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Strategic Transformation of Healthcare Personnel Training Planning at Poltekkes Bandung

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ABSTRAK

Penelitian ini menyoroti inefektivitas kebijakan pengembangan kompetensi SDM kesehatan di Poltekkes Bandung yang ditandai dengan rendahnya tingkat transfer of Learning dari hasil pelatihan ke tempat kerja, ketiadaan sistem pemantauan yang menyebabkan terjadinya skill decay, ketidakseimbangan antara hard skills dan soft skills, dan perencanaan top-down yang memicu terjadinya implementation gap. Menggunakan metode kualitatif dan analisis NVivo 12 terhadap 12 informan, riset ini merekonstruksi model perencanaan yang demand-driven melalui pendekatan Interprofessional Collaboration (IPC) dan digitalisasi. Hasilnya merumuskan model tujuh langkah terintegrasi, meliputi: sinkronisasi kurikulum dengan infrastruktur medis, optimalisasi kemitraan Triple Helix, implementasi kurikulum inklusif IPC untuk meruntuhkan budaya kerja sektoral (silo-based), serta penggunaan platform "Plataran Sehat" untuk monitoring digital. Transformasi ini menjadi prasyarat mutlak untuk mengeliminasi inefisiensi birokrasi dan kegagalan teknis di lapangan. Dengan mengintegrasikan sistem pemantauan dan kolaborasi lintas profesi, Poltekkes Bandung dapat bertransformasi menjadi katalisator pengembangan SDM yang responsif dan akuntabel guna mendukung pencapaian visi Indonesia Emas 2045.

ABSTRACT

This research highlights the ineffectiveness of the health human resources (HR) competency development policy at Poltekkes Bandung, which is characterized by a low rate of transfer of learning from training outcomes to the workplace, the absence of a monitoring system leading to skill decay, an imbalance between hard skills and soft skills, and top-down planning that triggers an implementation gap. Using qualitative methods and NVivo 12 analysis on 12 informants, this research reconstructs a demand-driven planning model through an Interprofessional Collaboration (IPC) approach and digitalization. The results formulate an integrated seven-step model, including: synchronizing the curriculum with medical infrastructure, optimizing the Triple Helix partnership, implementing an inclusive IPC curriculum to break down the sectoral (silo-based) work culture, and utilizing the "Plataran Sehat" platform for digital monitoring. This transformation is an absolute prerequisite to eliminate bureaucratic inefficiencies and technical failures in the field. By integrating the monitoring system and cross-professional collaboration, Poltekkes Bandung can transform into a catalyst for responsive and accountable HR development to support the achievement of the Golden Indonesia 2045 vision.

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INTRODUCTION

Conceptual Framework of Planning in Public Administration

The landscape of healthcare human resource (HR) development in Indonesia is currently facing a significant "implementation gap". Within the context of public administration, the efficiency of competency development is not merely a technical training issue but a core component of institutional capacity building required to ensure the delivery of high-quality public services (Guo, 2017; Warsono et al., 2019). Guo (2017), Warsono (2019), and Jiménez-Caldera et al.

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(2022) argued that planning models are instrumental in designing and managing training programs. By adopting a structured planning model, an organization can systematically identify training needs, formulate objectives, and evaluate outcomes. Training planning itself is a comprehensive process encompassing need identification, execution, and evaluation to ensure effectiveness and efficiency in achieving instructional goals (Dunn, 2018; Fredericks & McColskey, 2012; Quade, 2015). As the state aims to achieve the vision of "Golden Indonesia 2045," the mandate for an accountable and responsive public sector necessitates a transition from rigid, supply-driven training models toward more agile, demand-driven governance frameworks (Bappenas, 2024).

Due to their inherent flexibility and adaptability, planning models in public administration can be adjusted to various organizational requirements (Madan & Ashok, 2023; Jiménez-Caldera et al., 2022). One prominent application is the design of healthcare personnel training (Luo et al., 2024; Muller et al., 2019). As defined in Regulation Number 17 of 2023 concerning Health, healthcare personnel are individuals possessing health-related competencies who are licensed to practice within the health sector (Undang-Undang Republik Indonesia Nomor 17 Tahun 2023 Tentang Kesehatan, 2023). Training is defined as a systematic process aimed at enhancing an individual's knowledge, skills, and attitudes to improve both individual and organizational performance, thereby enabling employees to execute their duties more effectively (Gomez-Mejia et al., 2016; Kirkpatrick & Kirkpatrick, 2006; Noe et al., 2017).

Strategic Importance of Healthcare Training

Giovanelli et. al. (2024) emphasized the necessity of diverse pedagogical approaches and structured evaluations in healthcare training. Furthermore, WHO (2023) highlighted that robust training planning is vital in addressing the global shortage of healthcare workers. Research by Alharbi & Aloyuni (2023) and Garcia & Torres (2022) indicated that well-trained healthcare personnel directly influence patient satisfaction and health outcomes. Additionally, Nguyen & Tran (2023) stressed the importance of upgrading skills through participative training designs. In this context, healthcare training planning models serve as essential tools in public administration for effectively organizing and managing human resources to achieve policy objectives and service excellence (Russo & Gourevitch, 2019).

From a public administration perspective, health personnel training can no longer be understood solely as an instrument for individual competency enhancement; rather, it functions as a strategic mechanism for organizational capacity building that systemically influences the quality of governance, accountability, and public sector performance (Hartley, 2025). Contemporary research indicates that investments in apparatus competency development contribute to enhanced organizational innovation, public service effectiveness, and institutional agility in responding to the increasingly complex needs of society (Imaniyati et al., 2024; Tahirs et al., 2023). Within the context of development administration, training policies also hold macroeconomic implications for local government fiscal efficiency, as improved human resource capacity has been proven to strengthen the utilization of performance information, promote evidence-based decision-making, and reduce financial performance disparities across public organizations (Spreen et al., 2020). Furthermore, reforms in local government performance accountability systems demonstrate that bureaucratic capacity is a key determinant in the successful implementation of performance management and the optimization of public resource utilization (Salomo & Rahmayanti, 2023). Enhanced apparatus capacity also correlates with increased organizational competence, the reinforcement of proactive administrative behavior, and the creation of greater public value in healthcare delivery (Hartley, 2025; Jeong, 2022). At the local government level, planned competency development fosters public sector

innovation, which impacts regional development outcomes and improves service effectiveness for the community (Hilmawan et al., 2023). Therefore, the primary contribution of this research to the discipline of public administration lies in its attempt to elucidate how health personnel training planning can be reconstructed as a governance instrument that not only enhances professional competence but also strengthens fiscal efficiency, institutional capacity, and the sustainable attainment of public sector development goals (Hilmawan et al., 2023; Salomo & Rahmayanti, 2023).

Institutional Context: Poltekkes Bandung

In the context of Poltekkes Bandung, as a technical implementation unit under the Ministry of Health, the current planning model faces systemic challenges. Despite the theoretical importance of training in addressing the global shortage of health workers, the current implementation reaches a marginal fraction of the workforce in West Java, signaling an inefficiency in public policy execution (Dirjenakes, 2024; Kemenkes RI, 2024). This research argues that the prevailing planning processes are constrained by bureaucratic rigidities and a lack of integration between instructional design and the operational realities of street-level bureaucrats (Guo, 2017).

Based on 2024 data from the West Java Provincial Health Office, the availability of healthcare personnel in West Java, specifically within the professional categories taught at Poltekkes Bandung, is detailed in the following table:

Table 1
Distribution of Health Workers in West Java, Year 2024

Type of Health Personnel	Total
Nurses	11.567
Midwives	17.566
Pharmacists	2.280
Medical Laboratory Technologists	1.540
Environmental Health Professionals	1.139
Nutritionists	1.239
Public Health Professionals	2.038
Total	37.369

Source: West Java Provincial Health Office (2024)

The data indicates a total of 37,369 healthcare workers across these seven professions. However, Poltekkes Bandung has only been able to provide training for 175 nurses. This represents a mere 0.04% reach, which remains exclusively limited to the nursing profession.

Analysis of Training Ineffectiveness

Despite its implementation, the vocational training conducted by Poltekkes Bandung has not reached optimal effectiveness. In public administration, effectiveness refers to the extent to which planned objectives are achieved through the optimal use of available resources (Denhardt & Denhardt, 2015; D. Osborne & Gaebler, 1993). Several factors contribute to this ineffectiveness. Several systemic barriers hinder health workforce development in West Java. First, low learning transfer stems from a 35% competency-infrastructure gap; trainees often face "skill-disuse" due to obsolete equipment in rural facilities (BBPK Ciloto, 2025). Second, monitoring limitations persist as post-training oversight declines, with self-monitoring

participation reaching only 45-50%, obscuring data on "skill decay" (Kemenkes RI, 2025). Third, the neglect of soft skills is evident; 60% of patient complaints in Bandung hospitals involve communication failures rather than clinical errors (Ombudsman RI, 2025). By the end, limited scope remains a challenge, as training reached only 175 nurses by 2024, representing a marginal 0.04% of the province's total health workforce.

The Need for Strategic Reform

Inefficiencies at Poltekkes Bandung originate from "top-down" planning, resulting in an "implementation gap" through poor coordination with local stakeholders. According to Mazmanian and Sabatier (1983), policy success necessitates synchronizing technical instruments with the operational environment of "street-level bureaucrats." Currently, instructor appointments under Decree No. HK.02.03/F.XVIII/228.1/2024 fails to meet the diverse training mandates established by Decree No. HK.02.02/F/216/2024. Consequently, transitioning from traditional, budget-centric models toward a robust strategic planning framework is essential (Gomez-Mejia et al., 2016; Noe et al., 2017). As argued by Armstrong (2020), optimizing human resource quality requires objective-driven formulations, reinforcing the consensus that superior planning remains the primary determinant of organizational performance (EL Hajjar & Alkhanaizi, 2018; Mehner et al., 2024).

Drawing upon the framework of modern instructional design theory, this study aims to reconstruct the training planning process at Poltekkes Bandung. However, unlike prior studies that focus solely on the technical aspects of training, this research adopts a critical administrative perspective. It interrogates how training policy serves as a mechanism to harmonize stakeholder expectations, address institutional capacity constraints, and overcome the departmental silos often found in public sector organizations.

By integrating the concepts of Interprofessional Collaboration (IPC) and digital governance, specifically through platforms like "Plataran Sehat", this research seeks to offer a strategic trajectory for HR transformation. This is not intended as an absolute solution but as a conceptual model to mitigate implementation barriers and improve policy accountability within the Indonesian health bureaucracy. Ultimately, this research aims to bridge the literature gap between human resource development and public sector management, providing a framework that is contextually grounded in the complexities of Indonesia's health sector transformation.

Literature Review

Policy in Designing Training Planning

Rosenbloom (2022) conceptualized training policy as a strategic framework to optimize civil service capacity and efficiency. This requires robust resource allocation for high-quality, priority-aligned initiatives (Smith & Jones, 2021). By establishing a structured policy, public organizations can systematically identify urgent training needs and ensure that the deployment of human capital remains both pertinent and resource-efficient. Consequently, well-defined guidelines facilitate an alignment between employee competencies and the shifting demands of the public sector (Rizal, 2020).

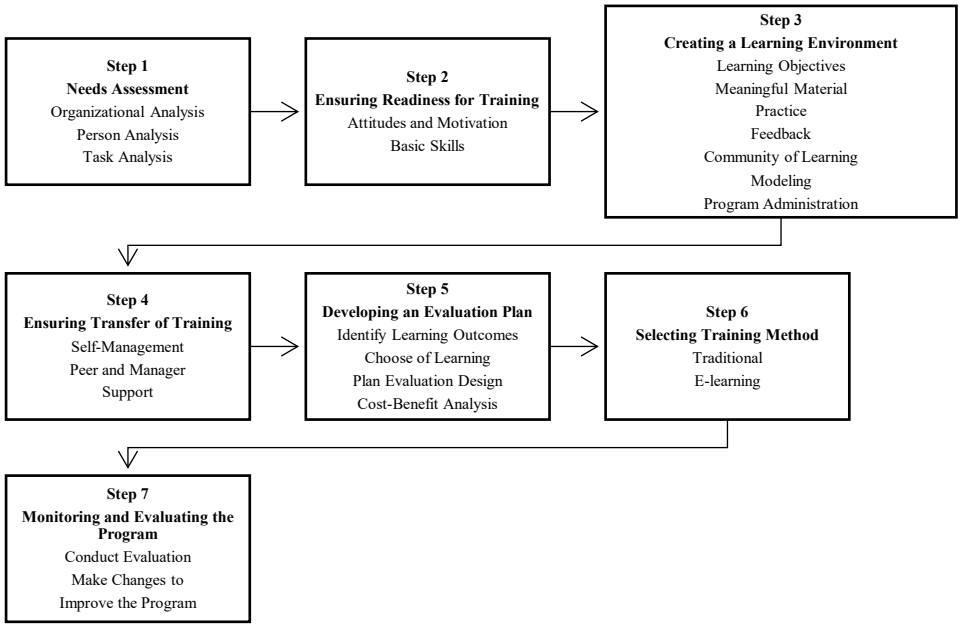
Beyond mere administrative utility, training policy serves as a pivotal mechanism for harmonizing the expectations of stakeholders, management, and the public. Smith and Jones (2021) argued that such policies must bridge the gap between instructional design and broader societal requirements. As a strategic roadmap, public policy dictates objective-setting and methodological selection, ensuring that skill development is not an isolated activity but an integrated component of the organizational mission.

Training Planning Theory

Training planning is a meticulously structured process aimed at identifying competency development needs and designing programs that enhance employee capabilities in alignment with organizational objectives. Training planning serves as an integral component of an organization's broader strategy for long-term goal attainment. Well-planned training enhances organizational capacity in terms of product development, service quality, and innovation (Noe, 2022).

Noe (2022) identified seven primary steps in the training planning process, collectively known as the Instructional System Design (ISD) model. The following sections detail these seven aspects and their accompanying dimensions based on Noe's (2022) theory:

Figure 1.
Stages of the Training Planning Process



Source: Noe (2022)

1. Needs Assessment

The initial stage of training planning involves a comprehensive needs assessment. This process is critical for determining whether training is necessary and, if so, identifying the specific type of training required. Noe (2022) stated three dimensions of needs assessment: (a) Organizational Analysis; (b) Person Analysis; and (c) Task Analysis.

2. Ensuring Readiness for Training

The subsequent stage involves ensuring that employees are prepared to bear with training. This readiness is comprised of two dimensions: (a) Attitudes and Motivation; and (b) Basic Skills (Noe, 2022).

3. Creating a Learning Environment

The learning environment must be designed to optimize the learning process. An effective learning environment is evaluated through several dimensions: (a) Learning Objectives; (b) Meaningful Material; (c) Practice; (d) Feedback; (e) Community of Learning; (f) Modeling; and (g) Program Administration (Noe, 2022).

4. Ensuring Transfer of Training

Upon completion of the training, it is vital to ensure that employees can apply the acquired knowledge and skills in the workplace. The dimensions emphasized here include: (a) Self-Management, and (b) Peer and Manager Support (Noe, 2022).

5. Developing an Evaluation Plan

This stage involves identifying the expected outcomes influenced by the training, selecting an evaluation design, and planning how to demonstrate the training's impact on the "bottom line" (profit and loss). The dimensions include: (a) Identify Learning Outcomes; (b) Choose Evaluation Design; and (c) Plan Cost-Benefit Analysis (Noe, 2022).

6. Selecting Training Methods

The selection of appropriate training methods depends heavily on the learning objectives and trainee characteristics. The dimensions include: (a) Traditional Methods, which require a facilitator and involve face-to-face interaction, such as lectures, On-the-Job Training (OJT), behavior modeling, and group building; and (b) E-learning (Technology-Based) (Noe, 2022).

7. Monitoring and Evaluating the Program

This process allows organizations to identify weaknesses in training and implement necessary improvements for future effectiveness. The emphasized dimensions are: (a) Conduct Evaluation, and (b) Make Changes (Noe, 2022).

Innovation in the Public Sector

Innovation in the public sector, particularly within the context of state apparatus capacity building, serves as a crucial instrument for responding to the ever-changing dynamics of public needs (Moore, 1995). This transformation does not merely signify the invention of novel ideas, but rather the implementation of strategies that tangibly enhance the overall efficiency and effectiveness of public service delivery (Mulgary & Albury, 2003). When contextualized within the realm of healthcare, the modernization of training methods and curricula for health professionals constitutes the foundational pillar for ensuring adaptive and sustainable service quality (Frenk et al., 2010). The process of curriculum adaptation and the design of cutting-edge clinical learning frameworks require public organizations to embrace calculated risks in order to overhaul obsolete conventional systems (Osborne & Brown, 2011).

Within the context of Indonesian public policy, bureaucratic reform through breakthroughs in training programs is an imperative measure to shift the service delivery paradigm from a rigid administrative orientation toward citizen-centric satisfaction (Dwiyanto, 2017). Consequently, the development of healthcare human resources must be anchored in the principles of good public governance, wherein training initiatives are systematically directed toward establishing technical competencies alongside the reinforcement of professional ethics (Sedarmayanti, 2016). Ultimately, cross-sectoral collaboration among educational institutions, local governments, and healthcare facilities serves as an essential prerequisite to ensure that innovations in health professional training can be institutionalized on a massive scale and generate a systemic impact (Lumbanraja, Rustiyana, Ibrahim, & Riyanto, 2025).

By building upon these theoretical perspectives, this research established a strong basis for designing an integrated training blueprint for health personnel within government agencies. The intended outcome is the development of a 'new model' framework that moves beyond traditional planning outlines. It functions as a synergistic system that aligns initial competency evaluations with dynamic learning environments and sustainable oversight protocols.

Notwithstanding the availability of diverse theoretical frameworks, a profound discrepancy persists between formal training planning policies and the operational realities at Poltekkes Bandung, which systematically fosters budgetary inefficiencies and hinders the effective transfer of knowledge. Addressing this critical phenomenon, this study posits two fundamental inquiries: first, how can the current training planning mechanism be reconstructed into a demand-driven model; and second, to what extent can the integration of interprofessional collaboration and digital governance mitigate prevailing structural bottlenecks? Through this analytical lens, the present research seeks to devise an adaptive and accountable planning model, ultimately aiming to cultivate an ecosystem for health human resources development that dismantles bureaucratic silos and aligns with the national vision for health workforce advancement.

RESEARCH METHODS

This study utilized a qualitative approach with a case study design to provide an in-depth explanation of policy phenomena and planning processes. The research was conducted at Poltekkes Bandung, chosen for its central role as a Class I health education institution in West Java. The research activities were initiated only after obtaining ethical approval under Protocol Number DP.04.03/D.XIV.6.5/274/2025, which was issued by the Research Ethics Committee of RSUP Dr. Hasan Sadikin, Bandung.

Primary data were obtained through in-depth interviews and direct observation, while secondary data included document reviews of laws, regulations, and institutional work plans. Informants were selected via purposive sampling, totaling 12 individuals, including the Director of Poltekkes Bandung, the Heads of Departments, the Head of the Competency Enhancement Unit (UPK SDM), the Chairperson of APKESI, representatives from Hasan Sadikin Hospital, and alumni. The rationale for informant selection is presented in the following table:

Table 2.
Research Informants Data

Informant	Count	Rationale
Director of Poltekkes Bandung	1 person	The primary executive and policymaker at Poltekkes Bandung.
Heads of Nursing, Midwifery, and Pharmacy Department	3 people	These three departments were selected because nursing, midwifery, and pharmacy represent the largest groups of healthcare professionals according to health data in West Java.
Head of the Health Human Resources Competency Development Unit (UPK SDM)	1 person	The executive entity responsible for the implementation and management of healthcare professional training at Poltekkes Bandung.
Chairperson of APKESI	1 person	Representing the Association of Indonesian Health Polytechnics, which serves as a forum for communication and coordination among health polytechnics nationwide.

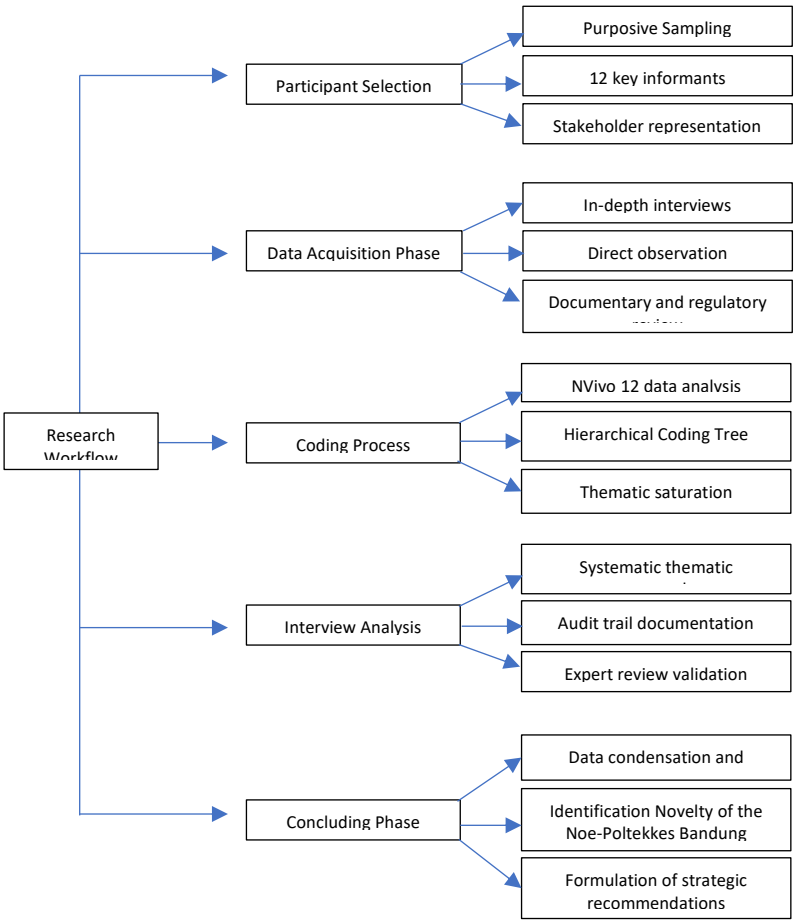
Informant	Count	Rationale
Training Division of Hasan Sadikin Hospital (RSHS) Bandung	3 people	RSHS is the largest hospital in Bandung, West Java, serving as a primary national referral hospital and a central teaching hospital.
Alumni	3 people	Graduates of the Nursing, Midwifery, and Pharmacy departments of Poltekkes Bandung who are active in professional organizations and have experience in professional healthcare training.

Source: Author's own elaboration (2025)

Data were analyzed qualitatively following the stages of collection, condensation, display, and conclusion drawing. To ensure methodological rigor, data analysis was conducted using NVivo 12 through a systematic thematic approach. The researcher developed a hierarchical Coding Tree to map both policy and operational dimensions. Thematic saturation was reached at the 12th informant, as no new significant themes emerged. The validity of the interpretation was maintained through an 'audit trail' that documented every coding decision within project memos, alongside expert review to ensure inter-coder agreement regarding the substance of the findings.

The research methodology employed in this study follows a systematic procedural flow, which is illustrated in the schematic diagram presented below:

Figure 2.
Research Procedural Framework



Source: Author Processed

RESULTS AND DISCUSSIONS

The findings suggest that the training planning at Poltekkes Bandung is heavily constrained by what could be termed "bureaucratic inertia." While the implementation of digital tools like the Ditmutu LMS is often framed as a panacea for efficiency, our analysis reveals that digital transformation in the public sector is frequently obstructed by rigid standard operating procedures (SOPs) and departmental silos. The "35% technological gap" identified in this study is not merely a technical deficit; it is an indicator of the institutional capacity trap where infrastructure investment fails to align with the dynamic needs of street-level bureaucrats in clinical settings.

The thematic analysis indicates that the term ‘training’ (pelatihan) is the most important descriptor within the interview transcripts. This keyword appears with the highest frequency relative to other terms, confirming that the informants’ primary discourse centers on the implementation of healthcare personnel training at Poltekkes Bandung.

Figure 3.
Lexical Dominance in Interview Transcripts

Source: Result analysis by Nvivo12 (2025)

Figure 3 illustrates that ‘training’ serves as the nucleus of the informants’ discussions, thereby validating the core focus of this research. The prevalence of ‘personnel’ and ‘healthcare’ identifies the primary subjects of the programs, healthcare professionals across diverse departments within Poltekkes Bandung. The term ‘needs’ signifies the vital importance of training needs assessments, which have yet to be optimized by the Health HR Development Unit (UPK SDM Kesehatan). Meanwhile, ‘evaluation’ reflects a growing concern for assessing training outcomes, although such efforts currently remain limited to measuring participant satisfaction levels. Additionally, the prominence of ‘infrastructure’ indicates that the adequacy of facilities and equipment remains a critical issue in the effective delivery of professional development fprograms.

Reconstructing Training Planning: Transitioning Toward a Demand-Driven Model

Analyses reveal that current training planning at Poltekkes Bandung remains constrained by inefficiencies stemming from a rigid supply-driven approach. This phenomenon is evidenced by bureaucratic dominance, which consistently prioritizes administrative adherence over the

immediate clinical necessities observed in the field. As highlighted by an informant from the RSHS Training Division, “the high volume of requests across various units necessitates stringent cost-benefit considerations and the establishment of priority scales”. This reality demonstrates that determining training needs is predominantly influenced by fiscal limitations and managerial preferences rather than exclusively by technical competency requirements. To successfully transition toward a demand-driven framework, the organization must harmonize its curriculum with the realities of available medical infrastructure. Research findings identify a 35% gap between theoretical instruction and equipment availability in rural health facilities, a discrepancy that frequently precipitates skill-disuse. Consequently, a robust planning model must incorporate deconstructive, task-based needs assessments, ensuring that instructional materials precisely align the functional responsibilities of health practitioners with the actual conditions of the existing clinical infrastructure.

Needs Assessment

The dimension of organizational analysis at Poltekkes Bandung serves as the fundamental cornerstone that synchronizes the institution’s strategic vision with the operational architecture of the Health HR Development Unit (UPK). This structural arrangement represents a concrete implementation of the 2020–2024 Strategic Plan, fortified by managerial legitimacy through the 2024 Director’s Decree.

The establishment of a transparent organizational structure with task-based role differentiation aims to mitigate jurisdictional overlaps and foster professional internal coordination (Armstrong, 2020). Such institutional support is further consolidated by the availability of 18 certified expert facilitators, ensuring that every competency development initiative is grounded in a robust and accountable scientific framework (Goldstein & Ford, 2002).

The dimension of personal analysis is conducted to ensure that each training intervention is characterized by precision in terms of target participants, clinical urgency, and timing. Awareness regarding the importance of this needs mapping is deeply embedded at the managerial level, as articulated by the Training Division of RSHS-1 (2025):

> *“...regarding the planning of needs assessments, it is undoubtedly essential. We must identify the specific training programs to be implemented over the coming year.”* (Training Division of RSHS-1, 2025).

This personal analysis is subsequently integrated into the 2025 Annual Performance Plan, which prioritizes human resource quality through measurable targets. Primary focus is directed toward critical technical training, such as eight sessions of BTCLS and two Clinical Instructor (CI) workshops within a single budgetary period.

The dimension of personal analysis is meticulously applied to ensure that training interventions target the appropriate health personnel at the optimal time and for pertinent reasons, thereby preventing the dissipation of public resources (Dunn, 2018). Managerial recognition of the necessity for individual needs mapping has been integrated into the 2025 Annual Performance Plan with quantifiable targets, specifically regarding BTCLS and Clinical Instructor (CI) training (Noe, 2022). This focus on strategic training reflects organizational efforts to maintain professionalism in public service delivery while adhering to professional standards mandated by health regulations (Undang-Undang Republik Indonesia Nomor 17 Tahun 2023 Tentang Kesehatan, 2023). Furthermore, the integration of digital infrastructure and platforms like Plataran Sehat facilitates information accessibility for participants, supporting the development of a health workforce that is adaptive to future epidemiological shifts (Wibowo et al., 2024).

At the task analysis level, the identification of specific knowledge and behaviors ensures that instructional materials are congruent with the functional duties of employees. Alumni experiences demonstrate that the training programs significantly support daily operational demands. Nursing Alumni (2025) further highlighted the relevance of surgical training to their placement:

> *"...I attended basic surgical nursing training because I work in the operating theater... and specialized orthopedic surgery training because I handle those cases daily."* (Alumni of Nursing Department, 2025).

> *"...training presents an ideal scenario, whereas workplace conditions do not always correspond... At that time, surgical handwashing was taught using brushes, but the hospital lacked the necessary equipment."* (Alumni of Nursing Department, 2025).

Task analysis deconstructs complex competencies into teachable elements, ensuring instructional materials, specifically APN and surgical nursing, align with the functional demands of healthcare practitioners (Hart et al., 2016; Mading & Willa, 2020). Nevertheless, systemic barriers to training transfer frequently arise from infrastructural deficits and inconsistent field operational procedures (Salas et al., 2012). To mitigate these implementation gaps, training planning must rigorously assess organizational readiness, ensuring that human capital development effectively translates into superior public service quality (Baldwin & Ford, 1988).

The application of rigorous personal and task analysis is essential to ensure that public training interventions target the correct personnel at optimal intervals, thereby preventing the dissipation of public fiscal resources. To operationalize this framework effectively, the training planning model must specify explicit short-term milestones and medium-term strategic objectives. Short-term targets focus on immediate clinical competency remediation and the systematic migration of basic instructional modules into active digital learning management environments. Conversely, medium-term targets prioritize the institutionalization of cross-sectoral collaborative networks and the establishment of continuous, data-driven digital quality assurance mechanisms across regional healthcare networks (Dunn, 2018; Gomez-Mejia et al., 2016; Lumbanraja et al., 2025; Noe, 2022).

The first novelty identified is that training needs assessment is heavily influenced by budgetary factors and organizational priority scales. Given the high volume of training requests, management must exercise rigorous selection based on direct impact on patient safety. Training Division of RSHS-2 (2025) explained:

> *"...requests from each unit are numerous... we must consider costs and establish a priority scale."* (Training Division of RSHS-2, 2025).

This dynamic indicates that effective training planning depends not only on theoretical needs but also on managerial navigation through financial constraints. Furthermore, policy trends and scientific advancements have emerged as new variables determining program relevance. Institutions must remain adaptive to strategic health issues to remain compliant with the latest regulations.

The second dimension of novelty emphasizes dissemination as a public accountability mechanism. The Chairperson of APKESI (2025) offered a critical note that the comprehensive socialization of evaluation plans still requires improvement:

> *"...Actually, it is necessary. But we have not yet socialized or implemented it effectively... it has not been fully carried out."* (Chairperson of APKESI, 2025).

The novelty of this study reveals that the efficacy of needs assessments is profoundly influenced by variables such as budgetary constraints, priority scaling, policy trends, and scientific substance (Wheelen & Hunger, 2018). Fiscal limitations necessitate that management exercises rigorous selection based on direct impacts on patient safety and healthcare quality (Rosenbloom, 2022). Furthermore, disseminating analysis through formal reports, cross-unit coordination, and digital media is critical for transparency and accountability (Dwiyanto, 2018). Adopting a hybrid communication approach ensures rapid information absorption, thereby optimizing human resource planning to be more responsive toward shifts in the strategic environment (Margetts & Dorobantu, 2019).

Ensuring Readiness for Training

Self-efficacy and internal determination among healthcare professionals at Poltekkes Bandung serve as the primary catalysts in responding to increasingly accelerated medical technology disruptions. Participant motivation has evolved beyond mere bureaucratic compliance, transforming into a proactive manifestation of maintaining contemporary service standards. As noted by the Head of Pharmacy Department (2025):

> *"...rapid technological advancements necessitate that employees continuously update their skills… healthcare personnel require training to enhance both their capabilities and, essentially, their knowledge base."* (Head of Pharmacy Department, 2025).

The relevance of educators' knowledge serves as a critical bridge for student readiness in facing the volatile dynamics of the healthcare industry. Faculty motivation to remain "attuned" to the latest trends stems from a moral responsibility to ensure that graduates possess high competitiveness in clinical settings. Head of Nursing Department (2025) emphasized that adaptation to social change is an imperative for educators:

> *"...it is indeed mandatory, as the world of service is changing. Societal demands are evolving. Meanwhile, as educators, we must prepare students to navigate these changes."* (Head of Nursing Department, 2025).

Employee preparation for training at Poltekkes Bandung centers on the reinforcement of intrinsic motivation, which is closely aligned with the professional standards required in the healthcare sector. The proactive disposition of healthcare personnel is driven by a profound desire to update competencies, ensuring they remain relevant amidst technological innovations and the shifting dynamics of public service delivery (Osborne & Brown, 2011). This motivation transcends mere bureaucratic compliance; it represents a strategic investment aimed at maintaining the excellence of both educational and service quality (Dwiyanto, 2018).

Conversely, the mastery of basic skills is viewed as a technical foundation that ensures participants possess the intellectual and practical capacity required before entering more complex training modules. Readiness is governed through rigorous curation of educational backgrounds, work experience, and the verification of active legal credentials, such as the Registration Certificate (STR). Head of Pharmacy Department (2025) characterized this as a guarantee of participant quality:

> *"...certain training programs necessitate fundamental requirements such as an active STR, minimum experience, or prior basic training. This is essential to ensure participant readiness."* (Head of Pharmacy Department, 2025).

However, operational realities demonstrate that efforts to strengthen basic capabilities often clash with institutional fiscal constraints. Although competency standards are maintained

normatively, budgetary impediments force healthcare professionals to improvise through self-funding initiatives to achieve desired qualifications. Head of Midwifery Department (2025) highlighted this budgetary dilemma:

> *"In reality, it is insufficient. Not enough... if a specific training is deemed necessary... we usually inform the faculty… this might involve cost-sharing among fellow lecturers."* (Head of Midwifery Department, 2025).

The mastery of basic skills serves as an absolute prerequisite, encompassing technical qualifications, administrative compliance, and psychological readiness through foundational training. The establishment of standards, such as possessing an active Registration Certificate (STR) and relevant professional experience, ensures that organizational investments in training programs yield maximal returns (Hood, 1991). Furthermore, strengthening these foundations through Training of Trainers (ToT) initiatives serves as a strategic mechanism to generate multiplicative competency effects within the institution's internal environment (Putra & Rahmat, 2020). Institutional support, specifically regarding budgetary certainty and resource provisioning, remains a determining factor for the sustained and equitable improvement of employee performance (Salas et al., 2012).

The findings of this research identify a novelty in the mapping of training types, which have become more specific and clustered based on clinical expertise groups, ranging from critical care nursing to pharmaceutical management. This diversification signifies a paradigm shift from generalized training toward deep specialization to address increasingly complex medical service needs. Training Division of RSHS-2 (2025) detailed these clusters:

> *"...for nursing, there is basic pediatric cancer training... and national-level hemodialysis... For midwifery, there are NICU and PONETUS training. Meanwhile, for pharmacy, there is aseptic dispensing training."* (Training Division of RSHS-2, 2025).

Innovation is also observed in instructional delivery methods, which now integrate clinical practice simulations with hybrid online learning to broaden competency reach. This interprofessional approach enables healthcare personnel from diverse backgrounds to collaborate within a unified learning scheme. Head of Pharmacy Department (2025) explained this methodological diversity:

> *"...clinical training focuses on practical skills... medical procedures, equipment usage. Then there are theoretical sessions... simulation-based training... and online modules."* (Head of Pharmacy Department, 2025).

The novelty of this research reveals that training types within health education institutions are highly diverse and categorized into specific professional clusters: pharmacy, midwifery, and nursing. Each cluster possesses distinct competency requirements, ranging from high-level clinical skills and technical simulation capabilities to interpersonal skills (Stonier & Jones, 2025). Planning based on these specializations is critical for guaranteeing patient safety and fulfilling national work qualification standards, Sasmita dan Rahmawati (2020). National Institute of Public Administration (LAN) 2018 stated that the integration of classical and non-classical instructional methods allows participants to absorb material effectively, tailored to their individual learning styles and functional job demands (Peraturan Lembaga Administrasi Negara Nomor 5 Tahun 2018, 2018).

The subsequent novelty lies in the information dissemination mechanisms, which now rely heavily on professional organization networks and specialized alumni associations. These channels are considered more effective and rapid than formal bureaucratic pathways because

they directly engage the relevant practitioner communities. Head of Nursing Department (2025) explained the strategic role of these professional bodies:

> *"...nursing activities have association ties according to expertise groups... they routinely organize training... we invariably obtain information from these professional organization clusters."* (Head of Nursing Department, 2025).

Finally, the digitization of information through platforms such as Srikandi and the Ministry of Health's Plataran Sehat LMS serves as a pillar of novelty in organizing HR development data. This system facilitates real-time transparency and integration of training data between central and regional agencies, although its effectiveness remains contingent upon individual proactiveness in accessing the system. Head of Pharmacy Department (2025) described this shift in information channels:

> *"...occasionally, announcements are internal... I send them via private messages... or internal social media like WhatsApp."* (Head of Pharmacy Department, 2025).

The adoption of digital media, such as leadership WhatsApp groups, demonstrates that the speed of information has become a top priority in accelerating the competency enhancement of healthcare personnel.

The dimension of training information serves as a pivotal channel that determines equitable access to self-development for all employees at Poltekkes Bandung. Information distribution is executed through a blended mechanism, utilizing formal internal media and central agency invitations, alongside dynamic channels such as electronic media and instant messaging applications (Varnelis, 2012). Although digital platforms like *WhatsApp* accelerate the dissemination of updates, challenges regarding documentation and standardized access remain a primary concern for the organization (Mefolere, 2016).

Creating an Effective Learning Environment

The establishment of a learning environment at Poltekkes Bandung transcends mere administrative compliance; it represents a strategic endeavor to align healthcare competencies with the rigorous demands of public service. This focus originates with the formulation of standardized learning objectives, where the integration of curriculum and temporal duration serves as the cornerstone of instructional success. This is corroborated by the Head of UPK SDM (2025), who stated:

> *"...to prepare the training personnel, the UPK must first establish a standardization structure for these trainers... Subsequently, we socialize this to the curriculum department responsible for planning the activities..."* (Head of UPK SDM, 2025).

Instructional efficacy is further bolstered by the synthesis of meaningful materials that remain pertinent to field requirements. Curricula are specifically tailored to ensure each module carries practical scientific weight applicable to respective professions. In this regard, the Head of the Midwifery Department (2025) emphasized the necessity of such relevance:

> *"...training must inherently relate to the (healthcare personnel's) competencies… for instance, pregnancy-related training encompasses integrated ANC, normal delivery care, and breastfeeding counseling..."* (Head of the Midwifery Department, 2025).

Under this paradigm, instructional materials are transformed from abstract theories into direct instruments for elevating healthcare service quality.

The dimension of practice serves as a critical bridge, converting theoretical knowledge into tangible clinical skills through experiential learning methodologies. The utilization of simulations within controlled environments ensures that participants can refine their proficiency without compromising patient safety. As elucidated by the Head of Pharmacy Department (2025):

> *"...simulation training involves practicing clinical skills in a safe, controlled environment... such as the correct procedure for handling laboratory specimens..."* (Head of Pharmacy Department, 2025).

These practical sessions dominate the curricular structure to guarantee the operational readiness of healthcare personnel when facing authentic emergency scenarios in the field.

Feedback mechanisms are managed as continuous quality control protocols to evaluate the impact of training within the workplace. Poltekkes Bandung implements a rigorous monitoring cycle, ranging from instructional progress to post-training evaluations, to ensure the effective implementation of acquired knowledge. Head of Pharmacy Department (2025) emphasized:

> *"...if a faculty member completes a training, I evaluate and subsequently monitor the outcomes… there must be tangible implementation..."* (Head of Pharmacy Department, 2025).

Nevertheless, structural impediments, such as disparate Standard Operating Procedures (SOPs) across work units, occasionally hinder the alignment of idealized training conditions with the logistical realities of available infrastructure.

The existence of a "learning community" acts as a catalyst for knowledge dissemination through professional networks and inter-institutional collaboration. Through professional organizations and benchmarking practices, healthcare personnel can mutually adopt innovations and best practices to strengthen institutional capacity. Chairperson of APKESI (2025) from APKESI highlighted the importance of this synergy:

> *"...we frequently conduct benchmarks with other Poltekkes… sharing insights; meaning, if we haven't developed a certain program but another institution has, we adopt it..."* (Chairperson of APKESI, 2025).

Finally, the integration of exemplary learner figures and systematic program governance is key to sustaining participant motivation. Standard-qualified faculty are positioned as role models capable of bridging academic curricula with evolving industry needs. Head of Nursing Department (2025) asserted:

> *"Faculty must adapt to external changes in service delivery so that the education provided here matches the requirements of the field."* (Head of Nursing Department, 2025).

Robust administrative support, encompassing legal assignment letters and teaching schedule adjustments, ensures that the healthcare HR development process remains professional and accredited according to national standards.

Training materials are systematically structured based on competency profiles within specialized fields, such as midwifery and pharmacy, allowing for immediate application in both clinical and academic practices. An experiential learning approach, utilizing simulations in controlled environments and field-based practice, serves as the primary strategy for building participants' confidence and decision-making capabilities (Davies et al., 2023; WHO, 2020). This pedagogical process is reinforced by a continuous feedback mechanism that monitors the implementation of training outcomes within respective work units (Davies et al., 2023; Kementerian Kesehatan

RI, 2024; Muller et al., 2019). Through a responsive evaluation system, the organization ensures that knowledge transfer occurs optimally and has a direct impact on the quality of public services (Ambu-Saidi et al., 2024; Kementerian Kesehatan RI, 2024; Noe, 2022).

This study identifies a novelty regarding facilitator competency as a determining factor in the quality of knowledge transfer. Rather than relying solely on trainer availability, Poltekkes Bandung has begun emphasizing a standardized structure of educational backgrounds and rigorous certifications for both internal and external instructors. Head of UPK SDM (2025) explained this strategy:

> *"...we align with the planned training curriculum by evaluating the educational background standards and trainer certifications required by said curriculum..."* (Head of UPK SDM, 2025).

The novelty of this research identifies that the effectiveness of the learning environment is heavily contingent upon facilitator competencies that meet both pedagogical standards and profound scientific substance. The quality of instructors is determined not only by their educational background but also by professional certification and the alignment of the trainer's profile with the prevailing curriculum (Peraturan Lembaga Administrasi Negara Nomor 5 Tahun 2018, 2018). The role of senior faculty as adaptive role models in the face of medical technology advancements significantly enhances participant learning motivation (Regmi & Jones, 2020). Consequently, the standardization of internal facilitator selection and collaboration with external experts is an absolute prerequisite for maintaining accountable knowledge transfer quality (Sunnemark et al., 2024).

The second dimension of novelty lies in the infrastructure management strategy through external partnership synergies. Amidst internal limitations regarding practice tools and space, tactical steps are taken through Memoranda of Understanding (MoUs) with professional organizations to meet curriculum-mandated facility standards. Head of UPK SDM (2025) reveals:

> *"...we seek assistance from partners, such as the HIPGABI professional organization... through MoU-based cooperation..."* (Head of UPK SDM, 2025).

The final novelty concerns temporal flexibility, which seeks to harmonize Lesson Hour (JPL) standards with the actual workload of healthcare personnel. Time management is handled situationally, where extended durations are often granted if competency targets remain unmet, even if it requires compensating daily operational schedules. Head of UPK SDM (2025) highlighted this complexity:

> *"...trainings are conducted on Saturdays and Sundays for two-day programs. This is because many participants have primary work obligations during the weekdays."* (Head of UPK SDM, 2025).

This scheduling adaptation proves that the success of HR development policies depends significantly on the balance between academic rigor and institutional empathy toward the dynamics of healthcare facility services.

Infrastructure aspects and scheduling flexibility emerge as critical dimensions supporting the learning ecosystem within government institutions. Physical facility limitations are addressed through internal campus optimization strategies and strategic partnerships with professional organizations via Memoranda of Understanding (MoU) mechanisms (Davies et al., 2023; Sunnemark et al., 2024). Furthermore, adaptive scheduling tailored to the actual workload of active healthcare personnel ensures maximal participation without disrupting the stability of

routine workplace services (Peraturan Menteri Ketenagakerjaan (Permenaker) Nomor 6 Tahun 2025, 2025; Regmi & Jones, 2020). The synchronization of adequate simulation equipment availability with efficient time allocation ensures that every training program operates according to accreditation standards and achieves the expected competency targets (Kementerian Kesehatan RI, 2024; Peraturan Menteri Ketenagakerjaan (Permenaker) Nomor 6 Tahun 2025, 2025; Sunnemark et al., 2024).

Ensuring Transfer of Training

The efficacy of knowledge transfer at Poltekkes Bandung hinges significantly on the self-management capacity of alumni in internalizing training outcomes into concrete field actions. Individual resilience emerges as a pivotal factor when healthcare personnel must adapt to infrastructural limitations through proactive self-regulation. This is exemplified by the initiative of Pharmacy Alumni (2025), who independently renovated the drug planning system to enhance efficiency:

> *"...implementing what was conveyed during the training, where [pharmaceutical] planning must not be arbitrary... to avoid surpluses, expired medications, or unused stock."* (Alumni of Pharmacy Department, 2025).

Training transfer at Poltekkes Bandung hinges on individual self-management to internalize and apply competencies. Healthcare personnel exhibit robust self-regulatory initiatives, from data-driven pharmaceutical planning to navigating infrastructural limitations (Noe, 2022). Personal commitment to On-the-Job Training (OJT) ensures benefits permeate the entire team (Davies et al., 2023; Rudy, 2025). Thus, aligning internal motivation with formal procedures serves as the foundation for sustainable knowledge transfer success (Alqatan et al., 2025).

Beyond personal factors, support from peers and managers functions as a social catalyst that accelerates the adoption of contemporary service standards through "professional dialectics". Midwifery Alumni (2025) underscored the dominance of this leadership role:

> *"...the most influential factor is superior support... If superiors provide support and instructions to subordinates, the program will inevitably succeed… furthermore, peer support is equally vital."* (Alumni of Midwifery Department, 2025).

Systemic organizational support, manifested through both formal regulations and digital technology integration, serves as the primary foundation for sustainable knowledge transfer. The utilization of digital platforms like E-Pus facilitates post-training data synchronization, while SOP adjustments ensure that clinical practices remain evidence-based and prioritize patient safety. Nursing Alumni (2025) highlighted the necessity of scientific validity in this process:

> *"...all external innovations must be aligned with hospital SOPs... There must be a preliminary study, SOP adjustments, and then submission for approval… Whatever is brought from training must be clinically tested."* (Alumni of Nursing Department, 2025).

Nevertheless, the effectiveness of this support often contends with the reality of volatile institutional budgets, necessitating a sharper focus on priorities in operational resource provisioning.

Social support from colleagues and managers functions as a strategic catalyst, providing operational legitimacy for the application of new skills. The leadership role is not confined to granting administrative permission; it encompasses logistical facilitation and the issuance of local policies, such as Director's Decrees (SK) for new clinical procedures (Alqatan et al., 2025; Northouse, 2025). Peer collaboration through Case Reflection Discussion (DRK) forums

accelerates the internalization of competencies through supportive collaborative practice (Regmi & Jones, 2020; Rudy, 2025). This conducive work environment ensures that innovations derived from training are integrated into standard operating procedures harmoniously and accountably (Noe, 2022).

This study identifies a novelty in the factors determining transfer success that transcends social support: namely, the existence of a funding mechanism based on the Public Service Agency (BLU) framework and compliance with government regulations. Formal authorization and guaranteed budgets for employee development act as stimulants for healthcare personnel to practice technical skills without personal financial burdens. Director of Poltekkes Bandung (2025) elucidates this institutional policy:

> *"...we have funding for employee development. Thus, competency enhancement for healthcare workers, particularly those at Poltekkes, can be institutionally funded."*

Novelty regarding implementation obstacles reveals structural bureaucratic impediments and societal resistance often omitted in conventional theory. Rigid budgetary procedures and lengthy approvals frequently dissipate training momentum, while community dynamics further challenge healthcare innovations. Midwifery Alumni (2025) illustrated these constraints:

> *"...using single-use BMAP must be proposed first, seeking superior approval while considering the budget... many community members reject family planning programs despite maximum education due to educational, cultural, or economic factors."*

The novelty of this research identifies that transfer success is profoundly determined by the synchronization between training materials, Standard Operating Procedures (SOPs), and the availability of Government Asset Goods (BMAP). Adequate pharmaceutical stocks and a responsive procurement system are technical prerequisites for healthcare personnel to practice clinical skills in a tangible manner (Hafner et al., 2017). Organizations providing digital infrastructure, such as the E-Pus system, prove more effective in supporting post-training data-driven decision-making (Hafner et al., 2017; Zulkarnaen et al., 2024). Adherence to government regulations and scientific validation through journal references ensures that practices resulting from training consistently prioritize patient safety and service quality (Uddin & Munni, 2021).

Logistics inconsistencies and shifting procurement policies frequently force improvisations, causing discrepancies between training standards and operational realities. Pharmacy Alumni (2025) described this distributional dilemma:

> *"We requested 10,000, but only received 8,000... A patient's medication regimen that should have lasted 10 days was reduced to only five.*" (Alumni of Pharmacy Department, 2025).

This phenomenon indicates that the effectiveness of knowledge transfer does not stand alone. Rather, it is heavily dependent on supply chain stability and policy synchronization between service facilities and regional regulators.

Despite significant potential for success, implementation obstacles such as bureaucratic hurdles, logistical constraints, and community resistance remain tangible challenges. Protracted budgetary approval procedures frequently cause a time lag in applying training outcomes, thereby hindering service efficiency (Hafner et al., 2017; Regmi & Jones, 2020; Sunnemark et al., 2024).

Integrating Interprofessional Collaboration and Governance Digitalization

The inquiry regarding the extent to which Interprofessional Collaboration (IPC) and digitalization can resolve structural obstacles is addressed through the urgent necessity for a non-sectoral work culture. Thematic analysis identifies bureaucratic silos between departments as the primary barrier to effective training transfer. The implementation of an inclusive, IPC-based curriculum has proven effective in dismantling these divisions, as evidenced by the assertion that "nursing activities have association ties according to expertise groups... we invariably obtain information from these professional organization clusters". Furthermore, digitalization via the "Plataran Sehat" platform emerges as a decisive solution to the challenges of digital monitoring. Field data suggests that this platform functions as a catalyst for information transparency between central and regional agencies; however, its overall effectiveness remains contingent upon individual proactivity. As noted by an informant from the Pharmacy Department, "the adoption of digital media, such as leadership WhatsApp groups, demonstrates that information velocity has become a primary priority". Consequently, digitalization transcends mere administrative utility, evolving into a sophisticated instrument for integrating real-time training data to facilitate evidence-based decision-making.

Developing an Evaluation Plan

The development of an evaluation plan encompasses several interconnected dimensions, ranging from the evaluative perspectives utilized and their underlying rationales to the specific developmental aspects requiring enhancement. Evaluations also extend to training achievements and post-instructional impacts. The Head of UPK SDM (2025) highlighted that the evaluation plan is executed in a multi-staged manner, from preparation to post-training, to provide a comprehensive overview of program success:

> *"…our evaluation plan is divided into three stages: preparation, implementation, and post-training. This strategy is employed to ensure a more holistic evaluation…"*

The development of an evaluation plan at Poltekkes Bandung adopts a systematic approach encompassing a comprehensive identification of outcomes, ranging from instructor quality to the effectiveness of financial allocation. This evaluation is executed across three pivotal stages, preparation, process, and post-training, to ensure that every program maintains instructional alignment with predefined objectives (Noe, 2022). The evaluative focus extends beyond the academic achievements of participants, validating the relevance of materials against the demands of clinical practice in the field (Muller et al., 2019).

The second dimension, Learning options, encompasses blended models, direct instruction, and strategic partnerships. The Head of UPK SDM (2025) highlighted MoUs with professional organizations like HIPGABI to bolster infrastructure and trainer specialization. The Head of UPK SDM stated:

> *"…we collaborate with professional organizations like HIPGABI through MoUs, ensuring that facilities and training support each other mutually…"* (Head of UPK SDM, 2025).

The third dimension, evaluation design, encompasses the guidelines, strategies, stages, and quality control mechanisms within the training assessment. The Head of UPK SDM (2025) explained that evaluations are conducted with reference to the National Institute of Public Administration (LAN) guidelines as the standard for evaluating training programs within the government sector:

> *"…our foundation rests on LAN guidelines to assess monitoring and evaluation activities, including the three aforementioned stages: preparation, execution, and post-training…"* (Head of UPK SDM, 2025).

Strategic flexibility in instructional methods, notably blended learning, optimizes participant engagement and knowledge transfer. Leveraging official curricula alongside strategic MoUs with professional organizations ensures access to specialized facilities and competent personnel (Davies et al., 2023; Sunnemark et al., 2024). These instructional choices are tailored to the specific competency profiles of participants, ensuring that every healthcare professional receives material applicable to their respective professional domain (Noe, 2022; Regmi & Jones, 2020). Adhering to National Institute of Public Administration standards, graduation is predicated on objective academic performance and qualitative behavioral validation, ensuring high-caliber public service delivery (Peraturan Lembaga Administrasi Negara Republik Indonesia Nomor 10 Tahun 2021, 2021).

The fourth dimension, cost-benefit analysis, focuses on regulatory compliance, audit implementation, fiscal efficiency, and the management of training finance. The Director of Poltekkes Bandung (2025) stated that every training session must adhere to principles of financial accountability:

> *"…the funding component must be evaluated because it relates to auditing; as a government entity, we must conform to the prevailing rules…"* (Director of Poltekkes Bandung, 2025).

Cost-benefit analysis constitutes a crucial element in ensuring that every investment in human resource development provides optimal value for the organization without neglecting the principles of state financial governance. Implementation of rigorous auditing mechanisms and adherence to government regulations to ensure transparency in the management of training budgets (Devine & Ash, 2022; Noe, 2022).

The first novelty is a tripartite evaluative framework covering preparation, implementation, and outcomes, focusing on trainer competency and infrastructural readiness (Head of UPK SDM, 2025). The second dimension emphasizes socializing evaluation plans to ensure stakeholder alignment with institutional objectives and success indicators, as highlighted by the Head of UPK SDM (2025):

> *"…we conduct training evaluation and development through the Ditmutu LMS application, coordination meetings, and virtual meetings. This multiplicity of channels ensures inclusive participation…"* (Head of UPK SDM, 2025).

The third novelty relates to the engagement of external stakeholders in training development. Head of Midwifery Department (2025) stated:

> "*External parties, such as hospitals, community health centers (Puskesmas), and professional organizations, are involved in curriculum design and competency needs reviews."* (Head of Midwifery Department, 2025).

This research highlights digital integration, notably the Ditmutu Learning Management System (LMS), in fostering transparent evaluation socialization. The evaluative paradigm has shifted toward outcome-based performance metrics over mere participant satisfaction (Merry et al., 2023; Shahiduzzaman, 2025). The use of platforms powered by artificial intelligence and sentiment analysis allows the institution to detect implementation barriers in work units at an early stage and execute rapid policy corrections (Wirtz & Müller, 2019). Through a Triple Helix

collaboration involving the government, academia, and practitioners, evaluation plans are formulated more contextually to address the challenges of a dynamic professional landscape (Kementerian Kesehatan RI, 2024).

Selecting Training Methods

The selection of instructional methods is governed by several determining factors, including the prevailing curriculum, the engagement of external partners, the efficiency of available infrastructure, and budgetary availability. Beyond these, pedagogical suitability remains a primary determinant of effectiveness. Certain programs necessitate traditional face-to-face instruction, particularly for clinical competencies and "soft skills" mandated by the standardized health training curriculum. Director of Poltekkes Bandung (2025) stated:

> *"…as previously implemented, if the training pertains to specific healthcare competencies, it must be conducted through face-to-face interaction..."* (Director of Poltekkes Bandung, 2025).

The selection of training methods at Poltekkes Bandung combines traditional and digital-based approaches to ensure the comprehensive attainment of healthcare competencies. Offline methods are maintained as the primary instrument for developing clinical and psychomotor skills that necessitate direct observation by instructors (Noe, 2022). Face-to-face interaction is considered more effective in providing immediate feedback and mitigating the risk of miscommunication during the mastery of complex medical procedures (Yusuf & Handayani, 2020). Consequently, the implementation of these traditional methods remains a pedagogical mandate within the curriculum that cannot be entirely replaced by technology to preserve the quality of professional standards (Johns, 2025; Shorey & Debby Ng, 2021).

E-learning has emerged as a viable instructional alternative based on the first dimension of novelty identified in this study, which is contingent upon curricular requirements, resource availability, or mutual agreements during program execution. The Head of UPK SDM (2025) interviews further support this shift:

> *"…after reviewing the methods outlined in the training curriculum, it appears that several programs can be implemented through online, offline, or blended models… The choice of method typically follows these options…"* (Head of UPK SDM, 2025).

The implementation of e-learning and blended learning has become an integral component of the human resource development system, providing temporal flexibility for participants with high workloads. The consistent utilization of Learning Management Systems (LMS) facilitates broader access to materials and enhances operational cost efficiency on a large scale (Noe, 2022). Integrating these technologies has proven to increase participant knowledge retention through the use of interactive modules and digital simulations accessible independently (Mayer, 2014; Shorey & Debby Ng, 2021).

Critically, the selection of training methods is not a subjective process; it must strictly adhere to the curricular guidelines accredited by the Ministry of Health. The Head of UPK SDM (2025) emphasized this regulatory mandate:

> *"…the training method certainly cannot ignore the specific curriculum... if the curriculum mandates an offline [in-person] format, then we must comply; there is no other option. If it permits an online format, then we proceed accordingly..."* (Head of UPK SDM, 2025).

The second prominent dimension of novelty concerns the impediments to establishing training methods. These constraints are perceived to significantly impact the effectiveness of training implementation and the subsequent attainment of predetermined learning objectives.

The novelty of this research emphasizes that the strategy for method selection must be predicated on an in-depth analysis of participant profiles and alignment with curricula accredited by the Ministry of Health. Managerial decisions in determining training formats have begun to adopt artificial intelligence support to personalize learning styles based on employees' psychometric data (Wirtz & Müller, 2019). The use of evidence-based decision-making ensures that the selection of simulation or case-study methods is supported by robust logical considerations regarding targeted competency achievements (Dunleavy et al., 2006). Aligning instructional strategies with the Accreditation Standards for Health Sector Training serves as a crucial bridge in realizing institutional transparency and accountability (Direktorat Jenderal Tenaga Kesehatan, 2022).

Synthesis of the Integrated Training Planning Model

The integration of demand-driven requirements, IPC, and digitalization yields an integrated seven-step model that mitigates bureaucratic inefficiencies. This model repositions evaluation not as a terminal assessment, but as a continuous cycle of iterative improvement. Research findings underscore that, "evaluation does not merely assess success, but must serve as the basis for future program design improvements". By involving external stakeholders, such as hospitals and professional organizations, in curriculum design, Poltekkes Bandung successfully shifts the paradigm from ceremonial training toward programs that yield tangible impacts on patient safety and public service effectiveness. This underscores the consensus that superior planning is the primary determinant of organizational performance in realizing the Golden Indonesia 2045 vision.

Monitoring and Evaluating the Program

At Poltekkes Bandung, training evaluation is conducted systematically across various units, spanning from the planning phase to post-implementation. The Director of Poltekkes Bandung underscores the necessity of a comprehensive assessment of all training components to ensure professional and administrative accountability. The Director of Poltekkes Bandung (2025) stated:

> *"…[evaluating] from the human resource perspective, the quantity and quality of the training, the administrative execution, and the funding models. The budgetary component is essential as it pertains to auditing, given our status as a government institution. Therefore, it must comply with the established regulatory framework…"* (Director of Poltekkes Bandung, 2025).

> *"…evaluation is not merely about judging success or failure; it must serve as the basis for refining future program designs. If a method proves unsuitable or participants find it ineffective, we must adapt our approach…"* (Director of Poltekkes Bandung, 2025).

The results of these evaluations are subsequently addressed through a continuous improvement mechanism to refine the design of training programs for subsequent cycles. Comprehensive adjustments are made, encompassing updates to material substance, recalibration of instructional methods, and enhancement of instructor quality based on stakeholder feedback (Noe, 2022). This focus on continuous improvement is vital to ensure that every training initiative remains adaptive to medical technology advancements and the latest health regulations (Alqatan et al., 2025; Uddin & Munni, 2021). Consequently, evidence-based program

revisions are capable of enhancing the effectiveness of knowledge transfer and delivering a positive impact on public service performance (Mutaqin, 2022; Noe, 2022).

The dimension of novelty identified in the evaluation and revision of training programs is the involvement of external stakeholders. This collaborative oversight provides objective feedback that transcends the internal limitations of the UPK. The Head of UPK SDM (2025) noted the importance of this transparency:

> "*…we require this evaluation to be accompanied by parties outside the UPK. Even though they are within the Poltekkes Bandung network, their input is vital for our improvement. It is immediately socialized to both internal parties and external partners."* (Head of UPK SDM, 2025).

Furthermore, while external expertise is utilized, there is an increasing emphasis on the autonomy of the organizing committees to ensure that internal management remains robust and compliant with the operational guidelines of the Ministry of Health.

The novelty of this research reveals the critical importance of third-party involvement, such as internal quality audits and external partners, in maintaining evaluative objectivity and the transparency of training outcomes. Engaging quality assurance units provides a crucial independent perspective for identifying program gaps that might be overlooked by internal organizers (Mutaqin, 2022; Noe, 2022). The dissemination of monitoring results is conducted openly through final evaluation meetings to build a collective understanding among units regarding the trajectory of competency development (Merry et al., 2023). This scheduled communication mechanism ensures that strategic recommendations can be immediately integrated into institutional operational policies in an accountable manner (Noe, 2022; Rupčić, 2022).

Evaluation findings are disseminated to internal stakeholders, specifically the UPK SDM Kesehatan, to ensure institutional standard compliance, yet systemic impediments like low response rates and excessive LMS dependency persist. Consequently, delayed assessments for certain programs create critical data voids, hindering the evidence-based optimization required for quality refinement.

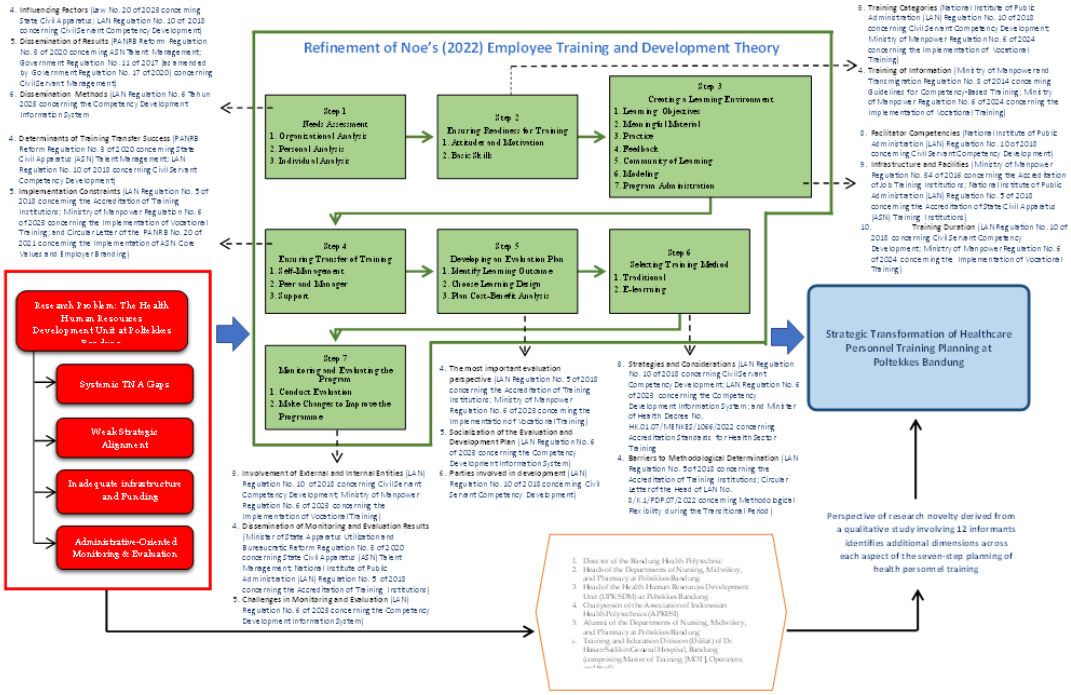
Amidst rapid societal acceleration and profound informational disruption, the capacity-building paradigm for healthcare personnel imperatively demands digital technology integration to protect public service institutions from qualitative stagnation (Margetts & Dorobantu, 2019; Wibowo et al., 2024). The systematic deployment of electronic learning platforms has proven highly effective in dismantling geographical barriers, concurrently securing critical temporal flexibility for medical practitioners who consistently navigate rigorous clinical routines and stringent deadlines (Noe, 2022; Shorey & Debby Ng, 2021). Ultimately, the administrative transition from classical instructional models toward a technology-driven training ecosystem transcends mere institutional adaptation; it has fundamentally evolved into an indispensable policy instrument for cultivating highly capable human capital aimed at elevating overarching public health outcomes (Lumbanraja et al., 2025; Wirtz & Müller, 2019).

Research Conclusion Framework: The Noe-Poltekkes Bandung Model

Based on the research findings above, where data was collected through interviews with 12 informants, this study establishes a specific novelty. This novelty refers to the fact that, beyond the seven-step training planning framework proposed by Noe (2022), this research identifies additional dimensions within each aspect of that theory. These findings provide a theoretical contribution regarding the formulation of training planning that is effective within the context

of healthcare professional training. The proposed novelty scheme for the healthcare training planning model resulting from this research is depicted in the figure below:

Figure 4.
Strategic Transformation Framework for Health Personnel Training Planning at Poltekkes Bandung, adapted from Noe's (2022) Instructional System Design (ISD) Theory



Source: Author Processed

Notwithstanding the proposed model, this study acknowledges inherent methodological limitations as a hallmark of scientific integrity. First, the single-case study design utilizing 12 key informants at Poltekkes Bandung limits the generalizability of findings to the broader, more diverse health education ecosystem in Indonesia. Second, the researcher's embedded position within the organization inherently carries a risk of institutional bias, which may influence subjective interpretations of the observed bureaucratic dynamics. Recognizing these constraints clarifies the operational boundaries of our findings and confirms that the resulting model is a contextual representation rather than a universal blueprint for all public institutions.

Theoretically, this research uniquely contributes by describing the mechanisms of bureaucratic "resistance" to digital transformation, while mapping how the integration of Interprofessional Collaboration (IPC) can shift administrative orientation toward the substance of clinical services. As suggested by Creswell and Creswell (2021), the significance of this study lies not in the discovery of absolute truth, but in expanding the public administration discipline's understanding of the necessity for demand-driven training management amidst technological disruption. Future research in public administration is now well-positioned to pursue empirical validation through large-scale quantitative or longitudinal designs to assess the robustness of this model in reducing health personnel competency gaps across more complex regional contexts.

Although Noe's (2022) instructional design model provides a fundamental structure, its linear approach frequently fails to respond to bureaucratic inertia and the complexity of modern public sector technological disruption; consequently, this research employs a reflective critique to

dissect the gap between supply-driven policies and operational field realities. Incorporating recent findings, contemporary health training effectiveness necessitates digital maturity, governance flexibility, and diverse pedagogical approaches aligned with structured evaluations to address health workforce shortages (Giovanelli et al., 2024; Shahiduzzaman, 2025). By reconstructing a model that integrates IPC and digitalization, this research offers a decisive solution to dismantle sectoral silos, ensure supportive managerial backing, and guarantee successful knowledge transfer through governance that is responsive to genuine clinical needs (Alqatan et al., 2025; Lumbanraja et al., 2025; Wibowo et al., 2024).

CONCLUSION

This study concludes that transforming health human resource competency at Poltekkes Bandung necessitates a paradigm shift from rigid supply-driven models to an adaptive, demand-driven framework. Theoretically, this research contributes the 'Noe-Poltekkes Bandung Model,' which reconstructs the seven-step instructional design by integrating Interprofessional Collaboration (IPC) and digitalization to address knowledge transfer failures (skill-disuse). While this model provides a solid conceptual framework, its universal validity remains constrained by the qualitative nature of the study, which relied on 12 key informants, and the potential for institutional bias. Consequently, this model serves as a strategic reference requiring further empirical validation within more heterogeneous health education ecosystems through quantitative or mixed-methods approaches.

For government agencies and policymakers, this research recommends the following concrete measures: 1) Curriculum Restructuring: Periodically synchronize training curricula with regional medical infrastructure realities to eliminate the 35% technological gap hindering field effectiveness. 2) Strengthening Digital Governance: Optimize the “Plataran Sehat” platform as an integrated digital monitoring instrument to ensure data transparency and competency development accountability. 3) Institutional Empowerment: Promote fiscal autonomy through Public Service Agency (BLU) governance to provide budgetary flexibility in supporting training activities responsive to clinical needs. 4) Cross-Sectoral Synergy: Strengthen Triple Helix collaboration and strategic partnerships with professional organizations to dismantle bureaucratic silos and create a sustainable human resource development ecosystem.

REFERENCES

Alharbi, K. M. S., & Aloyuni, S. A. S. (2023). The importance of training and development of employees in improving the quality of health services. *International Journal of Health Sciences*, *7*(S1), 2190–2201. https://doi.org/10.53730/ijhs.v7ns1.14473

Alqatan, A., Simmou, W., Shehadeh, M., AlReshaid, F., Elmarzouky, M., & Shohaieb, D. (2025). Strategic pathways to corporate sustainability: The roles of transformational leadership, knowledge sharing, and innovation. *Sustainability*, *17*(12), 5547. https://doi.org/10.3390/su17125547

Ambu-Saidi, B., Fung, C.Y., Turner, K., & Lim, A.S.S. (2024). A Critical Review on Training Evaluation Models: A Search for Future Agenda. *Journal of Cognitive Sciences and Human Development*, *10*(1), 142–170. https://doi.org/10.33736/jcshd.6336.2024

Armstrong, M. (2020). *Armstrong’s Handbook of Human Resource Management Practice* (15th ed.). Kogan Page Publisher. https://doi.org/https://doi.org/10.4324/9780749469641

Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. *Personnel Psychology*, *41*(1), 63–105.

Bappenas. (2024). *Rencana Pembangunan Jangka Panjang Nasional Tahun 2025-2045 (UU No. 59 Tahun 2024)*. Accessed on February 17, 2025, from

https://peraturan.bpk.go.id/Details/299728/uu-no-59-tahun-2024

Creswell, J. W., & Creswell, J. D. (2021). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (6th ed.). SAGE Publications.

Davies, E., Montagu, A., & Brazil, V. (2023). Recommendations for embedding simulation in health services. *Advances in Simulation*, *8*(1), 23. https://doi.org/10.1186/s41077-023-00262-3

Denhardt, R. B., & Denhardt, J. V. (2015). *The new public service: Serving, not steering* (4th ed.). Routledge. https://doi.org/https://doi.org/10.4324/9781315709765

Devine, P. G., & Ash, T. L. (2022). Diversity training goals, limitations, and promise: A review of the multidisciplinary literature. *Annual Review of Psychology*, *73*, 403–429. https://doi.org/10.1146/annurev-psych-060221-122215

Direktorat Jenderal Tenaga Kesehatan. (2022). *Pedoman Akreditasi Institusi Penyelenggaraan Pelatihan dan Registrasi Pelatihan Bidang Kesehatan*. Kementerian Kesehatan RI. Accessed on May 2, 2025, from https://ditmutunakes.kemkes.go.id

Dirjenakes. (2024). *SE Pembinaan dan pengawasan penyelenggara pelatihan dan atau kegiatan peningkatan kompetensi bidang kesehatan*. Accessed on May 2, 2025, from https://ditmutunakes.kemkes.go.id

Dunleavy, P., Margetts, H., Bastow, S., & Tinkler, J. (2006). New Public Management is Dead—Long Live Digital-Era Governance. *Journal of Public Administration Research and Theory*, *16*(3), 467–494. https://doi.org/10.1093/jopart/mui057

Dunn, W. N. (2018). *Public Policy Analysis: An Integrated Approach* (6th ed.). Routledge.

Dwiyanto, A. (2018). *Reformasi Birokrasi Kontekstual*. Gadjah Mada University Press.

EL Hajjar, S. T., & Alkhanaizi, M. S. (2018). Exploring the Factors That Affect Employee Training Effectiveness: A Case Study in Bahrain. *SAGE Open*, *8*(2). https://doi.org/10.1177/2158244018783033

Fredericks, J. A., & McColskey, W. (2012). The measurement of student engagement: A comparative analysis of various methods and student self-report instruments. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (USA, pp. 763–782). Springer Science Business Media. https://doi.org/10.1007/978-1-4614-2018-7_37

Garcia, M., & Torres, A. (2022). Evaluating the Effectiveness of Training Programs in Health Care. *Evaluation and Program Planning*, *90*, 101–110. https://doi.org/10.1016/j.evalprogplan.2021.101110

Giovanelli, L., Rotondo, F., & Fadda, N. (2024). Management training programs in healthcare: effectiveness factors, challenges and outcomes. *BMC Health Services Research*, *24*(1), 1–15. https://doi.org/10.1186/s12913-024-11229-z

Goldstein, I. L., & Ford, J. K. (2002). *Training in Organizations: Needs Assessment, Development, and Evaluation* (4th ed.). Wadsworth.

Gomez-Mejia, Balkin, & Cardy. (2016). *Managing Human Resources* (Internatio). Prentice Hall, Inc.

Guo, B. (2017). China's Administrative Governance Reform in the Era of "New Normal." *Journal of Chinese Political Science*, *22*, 357–373. https://doi.org/10.1007/s11366-017-9483-x

Hafner, T., Walkowiak, H., Lee, D., & Aboagye-Nyame, F. (2017). Defining pharmaceutical systems strengthening: concepts to enable measurement. *Health Policy and Planning*, *32*(4), 572–584. https://doi.org/10.1093/heapol/czw153

Hart, L. J., Carr, C., & Fullerton, J. T. (2016). Task Analysis as a Resource for Strengthening Health Systems. *Journal of Midwifery & Women's Health*, *61*(2), 241–245.

Hartley, J. (2025). Public aspects of public manager training, education and development. *Public Money & Management*, *45*(2), 111–118. https://doi.org/10.1080/09540962.2024.2398132

Hilmawan, R., Aprianti, Y., Yudaruddin, R., Anggraini, R. F., Fitrianto, Y., & Wahyuningsih, N. (2023). Public sector innovation in local government and its impact on development outcomes : Empirical evidence in Indonesia. *Heliyon*, *9*(12), e22833. https://doi.org/10.1016/j.heliyon.2023.e22833

Hood, C. (1991). A Public Management for All Seasons? *Public Administration*, *69*(1), 3–19.

Imaniyati, N., Ramdhany, M. A., Santoso, B., & Hadijah, H. S. (2024). Impact of staff competencies and organizational culture on service performance of local government : mediating role of organizational innovativeness. *Jurnal Ilmiah Pendidikan*, *43*(1), 198–209.

Jeong, S.-H. (2022). A Study on the Effect of Organizational Competence Perceived by Public Officials on Proactive Administration. *Journal of the Korean Governance Society*, *29*(1), 33–54. https://doi.org/10.17089/kgr.2022.29.1.002

Jiménez-Caldera, J., Serrano-Montes, J. L., Pérez-Arévalo, R., Rodrigo-Comino, J., Salvati, L., & Caballero-Calvo, A. (2022). A Conceptual Model for Planning and Management of Areas of Public Space and Meeting in Colombia. *Land*, *11*(11). https://doi.org/10.3390/land11111922

Johns, C. (2025). *Becoming a reflective practitioner* (7th ed.). John Wiley & Sons.

Kementerian Kesehatan RI. (2024). *Pedoman Pelatihan dan Peningkatan Kompetensi Bidang Kesehatan*. Kementerian Kesehatan RI. Accessed on May 2, 2025, from https://ditmutunakes.kemkes.go.id

Peraturan Menteri Ketenagakerjaan (Permenaker) Nomor 6 Tahun 2025, (2025). Accessed on January 13, 2026, from https://peraturan.bpk.go.id/Details/322073/permenaker-no-6-tahun-2025

Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). *Evaluating Training Programs: The Four Levels* (3rd ed.). Berrett-Koehler Publishers. https://doi.org/https://doi.org/10.1007/978-94-011-4850-4_5

Peraturan Lembaga Administrasi Negara Republik Indonesia Nomor 10 Tahun 2021, 1 (2021). Accessed on January 13, 2026, from https://peraturan.bpk.go.id/Details/227283/peraturan-lan-no-10-tahun-2021

Peraturan Lembaga Administrasi Negara Nomor 5 Tahun 2018, (2018). Accessed on January 13, 2026, from https://peraturan.bpk.go.id/Details/227390/peraturan-lan-no-5-tahun-2018

Lumbanraja, V., Rustiyana, R., Ibrahim, A. H. H., & Riyanto, A. (2025). *Reformasi Birokrasi dan Inovasi Pelayanan Publik di Indonesia: Konsep, Perkembangan, Prinsip dan Peran*. Star Digital Publishing.

Luo, R., Li, J., Zhang, X., Tian, D., & Zhang, Y. (2024). Effects of applying blended learning based on the ADDIE model in nursing staff training on improving theoretical and practical operational aspects. *Frontiers in Medicine*, *11*(June), 1–10. https://doi.org/10.3389/fmed.2024.1413032

Madan, R., & Ashok, M. (2023). AI adoption and diffusion in public administration: A systematic literature review and future research agenda. *Government Information Quarterly*, *40*(1), 101774. https://doi.org/10.1016/j.giq.2022.101774

Mading, V., & Willa, F. A. D. (2020). Peran Tenaga Kesehatan dalam Implementasi Sistem Kesehatan. *Jurnal Keperawatan Dan Kesehatan (JKS)*, *11*(2).

Margetts, H., & Dorobantu, C. (2019). Rethink government with AI. *Nature*, *568*(7751), 163–165. https://doi.org/10.1038/d41586-019-01099-5

Mayer, R. (2014). *Multimedia learning: Principles and applications* (3rd ed.). Cambridge University Press.

Mazmanian, D. A., & Sabatier, P. A. (1983). *Effective Policy Implementation*. Mass: Lexington Books.

Mefolere, K. F. (2016). WhatsApp and information sharing: Prospect and challenges. *International Journal of Social Science and Humanities Research*, *4*(1), 615–625.

Mehner, L., Rothenbusch, S., & Kauffeld, S. (2024). How to maximize the impact of workplace training: a mixed-method analysis of social support, training transfer and knowledge sharing. *European Journal of Work and Organizational Psychology*, *34*(2), 201–217. https://doi.org/10.1080/1359432X.2024.2319082

Merry, L., Castiglione, S. A., Rouleau, G., Létourneau, D., Larue, C., Deschênes, M. F., Gonsalves, D. M., & Ahmed, L. (2023). Continuing professional development (CPD) system development, implementation, evaluation and sustainability for healthcare professionals in low-and lower-middle-income countries: a rapid scoping review. *BMC Medical Education*, *23*(1), 498. https://doi.org/10.1186/s12909-023-04427-6

Muller, E., Strukava, A., Scholl, I., Härter, M., Diouf, N. T., Légaré, F., & Buchholz, A. (2019). Strategies to evaluate healthcare provider trainings in shared decision-making (SDM): A systematic review of evaluation studies. *BMJ Open*, *9*(6), 1–12. https://doi.org/10.1136/bmjopen-2018-026488

Mutaqin, A. Z. (2022). *Evaluasi Program Pendidikan dan Pelatihan bagi Aparatur Sipil Negara*. Penerbit NEM.

Nguyen, T. H., & Tran, P. (2023). Developing a Training Program for Health Care Workers: A Case Study in Rural Areas. *BMC Health Services Research*, *23*(1), 456. https://doi.org/10.1186/s12913-023-09012-3

Noe, Hollenbeck, Gerhart, & Wright. (2017). *Human Resource Management* (Internatio). The McGraw-hill Companies, Inc.

Noe, R. A. (2022). *Employee Training and Development* (9th ed.). McGrawl Hill.

Northouse, P. G. (2025). *Leadership: Theory and practice* (10th ed.). SAGE Publications.

Osborne, D., & Gaebler, T. (1993). *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*. A Plume Book.

Osborne, S., & Brown, L. (2011). *Managing Change and Innovation in Public Service Organizations*. Routledge.

Putra, P. E., & Rahmat, S. H. (2020). Strategi Peningkatan Kualitas Sumber Daya Manusia Melalui Pelatihan Training of Trainer (TOT) di Institusi Pendidikan. *Jurnal Administrasi Pendidikan*, *21*(1), 1–10.

Quade, M. (2015). Automated Usability Evaluation (AUE). In M. Halbrügge (Ed.), *Predicting User Performance and Errors* (pp. 23–33). SpringerLink. https://doi.org/10.1007/978-3-319-60369-8_4

Regmi, K., & Jones, L. (2020). A systematic review of the factors–enablers and barriers–affecting e-learning in health sciences education. *BMC Medical Education*, *20*(1), 91. https://doi.org/10.1186/s12909-020-02007-6

Rizal, A. (2020). *Kebijakan Publik dan Manajemen Sumber Daya Manusia*. Rajawali Pers.

Rosenbloom, D. (2022). *Public Administration: Understanding Management, Politics, and Law in the Public Sector*.

Rudy, S. K. (2025). *The Global Health Career: A Practical Guide to Finding and Sustaining Your Place in a Changing Field*. JHU Press.

Rupčić, N. (2022). Team learning in the context of learning organizations. *The Learning Organization*, *29*(2), 191–201. https://doi.org/10.1108/TLO-02-2022-278

Russo, P. G., & Gourevitch, M. N. (2019). Population Health. *Jonas and Kovner's Health Care Delivery in the United States, 12th Edition*, 101–122. https://doi.org/10.1891/9780826172730.0005

Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The science of training and development in organizations: What matters in practice. *Psychological Science in the Public Interest*, *13*(2), 74–101.

Salomo, R. V., & Rahmayanti, K. P. (2023). Progress and Institutional Challenges on Local Governments Performance Accountability System Reform in Indonesia. *SAGE Open*, *13*(4),

1–14. https://doi.org/10.1177/21582440231196659

Shahiduzzaman, M. (2025). Digital maturity in transforming human resource management in the post-COVID era: A thematic analysis. *Administrative Sciences*, *15*(2), 51. https://doi.org/https://doi.org/10.3390/admsci15020051

Shorey, S., & Debby Ng, E. (2021). The use of virtual reality simulation among nursing students and registered nurses: A systematic review. *Nurse Education Today*, *98*, 104662. https://doi.org/10.1016/j.nedt.2020.104662

Smith, J., & Jones, L. (2021). *Public Policy and Training Programs*. Routledge.

Spreen, T. L., Afonso, W., & Gerrish, E. (2020). Can Employee Training Influence Local Fiscal Outcomes? *The American Review of Public Administration*, *50*(4–5), 401–414. https://doi.org/10.1177/0275074020911717

Stonier, P. D., & Jones, S. A. (2025). Professional Competencies and Capabilities in the Development of Medicines. *Pharmaceutical Medicine*, *39*, 2250234. https://doi.org/10.1007/s40290-025-00550-5

Sunnemark, F., Lundqvist Westin, W., Al Saad, T., & Assmo, P. (2024). Exploring barriers and facilitators to knowledge transfer and learning processes through a cross-departmental collaborative project in a municipal organization. *The Learning Organization*, *31*(3), 358–374. https://doi.org/10.1108/TLO-01-2023-0003

Tahirs, J. P., Haerani, S., Taba, M. I., & Umar, F. (2023). The Influence of Leadership Commitment, Human Capital And Work Culture on Bureaucratic Performance Through Good Governance of Local Governments in South Sulawesi Province. *Intern. Journal of Profess. Bus. Review*, *8*(9), 1–24. https://doi.org/10.26668/businessreview/2023.v8i9.3443

Uddin, M. J., & Munni, M. N. (2021). Personalized Patient Safety Management: Sensors and Real-Time Data Analysis. In M. A. R. Ahad & A. Inoue (Eds.), *Vision, Sensing and Analytics: Integrative Approaches* (pp. 267–305). Springer. https://doi.org/10.1007/978-3-030-75490-7_10

Undang-Undang Republik Indonesia Nomor 17 Tahun 2023 tentang Kesehatan, Pub. L. No. 17 (2023).

Varnelis, K. (Ed.). (2012). *Networked publics*. Mit Press.

Warsono, H., Astuti, R. S., & Marom, A. (2019). Buku Ajar Teori Administrasi. *Ilmu Administrasi Dan Ilmu Administrasi Negara*, Surabaya:Erlangga.

Wheelen, T. L., & Hunger, J. D. (2018). *Strategic Management and Business Policy* (15th ed.). Pearson Education Inc.

WHO. (2020). *What do we know about community health workers? A systematic review of existing reviews*. World Health Organization.

WHO. (2023). *2023 WHO review of health in Nationally Determined Contributions and long-term strategies: health at the heart of the Paris Agreement*.

Wibowo, T., Raharjo, S., & Santoso, B. (2024). Digital transformation in health training centers: A case study of Poltekkes Kemenkes in the era of health transformation. *International Journal of Health Education and Training*, *8*(3), 112–129.

Wirtz, B. W., & Müller, W. M. (2019). An integrated artificial intelligence framework for public management. *Public Management Review*, *21*(7), 1076–1100. https://doi.org/10.1080/14719037.2018.1549268

Yusuf, F. A., & Handayani, D. Y. S. (2020). Analisis Kebutuhan Pelatihan Berbasis Kompetensi pada Pegawai di Lingkungan Sekretariat Daerah Kabupaten Demak. *Jurnal Administrasi Publik (JAP)*, *9*(1), 10–19.

Zulkarnaen, D., Zulkieflimansyah, & Khadafie, M. (2024). Transformasi Digital Berbasis E-Puskesmas Terhadap Kinerja Pegawai Dalam Manajemen Pelayanan Di Upt Puskesmas Kecamatan Maronge. *Innovation Journal (DIJ)*, *2*(2), 1–17.