

Evaluation System of Scientific Research Performance of Humanities and Social Sciences Teachers in Chinese Universities

-- Taking Tianjin University of Sport as an Example

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Abstract: This study takes Tianjin S University as an example to conduct an in-depth study on the research performance evaluation system of humanities and social science teachers in Chinese universities. Through comprehensive quantitative and qualitative methods, the advantages and existing problems of the evaluation system were comprehensively analyzed. Research has found that the current evaluation system emphasizes the number of papers, project topics, and the level and quantity of rewards, but there is still a lack of recognition of diverse research contributions. It is recommended to further improve the system, expand the scope of academic contribution evaluation, and promote more comprehensive scientific research performance evaluation. This study collected multi-dimensional data on papers, topics, awards, etc., and classified them according to different professional titles. Bayesian algorithms were used to train and establish classification models, providing a relatively mechanical classification reference for optimizing the performance evaluation system of scientific research in Chinese universities. It helps to promote the comprehensive development of educational research in the field of humanities and social sciences. By providing useful insights for decision-makers, administrative managers, and teachers, this study aims to promote the continuous improvement of the research performance evaluation system in Chinese universities, thereby creating a more favorable environment for academic progress and knowledge innovation.

1. Introduction

Since the 1980s, China's education development has made tremendous progress and the education industry has flourished. However, due to the long-term existence of the traditional educational concept of "emphasizing scientific research and neglecting to teach", the teaching tasks of university teachers are often seriously ignored. This not only weakens the enthusiasm of university teachers to engage in scientific research work, but also leads to a weakening of the academic atmosphere in universities. Since the introduction of performance-based pay system in the early 1990s, China's university teacher evaluation system has gradually moved towards institutionalization. However, in recent years, many scholars have pointed out that there are still many problems in the evaluation mechanism of performance pay for university teachers in China. In this context, this study takes Chinese university humanities and social science teachers as the research object, and provides valuable reference for the improvement of university research performance evaluation system by conducting multidimensional evaluation and establishing classification models.

Since the late 1990s, Chinese universities have gradually established a performance evaluation system based mainly on the performance of teacher education and teaching work. In this context, the performance evaluation system for university teachers is gradually moving towards institutionalization. However, there are still many problems in the performance evaluation system for humanities and social science teachers in Chinese universities. For example, there is a tendency to focus more on scientific research achievements and neglect teaching and research in terms of papers, topics, rewards, etc; Neglecting the evaluation of teachers in terms of diverse contributions; Teachers have not yet been classified for

assessment; Evaluate scientific research performance based solely on the number of papers, and so on. These issues have to some extent constrained the improvement of research capabilities in humanities and social sciences in Chinese universities and the achievement of high-level university construction goals. Therefore, this study selects Tianjin S University as the research object and proposes corresponding suggestions based on the investigation and analysis of the professional title evaluation system for humanities and social sciences teachers at the university, in order to provide useful reference for the improvement of research capabilities in humanities and social sciences in Chinese universities.

2. Literature Review

1. Qualitative analysis of the performance evaluation system for university teachers

Gu Ping (2017) improved the indicator system based on relevant literature research, mainly from the perspectives of research environment, research influence, and research input-output, dividing the indicator system into two types: core and expansion. Zhu Yuhang et al. (2019) designed an indicator evaluation model based on the effects of research resources, research processes, and research impacts on the research performance of universities, providing reference measurement standards for performance management analysis.

2. Determine the performance evaluation system for university teachers through mathematical analysis methods

Qiu et al. (2017) evaluated 32 higher agricultural institutions and conducted a study on their performance levels from 2012 to 2015 using DEA and Malmquist index methods. The results showed that China's agricultural and forestry institutions were generally in a non-DEA effective state.

Zhong (2020) used factor analysis to dynamically evaluate the research performance of five types of universities in China from 2012 to 2016, including comprehensive, agricultural and forestry, teacher education, engineering, and medicine. It was found that the gap in research performance levels among these universities is continuously narrowing. Cao et al. (2019) conducted an empirical analysis of the research performance of "Double First Class" universities in the Jiangsu Zhejiang Shanghai region from 2012 to 2016 using the Malmquist index method, and found that technological progress is the main factor affecting the improvement of research performance. Zhang et al. (2020) selected universities in the Yangtze River Delta region as the research object, used the DEA Malmquist Tobit model to evaluate and analyze their research performance from 2008 to 2017, and explored the influencing factors of research performance. Liu Feng et al. (2019) improved the evaluation index system constructed in existing literature research in China based on the DEA-CCR model, and established a more scientific and reasonable evaluation index system based on the characteristics of the research object. Liu et al. (2017) used the super efficiency DEA model to analyze the scientific and technological performance of universities in various regions of China from 2014 to 2015, and found that the efficiency of scientific and technological innovation in Chinese universities is not synchronized with the level of regional economic development. Liu et al. (2019) conducted a performance evaluation of the intellectual property capabilities of 38 "985" universities in China based on the AHP fuzzy comprehensive evaluation method. The results showed that the intellectual property capabilities of "985" universities in different regions formed a three-level ladder of high and low. Ruan et al. (2019) calculated the scientific and technological innovation performance of 39 universities in Shandong Province from 2013 to 2017 based on the PCA/DEA model. The study showed that the overall scientific and technological innovation performance showed an upward trend, but with significant fluctuations. Chen et al. (2020) conducted an empirical analysis on the research performance of universities directly under the Ministry of Education based on principal component analysis and Malmquist index method, and found that the overall research efficiency showed a downward trend.

The indicator system or model obtained through qualitative analysis and mathematical methods always has problems with objectivity or mechanical aspects. My paper combines the advantages and disadvantages of two aspects, and introduces classification algorithms to classify the research performance of social science teachers in universities. This can complement each other's strengths and weaknesses, resulting in a more scientific evaluation model for the research performance of social science teachers in universities.

3. Significance of the study

Theoretical significance:

Firstly, taking the evaluation system of the scientific research performance of social science teachers in universities as the research content fills the theoretical research gap specifically focused on the evaluation of the scientific research performance of social science teachers, and enriches the research content of higher education administrative management. Secondly, based on relevant theories, this study conducts empirical research to analyze the current status of research performance evaluation of social science teachers in Chinese universities, providing empirical

data for related research. Finally, this study constructed a research performance evaluation model for social science teachers in Chinese universities based on the existing system and collected data, further filling the gap in relevant theoretical research and providing references for other related studies.

Practical significance:

Firstly, this study contributes to improving the research level and quality of achievements of social science teachers in universities.

Secondly, this study helps social science teachers in universities to apply theoretical research to teaching practice, thereby improving their teaching abilities.

Thirdly, this study contributes to improving the efficiency of scientific research management in universities.

4. Research Objectives of the Study

Main objective:

Based on the analysis of the current situation of the quantitative evaluation of the scientific research performance of university teachers at home and abroad, this paper establishes the evaluation index system of the scientific research performance of university teachers in humanities and social sciences by using the methods of literature, interview, and questionnaire.

Specific objectives:

To review the research status of quantitative evaluation of scientific research performance of university teachers in Tianjin University.

To identify factors influencing the publication of papers among Humanities and Social Sciences Teachers at Tianjin University.

To establish a scientific research performance evaluation index system for teachers of humanities and social sciences in colleges and universities.

5. Methodology

Research Design

This study aimed to establish a research performance evaluation system for humanities and social sciences university teachers. The objective was to enhance the quality and outcomes of academic research by addressing issues such as complex evaluation systems, utilitarian research trends, and inadequate assessment methods. The research analyzed the current state of research performance evaluation for social science teachers in Chinese universities and developed a comprehensive system to improve the efficiency of research management and promote the development of social sciences in China.

Population and Locale of the Study

The study targeted the entire teaching staff of Tianjin Sport University, comprising 352 teachers. Of these, 153 were identified as qualified under social and humanistic criteria. The sample represented multiple disciplines, including education, psychology, sociology, and management, providing a comprehensive perspective on the evaluation system's applicability.

Data Gathering Tools

The study utilized both qualitative and quantitative tools to collect data. Qualitative data were obtained through a literature review and questionnaire surveys, which identified key performance evaluation indicators. Quantitative data were sourced from the university's research achievement

registration system and validated using mathematical statistics. These tools collectively facilitated the development and refinement of the performance evaluation system.

Data Gathering Procedures

Qualitative data were collected by analyzing existing indicators through literature reviews and survey questionnaires, leading to the identification of new performance metrics. Quantitative data were extracted from the university's research achievement registration system. These data were then cleaned and organized according to the performance indicators for social science teachers, ensuring that only relevant and accurate data were included in the analysis.

Treatment of Data

The research employed a structured questionnaire design to collect data on various aspects of research performance. The questionnaire gathered basic information, such as the teachers' professional titles, subject areas, and teaching experience. It also addressed research projects (e.g., the number of national, provincial, and institutional projects undertaken), research achievements (e.g., publications and monographs), academic impact (e.g., citations and conference participation), and research application (e.g., transformation of research outcomes and government adoption). Furthermore, respondents evaluated their satisfaction with the existing performance evaluation system.

A total of 153 questionnaires were distributed, and 148 valid responses were collected, resulting in an effective response rate of 96.73%. The responses were analyzed using mathematical statistics, including algorithms like the Bayesian algorithm, to establish a final evaluation model. This model enabled the creation of a robust performance evaluation system tailored to the needs of humanities and social sciences university teachers.

Ethical Consideration

When conducting this study, the following ethical factors were considered. The participation of the respondents was

entirely voluntary. They were not forced to participate in the research, and they could withdraw at any time if they deemed it necessary. Their identities were kept anonymous at all times. Their answers were treated as confidential, as only the researchers had access to the respondents' answers.

In terms of risk management, the researchers discussed the purpose of the study with the participants and read the questions to them to help them understand what was being asked. The researchers allowed participants to ask questions about areas or content they were unclear about. Furthermore, participants were informed that if they felt uncomfortable while completing the questionnaire, they could contact the researchers to mitigate any negative impacts the study might have caused. Apart from the content written in the questionnaire and the information discussed with the respondents, the researchers did not request any additional documents.

6. Results and Discussion

Current status of quantitative evaluation of scientific research performance of teachers in humanities and social sciences at Tianjin Institute of Physical Education

This study investigated the current status of scientific research performance evaluation of teachers in the humanities and social sciences of Tianjin Institute of Physical Education through a questionnaire survey. A total of 153 questionnaires were distributed, and 148 valid questionnaires were collected, with an effective recovery rate of 96.73%. The survey content mainly included teachers' views on the current scientific research performance evaluation system and factors affecting paper publication.

6.1. Research status of quantitative evaluation of scientific research performance of university teachers at Tianjin University

Table 1. Research status of quantitative evaluation of scientific research performance

Statement	Strongly Agree	agree	neutral	disagree	Strongly Disagree
I think the current research performance criteria used to assess the performance of teachers at Tianjin University are unreasonable.	27.03%	33.78%	15.54%	10.74%	12.84%
I believe that teachers at Tianjin University have received sufficient attention in their research work evaluation and promotion.	4.73%	14.19%	37.83%	24.25%	18.92%
I believe that the university has provided sufficient research resources and facilities to support teachers' research activities.	6.08%	12.84%	33.11%	25.68%	22.29%
I believe that it is challenging for teachers to obtain research projects or topics at the national, provincial, and ministerial levels.	29.98%	29.66%	20.20%	6.76%	12.84%
I think the demand for the number of research projects in the research results of teachers in the university is too high.	20.20%	33.78%	22.97%	14.86%	8.11%
I think the current research performance criteria may not fairly represent teachers' contributions at Tianjin University.	25.68%	30.34%	19.59%	14.19%	10.14%
I believe that the criteria for evaluating research performance need to be clearer and more transparent.	22.97%	34.46%	16.21%	14.86%	11.42%
I think collaborative research opportunities should be increased among teachers to enhance their output.	28.31%	32.43%	17.57%	12.16%	9.46%
I believe support systems for obtaining research projects should be improved.	24.25%	30.34%	20.20%	13.51%	11.42%
I think considering alternative assessment methods that encompass interdisciplinary collaboration and societal impact is important.	25.68%	29.66%	14.86%	17.57%	12.16%

The current status of scientific research performance evaluation of humanities and social science teachers at Tianjin Institute of Physical Education reflects many problems and challenges. A total of 148 valid questionnaires were collected in this survey, with an effective recovery rate of 96.73%. The survey shows that **60.81%** of teachers believe that the current evaluation standards are unreasonable, and only **23.58%** of teachers believe that they are reasonable, indicating that most teachers have a low degree of recognition of the current evaluation system. At the same time, there are also deficiencies in the attention and support for scientific research evaluation. Only **18.92%** of teachers believe that the school has given enough attention, while **43.17%** of teachers believe that the support is insufficient. Regarding the provision of research resources and facilities, only **18.92%** of teachers are satisfied, and more than **47.97%** of teachers believe that resources are insufficient. The lack of resource support may cause teachers to face more difficulties in actual scientific research work, and **59.64%** of teachers believe that there are great challenges in obtaining national or provincial research projects, which reflects the fierce competition for applications for high-level projects and is closely related to the lack of support from the school.

In addition, the number of research results required has become a major source of pressure for teachers, and **53.98%** of teachers believe that the requirements are too high. At the same time, regarding the fairness of the evaluation system, **56.02%** of teachers believe that the current standards cannot fairly reflect the contributions of teachers, and only **24.33%** of teachers believe that the existing standards are fair. The clarity and transparency of the evaluation system are also prominent issues. **57.43%** of teachers believe that the evaluation standards need to be further optimized and transparent. Overall, teachers have more negative views on the rationality, fairness and support of the current scientific research performance evaluation system, which to a certain extent affects the enthusiasm for scientific research. In the future, the school should focus on optimizing the evaluation standards, improving transparency, reducing excessive requirements for the number of research results, and at the same time increasing support for scientific research resources and policies, and reducing the difficulty of applying for high-level projects, so as to create a more fair, clear and supportive scientific research environment, thereby improving the efficiency and enthusiasm of teachers' scientific research work.

By analyzing the questionnaire survey data on the factors affecting the publication of papers by teachers in the humanities and social sciences of Tianjin Institute of Physical Education, it can be seen that various factors have different degrees of influence on teachers' research and publication capabilities. The data show that **60.74%** of teachers (**28.31% strongly agree, 32.43% agree**) believe that more opportunities for collaborative research are needed, and only **21.62%** of teachers disagree or strongly disagree. In addition, **54.59%** of teachers believe that the support system for research projects needs to be improved, and **20.20%** are neutral, indicating that the current lack of support system has affected the efficiency of paper publication. Interdisciplinary cooperation and social impact are seen as an important alternative evaluation method, **55.34%** of teachers support it, and only **29.73%** of teachers disagree.

The challenges faced in the evaluation of research

performance are multifaceted and have been highlighted in various academic contexts. One significant issue is the lack of clear and fair standards for assessing research contributions, which can lead to dissatisfaction among faculty members. This is particularly evident in the field of pharmacy education, where performance evaluation criteria for practice faculty are often vague and inconsistent, leading to unclear expectations and job dissatisfaction (Facciolo & Pittenger, 2024). Similarly, in the context of medical education, the shift towards competency-based assessments has highlighted the inadequacies of traditional evaluation methods, which often fail to accurately separate competent from incompetent candidates (Ekekezie et al., 2024).

Moreover, the allocation of research resources and facilities is another critical area where many institutions fall short. The development of appraisal tools for assessing the quality of in vitro studies, for instance, underscores the importance of having a robust methodology grounded in existing literature to support research endeavors (Whaley et al., 2024). The lack of adequate resources can also be seen in the challenges faced by Brazilian surgery journals, where the acceptance time for articles is extremely variable, pointing to inefficiencies in the editorial processes that could be improved with better resource allocation (Bentes et al., 2024).

The pressure to produce a high quantity of research outputs is another issue that can detract from the quality and impact of research. This is evident in the study of commercial insurance policies for osteochondral allograft transplantation, where the literature cited is often of low evidence level, suggesting that the emphasis on quantity over quality can lead to poorly supported policies (Fathi et al., 2024). Furthermore, the use of peer-reviewed journals by dentists who had evidence-based practice training during dental school highlights the importance of quality over quantity, as these practitioners are more likely to implement evidence-based findings in their practice (Burgette et al., 2021).

Finally, the lack of support for obtaining national or provincial research projects is a common challenge. The study on the judicialization of health rights in Mexico illustrates the tensions between different sectors and the lack of a coordinated strategy to promote change, which can be a barrier to secure research funding (Charvel et al., 2021). Similarly, the study on the performance criteria of education development centers in Iranian medical universities emphasizes the need for clear leadership and strategy to improve research performance and resource allocation (Maleki & Taghavinia, 2020).

The impact of university social science and humanities teachers on interdisciplinary and inter-institutional collaboration The scientific research performance of university teachers. Collaborative research can not only improve research quality, but also promote knowledge innovation (Zhang Yue et al., 2024). However, the current university scientific research evaluation system often focuses too much on individual achievements and ignores the value of collaborative research (Li Yongquan & Hu Qinxiao, 2023). Therefore, universities should encourage teachers to participate in collaborative research through policy guidance and resource support to improve scientific research performance.

The existing scientific research project application and management system is inadequate, which affects the research enthusiasm of teachers. According to the report of the

Ministry of Science and Technology (2023), although the total number of R&D personnel in China ranks first in the world, the efficiency of scientific research resource allocation still needs to be improved. Colleges and universities should optimize the scientific research support system, simplify the project application process, and provide more financial and technical support (Ministry of Education, 2020).

Traditional scientific research evaluation methods fail to fully reflect the value of interdisciplinary research and social impact. Zhou Guangli (2022) pointed out that under the background of breaking the "Five Only" policy, universities should establish a diversified evaluation system and incorporate interdisciplinary cooperation and social impact into the evaluation criteria. This will not only encourage

teachers to participate in research with greater social value, but also improve the overall quality of scientific research.

In conclusion, addressing these challenges requires a comprehensive approach that includes clarifying performance evaluation standards, improving resource allocation, emphasizing quality over quantity in research outputs, and fostering a supportive environment for securing research funding.

6.2. Factors influencing the publication of papers among Humanities and Social Sciences Teachers at Tianjin University

Table 2. Factors influencing the publication of papers

Statement	Strongly Agree	agree	neutral	disagree	Strongly Disagree
I think insufficient support services impact the quality and timeliness of my research output and publication process.	23.65%	29.66%	15.54%	14.86%	16.21%
I think access to professional development opportunities related to research and publication is limited.	21.56%	33.78%	14.19%	18.85%	11.42%
I think time constraints negatively affect my ability to dedicate time to research and publishing.	25.68%	29.66%	14.86%	15.54%	13.51%
I think balancing teaching commitments with research demands poses a significant challenge to my publication efforts.	24.25%	30.95%	14.19%	14.86%	15.54%
I think I face challenges in accessing necessary resources for conducting research and publishing in Humanities and Social Sciences.	23.03%	30.95%	14.19%	14.86%	16.90%
The availability of research resources significantly impacts my ability to conduct research and publish papers.	25.68%	29.66%	14.86%	15.54%	13.51%
I think the impact factor of journals influences my choice of publication venue.	20.20%	33.78%	14.86%	15.54%	15.54%
I think it is important to publish in high-ranking journals for establishing credibility in the Humanities and Social Sciences field.	21.56%	34.46%	13.51%	14.86%	15.54%
I prioritize publishing papers on topics that align with my personal research interests.	23.65%	30.95%	14.19%	14.86%	16.21%
I believe that the passion for my research drives my motivation to publish in Humanities and Social Sciences journals.	24.25%	30.95%	14.19%	14.86%	15.54%
I think the dissemination of my ideas and findings to a wider audience drives my publication efforts.	25.68%	33.78%	12.84%	13.51%	14.19%
I aim to contribute to the advancement of knowledge in my field through my published papers.	25.68%	33.78%	12.84%	13.51%	14.19%
I think institutional pressure to publish affects my overall job satisfaction as a Humanities and Social Sciences teacher.	23.03%	30.95%	14.19%	14.86%	16.90%
I think balancing the demands of teaching, research, and publication is challenging due to institutional expectations.	24.25%	29.66%	14.86%	14.19%	16.90%

6.3. Analysis of factors affecting the publication of papers by teachers in humanities and social sciences

More than 50% of the respondents (strongly agree + agree) believed that insufficient support services affected the quality

of their research and timeliness of publication, indicating that the school has obvious deficiencies in support services and urgently needs improvement. About 55% of respondents believe that there are limited opportunities for professional development related to research and publication, which indicates that teachers face bottlenecks in their career

development and that schools should provide more training and development opportunities. More than 55% of respondents said time constraints had a negative impact on their ability to research and publish, reflecting the difficulty faculty members have in balancing their time allocation between teaching, research, and publishing. About 55% of the respondents believed that balancing teaching and research demands posed a major challenge to publishing work, indicating that teachers find it difficult to balance research and publication under the pressure of multiple tasks. About 54% of the respondents said they faced challenges in obtaining the resources needed for research and publication, indicating that the school's resource provision was insufficient, affecting faculty members' research and publication efficiency. More than 55% of respondents believed that the availability of research resources had a significant impact on their ability to research and publish, further emphasizing the importance of resource support. About 54% of the respondents said that the impact factor of the journal influenced their choice of publication venue, indicating that teachers tend to choose journals with high impact factors when publishing to enhance their academic influence. About 56% of the respondents believed that publishing papers in high-level journals is very important for establishing academic credibility, reflecting the importance that teachers attach to high-level journals. About 54% of the respondents gave priority to publishing papers on topics consistent with their personal research interests, indicating that teachers prefer to engage in research areas of their own interest. About 55% of the respondents said that passion for research was their main motivation for publishing papers, reflecting the teachers' positive attitude towards academic research. About 59% of the respondents believed that disseminating research results to a wider audience was one of their motivations for publishing papers, indicating that teachers hope to expand their academic influence by publishing papers. About 59% of respondents said their goal was to contribute to the advancement of knowledge in their field by publishing papers, reflecting the high importance that faculty members place on academic contributions. About 54% of respondents felt that institutional pressure to publish affected their overall job satisfaction, indicating that faculty feel pressure when facing institutional expectations. Some 54% of respondents found it challenging to balance the demands of teaching, research, and publishing due to institutional expectations, further highlighting the pressure faculty members face under multiple tasks.

The above analysis shows that teachers of humanities and social sciences at Tianjin Institute of Physical Education face multiple challenges in the process of paper publication, including insufficient support services, limited professional development opportunities, time constraints, and difficulty in obtaining resources. In addition, teachers are also influenced by factors such as journal impact factors and institutional pressure when publishing papers. Schools should provide more support and resources to address these issues and help teachers better balance the needs of teaching, research and publication, thereby improving scientific research performance and academic influence.

6.4. In summary, the factors affecting the publication of papers by teachers in the humanities and social sciences are as follows:

Interpretation of Results in Relation to the Research

Question

The survey results reveal multiple key factors influencing the publication of papers by humanities and social sciences faculty, which are closely related to the research question of identifying the main barriers and motivations affecting academic publishing. First, insufficient support services (23.65% strongly agree, 29.66% agree) impact research quality and the timeliness of publications, consistent with literature emphasizing the importance of institutional support for research productivity (Bozeman & Gaughan, 2011). Second, limited professional development opportunities (21.56% strongly agree, 33.78% agree) restrict researchers' ability to master the latest methods and technologies, as studies show that continuous professional development is critical for enhancing research competitiveness (Brew, Boud, & Namgung, 2011). Third, time constraints (25.68% strongly agree, 29.66% agree) negatively affect research and publication capabilities, aligning with literature on the impact of time management on research productivity (Gonzalez & Bernard, 2006). Fourth, balancing teaching and research (24.25% strongly agree, 30.95% agree) is a major obstacle to publishing, as teaching responsibilities can consume significant time, reducing the time available for research (Bland et al., 2005). Fifth, challenges in accessing research resources (23.03% strongly agree, 30.95% agree) limit the ability to conduct high-quality research, as resource shortages may hinder publication outcomes (Stephan, 2012). Sixth, the availability of research resources (25.68% strongly agree, 29.66% agree) significantly impacts research and publication capabilities, consistent with literature on the importance of resource allocation for research productivity. Seventh, journal impact factors (20.20% strongly agree, 33.78% agree) influence the choice of publication venues, as high-impact journals are often seen as indicators of research quality (Larivière & Gingras, 2010). Eighth, publishing in top-tier journals (21.56% strongly agree, 34.46% agree) is important for establishing academic credibility, aligning with literature on the role of journal reputation in research evaluation. Ninth, prioritizing publications aligned with personal research interests (23.65% strongly agree, 30.95% agree) reflects researchers' passion and focus on their research topics. Tenth, passion for research (24.25% strongly agree, 30.95% agree) is a major driving force behind publishing, as studies show that intrinsic motivation is a key driver of research innovation (Ryan & Deci, 2000). Eleventh, the desire to disseminate research findings (25.68% strongly agree, 33.78% agree) is a significant motivation for publishing, consistent with literature on the importance of knowledge dissemination for research impact. Twelfth, contributing to the advancement of knowledge (25.68% strongly agree, 33.78% agree) is a primary goal of publishing, as studies indicate that researchers' intrinsic motivation significantly influences research productivity. Thirteenth, institutional pressure (23.03% strongly agree, 30.95% agree) affects job satisfaction, as high-pressure environments can lead to burnout (Kinman & Jones, 2008). Fourteenth, balancing teaching, research, and publication demands (24.25% strongly agree, 29.66% agree) is challenging, consistent with literature on the impact of multiple role pressures on research productivity. In summary, these results indicate that support services, professional development, time management, resource access, journal selection, and intrinsic motivation are key factors influencing the publication of papers by

humanities and social sciences faculty. Optimizing these aspects can enhance publication efficiency and job satisfaction.

6.5. Established scientific research performance evaluation index system for teachers of humanities and social sciences in universities

Based on the existing evaluation system and questionnaire survey results of Tianjin Institute of Physical Education, the new evaluation system will integrate traditional quantitative indicators (such as teaching hours, scientific research results level) with newly added multi-dimensional evaluation elements (such as support services, professional development, intrinsic motivation, etc.).

The new scientific research performance evaluation system integrates the existing quantitative indicators and multi-dimensional evaluation elements of Tianjin Institute of Physical Education, aiming to more comprehensively reflect the scientific research capabilities and actual contributions of teachers in the humanities and social sciences. First, the system retains the traditional teaching and scientific research task allocation indicators, such as the teaching hours requirement of 272 hours for professors and 336 hours for associate professors, and evaluates the balance between teaching and scientific research through time logs or questionnaires. Secondly, the quantitative indicators of scientific research results include journal article publication (such as Peking University core journals and Nanjing University core journals) and scientific research results level (such as Class A and Class B scientific research results) to ensure the quality of scientific research output. Third, the scientific research projects and awards cover national,

provincial, ministerial and bureau-level scientific research projects and awards. For example, national scientific research projects require one project for the top three in Class A and one project for the top five in Class B, and horizontal projects require hosting projects with a value of more than 300,000 yuan or more than 200,000 yuan. Fourth, support services and resource acquisition evaluate the quality of support services and the convenience of resource acquisition through questionnaires to ensure that researchers can carry out scientific research smoothly. Fifth, the professional development and training opportunities section records the number and content of training, evaluates the practicality of training, and helps researchers improve their scientific research capabilities. Sixth, intrinsic motivation and scientific research enthusiasm quantifies researchers' enthusiasm for scientific research and their desire to disseminate knowledge through questionnaires or self-reports, reflecting their intrinsic driving force. Seventh, interdisciplinary cooperation and social impact records the number of interdisciplinary cooperation projects and evaluates the value of research results in practical applications (such as policy formulation and social problem solving). Eighth, journal selection and publication strategy evaluates the relevance of researchers' journal selection and the diversity of publication strategies to ensure the wide dissemination of scientific research results. Finally, institutional stress and job satisfaction evaluates researchers' job satisfaction and mental health through regular surveys to help institutions optimize support policies and improve scientific research publication efficiency and job satisfaction. This comprehensive evaluation system not only retains traditional quantitative indicators, but also incorporates key elements such as support services, professional development, and intrinsic motivation, so as to better support the career development and scientific research innovation of researchers.

Table 3. Evaluation system of scientific research performance of college teachers

Evaluation Dimension	Specific Indicators	Data Sources
Teaching and Research Task Allocation	Teaching hours, balance between teaching and research time	Teaching records, time logs
Quantitative Indicators of Research Output	Number of journal publications, classification of research achievements	Publication records, research databases
Research Projects and Awards	National, provincial, and ministerial research projects and awards	Project records, award certificates
Support Services and Resource Access	Quality of support services, ease of resource access	Institutional records, surveys
Professional Development and Training Opportunities	Number of training sessions, practicality of training content	Training records, researcher feedback
Intrinsic Motivation and Research Passion	Passion for research, desire to disseminate knowledge	Surveys, self-reports
Interdisciplinary Collaboration and Social Impact	Number of interdisciplinary projects, social application of research outcomes	Project records, case studies
Journal Selection and Publication Strategy	Relevance of journals, diversity of publication strategies	Publication records, researcher interviews
Institutional Pressure and Job Satisfaction	Job satisfaction, level of institutional pressure	Regular surveys, mental health assessments

7. Conclusions and Recommendations

Conclusions

This study conducts an in-depth analysis of the research performance evaluation system for humanities and social

science teachers at Tianjin Sport University. It proposes a more scientific, reasonable, and quantifiable evaluation index system. This system comprehensively considers the level of scientific research projects, the quality and quantity of scientific research results, the depth and breadth of academic

influence, and the practical application value and social impact of scientific research results. Through multiple steps such as expert consultation, literature review, actual needs analysis, and data analysis, the specific scores and weights of each indicator were determined, ensuring the scientific and practical nature of the evaluation system.

The research results indicate that the new scientific research performance evaluation system can more comprehensively and accurately reflect the scientific research performance of teachers, especially in evaluating the quality and practical application value of scientific research achievements, which has significant advantages compared to traditional evaluation systems. The implementation of this system is expected to enhance teachers' research enthusiasm, promote the transformation and application of research results, and improve the overall research level of universities.

Recommendations

Further optimize the indicator system:

Dynamic adjustment: The research environment and academic field are constantly developing and changing. It is recommended to regularly evaluate and adjust the evaluation index system to ensure that it always conforms to the latest research development trends and the school's strategic goals.

Refine indicators: For some complex indicators, such as the conversion benefits of scientific research achievements, they can be further refined and quantified by adding more sub indicators to more comprehensively reflect the actual application of scientific research achievements.

Strengthen data management:

Data collection: Establish a comprehensive scientific research data collection and management system to ensure the accuracy and completeness of the data. Regularly collect and update information on teachers' research projects, paper publications, monograph publications, patent applications, etc.

Data sharing: Promote data sharing between different departments, avoid data silos, and improve data utilization efficiency.

Enhance evaluation transparency:

Openness and Transparency: Make the standards, methods, and results of scientific research performance evaluation transparent, so that teachers can clearly understand the specific content and standards of the evaluation, and enhance the fairness and transparency of the evaluation.

Feedback mechanism: Establish an effective feedback mechanism to promptly provide evaluation results and improvement suggestions to teachers, help them understand their own research strengths and weaknesses, and promote the improvement of their research abilities.

Encourage interdisciplinary collaboration:

Interdisciplinary projects: Encourage teachers to carry out interdisciplinary research projects, promote communication and cooperation between different disciplines, and enhance the innovation and application value of research results.

Joint evaluation: For interdisciplinary projects, it is recommended to adopt a joint evaluation mechanism that comprehensively considers the evaluation criteria and methods of different disciplines to ensure the scientificity and rationality of the evaluation results.

Strengthen policy support:

Research investment: Schools should increase their investment in scientific research, provide more research funding and resource support, especially for research projects with important academic value and social influence.

Policy guidance: Develop and implement policies that are conducive to the development of scientific research, such as incentive policies for the transformation of scientific research achievements, reward policies for scientific researchers, etc., to stimulate teachers' enthusiasm for scientific research and innovation vitality.

By implementing the above suggestions, we can further improve and optimize the research performance evaluation system for humanities and social science teachers in universities, promote the healthy development of scientific research work in universities, and enhance the overall research level and academic influence of universities.

References

- [1] Qiu, L., Guo, M., Zhang, Y., & Zhang, M. (2017). Research Efficiency Evaluation of Higher Agricultural Colleges Based on DEA and Malmquist. *Modern Education Management*, 2017(02), 50-55.
- [2] Zhong, J. (2020). Dynamic Evaluation of Research Performance in Chinese Universities: An Analysis Based on Panel Data of Five Types of Universities (2012-2016). *Educational Research*, 2020(02), 58-61.
- [3] Cao, G., Cui, X., Bai, L., & Gao, S. (2019). Analysis of Research Performance of "Double First-Class" Universities in the Jiangsu, Zhejiang, and Shanghai Region Based on Malmquist Index. *Economic Observation*, 2019(09), 18-20.
- [4] Zhang, J., Li, J., Chen, H., & Zhou, J. (2020). Research on Research and Innovation Performance Evaluation and Influencing Factors of Universities in the Yangtze River Delta. *Science and Technology Management Research*, 2020(09), 80-87.
- [5] Gu, P., Xia, X., Wu, X., Bai, L., & Zhong, Y. (2017). Construction of Research Evaluation Index System for Universities. *Library and Information Service*, 2017(09), 94-101.
- [6] Zhu, Y., & Sun, X. (2019). Design of the Research Performance Evaluation Index System for Universities. *Journal of Huaihai Institute of Technology (Social Science Edition)*, 2019, 17(05), 93-97.
- [7] Liu, F., & Yu, Z. (2019). Research on University Research Performance Evaluation Index System Based on DEA. *Jiangsu Science and Technology Information*, 2019(36), 26-29.
- [8] Liu, C., Zhou, X., & Liu, L. (2017). Evaluation of University Technological Innovation Efficiency Based on Super-Efficiency DEA Model. *Science and Technology & Economy*, 2017, 30(05), 21-26.
- [9] Liu, X., Du, H., & Yan, L. (2018). Performance Evaluation of Intellectual Property Rights Capability in "985" Universities in China. *Science and Technology Management Research*, 2018(02), 65-74.
- [10] Ruan, H., & Zhao, X. (2019). Evaluation of Technological Innovation Efficiency Based on PCA/DEA Model: A Case Study of Shandong Universities. *Eastern Forum - Journal of Qingdao University (Social Sciences Edition)*, 2019(03), 94-98.
- [11] Chen, Y., & Liang, X. (2020). Analysis of Research Performance of Directly Affiliated Universities of the Ministry of Education: Based on Principal Component Analysis and DEA-Malmquist Index Model. *Journal of Jimei University (Philosophy and Social Sciences Edition)*, 2020, 23(04), 69-78.
- [12] Zong, X., & Fu, C. (2019). Research on Research Performance and Its Influencing Factors of Research Universities in China: An Empirical Analysis Based on Relevant Data of Directly Affiliated Universities of the Ministry of Education. *Higher Education Management*, 2019, 13(05), 26-35.

- [13] Ma, L. (2018). Evaluation of Research Performance of Research Universities Based on Malmquist Index Model. *Statistics and Decision*, 2018, 34(22), 68-70.
- [14] Wang, X., Zheng, Z., & Li, X. (2017). Optimization and Empirical Analysis of Research Performance Evaluation System in Universities: A Case Study of 19 Universities in Fujian Province. *China University Science and Technology*, 2017, (11), 68-71.
- [15] Guo, X., Chen, L., & Zhai, H. (2017). Research on Research Performance Evaluation of Universities in Heilongjiang Province. *Heilongjiang Higher Education Research*, 2017, (07), 50-53.
- [16] Liu, T., & Xu, H. (2018). Analysis of Research Input-Output Performance and Its Influencing Factors in Different Regions of China: An Empirical Study Based on DEA-Tobit Model. *Science and Technology Management Research*, 2018, 38(13), 113-118.
- [17] Duan, X. (2019). Super-Efficiency DEA Evaluation of Research Performance of Universities in China under System Thinking. *Journal of Systems Science*, 2019, (04), 51-54.
- [18] Weng, Q. (2017). Efficiency Trends in Research, Teaching, and Social Services of Chinese Universities: A Case Study of 72 Directly Affiliated Universities of the Ministry of Education. *Contemporary Educational Science*, 2017, (10), 81-86.
- [19] Zhang, E., & Shi, W. (2020). Characteristics and Reference of Research Performance Evaluation System for Humanities and Social Science Teachers in American Universities. *Journal of Shenyang Normal University (Social Science)*, 2020, 44(01), 98-104. DOI:10.19496/j.cnki.sxxb.2020.01.015.
- [20] Zhang, E., & Shi, W. (2022). Optimization Study on the Evaluation System of Research Performance for Humanities and Social Science Teachers in Local Universities. *Scientific Management Research*, 2022, 40(03), 76-82. DOI:10.19445/j.cnki.15-1103/g3.2022.03.009.
- [21] Cui, Y., & Chen, Y. (2020). Reflection and Reconstruction of Research Productivity Evaluation of Social Science Teachers in Universities. *Higher Education Management*, 2020, 14(06), 50-59. DOI:10.13316/j.cnki.jhem.20201104.006.
- [22] Ji, Q. (2018). Research Hotspots and Development Trends of Research Performance Evaluation in Humanities and Social Sciences in Chinese Universities. *Science and Technology Management Research*, 2018, 38(18), 43-49.
- [23] Liu, K. (2020). Analysis of the Reform Direction of Research Evaluation System in Humanities and Social Sciences from the Perspective of Yin and Yang. *Journal of Kunming University of Science and Technology (Social Sciences)*, 2020, 20(01), 101-107. DOI:10.16112/j.cnki.53-1160/c.2020.01.013.
- [24] Wu, T., & Yang, J. (2022). Construction of an Evaluation System for Research Talents in Philosophy and Social Sciences. *China Social Science Evaluation*, 2022, No.31(03), 145-156+160.
- [25] Xue, E., Tian, S., & Li, J. (2022). Doctoral Cultivation System and Mechanism of University Think Tank in China. *Educational Philosophy and Theory*, 2022. DOI:10.1080/00131857.2022.2042205.
- [26] Ke, Q. (2022). Research on the Issue of Research Performance Evaluation of A University's Teachers under the Background of "Double First-Class". (Doctoral dissertation, Beijing University of Chemical Technology). DOI:10.26939/d.cnki.gbghu.2022.000454.
- [27] Cui, J. (2020). Current Situation and Development Trend Analysis of Research Performance Evaluation in Philosophy and Social Sciences in Universities in China. *Heilongjiang Education (Higher Education Research and Evaluation)*, 2020, No.1312(04), 49-51.
- [28] Jones, A. (2021). Scientometric Evaluation of Highly Cited Scientists in the Field of Forensic Science and Legal Medicine. *International Journal of Legal Medicine*, 2021. DOI:10.1007/s00414-021-02671-y.
- [29] Chen, Y., & Mo, T. (2020). Research on the Evaluation System of Teaching and Research Staff in French Universities. *Journal of Nanhua University (Social Science Edition)*, 2020, 21(01), 94-103. DOI:10.13967/j.cnki.nhxb.2020.0014.
- [30] Su, J. (2020). Correlation Analysis of Peer Review and Impact Factor in the Evaluation of Journals in Humanities and Social Sciences. *Library and Information Knowledge*, 2020, No.195(03), 128-137. DOI:10.13366/j.dik.2020.03.128.
- [31] Suo, C., & Yu, M. (2021). Review of Innovation Trends in Peer Review of Journal Articles Abroad. *Library and Information Work*, 2021, 65(01), 128-139. DOI:10.13266/j.issn.0252-3116.2021.01.018.
- [32] Jiang, G. (2020). Exploration of a New Model of Peer Review for Scientific Papers from the Perspective of Applied Philosophy. *Journal of Editing*, 2020, 32(06), 648-651. DOI:10.16811/j.cnki.1001-4314.2020.06.015.
- [33] Huang, C., & Kang, L. (2021). Several Methods to Improve the Quality and Efficiency of Peer Review. *Journal of Editing*, 2021, 33(01), 78-81. DOI:10.16811/j.cnki.1001-4314.2021.01.018.
- [34] Suo, C., & Li, Y. (2023). Evolution of Peer Review from the Perspective of Evaluation Theory. *Information Studies: Theory & Application* [Online]. Retrieved from <http://kns.cnki.net/kcms/detail/11.1762.G3.20230103.0922.001.html>.
- [35] Bland, C. J., Center, B. A., Finstad, D. A., Risbey, K. R., & Staples, J. G. (2005). A theoretical, practical, predictive model of faculty and department research productivity. *Academic Medicine*, 80(3), 225-237. <https://doi.org/10.1097/00001888-200503000-00003>
- [36] Bozeman, B., & Corley, E. (2004). Scientists' collaboration strategies: Implications for scientific and technical human capital. *Research Policy*, 33(4), 599-616. <https://doi.org/10.1016/j.respol.2003.11.001>
- [37] Bozeman, B., & Gaughan, M. (2011). How do men and women differ in research collaborations? An analysis of the collaborative motives and strategies of academic researchers. *Research Policy*, 40(10), 1393-1402. <https://doi.org/10.1016/j.respol.2011.07.002>
- [38] Brew, A., Boud, D., & Namgung, S. U. (2011). Research productivity and the internationalization of academic staff. *Higher Education*, 61(6), 679-694. <https://doi.org/10.1007/s10734-010-9349-z>
- [39] Gonzalez, C., & Bernard, H. (2006). Academic workload and faculty job satisfaction: A study of the relationship between workload and satisfaction in a sample of university faculty. *Research in Higher Education*, 47(6), 633-659. <https://doi.org/10.1007/s11162-006-9008-5>
- [40] Hicks, D., Wouters, P., Waltman, L., de Rijcke, S., & Rafols, I. (2015). Bibliometrics: The Leiden Manifesto for research metrics. *Nature*, 520(7548), 429-431. <https://doi.org/10.1038/520429a>
- [41] Kinman, G., & Jones, F. (2008). A life beyond work? Job demands, work-life balance, and wellbeing in UK academics. *Journal of Human Behavior in the Social Environment*, 17(1-2), 41-60. <https://doi.org/10.1080/10911350802165469>
- [42] Larivière, V., & Gingras, Y. (2010). The impact factor's Matthew Effect: A natural experiment in bibliometrics. *Journal of the American Society for Information Science and Technology*, 61(2), 424-427. <https://doi.org/10.1002/asi.21232>

- [43] Lee, S., & Bozeman, B. (2005). The impact of research collaboration on scientific productivity. *Social Studies of Science*, 35(5), 673-702. <https://doi.org/10.1177/0306312705052359>
- [44] Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54-67. <https://doi.org/10.1006/ceps.1999.1020>
- [45] Stephan, P. E. (2012). *How economics shapes science*. Harvard University Press. <https://doi.org/10.4159/harvard.9780674069583>
- [46] Wuchty, S., Jones, B. F., & Uzzi, B. (2007). The increasing dominance of teams in production of knowledge. *Science*, 316(5827), 1036-1039. <https://doi.org/10.1126/science.1136099>
- [47] Zhang, E. M., & Shi, W. B. (2020). Characteristics and reference of the research performance evaluation system for humanities faculty in American universities. *Journal of Shenyang Normal University (Social Science Edition)*, 2020(1).
- [48] Chen, S. (2019). *Research methods handbook* [Chinese version]. Beijing: People's Publishing House.
- [49] Wang, X. M. (2018). On the application of big data in the field of artificial intelligence. *Technology and Industry*, 18(10), 50-54.