

Dynamic capabilities, knowledge management, and lecturer performance as determinants of health workers' readiness in health services

Kapabilitas Dinamis, Manajemen Pengetahuan, dan Kinerja Dosen sebagai Determinan Kesiapan Tenaga Kesehatan dalam Pelayanan Kesehatan

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ABSTRACT

Background: Higher education institutions play a strategic role in preparing competent healthcare professionals and ensuring the quality of health services in the community. In the era of rapid health system transformation and technological advancement, health polytechnics are required to strengthen organizational performance through effective knowledge management, lecturer competence, and motivation to support adaptive institutional capabilities.

Objective: This study examined the effects of knowledge management, lecturer motivation, and lecturer competence on the institutional performance of Health Polytechnics.

Methods: Using an explanatory quantitative design, data were collected from 380 lecturers at 38 institutions through stratified sampling and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM).

Results: The results indicate that all independent variables significantly influence institutional performance. Organizational dynamic capabilities and lecturer performance are proven to act as significant mediators, both in parallel and serial relationships. A crucial finding indicates that the serial mediation pathway of knowledge management through dynamic capabilities and lecturer performance has the strongest influence. This confirms that the transformation of knowledge into organizational adaptive capabilities significantly determines institutional effectiveness.

Conclusion: This research indicates that strengthening lecturer capacity is essential for producing graduates who are adaptive to digital transformation and modern healthcare systems. Practically, this study provides strategic guidance for human resource development in higher health education to improve public health services sustainably.

Keywords: dynamic capabilities, health polytechnic, institutional performance, knowledge management, lecturer performance

ABSTRAK

Latar Belakang: Institusi pendidikan tinggi kesehatan memiliki peran strategis dalam menyiapkan tenaga kesehatan yang kompeten serta menjamin kualitas pelayanan kesehatan di masyarakat. Di era transformasi sistem kesehatan yang cepat dan perkembangan teknologi yang pesat, politeknik kesehatan dituntut untuk memperkuat kinerja organisasi melalui manajemen pengetahuan yang efektif, kompetensi dosen, dan motivasi dosen guna mendukung kapabilitas institusi yang adaptif.

Tujuan: Penelitian ini menganalisis pengaruh manajemen pengetahuan, motivasi, dan kompetensi dosen terhadap kinerja institusi Politeknik Kesehatan di Indonesia.

Metode: Penelitian ini menggunakan desain kuantitatif eksplanatif, data dikumpulkan dari 380 dosen di 38 institusi melalui teknik stratified sampling dan dianalisis menggunakan Partial Least Squares Structural Equation Modeling (PLS-SEM)

Hasil: Hasil penelitian menunjukkan bahwa seluruh variabel independen berpengaruh signifikan terhadap kinerja institusi. Kapabilitas dinamis organisasi dan kinerja dosen terbukti berperan sebagai mediator signifikan secara paralel maupun serial. Temuan krusial menunjukkan bahwa jalur mediasi serial manajemen pengetahuan melalui kapabilitas dinamis dan kinerja dosen memiliki pengaruh terkuat. Hal ini menegaskan bahwa transformasi pengetahuan menjadi kemampuan adaptif organisasi sangat menentukan efektivitas institusi.

Kesimpulan: Penelitian ini mengindikasikan bahwa penguatan kapasitas dosen esensial untuk menghasilkan lulusan yang adaptif terhadap transformasi digital dan sistem kesehatan modern. Secara praktis, studi ini memberikan panduan strategis bagi pengembangan sumber daya manusia di pendidikan tinggi kesehatan guna meningkatkan pelayanan kesehatan masyarakat secara berkelanjutan.

Kata kunci: kapabilitas dinamis, kinerja dosen, kinerja institusi, manajemen pengetahuan, politeknik kesehatan

INTRODUCTION

The effectiveness of higher health education organizations is a key indicator in ensuring the quality of educational services and the readiness of graduates as professional health workers capable of providing safe, high-quality, and community-oriented health services. In the context of the global health system, health education institutions are required not only to produce graduates who excel academically but also possess clinical skills, therapeutic communication skills, and adaptability to changing health care needs and medical technology[1]. Therefore, the performance of health education organizations has direct implications for the quality of health services and improving the health status of the community[2].

Health universities play a strategic role in developing the competency of healthcare workers through the integration of education, research, and community service, oriented toward evidence-based healthcare services. The performance of health education institutions is increasingly being assessed by their ability to produce work-ready graduates, adapt to the dynamics of the healthcare system, and contribute to strengthening promotive, preventive, curative, and rehabilitative services[3], [4]. Rapid changes in disease epidemiology, demographic transition, and developments in health technology require health education institutions to have a high organizational capacity for adaptation.

As a vocational education institution in the health sector, the Health Polytechnic plays a crucial role in preparing human resources for health through competency development and learning innovation. Vocational education emphasizes mastery of practical skills and prepares graduates to meet the demands of the workforce. This integration of skills-based education is expected to produce competent healthcare workers who are relevant to the demands of healthcare services. However, strengthening the capacity of lecturers, aligning the curriculum with healthcare practices, and optimizing the integration of research into learning remain areas that require further development[5].

In facing these challenges, the concept of dynamic capabilities serves as a relevant strategic framework for explaining the ability of healthcare institutions to adapt, innovate, and sustainably improve performance. Dynamic capabilities encompass the organization's

ability to sense, seize, and reconfigure in response to changing healthcare needs[6],[7]. In the context of health polytechnics, dynamic capabilities cannot be separated from the performance of lecturers as the main actors in developing students' health service skills.

The performance of lecturers in health education not only reflects the achievement of the Tri Dharma of Higher Education but also plays a direct role in shaping clinical competence, professional attitudes, and the readiness of graduates to provide quality health services. Effective learning approaches, mastery of pedagogical competence, professional knowledge, and teaching skills have been shown to improve student learning outcomes and their readiness for professional practice[8].

Based on empirical and theoretical gaps, this study aimed to analyze the role of dynamic capabilities and lecturer performance as determinants of the readiness of Health Polytechnics to produce competent healthcare workers in health services. This research is expected to provide theoretical and practical contributions to strengthening healthcare worker education and improving public health.

METHODS

Study design

This study used a quantitative approach with a cross-sectional design to examine the relationships among several variables related to institutional performance in health polytechnics. The study investigated the relationship between six key variables: three independent variables (knowledge management, lecturer motivation, and lecturer competence), two mediating variables (organizational dynamic capability and lecturer performance), and one dependent variable (institutional performance of health polytechnics). Data were collected simultaneously to describe conditions and behaviors among lecturers in health polytechnics across Indonesia. The research was conducted from January to July 2025.

Data source and sampling procedure

The research subjects consisted of lecturers from 38 Health Polytechnics throughout Indonesia. The number of lecturers in each polytechnic varies; therefore, stratified sampling with equal allocation was applied to ensure balanced representation from each institution. In this technique, the population was divided into strata based on each polytechnic, and samples were taken evenly from each stratum. A minimum of 10 lecturers were selected from each polytechnic, resulting in a total sample of 380 respondents. Data collection was conducted from May to July 2025.

Variables of the study

This study examined six variables consisting of three independent variables, two mediating variables, and one dependent variable. The independent variables were knowledge management, lecturer motivation, and lecturer competence. The mediating variables included organizational dynamic capability and lecturer performance. The dependent variable was institutional performance of health polytechnics.

Institutional performance at health polytechnics is assessed across six key dimensions: academic performance, graduate employability, curriculum relevance to current healthcare needs, collaboration with industry partners, availability of funding and supporting facilities, and accreditation status and institutional recognition. Lecturer performance is evaluated based on academic qualifications, teaching effectiveness, research output, engagement with industry and the community, and commitment to continuous professional development[9],[10],[11].

Dynamic organizational capabilities are reflected in the institution's ability to perceive opportunities and threats, utilize strategic options, and reconfigure resources to adapt to change. Knowledge management involves four processes: knowledge creation, storage/retrieval, sharing, and application. Lecturer motivation encompasses intrinsic and extrinsic motivational dimensions, as well as intensity, direction, and persistence in achieving goals[12]. Lecturers' competence is determined by their knowledge, skills, and professional attitudes—all of which are essential to fostering institutional excellence.

Data collection

Data were collected using an online questionnaire distributed through Google Forms to lecturers from 38 Health Polytechnics across Indonesia. Respondents were invited to participate voluntarily in the study and were asked to complete the questionnaire during the data collection period from May to July 2025. The questionnaire was designed to capture information related to knowledge management practices, lecturer motivation, lecturer competence, organizational dynamic capability, lecturer performance, and institutional performance.

Measurement and instruments

The research instrument used in this study was a structured questionnaire employing a 5-point Likert interval scale ranging from strongly disagree to strongly agree. Before distribution to respondents, the questionnaire underwent validity and reliability testing to ensure the accuracy and consistency of the measurement instrument. The questionnaire items were developed to measure the six variables examined in this study, including knowledge management, lecturer motivation, lecturer competence, organizational dynamic capability, lecturer performance, and institutional performance.

Ethical considerations

This study adhered to ethical principles in research involving human participants. Participation in the study was voluntary, and respondents were informed about the purpose of the research before completing the questionnaire. Respondents provided their consent before participating in the survey. The confidentiality and anonymity of participants were maintained, and the collected data were used solely for research purposes.

Data analysis

Descriptive statistical analysis was used to describe the characteristics of respondents and the distribution of each research variable. To test the research model and hypotheses, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed. This method was used to examine the relationships among independent variables, mediating variables, and the dependent variable simultaneously. The analysis also evaluated the mediation effects of organizational dynamic capability and lecturer performance in explaining the influence of knowledge management, lecturer motivation, and lecturer competence on institutional performance. Referring to the relationship between variables and the framework of thought, the research model in this study can be presented in Figure 1, accompanied by notations for developing research hypotheses.

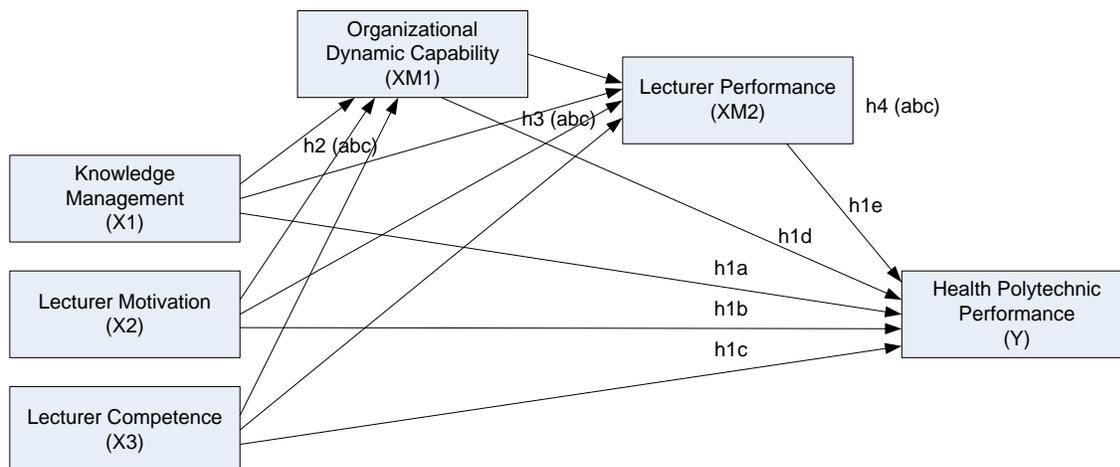


Figure 1. Research Model for the Development of Health Polytechnic Performance

RESULTS

Descriptive statistics indicate that all six variables measured in this study fall into the “High” or “Very High” categories based on their percentage scores. Lecturer Competence (X3) stands out with the highest mean score (4.35) and percentage (83.6%), which is categorized as Very High. This category indicates that the sampled lecturers perceive themselves as highly competent in terms of knowledge, skills, and attitudes—essential foundations for effective teaching and contribution to the institution’s goals. Lecturer Motivation (X2) and Lecturer Performance (XM2) also show strong results, with mean scores above 4.15 and percentages approaching 80%, indicating that motivational factors and performance levels are generally favorable in this institutional context.

However, despite the uniformly high scores, this consistency raises concerns about potential response bias or ceiling effects—where respondents tend to give favorable ratings overall, perhaps influenced by self-reporting or institutional image concerns. For example, Knowledge Management (X1) and Organizational Dynamic Capability (MX1) were slightly lower (75.8% and 77.8%, respectively), which may indicate relative weaknesses in structural or systemic areas compared to individual factors such as competence or motivation. Although in the “High” category, these components are important drivers of innovation and long-term adaptability. Their slightly lower ratings suggest a potential need for institutional investment in knowledge processes and agility. Finally, Institutional Performance (Y) scores mirrored Faculty Performance scores, suggesting a strong correlation, which may support the research hypothesis regarding the mediating role of individual performance in organizational outcomes. However, given their subjective nature and narrow range of score variability, these results should be interpreted with caution.

SEM-PLS analysis was chosen in this study due to its ability to overcome data limitations and model complexity while providing robust results for predictive and explanatory purposes. SEM-PLS is suitable for complex data and can handle models with many latent variables (constructs) and indicators. Furthermore, SEM-PLS supports both first- and second-order constructs. SEM-PLS analysis is frequently used in business and social research because it can measure abstract constructs. All measurement models for each variable in this study met the necessary criteria for validity and reliability. Specifically, all indicator factor loadings exceeded 0.70, indicating strong item convergence with their respective constructs.

Furthermore, Composite Reliability (CR) values for all constructs were above 0.70, confirming internal consistency. The Average Variance Extracted (AVE) values also exceeded the minimum threshold of 0.50, indicating adequate convergent validity. These results confirm that the measurement model is statistically sound, allowing the study to proceed with confidence in analyzing the structural model for hypothesis testing.

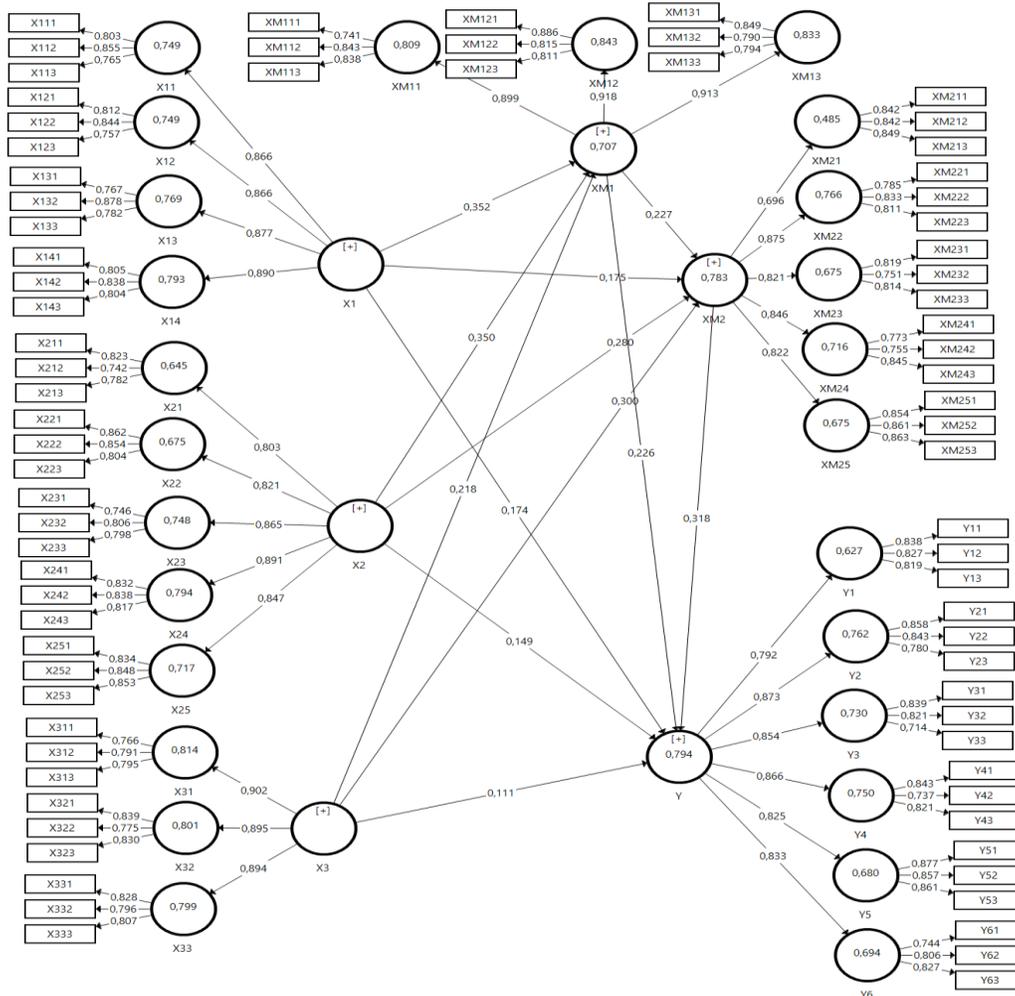


Figure 2. Overall Model

Based on SmartPLS calculations using the bootstrap method, the following output is obtained for hypothesis testing. The results of Table 1 show that all direct hypotheses in the structural model are statistically supported, as evidenced by significant p-values (<0.01) and t-statistics well above the critical threshold of 1.96. The most substantial direct effect is observed in the relationship between Knowledge Management (X1) and Organizational Dynamic Capability (XM1), with a coefficient of 0.352, followed by the effect of Lecturer Motivation (X2) on XM1 (0.350), indicating that knowledge systems and motivational factors play a significant role in shaping an institution's adaptive capacity. In particular, the direct effects of all independent variables (X1, X2, X3) on Institutional Performance (Y) are significant but relatively weaker (ranging from 0.111 to 0.174), indicating that their impacts

are channeled more effectively through mediating variables. The significant paths from Organizational Dynamic Capability (XM1) to Lecturer Performance (XM2) and from XM2 to Institutional Performance (Y) reinforce the importance of sequential mediation mechanisms. Overall, the findings confirm the robustness of the model and the interdependence of human and organizational factors in driving institutional outcomes.

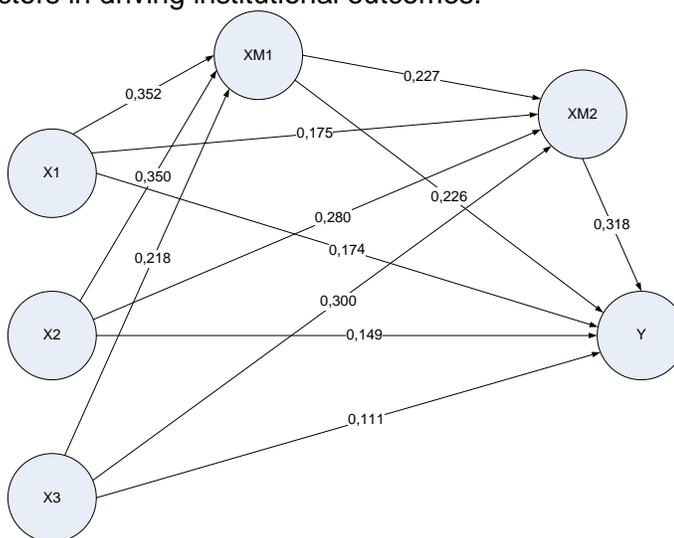


Figure 3. Structural Model

Table 1. Hypothesis Test (Mediation Effect)

Direct Effects	Coef.	SD	t-stat	p-value	Hypotheses
Knowledge Management → Organizational Dynamic Capabilities	0.352	0.050	7,007	0.000	Ha accepted
Knowledge Management → Lecturer Performance	0.175	0.044	3,933	0.000	Ha accepted
Knowledge Management → Polytechnic of Health Performance	0.174	0.056	3,138	0.002	Ha accepted
Lecturer Motivation → Organizational Dynamic Capabilities	0.350	0.056	6,311	0.000	Ha accepted
Lecturer Motivation → Lecturer Performance	0.280	0.062	4,525	0.000	Ha accepted
Lecturer Motivation → Polytechnic of Health Performance	0.149	0.051	2,914	0.004	Ha accepted
Lecturer Competence → Organizational Dynamic Capabilities	0.218	0.043	5,025	0.000	Ha accepted
Lecturer Competence → Lecturer Performance	0.300	0.043	6,970	0.000	Ha accepted
Lecturer Competence → Polytechnic of Health Performance	0.111	0.040	2,791	0.006	Ha accepted
Organizational Dynamic Capabilities → Lecturer Performance	0.227	0.052	4,400	0.000	Ha accepted
Organizational Dynamic Capabilities → Poltekkes Performance	0.226	0.060	3,747	0.000	Ha accepted
Lecturer Performance → Polytechnic of Health Performance	0.318	0.067	4,736	0.000	Ha accepted

Note: Coef. = coefficient; SD = standard deviation; t-stat = t-statistic

Table 2. Hypothesis Test (Mediation Effect)

Indirect Effect	Coef.	SD	t-stat	p-value	Hypotheses
Knowledge Management→Dynamic Capabilities→Polytechnic of Health Performance	0.080	0.023	3,463	0.001	Parallel Mediation
Lecturer Motivation → Dynamic Capabilities → Polytechnic of Health Performance	0.079	0.026	3,099	0.002	Parallel Mediation
Lecturer Competence → Dynamic Capabilities → Polytechnic of Health Performance	0.049	0.017	2,943	0.004	Parallel Mediation
Knowledge Management→Lecturer Performance→Polytechnic of Health Performance	0.055	0.019	2,979	0.003	Parallel Mediation
Lecturer Motivation→Lecturer Performance→Polytechnic of Health Performance	0.089	0.026	3,402	0.001	Parallel Mediation
Lecturer Competence→Lecturer Performance→Polytechnic of Health Performance	0.095	0.023	4.175	0.000	Parallel Mediation
Knowledge Management → Dynamic Capabilities → Lecturer Performance → Polytechnic of Health Performance	0.025	0.009	2,746	0.006	Serial Mediation
Lecturer Motivation → Dynamic Capabilities → Lecturer Performance → Polytechnic of Health Performance	0.025	0.010	2,532	0.012	Serial Mediation
Lecturer Competence → Dynamic Capabilities → Lecturer Performance → Polytechnic of Health Performance	0.016	0.006	2,433	0.016	Serial Mediation

Table 2 presents the results of the mediation tests, which show that both parallel and serial mediation effects are statistically significant across all paths. The parallel mediation path, specifically X3 (Lecturer Competence) → XM2 (Lecturer Performance) → Y (Institutional Performance), with a coefficient of 0.095 and a t-statistic of 4.175, shows the strongest indirect effect, indicating that lecturer competence significantly influences institutional performance through improved individual performance. Similarly, knowledge management and motivation also exert meaningful effects through XM1 (Dynamic Capabilities) and XM2. The serial mediation path, although smaller in magnitude, remains statistically significant, indicating a multi-step causal mechanism where inputs such as knowledge, motivation, and competence improve institutional performance through improved organizational capabilities, followed by lecturer performance. This layered structure highlights the strategic importance of integrating organizational and human capital development to improve institutional outcomes.

DISCUSSION

Knowledge management at the Health Polytechnic demonstrates good performance with an average indicator score above 75%, reflecting the availability of a knowledge management system that supports the strengthening of lecturer competencies and institutional readiness in health worker education. The high implementation of the dimensions of knowledge creation, storage and retrieval, sharing, and application plays a crucial role in ensuring the transfer of clinical knowledge and evidence-based practices to students as future health professionals. Effective knowledge management has been proven to improve the capabilities of health education institutions in producing competent, adaptive graduates who are able to provide safe and quality health services, thus contributing to

improving the quality of health services and the health status of the community, in line with the policy of transforming human resources for health in Indonesia[13][4].

In this study, the motivation of lecturers at the Health Polytechnic was measured through five main dimensions, namely intrinsic, extrinsic, intensity, direction, and persistence, with an average achievement of 78.8% which is included in the high category, indicating that lecturers have strong motivation from both internal and external factors in carrying out the duties of the tridharma of higher education. High work motivation contributes directly to improving academic performance, creativity, and professionalism of lecturers, which in turn impacts the readiness of students in providing safe, quality, and evidence-based health services (evidence-based practice)[13][14].

The overall competency achievement of lecturers reached 83.6% (very high), with knowledge, clinical skills, and professional attitudes of 83.8%, 82.6%, and 84.5%, respectively, reinforcing that lecturers have complete cognitive, practical, and affective readiness to form adaptive and competent professional health workers[4] [15]. In the context of improving individual and organizational performance, dynamic capabilities serve as an adaptive foundation that enables the Health Polytechnic to remain relevant, innovative, and responsive to the dynamics of higher education and the ever-changing needs of health services, thus becoming a key driver of the institution's long-term efficiency and effectiveness[16], [17], [18].

The lecturer's performance achievement rate of 79.6%, particularly in terms of academic qualifications and very high teaching effectiveness, shows that the integration of motivation, competence, and dynamic capabilities supports the institution's readiness in preparing professional, work-ready health workers and contributing to improving the quality of health services and the level of public health[19].

In contrast, the other five dimensions—employability, curriculum relevance, industry collaboration, funding, and facilities—although still rated “high,” indicate areas that need improvement to support the strategic role of health education institutions in building a health system that is responsive to societal challenges and the need for quality healthcare service delivery. In modern health education literature, the link between curriculum relevance to the needs of the health industry and graduates' readiness to contribute to the health of the community has been a major focus of research, where the involvement of industry stakeholders in curriculum development has been shown to strengthen graduates' work readiness, enabling them to immediately play a role in promotive and preventive health services in the community[20].

Based on Human Capital Theory, these dimensions are crucial for improving graduate quality and employability in the healthcare context because competent human resources are a key asset in efforts to improve service quality, reduce access disparities, and support the development of a Healthy Generation, Healthy Environment, Healthy Eating, and Enthusiastic Learning. Research shows that collaboration between healthcare education institutions and healthcare services facilitates research development, practical capacity, and graduates' adaptability to the dynamics of the clinical and public health fields, which collectively contribute to improving the overall quality of healthcare services[21].

The knowledge management variable demonstrated the most significant influence on polytechnic performance compared to other independent variables. This finding aligns with scientific evidence demonstrating that effective knowledge management practices in healthcare organizations—encompassing the systematic creation, storage, sharing, and

utilization of knowledge—can strengthen organizational capacity to improve healthcare quality, support better clinical decision-making, and encourage service innovation based on community needs.

Optimal knowledge management implementation also serves as a crucial foundation for the development of evidence-based education, enabling healthcare institutions to integrate research findings, clinical practice, and learning processes relevant to community needs. This ensures graduates are not only prepared to enter the workforce but also to act as agents of change in promoting healthy lifestyles and developing public health. These findings are reinforced by systematic reviews showing that knowledge management significantly improves the quality of decision-making, the quality of healthcare services, and the overall effectiveness of healthcare organizations by creating innovative services that are more responsive to patient and community needs[22]

The high perception of lecturers towards academic performance (82.9%) and institutional accreditation and recognition (83.2%)—both in the very high category—demonstrates the success of the Health Polytechnic in maintaining the quality of education and meeting national and international accreditation standards. These findings reflect the alignment of the institution's strategy with national health policies and global standards for health professional education set by international organizations, including the WFME standards that provide a framework for accreditation and quality assurance of health professional education[23][24]. In higher health education, accreditation serves not only as an internal evaluation of academic quality but also as an indicator of graduates' readiness to support a quality health care system that is responsive to community needs. Public health literature shows that health education program accreditation correlates with improvements in service quality, patient safety, and graduates' contributions to achieving sustainable public health[25].

This dimension includes key performance indicators such as student competency achievement, graduate job readiness, and research output, which are directly influenced by faculty performance and can be measured quantitatively. Meanwhile, the other five dimensions—Employability, Curriculum Relevance, Industry Collaboration, Funding, and Facilities—although still high, indicate areas that need to be strengthened to prepare graduates to meet the dynamic and complex needs of the healthcare workforce. Lecturer involvement in clinical practice-based curriculum design, industry collaboration, and utilization of learning facilities still need to be improved to ensure graduates' professionalism and readiness to provide quality healthcare services[4].

The finding that dynamic organizational capabilities mediate the relationship between knowledge management, lecturer motivation, and lecturer competency on the performance of health polytechnics at the Ministry of Health strengthens the framework of dynamic capabilities theory with a focus on the health education sector, where dynamic capabilities are a key factor in adapting to changes in health sciences, health service demands, and the dynamics of community needs. Dynamic capabilities enable health education organizations to sense, seize, and transform resources and opportunities for change in the health service system so that graduates are able to respond to the challenges of developing a continuously improving level of public health through learning innovation strategies and community-based curricula (e.g., the context of a Healthy Generation, a Healthy Environment, Healthy Eating, and a Passion for Learning) that have been discussed in the literature on the integration of knowledge management and organizational capabilities in higher education institutions in

Indonesia. Empirical studies show a positive relationship between knowledge management and dynamic capabilities in the context of higher education to enhance the competitive advantage of institutions through the integration of learning, research, and community service, which in turn contributes to the development of a holistic, healthy society[26].

The finding that Lecturer Performance can mediate the parallel influence of Knowledge Management, Motivation, and Competence on the Performance of the Ministry of Health's Health Polytechnic confirms that lecturers—as the main actors in the implementation of the tridharma of higher education—play a strategic role in transforming knowledge management and competency inputs into outputs that impact the effectiveness of learning, research, and community service, which ultimately supports the improvement of the quality of health services and healthy living behaviors in the community (e.g., Healthy Eating and Enthusiastic Learning). Contemporary health education literature also underscores the importance of adaptive expertise or adaptive skills of health educators to maintain effective performance responses in an ever-changing educational environment, which are directly related to the quality of institutional outputs[27].

The results of the study indicate a serial mediation effect through dynamic organizational capabilities and lecturer performance in the relationship between knowledge management, lecturer motivation, and lecturer competence on the performance of the Health Polytechnic. This serial mediation indicates that superior human resources do not automatically improve institutional performance but require internalization and organizational transformation first, which then results in optimal lecturer performance. This process is highly relevant to the context of health vocational education, where institutions not only produce graduates but also drive forces of change in public health services that need to be responsive to public health challenges such as environmental changes, dietary patterns, and healthy lifestyles. This model is consistent with the literature that integrates knowledge management and dynamic capabilities as a theoretical basis for achieving sustainable institutional performance and tangible results in the context of health education services[26].

CONCLUSION

The research findings indicate that knowledge management, lecturer motivation, lecturer competence, organizational dynamic capabilities, and lecturer performance significantly influence the performance of the Health Polytechnic (Poltekkes) in producing healthcare workers capable of providing quality healthcare services. Organizational dynamic capabilities and lecturer performance provide the strongest contributions, emphasizing the importance of the institution's ability to adapt to scientific developments and healthcare service needs, as well as the strategic role of lecturers in the educational process and student development.

Furthermore, organizational dynamic capabilities and lecturer performance have been shown to mediate the influence of knowledge, motivation, and competence on institutional performance, both in parallel and sequentially, reflecting the ongoing transformation of health education institutions. The synergy between strengthening institutional systems and individual lecturer performance is key to supporting the vision of health development oriented toward strengthening a healthy generation, a healthy environment, and healthy lifestyles, thus enabling Poltekkes to play a strategic role in continuously improving public health.

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