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Research on the Matching of Academic Passion Levels of University Teachers in Different Positions in China

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Abstract: This study aims to explore the differences in academic passion among university teachers in different types of positions and to verify whether the classification evaluation system advocated by the Ministry of Education of China can effectively identify the academic passion levels of teachers. A questionnaire survey yielded 373 valid responses from teachers at three universities in China. This study examined the influence of demographic factors, including gender, age, educational background, teaching experience, family income, and position type, on academic passion. Data analysis revealed significant differences in academic passion across various dimensions for teachers in different positions. Teaching-oriented teachers exhibited high levels of teaching passion, while research-oriented teachers showed more prominent research passion. Teaching and research-oriented teachers demonstrated a balance between the two. Additionally, factors such as age, degree, and years of teaching experience had significant effects on different dimensions of academic passion. The findings provide empirical evidence for the application of the classification evaluation system in identifying academic passion among university teachers and offer insights for optimizing education policies.

Keywords: Academic Passion; Teacher Evaluation; University Teachers; Teacher Development.

1. Introduction

University faculty are the backbone of advancing national education and cultivating high-level talent in the new era. Faculty evaluation has consistently been a core issue in the modernization of governance systems and capabilities in higher education institutions (He Juling & Yuan Zuoye, 2024). Since 2018, China's educational authorities have issued a series of guidelines aimed at reforming the teacher evaluation system. These include the Guiding Opinions on Promoting the Reform of Talent Evaluation Mechanisms by Category, Opinions on Deepening the Reform of Project Review, Talent Evaluation, and Institutional Assessment, and Notice on Measures to Optimize Research Management and Improve Research Performance, all intended to steer the reform of faculty evaluation through institutional adjustments. In 2020, the Ministry of Human Resources and Social Security and the Ministry of Education jointly issued the Guiding Opinions on Deepening the Reform of the Professional Title System for University Faculty, categorizing university faculty into three groups: teaching-focused, research-focused, and teaching-and-research-balanced. This classification aims to employ differentiated evaluation methods to fully engage faculty members, stimulate their enthusiasm and creativity, and maximize their potential within their respective roles.

In recent years, universities have actively responded to the policy requirements, gradually establishing and implementing a categorized teacher evaluation system. However, after years of practice, it remains to be further empirically researched to verify whether this policy can effectively identify teachers with different levels of academic passion and match them accurately to the corresponding positions, ensuring its scientific validity and implementation effectiveness.

2. Literature Review

Italian scholar Vallerand, building on self-determination theory, proposed a clear and well-developed definition of passion. Vallerand (2003) defined passion as a strong emotional preference for a particular activity and developed the Dualistic Model of Passion, categorizing it into harmonious and obsessive passion. Harmonious passion arises when individuals autonomously internalize an activity as part of their identity, actively engaging in it with high satisfaction and intrinsic motivation. Conversely, obsessive passion stems from internal or interpersonal pressures (e.g., performance expectations, self-evaluation, or social recognition). While individuals enjoy such activities, they feel compelled to participate due to these pressures. This model provides a theoretical foundation for studying passion in various fields.

When the area of passion involves academic research and discovery, it manifests as academic passion (Tian Min et al., 2022). Academic passion stimulates teachers' emotional energy and professional commitment, forming a specialized emotional identity where teachers believe their teaching activities can significantly impact students' learning (Manuel & Hughes, 2006). Duffy et al. (2013) found through interviews with 17 accomplished psychologists that selecting topics of interest, maintaining passion, and effective time management are critical to success.

In psychology, most research on passion does not directly examine the impact of demographic variables. Even in rare cases where demographic variables are considered, studies often show no significant differences in passion across age or gender (Moe, 2016). However, conflicting findings exist. For example, Lin (2019) found through a survey of 866 graduate students from 28 universities that male students demonstrated significantly higher levels of academic passion (including both harmonious and obsessive passion) compared to female

students. Curran (2015) identified that age moderates the relationship between obsessive passion and burnout, with the link becoming stronger as individuals age.

Research Objectives and Hypotheses

The primary goals of this research are twofold: To identify the characteristics of academic passion among teachers in different position types and determine whether the current policy can effectively recognize university teachers with varying levels of academic passion. To explore whether significant differences in academic passion exist among respondents when categorized by demographic characteristics such as age, educational level, years of teaching experience, family income, and position type.

Based on these goals, the following hypotheses are proposed:

H1: Teachers in different position types exhibit corresponding levels of academic passion.

H1-1: Teaching-oriented teachers exhibit higher teaching passion but lower research passion.

H1-2: Research-oriented teachers exhibit higher research passion but lower teaching passion.

H1-3: Teaching and research-oriented teachers exhibit comparable levels of teaching and research passion.

3. Methodology

Questionnaire

The questionnaire consisted of two parts:

Demographic Information: This section captured basic demographic and social statistics of respondents, including age, gender, educational background, years of teaching experience, family income, and position type.

Academic Passion Scale: This section utilized a revised version of the passion scale developed by Yan Guangming and Min Wei (2020), based on Vallerand's scale and adapted to align with the characteristics of China's higher education evaluation reforms. The scale aimed to reflect the spirit of categorized teacher evaluation, integrating preferences for teaching and research. It comprised 12 items, with items 1–6 measuring harmonious academic passion in teaching and research, and items 7–12 measuring obsessive academic passion in these domains.

Participants

The survey covered full-time teachers from three universities in China, with total teacher populations of 829, 1,550, and 1,900, respectively. Using the Raosoft sample size calculator with a 5% margin of error and a 95% confidence level, the minimum required sample size was determined to be 353. To ensure sufficient data, 375 questionnaires were distributed, of which 373 valid responses were obtained after excluding 2 invalid responses (caused by respondents outside the target group accessing the questionnaire through an open link).

The valid sample comprised 373 respondents, with demographic characteristics such as gender, age, educational background, teaching experience, and position type distributed as shown in Table 1.

Table 1. Demographic Distribution of Survey Participants

	Category	N	Percentum		Category	N	Percentum
Gender	Male	140	62.47	Professional Title	Professor	61	16.35
	Female	233	37.53		Associate Professor	212	56.84
Age	≤30 years old	6	1.61		Lecturer	95	25.47
	31–40 years old	163	43.7		Assistant	5	1.34
	41–50 years old	171	45.84	Teaching Experience	≤5 years	91	24.4
	≥51 years old	33	8.85		6–15 years	120	32.17
Marital	Married	339	90.88		16–20 years	101	27.08
	Single	25	6.7		≥ 21 years	61	16.35
	Divorced	9	2.41	Annual Teaching Hours	≤100 hours	47	12.6
Children	0	55	14.75		101–300 hours	218	58.45
	1	183	49.06		301–500 hours	93	24.93
	2	133	35.66		≥ 501 hours	15	4.02
	3	2	0.54	Position Type	Teaching-oriented	28	7.51
Annual income	<100,000 RMB	34	9.12%		Teaching and research-oriented	341	91.42
	100,000–150,000 RMB	213	57.1%		Research-oriented	4	1.07
	150,001–200,000 RMB	99	26.54%	Work Interest	No interest in teaching or research	4	1.07
	200,001–250,000 RMB	20	5.36%		Mainly teaching	24	6.43
	250,001–300,000 RMB	4	1.07%		Mainly research	11	2.95
	>310,000 RMB	3	0.8%		Interest in both, but teaching more than research	164	43.97
Degree	Doctorate	252	67.56		Interest in both, but research more than teaching	170	45.58
	Master	99	26.54	Total		373	100
	Bachelor	22	5.9				

4. Data Analysis and Discussion

(1)Reliability Test

The reliability analysis of the overall academic passion scale and its subscales showed a Cronbach's Alpha coefficient of 0.933 for the total scale and 0.915 for harmonious research passion, indicating a very high level of internal consistency. The Cronbach's Alpha coefficients for harmonious teaching passion, harmonious research passion, and obsessive research passion were 0.895, 0.887, and 0.889, respectively, all exceeding 0.8, further confirming the high reliability and internal consistency of the questionnaire.

(2)Validity Test

The validity test of the academic passion scale indicated a KMO value of 0.880, and Bartlett's test of sphericity yielded a significance p-value of 0, reaching a statistically significant level. This suggests that the data were suitable for factor analysis, confirming the high structural validity of the scale.

A normality test was performed on the academic passion data using the Kolmogorov-Smirnov test due to the sample size of 373. The results showed that the asymptotic significance (two-tailed) p-values for all types of academic passion were less than 0.05, indicating significant deviations from a normal distribution. Consequently, non-parametric statistical methods were employed in subsequent analyses to ensure accuracy and scientific rigor.

(3)Differentiation Analysis

Academic Passion Across Position Types

The Kruskal-Wallis test revealed significant differences in teaching passion, research passion, as well as their sub-dimensions (harmonious teaching passion, harmonious research passion, obsessive teaching passion, and obsessive research passion) among different position types, with p-values less than 0.05.

Further pairwise comparisons demonstrated statistically significant differences in teaching passion, research passion, and their sub-dimensions among different position types. Notably, research-oriented teachers and teaching and research-oriented teachers displayed significant differences across multiple passion dimensions. For example: Research-oriented teachers exhibited significantly higher levels of research passion and its sub-dimensions (harmonious and obsessive research passion) compared to other position types. Teaching and research-oriented teachers displayed more balanced levels of teaching and research passion and their sub-dimensions (harmonious and obsessive teaching passion).

These findings support Hypothesis H1, confirming that teachers in different positions exhibit academic passion levels aligned with their roles.

About Teaching Passion: Teaching-oriented teachers had the highest median score (~55), reflecting a high level of teaching passion. Teaching and research-oriented teachers followed, with a median of ~50. Research-oriented teachers had the lowest median score (~40), indicating relatively lower teaching passion. For harmonious and obsessive teaching passion, Teaching-oriented teachers scored the highest, followed by Teaching and research-oriented teachers, and Research-oriented teachers scored the lowest.

About Research Passion: Research-oriented teachers had the highest median score (~55), highlighting their outstanding research passion. Teaching and research-oriented teachers ranked second, with a median of ~50. Teaching-oriented teachers had the lowest median score (~40), showing a relative deficiency in research passion. In comparisons of harmonious and obsessive research passion, Research-oriented teachers again scored the highest, followed by Teaching and research-oriented teachers, with Teaching-oriented teachers scoring the lowest.

In summary, teaching-oriented teachers excel in teaching passion but exhibit relatively lower research passion. Conversely, Research-oriented teachers demonstrate the highest levels of research passion while scoring lower in teaching passion. Teaching and research-oriented teachers show moderate levels in both teaching and research passion dimensions, with greater variability, reflecting the challenges of balancing teaching and research responsibilities. Based on the above analysis, the hypotheses of this study were validated.

(4) Demographic Variable Analysis

Gender

The Mann-Whitney U test revealed a significant difference in harmonious teaching passion between genders ($p = 0.030$). Although the median scores for both genders were close, women had slightly higher median scores, indicating that female displayed greater in passion harmonious teaching.

Table 2. Kruskal-Wallis H Test for Passion and Age, Along with Mean Values Across Different Age Groups

	Kruskal-Wallis H	Asymp. Sig.	Mean Rank			
			age			
			≤30 years old	31-40 years old	41-50 years old	≥51 years old
teaching harmonious passion	7.616	0.055	208.75	172.28	193.47	222.23
research harmonious passion	3.671	0.299	208.08	198.23	177.29	178.02
teaching obsessive passion	13.723	0.003	202.42	176.53	183.96	251.65
research obsessive passion	10.481	0.015	244.17	200.71	168.34	205.59
Academic harmonious passion	1.442	0.696	226.75	187.24	183.11	198.73
Academic obsessive passion	8.796	0.032	232.92	188.72	175.18	231.39
teaching passion	12.184	0.007	209.42	173.57	187.94	244.41
research passion	7.823	0.05	237.75	200.39	170.94	194.85
N=373	373	373	6	163	171	33

Age

The Kruskal-Wallis H test results (Table 2) showed significant differences in teaching and research passion across age groups. At the sub-dimension level: Teaching obsessive

passion and research obsessive passion also varied significantly across age groups. Teaching passion and teaching obsessive passion, in particular, had very low p-values, highlighting strong associations with age. However, academic harmonious passion (including harmonious teaching and research passion) exhibited weak or non-significant age group differences.

Mean scores revealed the following trends: Teachers aged 51 and above had the highest teaching passion, followed by those aged 30 and below, while middle-aged teachers (31–50 years) exhibited lower teaching passion. For research passion dimensions, teachers aged 30 and below performed the best.

Education

The Kruskal-Wallis H test (Table 3) revealed significant effects of educational qualifications on most dimensions of academic passion (e.g., harmonious teaching passion, harmonious research passion, teaching obsessive passion, research obsessive passion, teaching passion, and research passion). Research passion (including harmonious and obsessive research passion) increased significantly with higher educational attainment. Conversely, teaching passion (including harmonious and obsessive teaching passion) tended to decrease as educational attainment rose.

Table 3. Kruskal-Wallis H Test for Passion and Educational Attainment, Along with Mean Values Across Different Educational Levels

	Kruskal-Wallis H	Asymp. Sig.	Mean Rank		
			Degree		
			Doctorate	Master	Bachelor
teaching harmonious passion	19.934	0	170.9	213.83	250.66
research harmonious passion	7.28	0.026	197.36	165.31	166
teaching obsessive passion	20.242	0	174.22	199.57	276.82
research obsessive passion	13.779	0.001	201.12	154.73	170.48
Academic harmonious passion	0.72	0.698	186.41	184.38	205.5
Academic obsessive passion	3.531	0.171	187.75	176.82	224.27
teaching passion	23.278	0	171.3	207.67	273.77
research passion	12.589	0.002	200.59	156.48	168.68
N	373	373	252	99	22

Years of Teaching Experience

The Kruskal-Wallis H test (Table 4) indicated significant impacts of teaching experience on teaching passion, harmonious teaching passion, and teaching obsessive passion. Generally: Teaching passion increased with longer teaching experience. However, differences in harmonious research passion, academic harmonious passion, and academic obsessive passion across teaching experience groups were not significant.

Table 4. Kruskal-Wallis H Test for Passion and Teaching Experience, Along with Mean Values Across Different Lengths of Teaching Experience

	Kruskal-Wallis H	Asymp. Sig.	Mean Rank				
			work interest				
			No interest in teaching or research	Mainly teaching	Mainly research	Interest in both, but teaching more than research	Interest in both, but research more than teaching
teaching harmonious passion	31.758	0	92.63	227.58	92.5	212.33	165.17
research harmonious passion	48.871	0	86.88	69.54	212.18	173.87	216.98
teaching obsessive passion	24.308	0	114.75	237.23	122.86	208.27	165.24
research obsessive passion	32.88	0	100.88	98.1	219.32	172.81	213.17
Academic harmonious passion	16.395	0.003	74.5	121.71	146.86	193.93	194.77
Academic obsessive passion	6.07	0.194	102.88	150.56	167.86	191.98	190.55
teaching passion	34.327	0	91.5	241.4	105.86	212.94	161.8
research passion	45.966	0	87.63	75.65	219.45	172.65	216.8
N	373	373	4	24	11	164	170

Work Interests

The Kruskal-Wallis H test (Table 5) highlighted differences in academic passion based on work interests: Teachers primarily interested in teaching scored higher in teaching passion, harmonious teaching passion, and teaching obsessive passion but lower in research-related dimensions. Teachers primarily interested in research scored highest in research passion and research obsessive passion but lower in teaching-related dimensions.

Other Variables

The study also examined the relationships between academic passion and variables such as marital status, number of children, annual income, family income, and professional title. Results showed no significant impact of these variables on any dimensions of academic passion.

Table 5. Kruskal-Wallis H Test for Passion and Work Interests, Along with Mean Values Across Different Interest Categories

	Kruskal-Wallis H	Asymp. Sig.	Mean Rank			
			teaching experience			
			≤5 years	6-15 years	16-20 years	≥ 21 years
teaching harmonious passion	14.525	0.002	165.65	182.09	185.31	231.32
research harmonious passion	2.706	0.439	199.95	189.71	175.93	180.68
teaching obsessive passion	12.36	0.006	178.94	176.83	179.64	231.21
research obsessive passion	10.42	0.015	216.23	186.76	170.53	171.13
Academic harmonious passion	1.793	0.616	185.1	189.58	177.65	200.25
Academic obsessive passion	4.038	0.257	200.17	180.76	174.54	200.25
teaching passion	15.832	0.001	171.46	178.5	181.18	236.52
research passion	7	0.072	210.12	188.38	171.52	175.43
N	373	373	91	120	101	61

5. Recommendations

(1)Optimize the Categorized Evaluation System to Align with Job Characteristics

China's categorized evaluation system for university faculty effectively identifies academic passion levels across different job types, ensuring a suitable match between teachers and tasks. Based on the existing framework, it is recommended to further refine evaluation standards to maximize academic passion for all teacher types.

For Teaching-oriented Teachers: Emphasize teaching-related metrics, such as student feedback, course innovation, teaching competition results, and teaching outcome transformation. Reduce the burden of research tasks and provide more resources for teaching support. Encourage breakthroughs in teaching by rewarding teaching achievements or organizing teaching innovation activities.

For Research-oriented Teachers: Focus evaluation on research outputs, such as high-impact publications, project grants, and patent commercialization, while setting minimum teaching requirements to ensure basic teaching quality. Establish interdisciplinary research centers or offer international collaboration opportunities to foster sustained innovation in research.

Foe Teaching and Research-oriented Teachers: Develop a dynamic evaluation mechanism to adjust the weight of teaching and research metrics based on individual development stages and needs. For example, Early career: prioritize research development, Mid-career: emphasize balancing teaching and research, Late career: focus on knowledge transfer and academic mentorship.

(2) Targeted Career Development Support

Provide tailored support based on differences in academic passion levels across age, gender, education level, and teaching experience. Teachers aged 30 and below, especially those with doctoral degrees, should receive enhanced training in research capabilities, additional research resources, and support in improving teaching skills. Teachers aged 31–50, often in a "bottleneck period," exhibit relatively lower teaching and research passion. Universities should strengthen career planning guidance to help them achieve breakthroughs. Teachers aged 51 and above, with extensive teaching experience, should be encouraged to participate in teaching quality supervision, curriculum standards development, and teacher training. They can mentor younger faculty and provide professional guidance.

6. Limitations and Directions for Future Research

This study's sample consisted of 373 teachers from three universities, a relatively small sample size that limits the external validity of the findings. Future research should expand the sample to include a broader range of universities and diverse teacher groups across regions, enhancing the generalizability of the conclusions.

Additionally, the study relied on cross-sectional data, focusing on the alignment of academic passion levels with job types but lacking an exploration of longitudinal changes in academic passion. This limits the understanding of the long-term trends in academic passion development.

Future Directions: Explore more detailed faculty classification systems that consider differences in disciplines, teaching models, and career stages. Develop evaluation standards that address the diverse needs of teachers. Use longitudinal designs to track changes in academic passion levels, exploring the long-term trends of academic passion and their relationship with career development across different job types. Conduct qualitative studies to understand the mechanisms or influencing factors behind the formation of academic passion, providing insights for evidence-based decision-making. Compare domestic and international faculty evaluation systems to explore how different cultural contexts influence academic passion. Use this global perspective to inform the optimization of evaluation systems and provide references for international benchmarking.

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