

# Principal's Human Resources Management Practices and Goal Achievement in Private Secondary Schools in Kwara State

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**Abstract:** This study examined principals' human resource management practices and their impact on goal achievement in private secondary schools in Kwara State. Guided by three purposes, two research questions, and one hypothesis, a descriptive survey of a correctional type was used. The population included 5,784 teachers from 255 private senior secondary schools in Kwara State, per the 2019/2020 Kwara State School Census Report. A sample of 180 respondents, including teachers and principals, was selected. Data was collected through a structured questionnaire titled "Principal's Human Resources Management Practices and Goal Achievement Questionnaire" (PHRMPGAQ), based

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on a 4-point Likert scale. Descriptive statistics, including mean and standard deviation, were used to answer the research questions, while the hypothesis was tested using Pearson Product Moment Correlation at a 0.05 significance level. Three experts from the Department of Education Management and Counselling at Al-Hikmah University validated the instrument, and reliability was confirmed with Cronbach's alpha values of 0.82 and 0.84. Findings indicated a high level of principals' human resource management practices in these schools and a significant relationship between these practices and goal achievement. It is recommended that principals regularly evaluate recruitment, training, appraisal, and promotion practices to ensure they effectively support the continuous achievement of educational goals.

#### INTRODUCTION

Effective human resource management (HRM) in schools is integral to achieving institutional goals and fostering positive student outcomes. School principals, as primary leaders and decision-makers, play a crucial role in setting the vision and creating the conditions necessary for academic success, staff satisfaction, and operational efficiency. In private secondary schools, where goals often encompass high academic performance, student retention, and competitive distinction, principals' HRM practices are pivotal in navigating challenges unique to the private education sector.

Human Resource Management (HRM) is a crucial function in any organisation, ensuring that the vision and goals of a business are achieved while minimising the risk of wasted resources and underutilised workforce potential. Effective HRM involves providing employees with training and development opportunities, prioritising their welfare, and implementing performance appraisals to motivate them. These practices are essential to drive organisational effectiveness. Human resources encompass the skills, aspirations, and expertise of employees, which contribute to the production of goods and services aligned with the organisation's objectives. HRM, therefore, involves processes that foster the growth of employees' skills, competencies, and knowledge needed to perform their roles successfully. This approach aims to engage employees meaningfully, enabling them to contribute effectively to their organisation's progress and overall development.

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The significance of Human Resource Management (HRM) in boosting organisational performance through strategic enhancements in employee work environments (Al-Habsi et al., 2021). Al-Kahtani (2021) argues that modern HRM involves a complex array of processes, such as workforce planning, employee training, and compensation policies. Al-Kahtani (2021) further observes that numerous studies emphasize human resources as a strategic asset and a critical driver of institutional resources and performance. The Human Resources Department thus plays a central role in managing valuable human capital, with well-structured HRM policies that align various components to create a cohesive and effective HRM strategy.

Human resources management in schools involves a comprehensive set of practices aimed at recruiting, developing, motivating, and retaining qualified and committed teachers and staff. These practices, which include recruitment, performance appraisal, staff development, conflict resolution, and resource allocation, directly influence the school's operational effectiveness and, ultimately, its goal achievement. Studies have shown that when school leaders adopt sound HRM practices, they foster an environment conducive to professional growth and collaborative success, which can improve teachers' job performance, student engagement, and school reputation.

The National Policy on Education (2013) defines secondary education as the level of education that follows primary school and precedes tertiary education. This stage aims to prepare individuals for meaningful participation in society and further education. Secondary education is tasked with offering all primary school graduates the opportunity to continue their studies, developing trained personnel in applied sciences, technology, and commerce at a semi-professional level, and nurturing a generation that can think independently, respect others' perspectives, value hard work, and contribute positively to national goals, fostering good citizenship. Achieving these objectives requires efficient school management, which involves the effective use of financial, capital, and human resources to meet educational goals. Consequently, the successful management of secondary schools relies heavily on the optimal utilisation of resources, particularly human resources.

In every organisation, three primary resources must be managed to achieve its objectives and goals: human, material, and financial resources (Ugwoke et al., 2013). Among these, human resource management (HRM) stands out as the most critical and challenging to handle. This is because each individual is inherently unique, with distinct ways of thinking, feeling, reasoning, and acting. Moreover, humans control and coordinate all other resources, forming the core workforce of the organisation. Given that human behaviour significantly impacts organisational success, establishing a strong, collaborative relationship between employees and managers is essential for achieving organisational goals. Previous studies underscore the importance of human resource management (HRM) practices in enhancing organisational performance. For instance, Ouafky and Alzoubi (2019) found that inconsistencies in HRM practices present significant challenges for institutions. This study involved approximately 600 respondents from various roles within the target population to gather survey data. The researcher anticipated that effective HRM practices can contribute meaningfully to improved organisational performance.

In Kwara State, Nigeria, private secondary schools are steadily expanding, contributing to the broader educational framework of the region. However, the diversity in management styles, school resources, and teacher expectations poses distinct HRM challenges. Therefore, it becomes essential to investigate how HRM practices employed by principals in these private schools impact their ability to meet educational goals. This study aimed to explore the relationship between principals' HRM practices and goal achievement in private secondary schools in Kwara State and provided insights into the effectiveness of different management strategies in driving institutional success. By understanding these dynamics, school leaders can identify and adopt best practices, thereby enhancing educational outcomes and contributing positively to the educational sector in Kwara State.



#### **METHOD**

Descriptive survey was employed in this study. The population consists of 5,784 teachers in 255 private senior secondary schools in Kwara State according to 2019/2020 Kwara State School Census Report. The target population consist of 2,125 teachers in 143 secondary schools in Kwara Central Senatorial District. 5 teachers and a principal was randomly selected in 30 schools which make the sample size 180 respondents. The instrument the researcher used for data collation was questionnaire titled Principal's Human Resources Management Practices Goal Achievement Questionnaire (PHRMPGAQ) which is self-designed. The instrument is a 40-item instrument scored on a 4-point scale of "SA (Strongly Agreed)", "A (Agreed)", "D (Disagreed)", and "SD (Strongly Disagreed)". The instrument has three sections: Section A deal with personal data of the respondents, Section B contains five clusters with five items each on Principal's Human Resources Management Practices while Section C contains three clusters with five items on Goal Achievement.

The instrument was face-validated by three experts in the department of education management in Al-Hikmah University. They were requested to study the items and asses the suitability of the language, adequacy, and relevance of the items in addressing the research questions bearing in mind the purpose of the study. Their corrections and inputs formed the basis for modification of the items of the instrument. In order to ensure the internal consistency of the instrument, a trial test was carried out on 30 teachers in five private secondary schools in Kwara State who were not selected for the actual study. Internal consistency reliability for each of the cluster was computed using Cronbach Alpha ( $\alpha$ ). The computation yielded reliability index of 0.82 and 0.84 respectively. This was considered appropriate, because it ensured the extent of homogeneity of the items in each cluster. The Cronbach Alpha ( $\alpha$ ) formula was used, because it provides more stable measure of homogeneity.

The researcher and two trained research assistants administered the instrument directly and retrieved same from the respondents. Data collected were analysed using mean score and SD (standard deviation) in answering the research questions. Score of 2.50 and above was taken to mean that the respondent is in agreement with the option, while a mean score of 2.49 and below showed disagreement to the items of the instrument. Pearson Product Moment Correlation (PPMC) was used at 0.05 level of significant to test the hypothesis.

#### **RESULTS**

The results presented in line with research questions and null hypothesis that guided the study are presented in Table 1.

**Table 1:**Result showing level of principal's human resources management practice in private secondary schools in Kwara State.

S/N	Statement	Mean	SD	Remarks
1	The principal implements a transparent recruitment process for hiring teachers.	3.41	0.83	High
2	There are clear criteria for selecting qualified candidates for teaching positions.	3.25	0.76	High
3	The recruitment process attracts a diverse pool of candidates.	3.05	0.88	High
4	Recruitment practices at this school focus on aligning candidates' skills with school goals.	3.71	0.89	High
5	The school ensures the hiring of qualified and skilled personnel	3.25	0.82	High



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6	The principal provides adequate training programs for teachers to enhance their skills.	3.05	0.89	High
7	Opportunities for professional development are regularly offered to teachers.	3.23	0.83	High
8	Teachers are encouraged to pursue further education and training.	3.35	0.89	High
9	Training programs are tailored to address the specific needs of teachers in the school.	2.91	0.82	High
10	The school supports continuous professional growth through workshops and seminars	2.85	0.72	High
11	The principal conducts regular performance appraisals for teachers.	3.27	0.76	High
12	The performance appraisal process is fair and objective.	3.16	0.92	High
13	Feedback from performance appraisals is used to improve teaching practices.	3.09	0.94	High
14	The appraisal process aligns with the goals and expectations of the school	3.32	0.73	High
15	Teachers receive constructive feedback on their performance.	3.25	0.83	High
16	The principal recognizes and rewards outstanding performance by teachers.	2.98	0.95	High
17	Teachers feel valued and appreciated for their contributions to the school.	3.41	0.83	High
18	Recognition programs motivate teachers to perform better.	3.25	0.76	High
19	Reward and recognition practices are aligned with the school's mission and goals.	2.90	0.78	High
20	There is a structured reward system for teachers who go above and beyond their responsibilities.	3.12	0.82	High
21	There are clear pathways for promotion within the school for teachers.	3.05	0.88	High
22	The promotion process is based on merit and performance.	3.05	0.89	High
23	Opportunities for promotion are communicated effectively to all staff	3.25	0.83	High
24	Teachers feel they have a fair chance for advancement within the school	3.19	0.79	High
25	Promotions are linked to teachers' contributions to the school's goals	3.47	0.89	High
	Grand Mean	3.19		High

The findings in Table 1 reveal that the level of principals' human resource management practices in private secondary schools in Kwara State is generally high, as indicated by a grand mean of 3.19. This high rating across all statements suggests that principals in these schools actively engage in practices that promote effective human resource management.

**Table 2:**Result showing level of educational goal achievement in private secondary schools in Kwara State.

S/N	Statement	Mean	SD	Remarks
26	Students in this school consistently perform well in standardized tests and exams.	3.27	0.76	High
27	There is noticeable year-over-year improvement in students' academic performance.	3.16	0.92	High
28	A majority of students meet or exceed grade-level expectations in core subjects.	3.09	0.94	High



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28	Students are well-prepared for external exams and post- secondary education.	2.99	0.95	High
30	The school provides adequate academic support to help struggling students improve.	3.29	0.60	High
31	The school effectively manages its financial and material resources to support educational goals.	3.17	0.63	High
32	Administrative and operational processes in the school are efficient and support a positive learning environment.	3.44	0.62	High
33	Teachers are productive and their roles align with the school's academic objectives.	2.74	0.83	High
34	The school maintains high rates of student attendance and retention.	3.18	0.56	High
35	Staff attendance and punctuality positively impact the school's operations and goals	3.12	0.65	High
36	Students are motivated and satisfied with their learning experience in this school	2.80	0.82	High
37	Parents are actively involved and engaged in school activities and decisions.	2.87	0.80	High
38	The school effectively communicates with parents and keeps them informed about students' progress.	2.94	0.67	High
39	Teachers feel valued and satisfied with their roles and professional growth opportunities.	3.38	0.56	High
40	The school has a strong reputation and positive impact on the surrounding community.	3.29	0.60	High
	Grand Mean	3.12		High

Table 2 illustrates that the level of educational goal achievement in private secondary schools in Kwara State is high, with a grand mean of 3.20. This finding indicates that these schools are generally effective in reaching their academic and educational objectives.

**Table 3:**Pearson Product Moment Correlation on Principal's Human Resources Management Practices and Goal Achievement in Private Secondary Schools in Kwara State.

Variable	Mean	SD	N	Df	R	Р	Decision
Principal's Human	47.8	8.34					
Resources Management Practices			180	178	0.840	0.000	H <sub>0</sub> Reject
Goal Achievement	15.8	3.23					

Significant Level < 0.05

The result of Table 3 shows the Cal. The P-value obtained was 0.000 which was less than alpha value of 0.05 Significance level with 178 degrees of freedom. Finding indicated that there was a positive correlation between the two variables which was statistically significant (r= 0.840). The null hypothesis which states that there is no significant relationship principal's human resources management practices and goal achievement in private secondary schools in Kwara State was therefore rejected and alternative hypothesis upheld. Thus, there was significant relationship between principal's human resources management practices and goal achievement in private secondary schools in Kwara State.

### **DISCUSSION**

Finding on research question one showed that the level of principals' human resource management practices in private secondary schools in Kwara State is generally high. These findings align with Ogalo (2020), who posits that effective human resource management by school leaders plays a pivotal role in enhancing teachers' performance, morale, and overall job satisfaction, leading to a more conducive atmosphere for achieving educational goals. Finding on research question one showed that the level of educational goal achievement in private secondary schools in Kwara

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State is high. Adedokun and Olaniyan (2023) found that private secondary schools that prioritize effective teaching strategies and robust management practices tend to have better academic outcomes. Their research emphasizes that schools with strong administrative support and clear communication of academic goals are more likely to see improvements in student performance and overall educational success. This aligns with the high levels of educational goal achievement reported in Kwara State, indicating that similar practices may be in place. Finally, the finding of the PPMC, there was significant relationship between principal's human resources management practices and goal achievement in private secondary schools in Kwara State. This indicates that enhancing key aspects of human resource management can positively impact educational goal achievement. Research consistently demonstrates that employees perform at higher levels when they receive effective management and development support (Abdullahi, 2020).

#### **CONCLUSION**

The study revealed that effective recruitment and selection, grounded in transparency and merit, enhance schools' ability to attract qualified educators, which strengthens the foundation for achieving academic goals. Additionally, the provision of ongoing professional development opportunities equips teachers with the skills needed to adapt to evolving educational demands, ultimately improving teaching quality and fostering academic success. The study also highlights the importance of regular and objective performance appraisals, which provide constructive feedback to teachers, encouraging them to continuously refine their teaching strategies. This appraisal process not only supports teacher growth but also reinforces accountability and promotes a culture of continuous improvement, which is vital for meeting academic targets. Recognizing and rewarding outstanding performance further motivates teachers, creating a positive school culture where educators feel valued and committed to their roles, thus contributing to higher levels of educational goal achievement. The study underscores that principals' strategic management of human resources is integral to the success of private secondary schools in Kwara State. By prioritizing these management practices, principals not only bolster teacher morale and productivity but also create an environment conducive to achieving the broader educational goals of their institutions.

#### Recommendations

Based on the findings of the study on principals' human resource management practices and goal achievement in private secondary schools in Kwara State, the following recommendations are proposed:

- 1. Principals should invest in continuous training and development opportunities for teachers, focusing on both subject-specific and pedagogical skills. Providing access to workshops, seminars, and further education programs can ensure that teachers stay updated with modern teaching methodologies and effectively contribute to achieving school goals.
- 2. Principals should facilitate regular communication and seek feedback from stakeholders to ensure that school practices align with community expectations and educational standards.
- 3. Principals should regularly assess the effectiveness of recruitment, training, appraisal, and promotion practices to ensure they contribute to the continuous achievement of educational goals.



#### **REFERENCES**

- Abdullahi, N. J. K. (2017). Managing Universal Basic Educational for breaking poverty circle in Nigeria. *Journal of Social Humanities*, 2(2), 39-46.
- Abdullahi, N. J. K. (2020). Human resource development and management of tertiary education for global competitiveness. *Journal of Arts and Social Sciences*, 7(1), 73-88.
- Abdullahi, N. J. K., & Abdulkareem, R. L. (2023). Human resource management and educational goal achievement in Nigeria. *Mediterranean Journal of Education*, 3(1), 95-111.
- Adedokun, O. J., & Olaniyan, O. A. (2023). The impact of effective management practices on academic achievement in private secondary schools. *Journal of Educational Administration*, 45(2), 123-138.
- Adeoye, M. A. (2022). Explanatory Remarks on Maslow's Theory of Motivation. *Indonesian Journal of Multidiciplinary Research*, 2(2), 469-476.
- Agboola, T., & Yusuf, O. (2020). Human resource management practices in public and private secondary schools: A comparative analysis. *Journal of Educational Administration*, 12(3), 89-101.
- Akafo, B. & Boateng, P.A. (2015), "Impact of Reward and Recognition on Job Satisfaction and Motivation", *European Journal of Business and Management*, .7 (24), 112-124.
- Alabi, A. T. (2010). School Personnel Managemen, The craft of educational management: INDEMAC Print Media.
- Al-Habsi, A. H., Farhana, N., & Karim, A. M. (2021). Impact of HR practices on employee retention in oil and gas industries of Oman. Social Sciences, 11(9), 1520–1530.
- Al-Kahtani, S. M. (2021). The role of human resources management in improving the institutional performance of medium industrial companies in the Republic of Yemen. Albaydha University Journal, 3(2), 932–942.
- Ames, C. (2021). Achievement goals, motivation, and school performance: Developing a productive approach to achievement. *Journal of Educational Psychology*, 93(3), 45–63.
- Armstrong. M. (2010), Armstrong's essential human resource management practice: A guide to people management, Kogan Page Limited.
- Bruinsma, M. (2018). Motivation, cognitive engagement, and achievement: How they interrelate and predict academic achievement. *Educational Psychology Review*, 30(1), 43–53.
- Cascio, W. F. (2015). Strategic HRM: Too important for an insular approach. *Human Resource Management*, *54*(3), 423–426.
- Ch'ng, H.K., Chong, W.K., and Nakesvari, M. (2010), "The Satisfaction Level of Penang Private Colleges Lecturers", *International Journal of Trade, Economics and Finance, 1*(2),168-172.
- Elrehail, H., Harazneh, I., Abuhjeeleh, M., Alzghoul, A., Alnajdawi, S. and Ibrahim, H.M.H. (2019), "Employee satisfaction, human resource management practices and competitive advantage: The case of Northern Cyprus", *European Journal of Management and Business Economics*, 29 (2), 125-149. https://doi.org/10.1108/EJMBE-01-2019-0001.
- Enwezor, C. H. (2021). Relationship Between Principals' human Resource Management Practices And Teachers'job Satisfaction In Secondary Schools In Anambra State. *UNIZIK Journal of Educational Research and Policy Studies*, 2, 137-150.
- Federal Republic of Nigeria. (2013). National Policy on Education. NERDC Press.
- Friedel, J. M., Cortina, K. S., Turner, J. C., & Midgley, C. (2017). Achievement goal orientation and adjustment in adolescents: Academic and motivational outcomes. *Learning and Instruction*, 13(1), 27–41.



- Friends, M., Adewale, O., & Salami, J. (2021). Exploring human resources strategies and their effect on performance in secondary education. *International Journal of Educational Leadership*, 17(2), 112-129.
- Gamage, A. S. (2014), "Organisational citizenship behaviour among employees in SMEs in Japan: An analysis of the link with HRM practices", Proceedings of International Conference on Business Management, 10, 129–140.
- Georgia, A., George, A., & Labros, S. (2013), "Employee recruitment and selection in the insurance sector: The case of the Greek insurance group", *European Journal of Management Sciences*, 1(1), 1-20.
- Halid, A., Ibrahim, Z., & Yusuf, T. (2020). The impact of human resource management practices on school goal achievement in private secondary schools. *Journal of Educational Administration*, *15*(3), 45-58.
- Hauret, L., Martin L., Omrani, N. & Williams, D.R. (2020), "How do HRM practices improve employee satisfaction?" Economic and Industrial Democracy, 1–25.
- Jouda, A. A., Ahmad, U. N. U., & Dahleez, K. A. (2016). The Impact of Human Resource Management Practices on Employees Performance: The Case of Islamic University of Gaza in Palestine. *International Review of Management* and Marketing, 6, 1080–1088.
- Lam, W., Chen, Z., & Takeuchi, N. (2009), "Perceived human resource management practices and intention to leave of employees: The mediating role of organisational citizenship behaviour in a Sino-Japanese joint venture", *The International Journal of Human Resource Management*, 20(11), 2250–2270.
- Locke, E. A. (2021). The role of motivation in work satisfaction and organisational productivity. In C. L. Cooper & E. A. Locke (Eds.), *Industrial and Organisational Psychology*. Wiley.
- Malik, M.E., Danish, R.Q. & Munir, Y. (2010), "Impact of Reward and Recognition on Job Satisfaction and Motivation: An Empirical Study from Pakistan", *International Journal of Business and Management*, 5(2), 159-167.
- Moustaghfir, K., El Fatihi, S. & Benouarrek, M. (2020), "Human resource management practices, entrepreneurial orientation and firm performance: what is the link?", *Measuring Business Excellence*, 24 (2), 267-283.
- Mugizi, W. & Bakkabulindi, F.E.K. (2018), "Human Resource Management Practices: Developing and Testing an Instrument in the Context of Academic Staff in Universities in Uganda", *Journal of Education Review*, 10 (1), 130-142.
- Noor, K. M. (2020). "Nature of Work Satisfaction: The Differences in Gender, Age, Tenure and Management Position among Academics in Malaysian Universities". AL-'ABQARI: *Journal of Islamic Social Sciences and Humanities*, 23(2). 27-40.
- Noor, K. M., Razali, W. M. F. A. W., & Mutalib, M. A. (2022). Human resource management practices and job satisfaction of academics in Malaysian higher education institutions. *International Journal of Mechanical Engineering*, 7(4), 26-39.
- Noor, K.M. (2013). 'Job Satisfaction in Malaysia Public Higher Education Institutions', PhD Thesis, La Trobe University.
- Ogalo, H. S. (2020). Strategic management of HRM practices and innovation performance in the high-tech fiberglass sector in Bahrain: Mediating role of organisational innovation. *Annals of Contemporary Developments in Management & HR (ACDMHR)*, 2(3), 43–55.
- Ouafky, I., & Alzoubi, H. M. (2019). Impact of human resource strategies and practices on organisational performance. *Human Resource Information Systems*, 1(2), 11–18.
- Robbins, S.P. & Coulter, M. (2018), Management, Pearson.
- Saifalislam, K.M., Osman, A. & AlQudah, M.K. (2014), "Human Resource Management Practices: Influence of recruitment and selection, and training and development



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- on the organisational performance of the Jordanian Public University", *IOSR Journal of Business and Management*, 16(5), 43-46. 61.
- Sothy, C. (2019). The effectiveness of principal in managing human resources in private secondary schools in Phnom Penh, Cambodia. *International Journal of Scientific & Research Publications*, *9*(6), 422-425.
- Tam, V. E., & Fonkeong, E. G. (2018). Human resources management and school effectiveness in government technical & secondary high schools in Cameroon. International Journal of Trend in Scientific Research and Development, 2(6), 721-733.
- Tangthong, S. & Agahi, H. (2018), "The Effects of Human Resource Management Practices on Employee Service Quality in Thailand's Chained-Brand Hotels", IOSR Journal of Business and Management, 20 (3), 56-71.
- Ugwoke, S. C., Ejionueme, L. K., Anyanwu, J. I., & Etonyeaku, E. A. C. (2013). Analysis of the Principals' Human Resource Management Practices in Secondary Schools in Nsukka Education Zone, Enugu State, Nigeria. *Psychology Research*, *3*(1), 12.