

STRATEGIES OF INCENTIVE PROMOTION FOR TEACHERS AT GUANGXI AGRICULTURAL VOCATIONAL AND TECHNICAL UNIVERSITY, CHINA

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Article Received: November 18, 2025. Revised: March 21, 2026. Accepted: March 23, 2026.

Abstract

The objectives of this research were: 1) To investigate the problems and needs in the promotion of teacher incentive work at Guangxi Agricultural Vocational and Technical University, China. 2) To develop strategies for improving teacher incentives at Guangxi Agricultural Vocational and Technical University, China. Taking Guangxi Agricultural Vocational and Technical University as a case study, this research selected samples through stratified random sampling, including 142 administrative staff and 295 teachers. The research tools included a 5-point Likert-scale questionnaire with 26 questions, designed for administrators and teachers, as well as an outline for focus group discussions. Three experts reviewed the questionnaire content, and the Item-Objective Congruence (IOC) index was used to assess validity. Statistical methods, including percentages, mean values, and standard deviations, were used for data analysis.

The results indicated that: 1) Both school administrators and teachers have a relatively high demand for teacher incentives. 2) The strategies formulated to enhance teacher incentives include three aspects: 1) Optimising the material incentive system; 2) Deepening the spiritual incentive system; 3) Reconstructing the career development system.

Keywords: Teacher Incentive, Incentiveal Strategies, Agricultural Vocational and Technical University

Introduction

Education quality lies in the competition for teacher resources, and a scientific incentive mechanism is crucial for motivating teachers' engagement and ensuring the quality of talent cultivation. Zhang Zhen and Zhao Ting (2021) noted that teachers' enthusiasm and creativity directly influence the core competitiveness of universities, and constructing a scientific incentive mechanism is crucial for motivating teachers to engage in both teaching and research. In 2023, relevant policies clearly identified teacher incentives as a core measure to improve education quality. Chen Chun and Liu Zhifang (2022) argued that a scientific

incentive mechanism guarantees the professional development of teachers. However, research on teacher incentives in vocational colleges, particularly in the context of university mergers, remains relatively scarce, making it challenging to inform practical work.

Following its merger in 2021, the number of teachers at Guangxi Agricultural Vocational and Technical University increased from over 600 to more than 1,500, encompassing three types: teaching-oriented, research-oriented, and practical-oriented, which resulted in diverse incentive needs. Zhang Zhen and Zhao Ting (2021) emphasised that a "one-size-fits-all" incentive approach should be avoided in such cases. Survey results indicate that administrative managers perceive the mechanism for aligning performance with assessment as imperfect and the provision of material support as insufficient. Among teachers, assistant teachers find it challenging to meet their living needs with their basic salaries. At the same time, lecturers highlight the prominent issue of mismatches between their salaries and the intensity of their work. Hu Yongmei and Yuan Jing (2022) empirically demonstrated a mismatch between university teachers' salaries and their work intensity. Wang Runxia and Yao Yingxue (2020) also noted that insufficient material incentives can weaken teachers' work engagement.

Drawing on the problems discussed above, the core of this study is to investigate the problems and needs related to teacher incentives in this university and formulate tailored improvement strategies. These strategies will not only help the university resolve its dilemmas but also provide references for similar agricultural vocational undergraduate institutions. Lin Jiajia and Zhang Yao (2024), as well as Wang Runxia and Yao Yingxue (2020), all argued that such case studies can fill research gaps and enhance the operability of improvement strategies.

Objectives of this Research

1. To investigate the problems and needs of promoting incentives for teachers at Guangxi Agricultural Vocational and Technical University, China.
2. To develop strategies to enhance teacher incentives at Guangxi Agricultural Vocational and Technical University, China.

Research Methodology

1. Research Design.

A mixed research method (combining quantitative and qualitative research) was used for data analysis, which applies both quantitative and qualitative research approaches in the research process.

2. Research Objects and Samples.

2.1 Research Objects. Taking Guangxi Agricultural Vocational and Technical University as a case study, the research objects are divided into two categories: 1) 142 administrative staff; 2) 295 teachers.

2.2 Research Samples. The research samples are also divided into two categories: 1) 142 administrative staff; 2) 295 teachers. The sample size was determined using the Krejcie and Morgan formula (Krejcie and Morgan, 1970), and respondents were selected through a stratified random sampling method. sampling.

3. Research Tools.

The tools used in this study are as follows:

3.1 Questionnaire. The questionnaire is divided into two parts: 1) Problems existing in teacher incentives; 2) Needs for teacher incentives. The validity and applicability of the questionnaire were reviewed by three experts (2 professors in the field of teacher incentive research in Thailand and one professor in vocational education management in China). The Item-Objective Congruence (IOC) index was used for validity evaluation, and the overall Cronbach's α coefficient of the questionnaire was 0.91.

3.2 Focus Group. Data were collected through focus group discussions with school administrators and teachers, and strategies for improving teacher incentives were formulated based on the discussion content and feedback results.

4. Data Collection.

Data were collected by distributing questionnaires to respondents, followed by data analysis and the writing of the research report and thesis.

4.1 A total of 437 questionnaires were distributed to respondents at Guangxi Agricultural Vocational and Technical University, and 437 were returned, with a recovery rate of 100%.

4.2 The focus group discussion was used to collect data from 4 teachers and four school administrators.

5. Data Analysis.

5.1 Quantitative analysis: Quantitative questions in the questionnaire were analysed using statistical indicators such as frequency, mean value (M), and standard deviation (S.D.). A 5-point Likert scale was used to evaluate the respondents' views on the needs and existing problems related to teacher incentives.

5.2 Qualitative analysis: Qualitative analysis was conducted on the data from focus group discussions.

Research Results

1. Current Situation of Teacher Incentives at Guangxi Agricultural Vocational and Technical University.

There are many problems and needs in teacher incentive work from the perspectives of administrative staff and teachers, as detailed below:

Table 1 The questionnaire for administrators in this study focused on three aspects: material incentives, spiritual incentives, and career development incentives, aiming to address the problems and needs of administrators in optimising incentive mechanisms.

Questions	n=142		Level
	$\bar{x}$	S.D.	
Problems			
1. The mechanism for measuring the matching degree between performance bonuses and post assessment results is incomplete.	3.50	1.30	High
2. Insufficient material support for teachers' participation in training, academic exchanges, and corporate practice.	3.49	1.29	Moderate
3. Low participation of teachers in the formulation of incentive policies.	3.59	1.35	High
4. Lack of transparent and unified evaluation standards for professional title promotion policies.	3.57	1.29	High
5. Limited effect of school-enterprise cooperation on improving teachers' practical abilities and insufficient depth of the cooperation mechanism.	3.54	1.38	High
Total	3.54	1.32	High
Needs			
1. Cooperate with enterprises to carry out teacher practice projects and incorporate practical achievements into the performance distribution system.	3.54	1.34	High
2. Increase the proportion of training funds in total expenditure to specifically support teachers' needs for academic exchanges and skill training.	3.50	1.27	High
3. Establish a teacher opinion feedback and response mechanism to ensure that teachers' voices are effectively adopted and given closed-loop feedback in policy formulation.	3.53	1.33	High
4. Establish a risk support fund for teaching reform to provide financial support and error tolerance for innovative exploration such as curriculum development and the integration of courses, certificates and competitions.	3.62	1.28	High
5. Shorten the approval process for school-enterprise cooperation projects to improve the efficiency of transforming teachers' practical achievements.	3.51	1.23	High
Total	3.54	1.29	High

As shown in Table 1, the administrative staff's scores on the problems and needs for improving the teacher incentive mechanism are at the "Medium" or "High" level.

Regarding problems: 1) The mechanism for measuring the matching degree between performance bonuses and post assessment results is incomplete ($\bar{x}$ =3.50, S.D.=1.30); 2) There is a lack of material support for teachers' participation in training, academic exchanges, and corporate practice ($\bar{x}$ =3.49, S.D.=1.29); 3) Teachers have low participation in the formulation of incentive policies ($\bar{x}$ =3.59, S.D.=1.35); 4) There is a lack of transparent and unified evaluation standards for professional title promotion policies ($\bar{x}$ =3.57, S.D.=1.29); 5) School-enterprise cooperation has a limited effect on improving teachers' practical abilities and the cooperation mechanism lacks depth ($\bar{x}$ =3.54, S.D.=1.38).

Regarding needs: 1) Cooperate with enterprises to carry out teacher practice projects and incorporate practical achievements into the performance distribution system ($\bar{x}$ =3.54, S.D.=1.34); 2) Increase the proportion of training funds to specifically support teachers' academic exchanges and skill training ($\bar{x}$ =3.50, S.D.=1.27); 3) Establish a teacher opinion feedback and response mechanism to ensure that teachers' opinions are effectively adopted and fed back in policy formulation ($\bar{x}$ =3.53, S.D.=1.33); 4) Establish a risk support fund for teaching reform to provide financial support and error tolerance for innovative exploration such as curriculum development ($\bar{x}$ =3.62, S.D.=1.28); 5) Shorten the approval process for school-enterprise cooperation projects to improve the efficiency of transforming teachers' practical achievements ($\bar{x}$ =3.51, S.D.=1.23).

Furthermore, to gain a comprehensive understanding of teachers' problems and needs, a questionnaire was designed with a stratified approach based on the professional title levels of Chinese universities. The professional titles, ranging from junior to senior, are sequentially teaching assistant, lecturer, associate professor, and professor. Focusing on aspects such as material benefits, spiritual incentives, and career development, the questionnaire analysed the problems and needs regarding incentive mechanisms among teachers at different levels, as shown in Table 2.

Table 2. According to relevant educational laws and regulations in China, teaching positions in universities are classified into four levels: assistant teacher, lecturer, associate professor, and professor. This study designed a job title stratification questionnaire for teachers. It explored the actual needs and existing problems of teachers with different titles across three dimensions: material incentives, spiritual incentives, and career development incentives, to optimise the incentive mechanism.

Title Category	Problems and Needs	Sample Size (n=295)	$\bar{x}$	S.D.	Level
Problems:					
Teaching Assistant	1. Consider that the basic salary provided by the university is insufficient to meet basic living needs.	50	3.65	1.17	High
	2. The incentive system for young teachers to take part in agricultural tech incentive practice is not complete.	50	3.74	1.2	High
Lecturer	3. Consider that the university's salary level does not match the workload intensity.	141	3.72	1.17	High
	4. Find it difficult to obtain opportunities to speak at academic conferences.	141	3.68	1.18	High
Associate Professor	5. Consider that the salary and welfare do not match their professional value.	77	3.59	1.14	High
	6. Consider that there is insufficient support for academic team construction.	77	3.72	1.15	High
Professor	7. Consider that the salary has a low matching degree with academic contributions.	27	3.68	1.25	High
	8. Find that there are limited opportunities to participate in international top forums.	27	3.66	1.14	High
Total			3.68	1.18	High
Needs					
Teaching Assistant	1. Consider that the university needs to establish a guaranteed growth mechanism for basic salary.	50	3.66	1.19	High

	2 Support the establishment of a points system for agricultural technology promotion practice.	50	3.69	1.19	High
Lecturer	3. Consider that the university needs to provide subscription services for high-end academic resource packages.	141	3.70	1.15	High
	4. Consider that the university needs to establish a salary compensation mechanism based on the intensity of teaching hours.	141	3.58	1.23	High
Associate Professor	5. Support the establishment of a talent pool for academic review.	77	3.67	1.16	High
	6. Support the holding of annual academic frontier salons.	77	3.67	1.15	High
Professor	7. Support the establishment of discipline development zones.	27	3.73	1.19	High
	8. Support the allocation of exclusive research assistant teams.	27	3.68	1.20	High
Total			3.67	1.18	High

As shown in Table 2, the scores of teachers regarding the problems and needs for improving the incentive mechanism are all at the "High" level.

Regarding problems: 1) Teaching assistants consider that the basic salary is insufficient to meet living needs ($\bar{x}$ =3.65, S.D.=1.17), and the incentive mechanism for young teachers to participate in agricultural technology promotion is incomplete ($\bar{x}$ =3.74, S.D.=1.2); 2) Lecturers consider that the salary does not match the workload intensity ($\bar{x}$ =3.72, S.D.=1.17), and it is challenging to obtain opportunities to speak at academic conferences ($\bar{x}$ =3.68, S.D.=1.18); 3) Associate professors consider that the salary and welfare do not match their professional value ($\bar{x}$ =3.59, S.D.=1.14), and there is insufficient support for academic team construction ($\bar{x}$ =3.72, S.D.=1.15); 4) Professors consider that the salary has a low matching degree with academic contributions ($\bar{x}$ =3.68, S.D.=1.25), and there are limited opportunities to participate in international top forums ($\bar{x}$ =3.66, S.D.=1.14).

Regarding needs: 1) Teaching assistants believe that the university needs to establish a guaranteed growth mechanism for basic salary ($\bar{x}$ =3.66, S.D.=1.19) and support the establishment of a points system for agricultural technology promotion practice ($\bar{x}$ =3.69, S.D.=1.19); 2) Lecturers believe that the university needs to provide subscription services for high-end academic resource packages ($\bar{x}$ =3.70, S.D.=1.15) and establish a salary compensation mechanism based on the intensity of teaching hours ($\bar{x}$ =3.58, S.D.=1.23); 3) Associate

professors support the establishment of a talent pool for academic review ($\bar{x}=3.67$, S.D.=1.16) and the holding of annual academic frontier salons ($\bar{x}=3.67$, S.D.=1.15); 4) Professors support the establishment of discipline development zones ($\bar{x}=3.73$, S.D.=1.19) and the allocation of exclusive research assistant teams ($\bar{x}=3.68$, S.D.=1.20).

To further explore the core issues reflected in the questionnaire and build consensus on improvements, this study organised a focus group discussion involving four administrative staff members and four teachers with different professional titles. Examples of guiding questions included: "What procedural obstacles exist in the advancement of school-enterprise cooperation currently?" "What are the core demands of teachers with different professional titles regarding incentive policies?" and "How to optimise performance evaluation standards to reflect work value?"

The discussion results showed that administrative staff proposed simplifying the approval process for school-enterprise cooperation and refining performance evaluation standards. Teaching assistants called for the addition of housing subsidies, while professors hoped to increase the number of quotas for participating in international forums. Ultimately, all parties agreed that it was necessary to establish a hierarchical and classified incentive system centred on value stimulation and growth promotion, which provided a practical basis for the formulation of subsequent strategies.

2. Strategies for Improving Teacher Incentives.

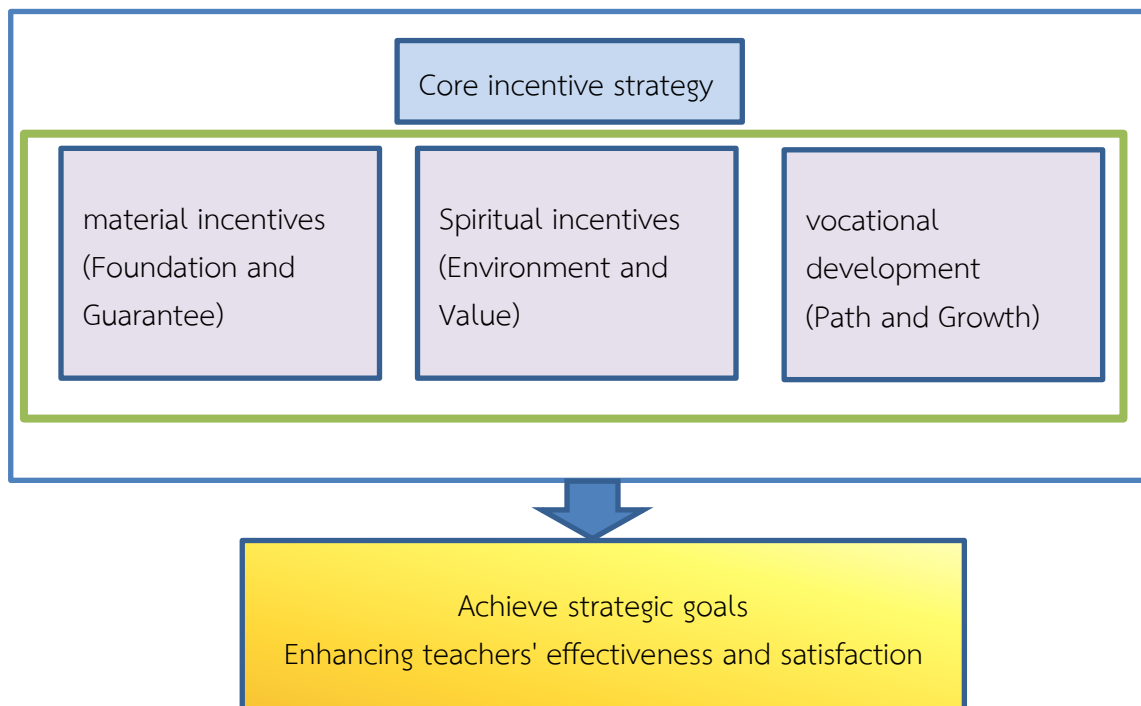


Figure 1 Core incentive strategy

In light of the relevant research findings, the teacher incentive mechanism should be optimized from three aspects: First, the material incentive system was optimized by establishing a multi-dimensional salary structure of "basic salary + performance bonus + special rewards"; legal benefits were implemented for non-regular teachers, housing subsidies were provided for young teachers, and special accident insurance was purchased for teachers engaged in field practice; academic exchanges were supported, research facilities were upgraded, and financial and error-tolerance guarantees were offered for curriculum innovation; second, deepen the spiritual incentive system, establish a "three-stage participation mechanism" in policy-making and opinion channels, simplify the approval process for school-enterprise cooperation, set up multiple honorary titles and publicize them, hold subject salons and provide psychological counselors to enhance value recognition; third, reconstruct the career development system, create a three-dimensional promotion channel of "teaching, research and practice", provide tiered support according to professional titles, and jointly build practice flow stations.

Research Discussion

1. Problems and Needs in Teacher Incentives at Guangxi Agricultural Vocational and Technical University.

Drawing on the background of university mergers, the nature of agricultural vocational undergraduate education, and the characteristics of the teacher group, this study examined the causes of problems and identified the needs in teacher incentives. In terms of material incentives, the scale of teachers had increased significantly after the university merger, but the original salary system had not been adjusted accordingly. Additionally, the practical orientation of agricultural vocational education had not been fully integrated into incentives, and there was a lack of subsidies to cover the material costs of teachers participating in practical projects. Sun Maoyuan et al. (2024) noted that the single salary structure cannot accurately reflect the value of employees' work. The insufficiency of spiritual incentives originated from the lagging cultural integration of merged institutions, where different school-running concepts had not formed a unified recognition, resulting in a weak sense of belonging among teachers. At the same time, the low social recognition of agricultural vocational education had weakened teachers' sense of honour. Based on Maslow's Hierarchy of Needs Theory, Demil (2021) conducted a study and concluded that teachers' sense of belonging belonged to the "need for love and belonging", and the lagging cultural integration had led to the failure to meet this need. The dilemma of career development incentives was reflected in the unreasonable "academic-oriented" and "practice-oriented" systems. The needs of teachers with different professional titles had reflected the laws and changes of the career

cycle: teaching assistants had focused on basic living security and practical experience, lecturers had paid attention to the balance between salary and workload as well as academic resources, associate professors had emphasized career promotion and academic team construction, and professors had valued the recognition of academic contributions and international cooperation. This had provided theoretical support for differentiated incentive strategies. Based on Maslow's Hierarchy of Needs Theory, Demil (2021) drew a research conclusion that teachers at different career stages had different levels of needs, and it was necessary to design incentive strategies hierarchically.

2. Strategies to enhance teacher incentives at Guangxi Agricultural Vocational and Technical University, China.

This study developed a three-dimensional incentive strategy, focusing on "material-spiritual-career development", which closely aligned with the positioning of agricultural vocational undergraduate institutions and facilitated research supplementation and innovation. In the optimization of material incentives, the market-oriented dynamic salary mechanism had solved the problem of salary fairness, incorporated practical achievements into performance accounting, and designed welfare benefits for different professional titles. Sun Maoyuan et al. (2024) proposed improving the salary system by establishing a differentiated salary structure based on the value of the post and performance. The innovation of the spiritual incentive strategy lay in the construction of a progressive system of "democratic participation-honour recognition-cultural identity". The "three-stage policy participation mechanism" had broken through the traditional decision-making model, and the characteristic honorary titles had integrated social value into the honour system. Psychological support and cultural cultivation had also strengthened the sense of professional mission. Adhikari and Shrestha (2023) emphasised the importance of recognising teachers' social contributions to enhance their sense of professional value. The reconstruction of the career development system had achieved breakthroughs in "diversified paths-hierarchical support-efficient cooperation". The "three-dimensional parallel" promotion channel had responded to practical needs, the hierarchical capacity-building platform had followed the law of demand hierarchy, and rewards for cross-disciplinary cooperation had solved problems related to teams and resources. Kooli and Abadli (2022) have proposed suggestions for providing differentiated career support to teachers at various stages of development.

Research Body of Knowledge

The knowledge of this research encompasses the construction of teachers' incentive systems, the adaptive innovation of multidimensional incentive strategies, and the implementation guarantee mechanism. The specific content is shown in Figure 1.

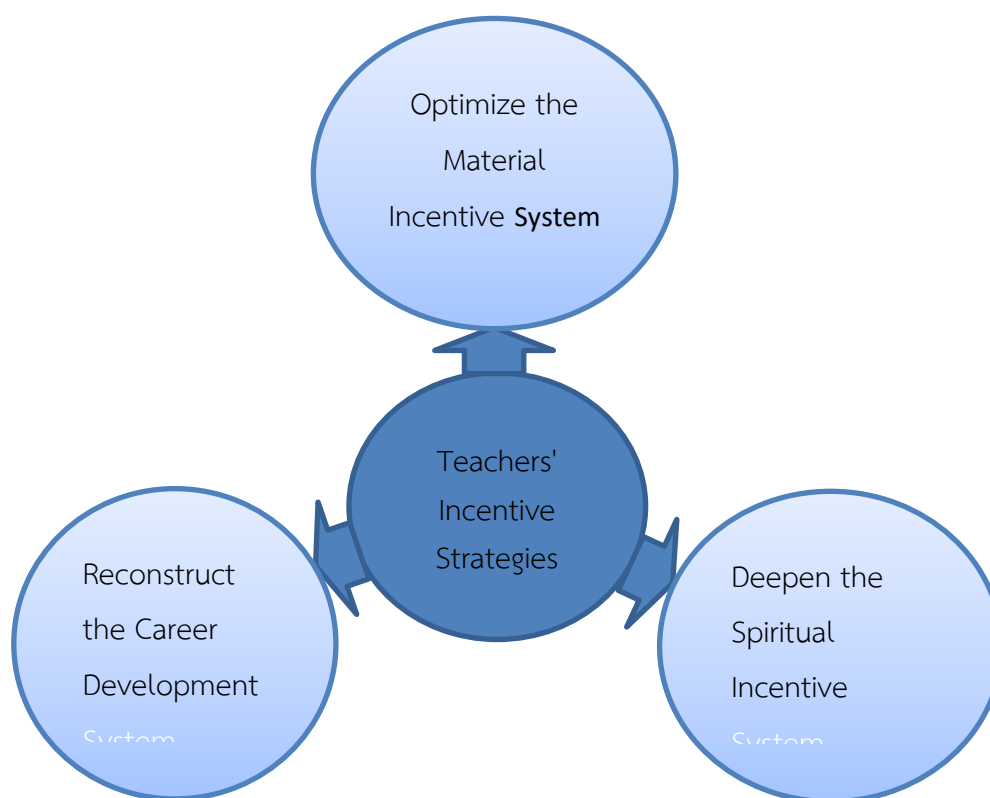


Figure 2 Teacher Incentive Strategies

Research Suggestion

1. Suggestions in practice.

First, the operable strategies were piloted and optimized in practice-oriented departments. Then, the mature strategies were promoted across the university, and complex reforms were launched. Finally, the practical strategies were institutionalized. Targeted measures were taken for groups such as non-staff teachers and young teachers to avoid incentive blind spots (Zhao Ping and Hu Yongmei, 2024). They emphasized increasing the starting salary of young teachers' basic salary to enhance their security. Resources were guaranteed by optimizing internal budgets, aligning with external policies, and jointly establishing school-enterprise funds. The effectiveness of these strategies was improved through monthly review meetings, achievement columns, and differentiated training. It was also mentioned that strategic compensation and human resource development required supporting resources.

2. Suggestions for research.

The sample was expanded to agricultural vocational undergraduate institutions in different regions, and comparisons were made with other types of institutions to improve relevant theories. (Cao Yan, Tang Shanshan and Xun Yuan 2022) had mentioned in their research that there were differences in financial allocation mechanisms and incentive effects

among different types of universities. Focus was placed on special groups, such as "dual-qualified" teachers, to fill research gaps. Digital incentive methods were explored in combination with technological trends. As Sadikin et al. (2023) mentioned, human resource development needs to adapt to the technological needs of the times.

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