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Developing an Incentive Mechanism Management Model of Enhancing the Quality of Work Life of Primary School Teachers: Case Study of Changchun, China

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ABSTRACT

Purpose: This study examines the quality of work life (QWL) of primary school teachers in Changchun City and its link to incentive mechanisms. It evaluates the current QWL status, identifies key factors, and proposes a management model to improve teacher well-being and professional satisfaction. **Design/Methodology/Approach**: A quantitative research design was used, with stratified random sampling to survey 398 primary school teachers. A structured questionnaire of 60 items measured QWL and its determinants, including gender, education level, age, salary, and teaching experience. **Findings**: The results show a significant positive correlation between incentive mechanisms and QWL. Key challenges include work pressure, low salary, and limited career development opportunities. Factors such as gender, education level, age, salary, and teaching experience significantly influence QWL. Based on these findings, a comprehensive incentive management model was developed, incorporating material, spiritual, and career development incentives tailored to teachers' diverse needs. **Practical Implications**: The proposed model offers a practical framework for educational administrators to boost teacher motivation and reduce burnout. It aids policy development by providing actionable strategies to enhance QWL through optimized incentive systems that cater to both general and group-specific needs. **Originality/Value**: This study contributes to the literature by providing a structured approach to linking incentive mechanisms with QWL in education. It offers both theoretical and practical insights for enhancing teacher well-being, laying the foundation for future research and policy development focused on professional growth and improving educational standards.

Introduction

Education serves as a cornerstone for national progress, and China has consistently prioritised its development through well-structured policies and substantial investment. The governance framework established by the Ministry of Education follows a decentralised model, wherein local authorities are responsible for the administration of

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secondary and lower levels of education. Concurrently, higher education is jointly managed by the State Council and provincial governments. In the city of Changchun, the Municipal Education Bureau enforces national directives and supervises compulsory, vocational, and academic education, thereby upholding both accessibility and quality standards. By 2020, the city accommodated 1,621 educational institutions—excluding pre-school establishments—serving approximately 1.544 million learners and employing a workforce of 134,000, including 103,000 full-time educators (Ministry of Education of the People's Republic of China, 1995).

China's model of school governance accentuates decentralisation and collaborative leadership. A notable reform initiative, the 2020 Opinions on Further Stimulating the Vitality of Primary and Secondary Schools, seeks to broaden institutional autonomy in areas such as pedagogical practices, human resources, and financial oversight, while promoting participatory governance among various stakeholders (State Council of the People's Republic of China, 2020). Contemporary educational reforms reflect China's unwavering commitment to fostering high-calibre development, with particular focus on refining administrative structures and incentive systems to uplift educational quality (Ministry of Education of the People's Republic of China, 2021). This emphasis is substantiated by significant fiscal commitment, with education expenditure amounting to 5.787 trillion yuan in 2021, representing 4.01% of the national GDP. Nearly fifty per cent of this investment was allocated to compulsory education (National Bureau of Statistics of China, 2021).

Primary education is fundamental to the cultivation of human capital and the promotion of lifelong learning. Bacon (2000) underscored the significance of forming positive habits during early educational stages, thus reinforcing the imperative of delivering high-quality primary schooling. As of 2021, China operated 157,979 primary schools, collectively educating over 107 million pupils and supported by 5.23 million full-time teaching staff (Ministry of Education of the People's Republic of China, 2021). Improving the calibre of primary education necessitates the recruitment and retention of motivated and well-supported educators. Empirical studies indicate that favourable working conditions foster teacher dedication, thereby enhancing student achievement (Hargreaves & Fullan, 2015). Nonetheless, challenges such as excessive workloads, insufficient remuneration, and constrained career progression can adversely affect teacher motivation and their quality of work life (QWL) (Darling-Hammond, 2000; Day & Gu, 2010). In Changchun, novice primary school teachers typically earn a monthly salary of around 3,000 yuan and encounter limited opportunities for career advancement, despite the provisions of the Compulsory Education Law, which stipulates that teacher remuneration should be on par with civil service salaries (Ministry of Education of the People's Republic of China, 2021).

Within the context of the knowledge economy, increasing demands for high-quality education underscore the necessity of robust incentive frameworks to maintain teacher motivation and overall well-being. Tackling adverse working conditions and bridging policy shortcomings are imperative to enhancing teachers' QWL and, by extension, strengthening the education system. This research seeks to examine the needs of teachers, identify the key factors that influence their professional experience, and assess the effectiveness of current incentive structures. The ultimate aim is to develop a structured incentive model designed to improve teachers' QWL. The study pursues the following specific objectives:

1. Examine the incentive mechanisms and the QWL of primary school teachers in Changchun.
2. To analyse the factors influencing QWL, including gender, education level, age, salary, and teaching experience.
3. To assess the correlation between incentive mechanisms and QWL.
4. To establish an effective incentive mechanism management model to improve QWL.

The study reveals a positive association between the QWL and the implementation of incentive mechanisms in Changchun. Factors such as gender, educational attainment, income level, age, and teaching experience are found to collectively impact QWL. Furthermore, the research proposes a managerial framework for incentive mechanisms that demonstrably enhances teachers' well-being and professional fulfilment.

Literature Review

Concept of Incentive

In contemporary Chinese, the concept of incentive refers to the act of motivating and encouraging individuals, with a primary focus on external influences. Lazear (2000) underscored the significance of incentives in economic theory, noting the importance of both material and psychological rewards to align individual actions with organisational goals. Berelson and Steiner (1964) viewed incentives as internal drivers of activity, such as personal ambitions and desires, while Erlinger et al. (1973) regarded them as mediating factors in human behaviour. Hill et al. (1976) suggested that motivation is a directed process that requires clear guidance to meet individual needs. The academic performance of students often serves as an indicator of the quality of teachers' work life (Hanushek, 1998; Sanders & Rivers, 1996). Teacher motivation plays a significant role in determining work quality, behaviour, and characteristics, although the exact mechanisms remain elusive (Darling-Hammond, 2000).

Motivation among teachers encompasses intrinsic factors, social prestige, job security, non-economic aspects, and overall job satisfaction. Moreover, external factors such as school size, geographical location, and economic conditions influence teacher motivation and retention (Smith & Ingersoll, 2004). School characteristics, including financial stability and institutional type, also affect teacher turnover (Hanushek & Raymond, 2001). Compensation, including salary and benefits, is critical for both attracting and retaining teachers, with higher pay rates contributing to reduced attrition rates (Kirby et al., 1999; Mont & Rees, 1996). However, environmental factors within the school often exert a greater influence on retention than salary (Bennell, 2004). Teacher retention is further influenced by policies and regulations, such as professional development opportunities and managerial support (Vegas & Umansky, 2005). The influence of teachers' unions on performance remains contentious, with evidence suggesting both positive and negative effects on student outcomes (Hoxby, 1996).

Incentive Methods in Teacher Incentive Mechanisms

Smith and Ingersoll (2004) advocate for the promotion of retention and professional development through transparency, support, and active participation. Darling-Hammond (2000) highlights the importance of fairness, stability, and opportunities for professional

growth. Traditionally, the quality of teachers' work has been assessed through student academic performance (Hanushek, 1998; Sanders & Rivers, 1996). However, Darling-Hammond (2000) points out that teachers' classroom behaviour is also a vital indicator of quality, with factors such as teacher-student interactions and communication with parents playing a crucial role.

Hanushek (1998) argue that incentive policies focused on student outcomes may not necessarily lead to improved teacher behaviour. Factors related to the school environment, including size, location, and student demographics, influence teacher turnover, with economically disadvantaged schools and private institutions experiencing higher rates of turnover (Ingersoll, 2001; Smith & Ingersoll, 2004). Although salary levels have a significant impact on retention (Kirby et al., 1999; Mont & Rees, 1996), they do not ensure the recruitment of high-quality teachers (Bennell, 2004). Effective motivational strategies encompass job security, professional autonomy, opportunities for career advancement, and financial rewards (Darling-Hammond, 2000; Ingersoll, 2001). Ryan and Deci (2000) emphasise the necessity of integrating intrinsic, social, and material incentives to create a supportive work environment and enhance teacher motivation.

Concept of QWL

Ahmed (1981) defines QWL as encompassing aspects of work-related emotions, including economic compensation, welfare, work environment, organisational relationships, and personal fulfilment. Walker et al. (2008) and Peters et al. (2009) emphasise that work-life satisfaction is a fundamental component of QWL. Cuninggim (1985) argues that QWL serves to alleviate job-related stress and boosts employee satisfaction. Schuler and Jackson (1987) perceive QWL as an organisational value that reflects managerial practices aimed at fostering self-control, responsibility, and self-esteem.

Connotation of Teachers' Work-Life Quality

QWL is divided into subjective experiences and structural improvements. Pelsma et al. (1989) and Efraty et al. (1991) define QWL in terms of subjective job satisfaction and fulfilment. Cunningham (1983) and Arif and Ilyas (2013) highlight that QWL contributes to reducing stress and burnout by enhancing working conditions. However, its abstract nature and diverse interpretations complicate the establishment of a universally accepted definition (Arif & Ilyas, 2013; Cunningham, 1983).

White and Keith (1990) argue that Americans prioritise work, living standards, education, relationships, health, safety, and self-perception when evaluating life quality. Sirgy et al. (2001) highlight the importance of meeting needs related to health, safety, economic stability, social interaction, and personal development to enhance QWL. Maslach (1999) emphasised the necessity of assessing QWL indices and underlined the importance of evaluation models in improving the quality of teachers' work-life.

Scholars have proposed various components and evaluation indicators for QWL. Seashore and Taber (1975) classify QWL from the perspectives of employers, employees, and society. The OECD criteria (Juuti, 1991) emphasise work continuity, objective conditions (such as salary and working hours), and subjective job satisfaction.

Researchers including Walton (1973), Blackburn and Bruce (1989), and Louis and Marks (1998) have identified multiple dimensions of QWL, encompassing salary, safety, work environment, respect, self-realisation, and job security.

Influencing Factors of Teachers' Work-Life Quality

QWL factors encompass organisational conditions, mindset, and employee well-being (Hamidi & Mohamadi, 2012). Wickstrom (1973) underscores the importance of achievement, work environment, and teacher-student relationships. Sadik and Akbulut (2015) highlight the role of infrastructure, parents' education, and family economic status. Gayathiri et al. (2013) emphasise the need for fair salaries, a healthy workplace, career development opportunities, and personal rights. Strategies for enhancing QWL include equitable policies, legal safeguards, and organisational support (Eisenberger et al., 1990; Seashore Louis & Lee, 2016; Tomkiewicz & Tomkiewicz, 1986).

Teacher Motivation and Its Issues

Ryan and Deci (2000) differentiate between intrinsic motivation (task enjoyment) and extrinsic motivation (rewards, status). Ambrose (1999) categorise motivation into internal (interests, beliefs) and external (goals, obligations) types. Amabile et al. (1994) argue that external motivation is shaped by factors such as evaluation, recognition, and competition, while internal motivation arises from self-determination and curiosity. Stajkovic and Luthans (2003) define motivation through four dimensions: intrinsic, extrinsic, relational, and contribution motivation. A well-designed motivation system promotes teacher engagement and workforce stability, whereas an ineffective one leads to dissatisfaction and turnover. Darling-Hammond (2000) identifies uncompetitive compensation and limited career development opportunities as key challenges, while Ingersoll (2001) highlights high turnover and inadequate job support as major concerns.

Internal Needs for School Development and Teacher Commitment

Elliott et al. (2007) identify a positive correlation between QWL and organisational commitment, a perspective supported by Sirgy et al. (2001). Donaldson (1999) and Huang et al. (2007) emphasise that salary, leadership behaviour, and work-life balance have a significant impact on emotional commitment. Porter et al. (2003) suggest that improving QWL enhances job satisfaction, trust, and workplace relationships, while reducing stress and increasing job security. Korunka et al. (2008) highlight the role of QWL in mitigating turnover intentions.

Conceptual Framework

This study investigates the relationship between work-life quality and incentive mechanisms for primary school teachers in Changchun. It identifies a positive correlation between these variables and develops an incentive model that incorporates factors such as gender, education level, salary, age, and experience to improve teachers' work-life quality, as shown in Figure 1.

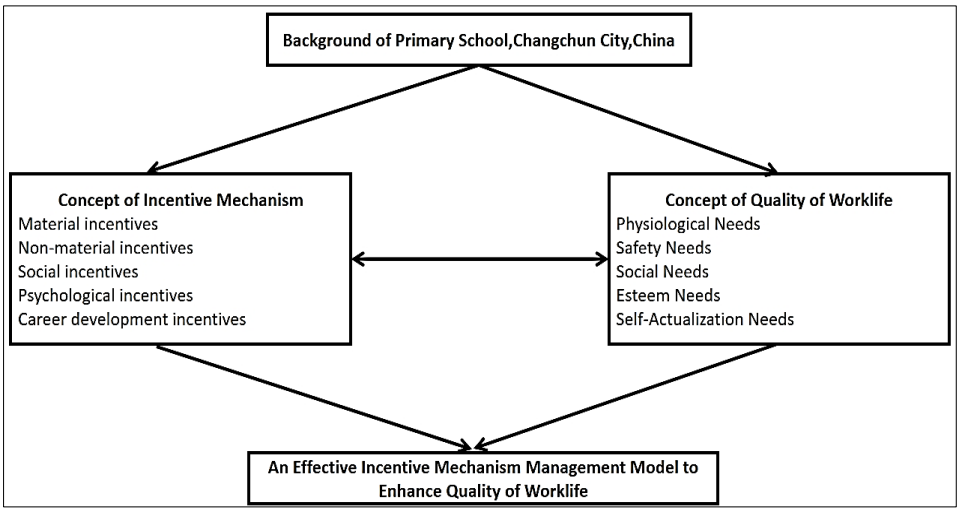

Figure 1: Conceptual Framework

Methodology

Population and Samples

Changchun, the administrative centre of Jilin Province in north-eastern China, functions as a political, economic, cultural, and transportation hub. The city is renowned for its robust educational and research environment, with approximately 27 universities and 98 research institutes, excelling in fields such as optical electronics, bioengineering, and automotive technology. This study focuses on teachers in Changchun, aiming to propose an incentive mechanism management model to enhance their work-life quality. Given the city's vast number of schools and educators, random sampling proved unfeasible. Therefore, a strategic sampling method was utilised, selecting five prominent schools from various administrative districts of Changchun: Changchun Second Experimental Elementary School, Jiefang Road Elementary School, Anda Elementary School, Jilin University Huigu School, and Tianjin Road Elementary School. These schools were chosen based on their diverse characteristics to ensure a representative sample of Changchun's teacher population. Selection criteria included geographic distribution across different districts, school size (ranging from 124 to 320 teachers), and institutional history (spanning 10 to 114 years). This diversity in location, size, and background enhances the generalisability of the findings, allowing the insights to apply to a wider population of educators in Changchun. A sample size of 390 was determined to ensure statistical reliability.

Research Instruments

This study gathered data through questionnaire surveys and interviews, using two primary questionnaires: "Quality of Work Life" and "Incentive Mechanisms." The "Quality of Work Life" questionnaire, guided by Maslow's hierarchy of needs, Herzberg's two-factor theory, social support theory, and equity theory, comprises 30 items on a five-point Likert

scale, evaluating teachers' work-life quality and fundamental needs. Likewise, the "Incentive Mechanisms" questionnaire, grounded in need theory, expectancy theory, and achievement motivation theory, contains 30 items on a five-point Likert scale to assess the effectiveness of incentive measures and gather feedback for potential improvements. The design of the questionnaires followed a systematic approach. Initial drafts were created based on theoretical frameworks and professional expertise. The first validation phase involved feedback from six teachers, resulting in revisions. Following this, five senior experts reviewed the drafts and provided additional suggestions for refinement. A pilot test revealed ambiguities, prompting targeted revisions. The finalised questionnaires were distributed, ensuring they were both theoretically sound and methodologically robust.

Structure of the Questionnaire

The study's questionnaire comprises three sections. The first section collects demographic information, including gender, age, marital status, education, teaching experience, job title, salary, and professional rank. The second section, assessing work-life quality, uses a five-point Likert scale across 30 questions categorized into five factors: job satisfaction, work stress, work-life balance, social support, and career development/compensation benefits. Higher scores indicate high work-life quality. The third section evaluates incentive mechanisms through a five-point Likert scale, with 30 questions divided into five factors: material, non-material, social, psychological, and career development incentives. Higher scores reflect greater satisfaction with incentive mechanisms.

Data Collection

Data collection was supported by former colleagues and school leaders, which facilitated the efficient distribution of questionnaires. Teachers responded positively, resulting in a high response rate. For schools with lower participation, the researcher utilised connections with a teacher training institution and online platforms, such as Questionnaire Star, to distribute questionnaires electronically. Despite the lack of government support, sustained efforts led to the collection of 426 questionnaires, of which 398 met the required quality standards and were formally accepted. The remaining 28 were excluded due to incomplete responses or errors, ensuring strict adherence to quality control protocols.

Data Analysis

Statistical analyses were performed using SPSS 27 and AMOS 26. Five senior experts assessed questionnaire validity via the Index of Objective Congruence (IOC), with values ranging from 0.80 to 1.00. Reliability was confirmed through Cronbach's Alpha ($\alpha > 0.7$). Exploratory factor analysis supported structural validity (KMO > 0.7; significant Bartlett's test). Descriptive statistics (percentages, means, SDs) described demographics and key variables, including job satisfaction, work stress, and incentive mechanisms. Independent t-tests compared gender and marital status, while one-way ANOVA analysed differences by age, education, and professional background. Pearson's correlation revealed significant links between incentive mechanisms and work-life quality. SEM explored associations among job satisfaction, work stress, work-life balance, social support, career development, and work-life quality. Model fit indices and path analysis confirmed that job satisfaction

improves, while work stress reduces, work-life quality. Findings offer practical guidance for improving teacher incentives and educational outcomes.

Results and Discussion

Demographic Information

Table 1 outlines the demographic and professional profile of 398 surveyed teachers. The majority are female (77.4%), with males comprising 22.6%. Most are aged 30–49, including 37.2% aged 40–49 and 31.7% aged 30–39. A large proportion are married (76.1%) and hold a Bachelor's degree (56%). Teaching experience varies, with 24.1% having 6–10 years, 30.2% with 11–20 years, and 19.6% with over 20 years. Most are ordinary teachers (72.1%), and 24.1% are middle managers. In terms of income, 49.2% earn 3001–5000 RMB, and 25.1% earn 5001–7000 RMB. Regarding professional titles, 45.2% hold a one-level title, 21.4% are senior teachers, and 12.8% have a three-level title.

Table 1

Teacher Basic Information

Item	Indicators	Frequency	Percent
Gender	Male	90	22.6
	Female	308	77.4
Years of Age	21-29	53	13.3
	30-39	126	31.7
	40-49	148	37.2
	50-59	71	17.8
Marital Status	Married	303	76.1
	Unmarried	95	23.9
Education	Below Bachelor Degree	80	20.1
	Bachelor Degree	223	56
	Master Degree	88	22.1
	Doctoral Degree	7	1.8
Years of being a Teacher	1-2	40	10.1
	3-5	64	16.1
	6-10	96	24.1
	11-20	120	30.2
	20over	78	19.6
Position	Ordinary Teachers	287	72.1
	Middle Manager	96	24.1
	Senior Management	15	3.8
Income	3000RMB	72	18.1
	3001-5000RMB	196	49.2
	5001-7000RMB	100	25.1
	Over7001RMB	30	7.5
Professional Title	Three-Level	51	12.8
	Two-Level	82	20.6
	One-Level	180	45.2
	Senior Teacher	85	21.4
Total		398	100

Descriptive Analysis

Table 2 presents descriptive statistics for ten latent variables across five dimensions of work-life quality and incentive mechanisms, based on responses from 398 participants. Mean scores range from 3.4 to 3.8, indicating generally positive perceptions. Negative skewness suggests most ratings are above average, with kurtosis values near normal, except for work-life quality (1.070), indicating greater concentration. Mental health and work stress scored highest (3.784), reflecting adequate support, while social support and interpersonal relationships scored lower (3.569), highlighting a need for enhanced team-building and balance. Employee consensus showed the lowest variability (SD = 0.805), while social support showed the highest (SD = 0.844), suggesting differing needs. Material (3.624) and career development incentives (3.684) received the highest ratings, whereas non-material (3.571), social (3.437), and psychological incentives (3.429) were rated lower. Psychological incentives had the highest variability (SD = 0.845), indicating the need for tailored approaches. To improve work-life quality and incentive effectiveness, organisations should strengthen social support, interpersonal relationships, and psychological incentives while maintaining their strengths in material and career-related rewards.

Table 2

Descriptive Statistics

Latent Variables	Mean	Std. Deviation	Skewness	Kurtosis
Job Satisfaction	3.723	0.817	-0.900	0.442
Mental Health and Work Stress	3.784	0.786	-0.959	0.205
Work-Life Balance	3.718	0.805	-0.693	-0.069
Social Support and Interpersonal Relationships	3.569	0.844	-0.513	-0.714
Professional Development and Compensation	3.633	0.957	-0.671	-0.520
Quality of Work and Life	3.685	0.647	-1.232	1.070
Material Incentives	3.624	0.846	-0.855	-0.058
Non-material Incentives	3.571	0.791	-0.900	0.399
Social Incentives	3.437	0.799	-0.265	-0.670
Psychological Incentives	3.429	0.845	-0.772	0.022
Career Development Incentives	3.684	0.915	-1.053	0.214
Incentive Mechanism	3.549	0.690	-1.061	0.474

Analysis of the Impact of Various Factors on Quality of Work-Life

Table 3 presents independent samples t-test results assessing gender differences across key dimensions. Assuming variance homogeneity, the analysis compared male and female responses on job satisfaction, mental health, work stress, work-life balance, social support, career development, and overall work-life quality. Significant gender differences ($P < 0.05$) emerged in most areas, with female respondents scoring higher, suggesting stronger coping abilities, better work-life balance, and more positive career development experiences. However, no significant difference was found in job satisfaction ($P > 0.05$), indicating similar perceptions between genders.

Table 3

Results for the Difference Tests of Various Variables by Gender

Latent Variables	Male	Female	T	P
	M±SD	M±SD		
Job Satisfaction	3.582±1.003	3.764±0.75	-1.601	0.112
Mental Health and Work Stress	3.6±0.905	3.838±0.742	-2.284	0.024
Work-Life Balance	3.456±0.838	3.794±0.78	-3.564	0.000
Social Support and Interpersonal Relationships	3.293±0.906	3.65±0.809	-3.583	0.000
Professional Development and Compensation	3.415±1.042	3.697±0.923	-2.476	0.014
Quality of Work and Life	3.469±0.773	3.749±0.592	-3.173	0.002

Table 4 presents independent samples t-test results based on marital status, revealing significant differences ($P < 0.05$) in most dimensions of work-life quality. Unmarried teachers reported higher scores in job satisfaction ($P = 0.006$), mental health and work stress ($P = 0.007$), work-life balance ($P = 0.031$), professional development and compensation ($P = 0.019$), and overall work-life quality ($P = 0.001$). This suggests that single individuals may experience fewer family responsibilities and greater time flexibility. No significant difference was found in interpersonal relationships or social support ($P = 0.155$), indicating marital status did not influence perceived workplace support or interactions.

Table 4

Results of the Difference Test Across Various Dimensions by Marital Status

Latent Variables	Married	Unmarried	T	P
	M±SD	M±SD		
Job Satisfaction	3.667±0.854	3.9±0.657	-2.792	0.006
Mental Health and Work Stress	3.734±0.833	3.944±0.593	-2.707	0.007
Work-Life Balance	3.676±0.847	3.853±0.637	-2.174	0.031
Social Support and Interpersonal Relationships	3.538±0.872	3.668±0.745	-1.427	0.155
Professional Development and Compensation	3.577±0.994	3.814±0.81	-2.357	0.019
Quality of Work and Life	3.638±0.691	3.836±0.452	-3.235	0.001

Analysis of Variance

Table 5 displays the results of a one-way ANOVA, revealing significant differences ($P < 0.05$) in all dimensions of work-life quality across various age groups. Employees in the 50-59 age range consistently reported the highest scores in job satisfaction (4.012±0.701), mental health and work stress (4.007±0.569), work-life balance (4.000±0.621), social support (3.857±0.778), professional development (3.967±0.750), and overall work-life quality (3.969±0.484). The 40-49 age group followed with slightly lower scores, while employees aged 30-39 demonstrated moderate levels across all dimensions. The youngest cohort (21-29) consistently recorded the lowest scores, particularly in professional development (3.192±1.114) and social support (3.355±1.008), indicating potential challenges in adaptability, experience, and coping mechanisms. These findings underscore the influence of age on work experiences, highlighting the importance of age-specific strategies to improve job satisfaction and overall well-being.

Table 5

Differential Analysis of Age Across Various Dimensions

Latent Variables	21-29	30-39	40-49	50-59	F	P
	M±SD	M±SD	M±SD	M±SD		
Job Satisfaction	3.44±0.909	3.648±0.879	3.749±0.737	4.012±0.701	5.672	0.001
Mental Health and Work Stress	3.494±1.01	3.691±0.804	3.862±0.733	4.007±0.569	5.569	0.001
Work-Life Balance	3.469±0.97	3.627±0.858	3.749±0.735	4±0.621	5.382	0.001
Social Support and Interpersonal Relationships	3.355±1.008	3.433±0.89	3.624±0.727	3.857±0.778	5.355	0.001
Professional Development and Compensation	3.192±1.114	3.504±0.971	3.741±0.903	3.967±0.75	8.481	0.000
Quality of Work and Life	3.39±0.859	3.58±0.676	3.745±0.536	3.969±0.484	10.421	0.000

Table 6 reveals that individuals with lower levels of education report higher job satisfaction, better mental health, improved work-life balance, stronger social support, superior professional development, and a higher quality of work and life compared to those with advanced degrees. Job satisfaction declines from 3.992±0.646 (Below Bachelor's) to 3.143±1.383 (Doctoral), while mental health and work stress worsen with higher education ($F = 5.333$, $p = 0.001$). Work-life balance ($F = 7.622$, $p < 0.001$), social support ($F = 3.615$, $p = 0.013$), professional development ($F = 7.716$, $p < 0.001$), and overall quality of work and life ($F = 9.776$, $p < 0.001$) all exhibit significant declines as education levels increase. These findings suggest that while higher education may facilitate career progression, it is also linked to lower job satisfaction, higher stress levels, and a reduction in overall well-being in the workplace.

Table 6

Differential Analysis of Education Level Across Various Dimensions

Latent Variables	Below Bachelor Degree	Bachelor Degree	Master Degree	Doctoral Degree	F	P
	M±SD	M±SD	M±SD	M±SD		
Job Satisfaction	3.992±0.646	3.704±0.807	3.572±0.868	3.143±1.383	5.272	0.001
Mental Health and Work Stress	3.994±0.568	3.812±0.781	3.563±0.872	3.31±1.219	5.333	0.001
Work-Life Balance	4.033±0.576	3.711±0.827	3.455±0.83	3.643±0.93	7.622	0.000
Social Support and Interpersonal Relationships	3.798±0.698	3.563±0.862	3.409±0.843	3.167±1.295	3.615	0.013
Professional Development and Compensation	3.998±0.673	3.632±0.968	3.352±1.024	3.024±1.207	7.716	0.000
Quality of Work and Life	3.963±0.411	3.684±0.652	3.47±0.682	3.257±1.046	9.776	0.000

Table 7 reveals significant differences ($p < 0.01$) in job satisfaction, mental health, work-life balance, social support, professional development, and overall work-life quality across experience levels. Teachers with 3–5 years of experience reported the highest scores in all dimensions, including job satisfaction (3.813±0.729), mental health (4.029±0.504), and work-life balance (4.008±0.623). In contrast, those with 1–2 years or 6–10 years of experience reported lower scores, especially in job satisfaction, social support, and professional development. These findings suggest that early-career teachers face greater stress and lower satisfaction, whereas those with moderate experience enjoy greater well-being and professional fulfilment.

Table 7

Differential Analysis of Years of Work Experience Across Various Dimensions

Latent Variables	1-2	3-5	6-10	11-20	20over	F	P
	M±SD	M±SD	M±SD	M±SD	M±SD		
Job Satisfaction	3.5 ±0.901	3.813 ±0.729	3.53 ±0.951	3.868 ±0.627	3.778 ±0.868	3.400	0.009
Mental Health and Work Stress	3.388 ±0.975	4.029 ±0.504	3.625 ±0.878	3.988 ±0.641	3.671 ±0.821	8.010	0.000
Work-Life Balance	3.275 ±0.964	4.008 ±0.623	3.639 ±0.859	3.839 ±0.679	3.618 ±0.846	6.675	0.000
Social Support and Interpersonal Relationships	3.392 ±0.89	3.898 ±0.763	3.323 ±0.877	3.724 ±0.754	3.455 ±0.861	6.630	0.000
Professional Development and Compensation	3.321 ±1.218	4.013 ±0.784	3.302 ±1.014	3.832 ±0.786	3.583 ±0.936	8.382	0.000
Quality of Work and Life	3.375 ±0.837	3.952 ±0.448	3.484 ±0.719	3.85 ±0.466	3.621 ±0.679	10.374	0.000

Table 8 shows significant differences in job satisfaction, mental health, work-life balance, social support, professional development, and overall work-life quality across job positions. Middle managers report the highest job satisfaction (3.955±0.682, $F = 6.002$, $p = 0.003$), while ordinary teachers score lowest (3.636±0.855). Mental health is significantly better among middle (4.089±0.557) and senior managers (4.067±0.453) than teachers (3.668±0.835, $F = 11.918$, $p < 0.001$). Work-life balance also improves with rank, peaking in senior management (4.244±0.403, $F = 8.818$, $p < 0.001$). Senior managers report the strongest social support (4.011±0.694, $F = 9.468$, $p < 0.001$). Middle managers lead in professional development satisfaction (3.87±0.845, $F = 4.354$, $p = 0.013$). Quality of work-life is highest among senior managers (4±0.333) and lowest among teachers (3.586±0.69, $F = 12.956$, $p < 0.001$), suggesting that higher roles are linked to better overall well-being and support.

Table 8

Differential Analysis of Different Positions Across Various Dimensions

Latent Variables	Ordinary Teachers	Middle Manager	Senior Management	F	P
	M±SD	M±SD	M±SD		
Job Satisfaction	3.636±0.855	3.955±0.682	3.9±0.523	6.002	0.003
Mental Health and Work Stress	3.668±0.835	4.089±0.557	4.067±0.453	11.918	0.000
Work-Life Balance	3.621±0.855	3.925±0.605	4.244±0.403	8.818	0.000
Social Support and Interpersonal Relationships	3.459±0.875	3.83±0.686	4.011±0.694	9.468	0.000
Professional Development and Compensation	3.547±0.986	3.87±0.845	3.778±0.847	4.354	0.013
Quality of Work and Life	3.586±0.69	3.934±0.44	4±0.333	12.956	0.000

Table 9 presents results indicating significant differences in job satisfaction, work-life balance, social support, professional development, and quality of work-life across income levels. Higher income is associated with increased job satisfaction, rising from 3.551±0.943 (≤3000 RMB) to 4.028±0.561 (>7001 RMB, F = 4.474, p = 0.004). Work-life balance similarly improves, with the highest score found in the highest income group (4.117±0.648, F = 4.389, p = 0.005). Social support is significantly higher in the >7001 RMB group (3.978±0.638, F = 2.785, p = 0.041), while professional development and compensation also increase with income (F = 3.445, p = 0.017). Quality of work-life follows the same trend, peaking at 3.986±0.361 in the highest income group (F = 4.625, p = 0.003). Mental health and work stress do not show significant differences (p = 0.096). Higher income is positively correlated with better job satisfaction, work-life balance, professional growth, and overall well-being.

Table 9

Differential Analysis of Various Income Levels Across Various Dimensions

Latent Variables	3000RMB	3001-5000RMB	5001-7000RMB	Over 7001RMB	F	P
	M±SD	M±SD	M±SD	M±SD		
Job Satisfaction	3.551±0.943	3.653±0.817	3.892±0.736	4.028±0.561	4.474	0.004
Mental Health and Work Stress	3.576±0.872	3.844±0.786	3.802±0.769	3.839±0.54	2.130	0.096
Work-Life Balance	3.498±0.817	3.727±0.808	3.738±0.792	4.117±0.648	4.389	0.005
Social Support and Interpersonal Relationships	3.47±0.915	3.563±0.821	3.53±0.867	3.978±0.638	2.785	0.041
Professional Development and Compensation	3.366±1.08	3.634±0.971	3.723±0.87	3.967±0.666	3.445	0.017
Quality of Work and Life	3.492±0.745	3.684±0.642	3.737±0.613	3.986±0.361	4.625	0.003

Table 10 shows significant differences in work-related factors across teacher ranking levels. Mental health and work stress (F = 4.237, p = 0.006), work-life balance (F = 5.393, p = 0.001), social support (F = 8.535, p < 0.001), professional development (F = 8.203, p < 0.001), and quality of work-life (F = 9.258, p < 0.001) vary notably, with three-level teachers reporting the highest scores and two-level teachers the lowest. Job satisfaction shows no significant difference (p = 0.084). These findings suggest that higher-ranked teachers tend to enjoy better well-being, balance, and growth, while two-level teachers face greater challenges.

Table 10

Differential Analysis of Different Job Titles Across Various Dimensions

Latent Variables	Three-Level	Two-Level	One-Level	Senior Teacher	F	P
	M±SD	M±SD	M±SD	M±SD		
Job Satisfaction	3.801±0.622	3.529±1.002	3.797±0.709	3.706±0.911	2.234	0.084
Mental Health and Work Stress	3.951±0.734	3.526±0.927	3.851±0.735	3.792±0.729	4.237	0.006
Work-Life Balance	3.843±0.641	3.439±0.938	3.839±0.739	3.655±0.828	5.393	0.001
Social Support and Interpersonal Relationships	3.768±0.757	3.183±0.878	3.698±0.797	3.549±0.853	8.535	0.000
Professional Development and Compensation	3.807±0.887	3.279±1.007	3.829±0.89	3.457±0.971	8.203	0.000
Quality of Work and Life	3.834±0.49	3.391±0.786	3.803±0.56	3.632±0.666	9.258	0.000

Constructing and Validating an Optimization Model for the Incentive Mechanism of Elementary School Teachers in Changchun City

Establishment of Structural Equation Modelling

Figure 2 illustrates the structural equation modelling used in this study, conducted with AMOS 26.0 to optimise the incentive mechanism for elementary school teachers in Changchun City. A hypothetical model incorporating six latent variables—material, non-material, social, psychological, career development incentives, and quality of work-life—was developed, each corresponding to six observed variables. Material incentives encompass salary and benefits (M1–M6), non-material incentives involve honours and recognition (NM1–NM6), social incentives include status and peer evaluations (S1–S6), psychological incentives address self-actualisation and belonging (P1–P6), and career development incentives focus on promotion and training opportunities (CD1–CD6). Path analysis using AMOS reveals the relationships between these variables, offering valuable insights into the model's effectiveness.

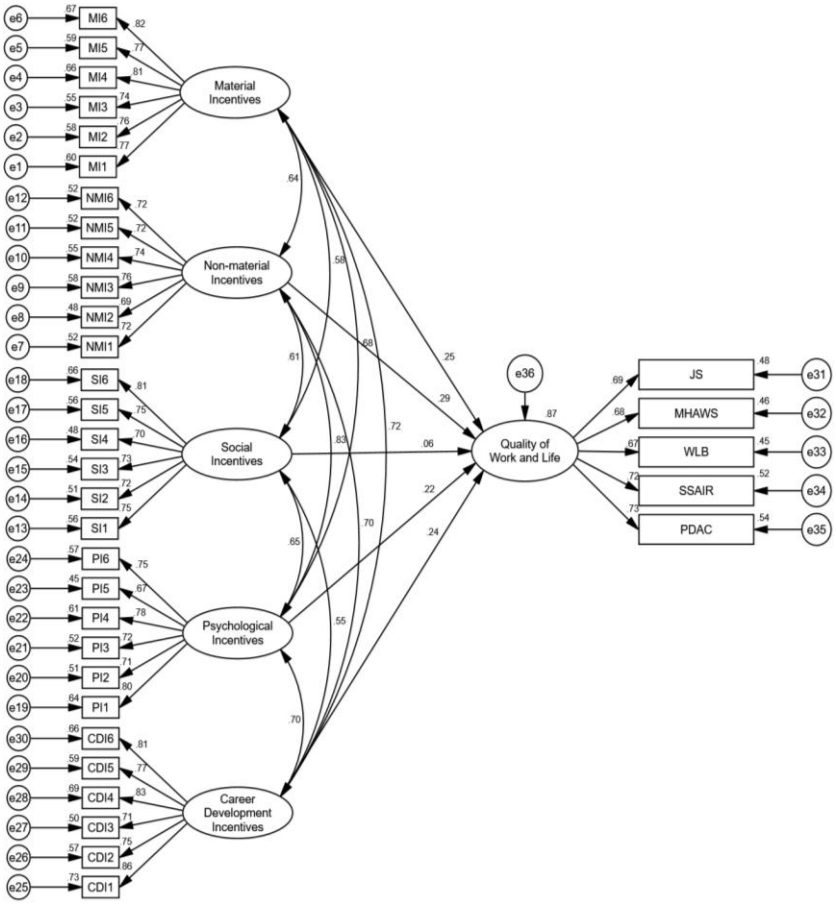

Figure 2: Standardized Path Estimation of Structural Equation Model

Structural Equation Model Fit Testing

Table 11 presents the model fit indices, which confirm that the structural equation model fits the data well. The chi-square/degree of freedom ratio ($X^2/df = 1.998$) is below the threshold of 3, indicating an acceptable model fit. The Goodness-of-Fit Index (GFI = 0.869) and the Adjusted Goodness-of-Fit Index (AGFI = 0.849) both exceed 0.8, meeting the qualification criteria. The Incremental Fit Index (IFI = 0.936), Tucker-Lewis Index (TLI = 0.930), and Comparative Fit Index (CFI = 0.936) all exceed 0.9, confirming a strong model fit. The Root Mean Square Error of Approximation (RMSEA = 0.050) is below the threshold of 0.08, further supporting the adequacy of the model. All indices meet the reference values, validating the model as statistically sound and appropriate for the study.

Table 11

Model Goodness-of-Fit Index

Reference Index	X^2/df	GFI	AGFI	IFI	TLI	CFI	RMSEA
Statistical Value	1.998	0.869	0.849	0.936	0.930	0.936	0.050
Reference Value	<3	>0.8	>0.8	>0.9	>0.9	>0.9	<0.08
Conclusion	Qualified	Qualified	Qualified	Qualified	Qualified	Qualified	Qualified

Estimates of the Standardized Regression Coefficients and Variance Parameters Obtained from the Structural Equation Model

Table 12 presents the results of a structural equation model analysis, highlighting the significant influence of various incentives on teachers' QWL. Material incentives show a significant positive impact (path coefficient = 0.254, C.R. = 4.332), enhancing QWL by improving economic stability and job satisfaction. Non-material incentives have an even stronger effect (path coefficient = 0.293, C.R. = 3.662), reflecting their role in fulfilling spiritual needs and offering professional recognition. Psychological incentives also contribute significantly (path coefficient = 0.220, C.R. = 2.679), mainly through emotional support and stress reduction. Career development incentives (path coefficient = 0.241, C.R. = 4.033) are vital in promoting growth and retaining talent. In contrast, social incentives (path coefficient = 0.057, p = 0.235) do not show a statistically significant impact, indicating limitations in their current application. These findings underscore the importance of implementing tailored and multifaceted incentive strategies to enhance QWL and recommend further investigation into how different incentive mechanisms interact.

Table 12

Path Coefficient between the Variables

Path Relationship		Standardized Path Coefficient	S.E.	C.R.	P
Quality of Work and Life	Material Incentives	0.254	0.042	4.332	***
Quality of Work and Life	Non-Material Incentives	0.293	0.068	3.662	***
Quality of Work and Life	Social Incentives	0.057	0.034	1.188	0.235
Quality of Work and Life	Psychological Incentives	0.22	0.05	2.679	0.007
Quality of Work and Life	Career Development Incentives	0.241	0.033	4.033	***

Note: *** indicates P<0.001.

Exploratory Factor Analysis and Confirmatory Factor Analysis

Exploratory Factor Analysis

Table 13 presents the results of the Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity, which evaluate the suitability of the data for factor analysis. The KMO values for both Quality of Work and Life (0.933) and Incentive Mechanism (0.951) are well above the 0.8 threshold, indicating that the data is highly adequate for factor analysis. Bartlett's Test of Sphericity yielded statistically significant p-values (0.000) for both constructs, with Chi-Square values of 7690.299 and 7452.753, supporting the conclusion that the correlation matrices are not identity matrices. This confirms that factor analysis is appropriate for the data, indicating that the dataset is well-suited for dimensionality reduction and the extraction of latent variables.

Table 13

Kaiser-Meyer-Olkin

	KMO	Bartlett's Test of Sphericity		
		Approx. Chi-Square	df	Sig.
Quality of Work and Life	0.933	7690.299	435	0.000
Incentive Mechanism	0.951	7452.753	435	0.000

Table 14 presents the results of exploratory factor analysis, identifying five distinct components related to latent variables: Job Satisfaction, Mental Health and Work Stress, Work-Life Balance, Social Support and Interpersonal Relationships, and Professional Development and Compensation. Job satisfaction, professional development, and compensation show the highest loadings, with values ranging from 0.699 to 0.853 and 0.72 to 0.837, respectively. The eigenvalues for the five factors range from 1.355 to 11.666, with a cumulative variance of 66.366%, indicating that these factors explain a substantial portion of the total variance. These findings confirm the validity of the factor structure and suggest that the identified components effectively represent key dimensions of teachers' work-life quality and incentive mechanisms.

Table 14

Quality of Work and Life Factor Rotation Matrix

Latent Variables	Observation Variable	Component				
		1	2	3	4	5
Job Satisfaction	JS1		0.808			
	JS2		0.738			
	JS3		0.699			
	JS4		0.736			
	JS5		0.791			
	JS6		0.853			
Mental Health and Work Stress	WP1					0.763
	WP2					0.657
	WP3					0.709
	WP4					0.679
	WP5					0.681
	WP6					0.745

Table 14(Continued)

Quality of Work and Life Factor Rotation Matrix

Latent Variables	Observation Variable	Component				
		1	2	3	4	5
Work-Life Balance	WLB1				0.714	
	WLB2				0.705	
	WLB3				0.718	
	WLB4				0.677	
	WLB5				0.717	
	WLB6				0.739	
Social Support and Interpersonal Relationships	SS1			0.768		
	SS2			0.689		
	SS3			0.658		
	SS4			0.671		
	SS5			0.768		
	SS6			0.72		
Professional Development and Compensation	CD1	0.762				
	CD2	0.729				
	CD3	0.78				
	CD4	0.72				
	CD5	0.814				
	CD6	0.837				
Eigenvalue		11.666	2.979	2.376	1.534	1.355
% of Variance		14.423	14.275	12.7	12.605	12.363
Cumulative %		14.423	28.698	41.398	54.003	66.366

Table 15 shows that factor analysis validates five incentive categories—Material, Non-material, Social, Psychological, and Career Development Incentives—based on strong factor loadings. Material (0.660–0.784) and Career Development Incentives (0.681–0.769) load onto Component 1, linking financial rewards to career growth. Psychological (0.610–0.698) and Social Incentives (0.639–0.838) load onto Components 2 and 3, highlighting emotional and peer-related motivation. Non-material Incentives (0.593–0.76) mainly load onto Component 4, with slight cross-loadings on Component 5. These factors explain 65.228% of the variance, confirming the effectiveness of these incentive constructs.

Table 15

Incentive Mechanism Factor Rotation Matrix

Latent Variables	Observation Variable	Component				
		1	2	3	4	5
Material Incentives	MI1		0.784			
	MI2		0.716			
	MI3		0.752			
	MI4		0.698			
	MI5		0.66			
	MI6		0.7			

Table 15(Continued)

Incentive Mechanism Factor Rotation Matrix

Latent Variables	Observation Variable	Component				
		1	2	3	4	5
Non-Material Incentives	NMI1					0.725
	NMI2					0.76
	NMI3					0.593
	NMI4			0.453		0.559
	NMI5			0.431		0.547
	NMI6					0.616
Social Incentives	SI1				0.707	
	SI2				0.715	
	SI3				0.702	
	SI4				0.639	
	SI5				0.729	
	SI6				0.838	
Psychological Incentives	PI1			0.694		
	PI2			0.61		
	PI3			0.644		
	PI4			0.64		
	PI5			0.684		
	PI6			0.698		
Career Development Incentives	CDI1	0.769				
	CDI2	0.693				
	CDI3	0.681				
	CDI4	0.72				
	CDI5	0.725				
	CDI6	0.739				
Eigenvalue		13.066	2.107	1.875	1.396	1.124
% of Variance		13.787	13.597	13.43	13.231	11.183
Cumulative %		13.787	27.384	40.814	54.045	65.228

Confirmatory Factor Analysis

Table 16 presents key evaluation indices for assessing the model's overall fit. A chi-square ratio of degrees of freedom (NC value) between 1 and 3 indicates a good fit. Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI) values above 0.8 suggest acceptable fit. Incremental Fit Index (IFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Normed Fit Index (NFI) all require values above 0.9 for a strong fit. Finally, a Root Mean Square Error of Approximation (RMSEA) below 0.08 confirms the model's reasonable fit to the data.

Table 16

Main Evaluation Indexes and Evaluation Criteria of the Overall Fitness

Statistical Inspection Quantity	Adaptation Standard or Critical Value
Chi-Square Ratio of Degrees of Freedom (NC Value)	1 < NC < 3, Good Adaptation
GFI	>0.8
AGFI	>0.8
IFI	>0.9
CFI	>0.9
TLI	>0.9
NFI	>0.9
RMSEA	< 0.08, Reasonable Adaptation

Table 17 confirms a strong model fit with the data, indicated by X^2/df values of 2.200 and 2.031, GFI values of 0.878 and 0.886, AGFI values of 0.856 and 0.866, and IFI, CFI, and TLI values exceeding 0.9. RMSEA values of 0.055 and 0.051 also meet the acceptable threshold. Factor loadings predominantly exceed 0.7, highlighting strong explanatory power. In the work-life quality model, career development and compensation are pivotal (path coefficient = 0.68), while mental health and work stress significantly affect job satisfaction (path coefficient = 0.47). In the incentive mechanism model, social incentives are the most influential (path coefficient = 0.83), and career development incentives notably impact psychological incentives (path coefficient = 0.70).

Table 17

Fitting Index of the Model

Reference Index	X^2/df	GFI	AGFI	IFI	TLI	CFI	RMSEA
Quality of Work and Life	2.200	0.878	0.856	0.937	0.930	0.937	0.055
Incentive Mechanism	2.031	0.886	0.866	0.944	0.938	0.944	0.051
Reference Value	<3	>0.8	>0.8	>0.9	>0.9	>0.9	<0.08
Conclusion	Qualified	Qualified	Qualified	Qualified	Qualified	Qualified	Qualified

Common Variance Deviation Test

Table 18 shows that Harman's Single Factor Test revealed no significant common method bias, as the first factor explained only 37.694%, below the 40% threshold. The results demonstrate high reliability, with further validity tests planned to confirm the measurement model's effectiveness.

Table 18

Common Method Deviation Test

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	22.616	37.694	37.694	22.616	37.694	37.694
2	3.204	5.34	43.034	3.204	5.34	43.034
3	2.588	4.313	47.347	2.588	4.313	47.347
4	2.326	3.877	51.224	2.326	3.877	51.224
5	2.187	3.645	54.869	2.187	3.645	54.869
6	1.73	2.883	57.752	1.73	2.883	57.752
7	1.633	2.722	60.474	1.633	2.722	60.474
8	1.291	2.152	62.626	1.291	2.152	62.626
9	1.246	2.077	64.704	1.246	2.077	64.704
10	1.108	1.847	66.55	1.108	1.847	66.55

Convergent Validity and Discriminative Validity Tests

Convergent Validity Test of the QoL Model

Table 19 shows that convergent validity was confirmed, with factor loadings ranging from 0.675 to 0.891. All CR values exceeded 0.7, and AVE values surpassed 0.5, meeting established criteria. The significant probability ($P < 0.001$) further supports the strong relationships between latent variables and their indicators, confirming excellent convergent validity of the structural model.

Table 19

Quality of Work and Life Confirmatory Factor Analysis Results

Latent Variables	Observation Variable	Standard Factor Load Coefficient	S.E.	C.R.	P	CR	AVE
Job Satisfaction	JS1	0.830				0.914	0.639
	JS2	0.777	0.058	17.911	***		
	JS3	0.734	0.054	16.536	***		
	JS4	0.773	0.057	17.753	***		
	JS5	0.797	0.053	18.559	***		
	JS6	0.877	0.054	21.444	***		
Mental Health and Work Stress	WP1	0.762				0.871	0.529
	WP2	0.696	0.061	13.728	***		
	WP3	0.729	0.056	14.443	***		
	WP4	0.750	0.060	14.893	***		
	WP5	0.723	0.061	14.310	***		
	WP6	0.701	0.060	13.835	***		
Work-Life Balance	WLB1	0.800				0.881	0.552
	WLB2	0.717	0.057	15.018	***		
	WLB3	0.718	0.051	15.048	***		
	WLB4	0.737	0.057	15.523	***		
	WLB5	0.731	0.057	15.380	***		
	WLB6	0.751	0.053	15.911	***		
Social Support and Interpersonal Relationships	SS1	0.787				0.886	0.564
	SS2	0.727	0.056	15.112	***		
	SS3	0.675	0.052	13.853	***		
	SS4	0.777	0.057	16.382	***		
	SS5	0.727	0.054	15.107	***		
	SS6	0.806	0.051	17.122	***		
Professional Development and Compensation	CD1	0.834				0.924	0.671
	CD2	0.725	0.048	16.504	***		
	CD3	0.805	0.047	19.193	***		
	CD4	0.844	0.048	20.666	***		
	CD5	0.806	0.046	19.225	***		
	CD6	0.891	0.045	22.560	***		

Discriminant Validity of Quality of Life

Table 20 presents the results of the discriminant validity assessment, which verifies that the latent variables are distinct from one another. This is done by comparing the square root of the AVE with the correlations between constructs. The findings demonstrate that all diagonal values exceed the corresponding inter-construct correlations, confirming strong discriminant validity. Job Satisfaction (0.799) and Professional Development and Compensation (0.819) exhibit the highest AVE values, further emphasizing their distinctiveness. Although the correlation between Work-Life Balance, Mental Health, and Work Stress (0.727) indicates a notable relationship, their AVE values (0.743 and 0.727, respectively) ensure sufficient differentiation. Overall, these results affirm the distinctiveness of the constructs in the model, validating its robustness.

Table 20

Discriminant Validity Analysis

	1	2	3	4	5
1. Job Satisfaction	0.799				
2. Mental Health and Work Stress	0.470	0.727			
3. Work-Life Balance	0.517	0.727	0.743		
4. Social Support and Interpersonal Relationships	0.576	0.491	0.483	0.751	
5. Professional Development and Compensation	0.487	0.485	0.489	0.679	0.819

Note: The bold data value in the upper right corner is the square root of the AVE value.

Convergent Validity of the Incentive Mechanism

Table 21 confirms the convergent validity of incentive-related constructs, with factor loadings exceeding 0.668, indicating strong relationships between latent variables and indicators. Composite reliability (CR) values range from 0.871 to 0.909, ensuring internal consistency, and average variance extracted (AVE) values surpass 0.5, confirming that each construct explains more than half of its variance. These results validate the measurement of Material, Non-Material, Social, Psychological, and Career Development Incentives in the structural model.

Table 21

Incentive Mechanism Confirmatory Factor Analysis Results

Latent Variables	Observation Variable	Standard Factor Load Coefficient	S.E.	C.R.	P	CR	AVE
Material Incentives	MI1	0.771				0.903	0.608
	MI2	0.763	0.062	15.870	***		
	MI3	0.743	0.065	15.375	***		
	MI4	0.811	0.064	17.063	***		
	MI5	0.770	0.061	16.028	***		
	MI6	0.816	0.062	17.172	***		
Non-Material Incentives	NMI1	0.721				0.871	0.529
	NMI2	0.691	0.074	13.113	***		
	NMI3	0.757	0.088	14.370	***		
	NMI4	0.743	0.085	14.096	***		
	NMI5	0.722	0.079	13.714	***		
	NMI6	0.729	0.083	13.829	***		

Table 21(Continued)

Incentive Mechanism Confirmatory Factor Analysis Results

Latent Variables	Observation Variable	Standard Factor Load Coefficient	S.E.	C.R.	P	CR	AVE
Social Incentives	SI1	0.745				0.881	0.552
	SI2	0.717	0.066	13.975	***		
	SI3	0.732	0.065	14.296	***		
	SI4	0.695	0.062	13.515	***		
	SI5	0.751	0.063	14.686	***		
	SI6	0.813	0.064	15.932	***		
Psychological Incentives	PI1	0.805				0.879	0.549
	PI2	0.708	0.048	15.084	***		
	PI3	0.723	0.054	15.483	***		
	PI4	0.780	0.051	17.070	***		
	PI5	0.668	0.051	14.040	***		
	PI6	0.752	0.057	16.285	***		
Career Development Incentives	CDI1	0.853				0.909	0.624
	CDI2	0.756	0.044	17.747	***		
	CDI3	0.710	0.044	16.192	***		
	CDI4	0.830	0.046	20.544	***		
	CDI5	0.772	0.046	18.321	***		
	CDI6	0.811	0.042	19.766	***		

Differential Validity Analysis of the Incentive Mechanism

Table 22 confirms excellent discriminant validity, with all AVE values exceeding 0.5 and the square root of each dimension's AVE greater than its correlations with other constructs. Material Incentives (0.779) and Career Development Incentives (0.790) show strong validity, while Psychological Incentives (0.741) correlate closely with Non-Material Incentives (0.832), indicating a distinct but related relationship. Social Incentives (0.743) and Non-Material Incentives (0.728) also maintain clear differentiation. These findings validate the scale's ability to distinguish between different incentive types.

Table 22

Incentive Mechanism Discriminant Validity Analysis

	1	2	3	4	5
1. Material Incentives	0.779				
2. Non-Material Incentives	0.638	0.728			
3. Social Incentives	0.581	0.609	0.743		
4. Psychological Incentives	0.684	0.832	0.646	0.741	
5. Career Development Incentives	0.723	0.699	0.546	0.696	0.790

Note: The bold data value in the upper right corner is the square root of the AVE value.

Discussion of the Study

The findings of this study are consistent with previous research highlighting the significant impact of incentive mechanisms on teacher motivation and work-life quality.

Lazear (2000) emphasized that both material and non-material incentives motivate employees, and our results confirm that financial compensation, career development opportunities, and job stability positively influence teachers' commitment and satisfaction. Our study further supports Hanushek (1998) and Sanders and Rivers (1996), which linked teacher motivation to student performance, showing that more motivated teachers tend to improve student outcomes. However, in line with (Darling-Hammond, 2000), our study also found that motivation mechanisms are complex, influenced by financial incentives, career growth, and workplace conditions.

The findings validate Ahmed (1981) QWL concept, encompassing compensation, work environment, and personal meaning. Similar to Walker et al. (2008) and Peters et al. (2009), we found that job satisfaction and work-life balance are crucial for enhancing teacher motivation. Our study also reflected both the structural and subjective dimensions of QWL proposed by Pelsma et al. (1989) and Efraty et al. (1991), as respondents highlighted tangible benefits (salary, job security) and intangible elements (self-fulfilment, recognition). While financial incentives were considered vital (Kirby et al., 1999; Mont & Rees, 1996), Bennell (2004) suggested that workplace conditions often outweigh salary in teacher retention. School characteristics, management support, and professional autonomy were identified as key factors influencing teacher motivation, aligning with Smith and Ingersoll (2004) and Vegas and Umansky (2005).

Our study identifies similar motivation challenges to those reported by Darling-Hammond (2000) and Ingersoll (2001), such as low salaries, limited career growth opportunities, and high turnover rates. These issues are exacerbated in economically disadvantaged areas, where insufficient resources and infrastructure further impair work-life balance, aligning with the findings of Sadik and Akbulut (2015) and Gayathiri et al. (2013). Additionally, our results support Ryan and Deci (2000) emphasis on intrinsic motivation, such as personal interest and job satisfaction. However, in line with Amabile et al. (1994) and Ambrose (1999), extrinsic motivators, including financial incentives and recognition, also proved to be influential. The study underscores the need for a balanced approach, integrating both intrinsic and extrinsic motivators, to sustain teacher effectiveness and engagement.

Implications for Policy and Practice

The study aligns with Elliott et al. (2007) and Sirgy et al. (2001), showing that a higher QWL is positively linked to organizational commitment. Improving work conditions, leadership support, and professional growth opportunities can significantly enhance teacher retention, as suggested by Korunka et al. (2008). To offer a tailored approach to teacher motivation in line with OECD standards for evaluating work-life quality, our proposed incentive model includes key demographic parameters such as gender, education level, salary, age, and experience (Juuti, 1991). Overall, the findings advocate for comprehensive incentive systems that extend beyond financial compensation. To enhance teacher motivation, work-life balance, and educational performance, schools should implement fair compensation, job security, professional development programs, and supportive work environments.

Conclusion and Recommendations

Conclusion

This study examines the incentive mechanisms and QWL among elementary school teachers in Changchun City, highlighting the influence of demographic factors on job satisfaction, work-life balance, and professional development. It finds that higher-ranking, higher-income, and more experienced teachers report better well-being. While material and career incentives are well-received, satisfaction with non-material and psychological incentives is lower, suggesting a need for more personalized rewards. SEM confirms that material, non-material, psychological, and career development incentives positively impact QWL, but social incentives are less effective. Factor analyses validate the measurement model, confirming job satisfaction, mental health, work stress, work-life balance, social support, and professional development as key QWL dimensions. The findings provide insights for improving incentive structures and teacher well-being, with future research focusing on the long-term impacts of these mechanisms.

Recommendations of the Study

This study recommends enhancing psychological and non-material incentives through recognition programs, mentorship, and regular feedback to improve the QWL for teachers in Changchun City. Social incentives should be bolstered by fostering workplace relationships and peer-support networks. Career development opportunities should be expanded with professional training and clear promotion pathways. Material incentives can be optimized by adjusting salary structures, offering performance-based rewards, and ensuring competitive compensation. Promoting work-life balance through flexible work arrangements, stress reduction, and wellness programs is also essential. Stronger policy and administrative support should involve teachers' feedback in decision-making and create participatory workplace policies, thereby boosting job satisfaction, motivation, and teaching effectiveness while fostering a sustainable work environment.

Limitations of the Study

This study focuses on elementary school teachers in Changchun City, which may limit the generalisability of the findings to other regions or nationwide. The educational environment in Changchun could influence teacher characteristics in ways that differ from other areas. Additionally, the use of a self-reported questionnaire, while cost-effective and practical, is prone to response bias, as teachers' answers may be influenced by personal feelings, expectations, or social desirability. These limitations should be considered when applying the findings to different contexts.

Future Research Directions

Future research should address the limitations of this study by expanding the sample to include teachers from diverse geographical locations and school types. A mixed-methods approach, combining quantitative and qualitative techniques, should be employed, including interviews to gain deeper insights into teachers' motivations and needs. Long-term follow-up studies could explore the evolving effects of incentive

mechanisms over time. Additionally, cross-cultural comparisons are essential to understanding how incentives operate in different contexts. Future research should also examine how incentive mechanisms adapt to changing educational environments, reinforcing the theoretical foundations of such mechanisms.

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