04			Classes; 21-25 Classes > 10-15
	Total	96	27.79	6.58			Classes
Work Conditions	<10	3	26.67	0.58			
	10-15	25	27.28	3.88			Less Than 10 Classes > 10-15
	16-20	52	28.06	4.16	3.990	0.010*	Classes; 16-20 Classes > 10-15
	21-25	16	31.63	5.12			Classes; 21-25 Classes > 10-15
	Total	96	28.41	4.41			Classes
Competence and Career Prospects	<10	3	12.00	1.00			
	10-15	25	11.24	2.71			Less Than 10 Classes > 10-15
	16-20	52	12.85	2.23	4.676	0.004**	Classes; 16-20 Classes > 10-15
	21-25	16	13.75	1.57			Classes; 21-25 Classes > 10-15
	Total	96	12.55	2.38			Classes
School Management	<10	3	19.67	0.58			
	10-15	25	18.72	3.45			
	16-20	52	20.02	3.33	2.041	0.114	No significant differences
	21-25	16	21.25	2.86			
	Total	96	19.88	3.31			
Salary Income	<10	3	17.00	1.00			
	10-15	25	12.28	4.17			Less Than 10 Classes > 10-15
	16-20	52	15.37	4.00	4.254	0.007**	Classes; 16-20 Classes > 10-15
	21-25	16	16.13	4.73			Classes; 21-25 Classes > 10-15
	Total	96	14.74	4.34			Classes
Overall Satisfaction	<10	3	16.33	1.15			
	10-15	25	12.88	2.55			Less Than 10 Classes > 10-15
	16-20	52	14.29	3.08	5.590	0.001**	Classes; 16-20 Classes > 10-15
	21-25	16	16.50	2.88			Classes; 21-25 Classes > 10-15
	Total	96	14.35	3.09			Classes

* $p < 0.05$ ** $p < 0.01$

4.2.7. Job Satisfaction Analysis by Administrative Position

An independent samples t-test on job satisfaction between teachers with and without administrative positions revealed no significant differences in the "personal feelings," "competence and career prospects," "school management," and "salary income" dimensions. In contrast, significant differences were observed in the "work conditions" and "overall satisfaction" dimensions between teachers with administrative positions and those without.

Table 11. Results of Independent Samples t-Test

	With/Without Administrative Position		<i>t</i>	<i>p</i>
	No (n=71)	Yes (n=25)		
Personal Feelings	27.17±6.19	29.56±7.43	-1.575	0.119
Work Conditions	27.58±3.69	30.76±5.43	-2.719	0.010*
Competence and Career Prospects	12.30±2.39	13.28±2.25	-1.796	0.076
School Management	19.72±3.27	20.32±3.44	-0.781	0.437
Salary Income	14.69±3.87	14.88±5.55	-0.158	0.875
Overall Satisfaction	13.97±2.93	15.44±3.33	-2.077	0.040*

* *p*<0.05 ** *p*<0.01

4.2.8. Job Satisfaction Analysis by Availability of Residential Supervisors

An independent samples t-test on job satisfaction between teachers with and without access to residential supervisors showed that, across all six dimensions (personal feelings, work conditions, competence and career prospects, school management, salary income, and overall satisfaction), teachers with access to residential supervisors reported significantly higher job satisfaction scores than those without (*p* < 0.01). The mechanism through which residential supervisors influence the job satisfaction of full-time special education teachers in special education settings operates primarily as follows: In special education schools, residential supervisors assume responsibilities such as managing students' daily behaviors, training students in life skills, and providing after-class tutoring. Their effective performance significantly reduces the non-teaching workload of full-time teachers, allowing the latter to focus more on core professional tasks such as curriculum design and individualized instruction. This scientific division of labor directly improves the work efficiency of full-time teachers. When residential supervisors and full-time teachers form a stable collaborative community to jointly develop and implement Individualized Education Programs (IEPs), they not only address students' complex emotional and behavioral issues more effectively but also create a supportive work environment. Conversely, if residential supervisors are insufficient in number or lack professional competence, full-time teachers are forced to take on a large number of non-teaching tasks, leading to role ambiguity and work overload, which in turn triggers professional burnout.

Therefore, the availability of residential supervisors and the quality of their professional collaboration profoundly influence the job satisfaction and professional experience of full-time teachers through two key pathways: optimizing the distribution of work load and enhancing team support.

Table 12. Results of Independent Samples t-Test

	With/Without Residential Supervisors		<i>t</i> □	<i>p</i> □
	No (n=66)	Yes (n=30)		
Personal Feelings	26.03±6.30	31.67±5.49	-4.221	0.000**
Work Conditions	27.50±3.97	30.40±4.73	-3.119	0.002**
Competence and Career Prospects	12.03±2.51	13.70±1.58	-3.950	0.000**
School Management	19.12±3.36	21.53±2.52	-3.504	0.001**
Salary Income	13.38±4.05	17.73±3.36	-5.133	0.000**
Overall Satisfaction	13.70±3.10	15.80±2.58	-3.240	0.002**

* *p*<0.05 ** *p*<0.01

5. Problems and Recommendations Regarding Special Education in Zhuhai

This study conducted a questionnaire survey and analysis on the job satisfaction of full-time special education teachers in Zhuhai, covering 59 items across six dimensions: personal feelings, work conditions, competence and career prospects, school management, salary income, and overall satisfaction. The core objective was to identify the key factors influencing the job satisfaction of full-time special education teachers amid the ongoing advancement of diversified education.

5.1. Key Issues in Zhuhai's Special Education

5.1.1. Relatively Low Salary, Remuneration, and Welfare Benefits

As a strategically important city in the Pearl River Delta, Zhuhai offers salaries and benefits for civil servants and public institution staff that are above the national average. By 2025, the average monthly salary for teachers in Zhuhai was RMB 6,612; however, annual salary distribution data showed that 27% of practitioners earned less than RMB 55,800, indicating that a subset of teachers received salaries below the average level¹ Notably, teacher salaries exhibited a significant correlation with factors such as work experience and age. According to the 2025 Zhuhai Teacher Salary Analysis Report: Data from the Education and Training Industry, nearly half of all teachers in the industry earned less than RMB 76,200 annually, while fewer than 10% earned more than RMB 138,900—reflecting a low proportion of high-income earners among Zhuhai's teaching workforce.

The same trend applied to the salaries of full-time special education teachers. As evidenced by the 2024 Departmental Final Accounts of Zhuhai Special Education Schools, the total salary and welfare expenditure for full-time special education teachers in Zhuhai in 2024 was RMB 73.9712 million. Although this represented an increase from previous years, it still lagged behind Zhuhai's per capita salary level. Statistical analysis of the questionnaire data for full-time special education teachers in Zhuhai revealed that only 42.11% of respondents reported being "very satisfied" or "satisfied" with their work benefits—less than half of the valid questionnaires. This indicates that the salary and welfare levels for special education in Zhuhai fail to easily make full-time teachers feel that their efforts are adequately rewarded. A systematic analysis of the questionnaire data identified three key reasons for this issue: Low satisfaction with financial income: As shown in the figure below, only 30.53% of full-time special education teachers in Zhuhai reported being "very satisfied" or "satisfied" with their financial income. Basic salaries were relatively low, and teachers perceived that their labor inputs were not commensurately compensated financially, leading to a sense of imbalance and unfairness. Comparison with peers in other industries: Only 17.9% of teachers reported being "very satisfied" or "satisfied" with their salaries when compared to acquaintances in other industries. This comparison triggered a sense of imbalance among special education teachers, resulting in feelings of inadequacy in their work.

Disparities in special education subsidies across cities: Fewer than 20% of teachers reported being "very satisfied" or "satisfied" with special education subsidies when compared to teachers in other cities. Welfare gaps between cities fostered feelings of comparison; the significant disparities led special education teachers to perceive a lack of local emphasis on their profession, resulting in low sense of integration into the city, weak sense of belonging, and reduced professional identity.

¹Data source: <https://docs.ihr360.com/salary-report/346701>。

5.1.2. High Work Intensity and Shortage of Professional Teachers

As previously indicated by data, the growth rate of full-time special education teachers in Zhuhai in recent years has been far lower than the growth rate of special education student enrollment. In 2023, the Zhuhai Municipal People's Government promulgated the Zhuhai Municipal Action Plan for the Development and Advancement of Special Education (2023–2025), which explicitly stated: "During the 14th Five-Year Plan period, the enrollment rate of children and adolescents with disabilities in compulsory education shall reach over 97%²." The significant imbalance between the growth rates of full-time teachers and special education students has exposed teachers to high work pressure. According to the questionnaire data, 72.63% of full-time special education teachers reported that their workload was "heavy" or "excessive." Among these, over 50% identified "heavy workload" as their primary work-related challenge. Students in special education schools often have physical or psychological disabilities, requiring teachers to invest substantial time and effort in their daily care.

Furthermore, the questionnaire revealed that only 30 respondents (31.25% of the sample) reported having residential supervisors assigned to their classes. To ensure teaching quality and comprehensive class management, special education schools typically adopt small-class teaching. Professional residential supervisors can improve the daily living skills of students with special needs and effectively alleviate the workload pressure on full-time teachers. However, many respondents reported that they were required to concurrently serve as head teachers and teach multiple courses—exacerbating their work pressure. Frontline teachers are not only responsible for lesson preparation and instruction for students with special needs but also for addressing students' daily living and rehabilitation needs. This significantly increases their work intensity and constitutes a key factor contributing to low job satisfaction.

5.1.3. Inadequate Career Development Opportunities

The lack of adequate career development opportunities for full-time special education teachers in Zhuhai is manifested in four key challenges: narrow career promotion channels, insufficient support for professional growth, misalignment between workload and resource allocation, and the need for more targeted policy safeguards. Together, these issues form a bottleneck restricting the stability and professionalism of the teaching workforce. According to the questionnaire data, a high proportion of respondents expressed a strong desire for their employers to provide personalized career development opportunities. Specifically, the challenges are as follows:

Shortcomings in the career promotion system: Teachers generally face bottlenecks in "professional title promotion." The existing professional title evaluation system fails to fully account for the unique characteristics of special education positions, resulting in senior teachers being stuck in low-level titles for extended periods and blocked from career advancement. Inadequate support for professional development: Although Zhuhai has organized multiple training programs for non-special education teachers to obtain qualification certificates and held head teacher competency competitions, teacher continuing education still suffers from "poor targeting and effectiveness" and "monotonous training formats." In particular, specialized training resources for special education in subjects such as physical education are scarce, leading to slow improvement in teachers' professional competencies.

Misalignment between work intensity and resource allocation: Special education teachers undertake far more responsibilities than general education teachers, including developing Individualized Education Programs (IEPs), providing rehabilitation training, and conducting home visits. However, staffing quotas for

²Data source: <http://www.zhuhai.gov.cn/>

special education are severely insufficient. Special education schools in the Pearl River Delta region also face a "high proportion of part-time teachers." This work environment characterized by high intensity and low resource allocation—exacerbates occupational burnout among teachers.

5.2. Recommendations

The preceding sections analyzed the overall job satisfaction of full-time special education teachers in Zhuhai and identified key influencing factors, including low salary and welfare benefits, high work intensity, a shortage of professional teachers, and inadequate career development opportunities. To address these factors and build a high-quality hub for special education, this study proposes the following recommendations:

5.2.1. Prioritize Improving Salary and Welfare Benefits for Full-Time Special Education Teachers

Special education teachers are the primary implementers of special education and key evaluators of education quality. Optimizing incentive mechanisms for special education teachers can improve their job satisfaction and work motivation to a certain extent. This can be achieved through internal material incentives and external motivational incentives, with a particular focus on strengthening the welfare benefits for special education teachers.

According to the survey, teachers' income is one of the critical factors affecting the job satisfaction of special education teachers. Maslow's Hierarchy of Needs emphasizes that basic needs (the lowest and most urgent level of needs) must be met before higher-level needs can be pursued. Satisfying these basic needs effectively stimulates teachers' intrinsic motivation.

5.2.2. Scientifically Allocate Full-Time Special Education Teachers and Support Staff

Under current social systems and regulations, one special education teacher is typically expected to support the educational needs of two students—a task that is both arduous and labor-intensive. However, the existing teacher-to-student ratio in special education schools is misaligned with these requirements: the number of teachers fails to keep pace with student enrollment, resulting in an insufficient teaching workforce. Compounding this issue, special education teachers are often burdened with tedious non-teaching tasks that are unrelated to instruction. These tasks consume significant time and energy, diverting resources from core teaching responsibilities and representing a waste of teacher expertise. To address this, it is recommended that special education schools allocate a sufficient number of childcare workers to each class to assist teachers with non-teaching tasks and support instructional activities.

Additionally, in the context of overly formalistic inspections, special education teachers are frequently required to complete excessive paperwork—tasks that cause significant distress and unnecessary complaints. Schools should, on one hand, cooperate with higher-level authorities to fulfill necessary inspection requirements; on the other hand, they must align practices with actual work needs to reduce non-essential inspections. This would free special education teachers from administrative burdens, reduce their workload, enable them to better serve students, improve work efficiency, and ultimately enhance their job satisfaction.

5.2.3. Provide a Favorable Work Environment and Expand Career Development Opportunities

Improve staffing and professional title evaluation systems. Efforts should be made to refine the staffing quota system and professional title evaluation framework for special education teachers. This includes exploring the establishment of specialized staffing quotas for special education and emphasizing assessments of professional competencies in title evaluations, rather than relying solely on research outputs. This reform would address the promotion bottleneck faced by senior special education teachers. A dynamic adjustment mechanism for special education post subsidies should be established. Complementary benefits should also

be provided to improve the overall competitiveness of salaries and enhance the attractiveness of special education as a profession.

Further promote the integration of vocational education, special education, and enterprises. This would allow teachers to witness students' growth and social integration through participation in enterprise cooperation projects, thereby fostering a strong sense of professional value. Mobilize social participation: Publicize social integration projects for students with special needs to attract more enterprises and organizations to participate in special education development. This collaborative effort would create a positive social atmosphere that respects and supports special education teachers.

Through these multi-dimensional measures, it is expected that the work environment for special education teachers in Zhuhai will be systematically improved, their professional development opportunities expanded, and a solid talent foundation laid for the overall enhancement of regional special education quality.

Conflict of interest

The authors declare no conflict of interest

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