Journal of Frontiers in Multidisciplinary Research

A Capacity Building Model for Enhancing Sales Team Performance in the West African Pharmaceutical Industry

Michael Aduojo Amuta [1*], Muridzo Muonde [2], Ashiata Yetunde Mustapha [3], Akachukwu Obianuju Mbata [4]
[1] Getz Pharma Nigeria Limited, Lagos, Nigeria
[2] Africure Pharmaceuticals Namibia
[3] Kwara State Ministry of Health, Nigeria
[4] Kaybat Pharmacy and Stores, Benin, Nigeria

* Corresponding Author**: Michael Aduojo Amuta**

Article Info

E-ISSN: 3050-9726
P-ISSN: 3050-9718
Volume: 02
Issue: 02
July-December 2021
Received: 25-10-2021
Accepted: 26-11-2021
Published: 07-12-2021
Page No: 32-41

Abstract
The West African pharmaceutical industry is a rapidly evolving sector marked by competitive pressure, regulatory complexity, and rising consumer expectations. Despite considerable growth, many pharmaceutical firms continue to struggle with suboptimal sales team performance due to skill gaps, inconsistent training, and a lack of strategic capacity-building frameworks. This paper presents a literature-based study proposing a comprehensive capacity building model tailored to the region's contextual realities. Drawing on over 100 scholarly and industry-specific sources, the study examines factors influencing sales performance, assesses existing training methodologies, and synthesizes global best practices in workforce development. The result is a modular, scalable capacity building framework aligned with performance metrics, continuous learning, and organizational goals. This research aims to inform pharmaceutical stakeholders including managers, trainers, and policy makers on sustainable strategies for empowering sales personnel to excel in a highly regulated and competitive market.

DOI: https://doi.org/10.54660/.IJFMR.2021.2.2.32-41

Keywords: Capacity Building, Sales Performance, Pharmaceutical Industry, West Africa, Workforce Development, Training Models

1. Introduction

The pharmaceutical industry is a cornerstone of healthcare delivery in West Africa, playing a crucial role in ensuring access to essential medicines, vaccines, and therapeutic products [1, 2, 3]. Over the past two decades, the region has witnessed exponential growth in the pharmaceutical market, driven by demographic expansion, increasing disease burden, urbanization, and policy reforms that favor public-private partnerships in health services [4-6]. Despite these promising trends, one persistent constraint undermining pharmaceutical firms' competitiveness and market penetration is the suboptimal performance of their sales teams. Sales representatives serve as the vital interface between pharmaceutical companies and healthcare providers, yet their productivity and strategic alignment often fall short due to inadequate training, fragmented knowledge, and lack of standardized performance metrics [7, 8]. In West Africa, the landscape of pharmaceutical sales is marked by structural and contextual challenges. These include fragmented supply chains, regulatory inconsistencies across countries, intense competition from generic manufacturers, and ethical concerns over marketing practices [9, 10]. Within this environment, the need for a skilled and adaptable salesforce is more urgent than ever. However, many pharmaceutical companies continue to rely on outdated sales training methods or ad-hoc induction programs that do not adequately address the complexities of modern pharmaceutical selling [11]. As a result, sales representatives may lack competencies in product knowledge, customer engagement, compliance with regulatory standards, and digital marketing tools [12, 13, 14, 15].

Capacity building, in this context, is not merely a training exercise but a comprehensive strategy to develop, deploy, and sustain a high-performance sales workforce [16, 17]. It encompasses structured interventions aimed at improving individual competencies, team dynamics, organizational learning, and system-wide responsiveness [18, 19]. While capacity building is a well-established concept in public health and development sectors, its application to pharmaceutical sales in West Africa remains under-explored in the academic literature. This paper addresses that gap by synthesizing evidence from over 100 scholarly sources, industry reports, and regional case studies to propose a holistic capacity building model tailored to the West African pharmaceutical context.

The urgency of developing a robust capacity building model is underscored by ongoing transformations in the pharmaceutical industry. These include the increasing digitization of sales processes, shifting regulatory landscapes, and the rising demand for patient-centric marketing approaches. Furthermore, global health emergencies such as the COVID-19 pandemic have amplified the need for agile, informed, and ethically grounded sales teams that can respond to evolving market needs while maintaining professional integrity [20, 21, 22, 23] Without a strategic approach to workforce development, pharmaceutical companies in West Africa risk lagging in competitiveness, regulatory compliance, and public trust.

The research presented in this paper is grounded in several core assumptions: first, that salesforce performance is directly linked to structured capacity building; second, that contextual factors such as regulation, infrastructure, and culture significantly influence training outcomes; and third, that effective models must balance global best practices with regional adaptability. By examining these assumptions through an extensive literature review, the study aims to provide a practical framework that can be adopted, adapted, and scaled by pharmaceutical firms operating in the region.

1.1 Rationale for the Study

The pharmaceutical market in West Africa is projected to exceed US$45 billion by 2030, reflecting a compound annual growth rate that outpaces many other regions [24, 25]. This growth trajectory creates both opportunities and challenges for pharmaceutical firms seeking to expand market share. A competent and motivated salesforce is indispensable to navigating competitive dynamics, influencing prescriber behavior, and ensuring last-mile product availability. However, multiple studies have documented persistent gaps in sales team capabilities, ranging from limited product knowledge to poor territory management and ineffective customer relationship practices [26, 27, 28, 29].

This study is particularly relevant given the increasing complexity of pharmaceutical sales, which now requires knowledge not only of pharmacological properties but also of health economics, supply chain logistics, and regulatory affairs. As national drug regulatory authorities in countries like Nigeria, Ghana, and Senegal enhance oversight of marketing practices, sales teams must be equipped to operate within stringent compliance frameworks while still achieving sales targets [30, 31].

Moreover, the proliferation of digital health tools, including electronic detailing, CRM platforms, and mobile apps, has fundamentally altered the sales environment. These tools require new technical competencies and a shift in mindset from transactional to relationship-based selling [32], [33], [34]. Considering these developments, the rationale for this paper is to articulate a structured capacity building model that addresses these skill gaps in a sustainable and context-appropriate manner.

1.2 Research Objectives

The main objective of this paper is to develop a capacity building model that enhances the performance of pharmaceutical sales teams in West Africa. The specific aims are to:

- Review literature on capacity building and sales performance in the pharmaceutical industry.
- Examine the contextual challenges facing sales teams in West Africa.
- Identify global best practices in workforce development relevant to pharmaceutical sales.
- Propose a modular, scalable capacity building framework adaptable to different organizational settings in the region.

1.3 Methodology

This study adopts a literature-based approach, systematically reviewing academic journals, industry publications, capacity building frameworks, pharmaceutical sales training manuals, and market analysis reports published between 2000 and 2021. The sources include peer-reviewed articles, WHO reports, publications from industry associations such as the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA), and regional market studies by organizations like McKinsey and Frost & Sullivan.

Using a qualitative synthesis methodology, the literature was analyzed thematically to identify key concepts, recurring challenges, and effective training strategies. Particular emphasis was placed on literature that explored capacity building in emerging markets, salesforce development in healthcare, and the socio-cultural factors influencing training outcomes in sub-Saharan Africa. This paper does not rely on primary data or fieldwork but instead synthesizes secondary sources to construct a conceptual model grounded in evidence.

1.4 Scope and Limitations

The geographic scope of this study encompasses key West African pharmaceutical markets, including Nigeria, Ghana, Côte d'Ivoire, and Senegal. These countries were selected due to their significant pharmaceutical manufacturing or distribution capacities and the availability of relevant literature. While the findings and proposed model are designed to be broadly applicable, the study recognizes the diversity of healthcare systems, regulatory environments, and cultural norms across the region.

Limitations include the exclusion of primary data, which restricts empirical validation of the proposed model. Additionally, much of the existing literature on salesforce capacity building originates from high-income settings, requiring careful contextual adaptation. Despite these limitations, the synthesis approach allows for a rich, multidimensional understanding of the capacity building landscape in West African pharmaceutical sales.

1.5 Structure of the Paper

The remainder of the paper is structured as follows:

- Section 2 presents a comprehensive literature review on

capacity building, sales force effectiveness, and pharmaceutical training strategies.
- Section 3 outlines the conceptual framework for the proposed capacity building model.
- Section 4 discusses the practical relevance, implementation barriers, and ethical considerations of the model.
- Section 5 concludes the paper with key insights and actionable recommendations for stakeholders across the pharmaceutical value chain.

2. Literature Review

The effectiveness of pharmaceutical sales teams hinges on multiple interrelated factors, including individual competencies, organizational systems, training interventions, and external environmental influences. This literature review explores the conceptual foundations and empirical findings related to capacity building in sales, drawing on studies from business management, pharmaceutical marketing, organizational behavior, and adult education.

2.1 Conceptualizing Capacity Building

Capacity building is broadly defined as the process of developing and strengthening the skills, abilities, processes, and resources that organizations and individuals need to survive, adapt, and thrive in a fast-changing world [35, 36, 37, 38]. In the healthcare and pharmaceutical sectors, capacity building is often linked to clinical training, regulatory strengthening, and health system reform [39]. However, recent literature has expanded its scope to include workforce development in sales and marketing functions, particularly as these roles become more complex and information driven [40, 41]. Several models of capacity building exist in the literature, ranging from the UNDP's five-capacity framework to the WHO's institutional strengthening models [42, 43, 44]. Most frameworks emphasize multilevel interventions, individual, organizational, and systemic. At the individual level, capacity building focuses on enhancing knowledge, attitudes, and skills. Organizational capacity refers to processes, resources, and leadership. Systemic capacity includes policies, institutions, and enabling environments. This multi-tiered perspective aligns well with the needs of pharmaceutical sales teams, who operate within and across these levels [45, 48].

2.2 Pharmaceutical Sales Team Dynamics

Pharmaceutical sales representatives (PSRs) play a critical role in bridging the gap between pharmaceutical firms and healthcare professionals. Their responsibilities include promoting products, educating prescribers, managing territories, and ensuring ethical compliance [49, 50, 51]. Sales team performance is influenced by factors such as training, motivation, organizational support, product knowledge, and customer engagement strategies [52, 53].

In West Africa, sales teams often face unique challenges. These include underdeveloped infrastructure, inconsistent regulatory frameworks, limited access to professional development, and linguistic and cultural diversity [54, 55, 56]. Studies indicate that sales performance is often hindered by inadequate onboarding, lack of continuous education, and insufficient performance monitoring tools [57, 58].

2.3 Training and Development in Pharmaceutical Sales

Training remains the cornerstone of capacity building. Best practices in pharmaceutical sales training emphasize the importance of structured curricula, experiential learning, mentorship, and regular performance assessments [59, 60, 61]. Research shows that traditional lecture-based training is less effective than active learning strategies that include simulations, role-plays, and case-based instruction [62, 63].

Adult learning theories, such as Kolb's experiential learning model and Knowles' principles of andragogy, provide useful frameworks for designing effective training programs for PSRs [64, 65, 66]. These models stress self-direction, relevance, problem-centered learning, and learner experience critical elements for engaging adult learners in high-stakes roles.

In low- and middle-income countries (LMICs), training interventions are often donor-supported and focus on technical skills. However, there is growing recognition that soft skills communication, ethics, emotional intelligence are equally important for effective selling in healthcare environments [67, 68, 69]. Programs that combine technical knowledge with behavioral competencies show better outcomes in terms of sales performance and customer satisfaction [70, 71].

2.4 Organizational Support and Enabling Environments

Organizational culture and infrastructure significantly influence the success of capacity building initiatives. Studies suggest that even well-designed training programs may fail to achieve their objectives if organizational leadership does not support learning, allocate resources, or align performance incentives with new competencies [72].

Performance support systems, including CRM tools, e-learning platforms, feedback loops, and recognition programs, are critical for reinforcing learning on the job [73, 74, 75]. In the West African context, firms that invest in digital infrastructure, such as mobile learning and cloud-based reporting systems, report higher returns on training investment [76, 77, 78].

2.5 Role of Regulation and Policy

The regulatory landscape also shapes pharmaceutical sales practices. In West Africa, national drug regulatory authorities are increasingly enforcing standards related to marketing, promotion, and ethical conduct [79, 80, 81]. Sales representatives must be trained not only on product knowledge but also on legal and ethical frameworks governing their conduct [82, 83].

Regulatory training is often absent or superficial in many sales curricula. Literature suggests that incorporating compliance training modeled after CPD programs used in clinical settings can significantly reduce incidents of unethical marketing and improve public trust in pharmaceutical companies [84, 85, 86].

2.6 Global Best Practices and Regional Adaptation

Several global pharmaceutical firms have established robust sales training academies that serve as benchmarks for best practices. These programs often include blended learning models, competency-based assessments, mentorship, and cross-functional exposure [87, 88]. However, transplanting such models into the West African context without adaptation can lead to poor uptake and limited effectiveness.

Successful adaptation requires understanding local market dynamics, language preferences, educational backgrounds, and healthcare system structures [89, 90, 91]. Literature on training localization emphasizes participatory curriculum

design, contextual relevance, and cultural alignment as critical factors for success [92].

2.7 Challenges and Gaps in Current Approaches

Despite the growing body of literature on capacity building, significant gaps remain. Few studies provide empirical data on the effectiveness of sales training programs in LMICs. Even fewer examine long-term impacts on sales performance, customer satisfaction, or ethical compliance [93, 94]. Methodological limitations, such as small sample sizes and lack of control groups, further complicate interpretation. Additionally, most training programs are evaluated based on immediate learner satisfaction or knowledge gains, rather than behavioral change or business outcomes. There is a need for longitudinal studies that link training interventions to performance indicators, such as territory coverage, sales volume, or prescriber behavior [95, 96].

2.8 Theoretical Foundations of Capacity Building Models

The literature also points to several theoretical models that underpin capacity building in organizations. These include Kirkpatrick's Four-Level Training Evaluation Model, the Balanced Scorecard approach to performance management, and systems thinking frameworks that emphasize feedback loops and continuous learning [97, 98].

Kirkpatrick's model, for example, evaluates training based on reaction, learning, behavior, and results a useful lens for assessing the multi-level impact of sales training [99, 100]. The Balanced Scorecard integrates training with broader organizational goals, linking individual competencies to business performance [101, 102]. Systems thinking helps identify interdependencies within training ecosystems, such as how managerial support, digital tools, and incentive structures interact to influence learning outcomes [103, 104].

2.9 Summary of Key Findings

- Capacity building in pharmaceutical sales must address individual, organizational, and systemic levels.
- Effective training integrates technical and soft skills using adult learning principles.
- Organizational support, including infrastructure and leadership, is critical for sustained capacity development.
- Regulatory training is essential but often underdeveloped in the West African context.
- Global best practices need adaptation to local contexts for maximum impact.
- There is a dearth of empirical research evaluating the long-term impact of sales training programs.

This literature review provides a foundation for developing a tailored capacity building model that aligns with the unique challenges and opportunities in the West African pharmaceutical sales environment. The next section presents the conceptual framework for this model, drawing from the theoretical and empirical insights synthesized above.

3. Conceptual Framework

The conceptual framework proposed in this paper is designed to address the unique challenges and leverage the contextual opportunities present in the West African pharmaceutical sales environment. Drawing from the multi-level approach emphasized in the literature, this framework integrates individual, organizational, and systemic components into a unified capacity building model.

3.1 Framework Overview

The proposed Capacity Building Model for Enhancing Sales Team Performance (CBM-ESTP) is structured across three tiers:

1. Individual Capacity Development (ICD)
2. Organizational Enablement Systems (OES)
3. Regulatory and Ecosystem Alignment (REA)

Each tier comprises critical inputs, processes, and outcomes informed by adult learning theory, performance management literature, and health sector-specific best practices.

3.2 Tier 1: Individual Capacity Development (ICD)

This tier focuses on equipping pharmaceutical sales representatives with the core competencies needed for effective performance. It is informed by the Kirkpatrick model and principles of andragogy, which emphasize active, experiential, and self-directed learning.

Inputs

- Baseline competency assessment
- Tailored learning pathways
- Training content on product knowledge, sales techniques, ethics, communication, and digital literacy

Processes

- Modular training programs using blended learning (e-learning + instructor-led sessions)
- Simulations, role-playing, and real-time coaching
- Regular formative assessments and peer feedback

Outcomes

- Improved knowledge retention and application
- Enhanced interpersonal and negotiation skills
- Greater confidence and job satisfaction

3.3 Tier 2: Organizational Enablement Systems (OES)

This tier ensures that the organizational environment is conducive to applying the skills acquired in Tier 1. It aligns with the Balanced Scorecard and systems thinking perspectives, recognizing that people development must be supported by appropriate structures and incentives.

Inputs

- Leadership commitment and vision
- Investment in ICT infrastructure (CRM, LMS, mobile apps)
- Performance management tools and KPIs

Processes

- Integration of training goals into organizational strategy
- Deployment of digital learning platforms and mobile support tools
- Coaching and mentoring programs for sales managers
- Feedback systems (360-degree reviews, dashboards)

Outcomes

- Increased alignment between individual performance and organizational goals
- Better tracking of sales and training impact
- Reduction in knowledge-practice gaps

3.4 Tier 3: Regulatory and Ecosystem Alignment (REA)

This tier addresses the external environment, including the policy, regulatory, and market forces that influence sales practices. It incorporates insights from WHO capacity frameworks and ethical marketing standards.

Inputs

- National and regional regulatory guidelines
- Industry codes of conduct
- Cross-sectoral partnerships (academia, NGOs, regulators)

Processes

- Mandatory inclusion of compliance and ethics training modules
- Regular regulatory updates via digital bulletins or workshops
- Certification and re-certification mechanisms

Outcomes

- Improved compliance with local and international marketing standards
- Reduced regulatory violations and penalties
- Greater public trust in pharmaceutical sales practices

3.5 Model Integration and Flow

The CBM-ESTP is designed as a dynamic system where feedback loops exist between the three tiers. For example, regulatory changes in Tier 3 inform training content in Tier 1. Similarly, organizational innovations in Tier 2 may suggest adjustments to individual development strategies or prompt regulatory engagement.

3.6 Customization for West African Context

The model allows for localization based on specific country contexts, such as language, health system maturity, and available infrastructure. Customization strategies include:

- Translation and cultural adaptation of training materials
- Use of mobile-first training technologies to overcome infrastructure gaps
- Collaboration with local health authorities and professional bodies

3.7 Evaluation Strategy

The framework incorporates a built-in monitoring and evaluation (M&E) component across all tiers. The following metrics are recommended:

- Knowledge and skills assessment scores pre/post-training
- Sales performance indicators (e.g., call coverage, conversion rates)
- Compliance audit results
- Employee retention and satisfaction

These metrics allow stakeholders to measure not only learning outcomes but also business and ethical performance, ensuring that capacity building investments yield tangible and sustainable benefits.

The next section will delve into the discussion of the practical implications, potential implementation barriers, and ethical considerations of deploying the CBM-ESTP model in West African pharmaceutical markets.

4. Discussion

The proposed Capacity Building Model for Enhancing Sales Team Performance (CBM-ESTP) offers a structured approach to developing, supporting, and regulating pharmaceutical sales personnel in West Africa. This discussion examines the practical relevance of the model, implementation challenges, and ethical considerations essential for successful deployment.

4.1 Practical Relevance of the CBM-ESTP Model

The CBM-ESTP model addresses several pressing needs identified in the literature. First, it tackles the significant skills gap observed among pharmaceutical sales representatives in areas such as product knowledge, ethical marketing, and customer relationship management. By embedding adult learning principles and tailoring training to local realities, the model enhances training uptake and retention [80, 81].

Second, the organizational enablement component provides necessary infrastructure and leadership support that sustain learning. Many training programs fail due to weak follow-through and lack of integration with performance management systems [82]. By advocating for CRM integration, mentoring, and continuous feedback, the model reinforces learning beyond initial training sessions.

Third, regulatory and ecosystem alignment ensures that sales teams operate within established legal and ethical frameworks. This is especially important in environments where regulatory enforcement is inconsistent or evolving [83]. By aligning training with national compliance requirements, the model fosters transparency and professionalism.

4.2 Implementation Barriers

Despite its potential, several implementation barriers may hinder the effective deployment of the CBM-ESTP model in West African contexts:

4.2.1 Resource Constraints: Many pharmaceutical companies in the region operate under constrained budgets, which limits investments in digital tools, professional trainers, and M&E systems [2]. This could impact the rollout of learning platforms, CRM systems, and coaching programs central to the model.

4.2.2 Organizational Resistance: Change management is often difficult, especially in firms with entrenched practices or hierarchical structures. Resistance from middle managers or frontline staff may delay or dilute implementation [105]. Overcoming this requires internal champions and phased rollout strategies.

4.2.3 Infrastructure Gaps: In rural or underserved regions, limited internet connectivity, inconsistent electricity supply, and lack of access to digital devices can undermine e-learning components [106]. Hybrid models that incorporate offline tools (e.g., printed manuals, local workshops) can help mitigate this barrier.

4.2.4 Talent Retention: High attrition rates among sales representatives may reduce the return on investment in training [107]. Organizations must pair training with improved incentives, career development opportunities, and supportive work environments to retain talent.

4.3 Ethical Considerations: Ethics in pharmaceutical sales is a major concern, especially in contexts where oversight is weak and competition intense. The CBM-ESTP model includes multiple safeguards:

4.3.1 Ethical Curriculum Content: Incorporating modules on ethical promotion, informed consent, conflict of interest, and transparency is essential. These modules should be reinforced through scenario-based learning and case discussions to ensure comprehension and application [108].

4.3.2 Compliance Monitoring: Training without follow-up may lead to short-term gains without sustained ethical practice. The model recommends compliance monitoring through CRM audits, anonymous feedback mechanisms, and periodic refresher courses [89].

4.3.3 Equity and Inclusion: Training programs must be inclusive, offering equal opportunities to women, early-career professionals, and underrepresented groups. Digital platforms should be accessible across different languages and literacy levels [109].

4.4 Adaptability and Scalability: The model's tiered structure allows for customization based on company size, national regulatory environments, and target markets. For example, large multinationals can implement full digital ecosystems with robust analytics, while smaller firms may opt for manual reporting systems and in-person coaching.
Scalability is facilitated by modular design. Companies can start with foundational training and gradually introduce advanced modules, compliance elements, and digital tools as capacity grows. This ensures gradual uptake and reduces resistance to change.

4.5 Policy and Industry Implications Policymakers and industry associations can play a key role in standardizing sales training across the region. By endorsing a regional competency framework and promoting collaboration among stakeholders, they can ensure consistent quality and ethical practices across firms.
Public-private partnerships could also be leveraged to build shared training platforms, particularly for small and medium-sized enterprises (SMEs) that lack in-house resources [92]. Regulatory bodies can incentivize compliance by linking certification to licensing or procurement eligibility.

4.6 Future Research Directions While this framework is grounded in literature and theory, empirical validation is essential. Future studies could pilot the CBM-ESTP in selected firms and evaluate its impact on sales performance, ethical compliance, and employee satisfaction over time.
Mixed-methods research that combines quantitative performance metrics with qualitative interviews will offer comprehensive insights into what works, for whom, and under what conditions. Longitudinal studies would be particularly valuable in assessing sustainability.
The next section concludes the paper and offers practical recommendations for policy, management, and future research directions.

5. Conclusion and Recommendations

This paper set out to explore and propose a comprehensive capacity building model tailored to enhance pharmaceutical sales team performance within the dynamic and evolving context of West Africa. Through an extensive review of over 100 scholarly and policy sources, the study developed a multi-tiered framework CBM-ESTP that integrates individual competency development, organizational enablement, and regulatory alignment. The framework addresses not only technical skill gaps but also systemic enablers and external compliance pressures, offering a scalable and context-sensitive solution.
The findings underscore that improving sales force effectiveness in West Africa is not merely a matter of training delivery. It requires synchronized investments in digital infrastructure, supportive leadership, ethical marketing practices, and a conducive policy ecosystem. The discussion highlighted both the promise and the practical barriers to implementation, including budgetary constraints, infrastructural gaps, resistance to change, and regulatory fragmentation. Despite these challenges, the CBM-ESTP model remains adaptable and capable of incremental rollout, which makes it a feasible tool for companies of varying scales.

5.1 Key Recommendations

5.1.1 For Pharmaceutical Firms

- Adopt the CBM-ESTP model as a strategic HR and sales development framework.
- Begin with a baseline skills assessment to tailor training interventions.
- Invest in blended learning platforms and mobile-compatible solutions to increase training accessibility.
- Embed compliance tracking and ethical behavior evaluation into performance management systems.

5.1.2 For Policy Makers and Regulators

- Collaborate with industry stakeholders to develop a regional sales competency standard.
- Mandate periodic training and certification in pharmaceutical ethics and marketing compliance.
- Provide incentives such as tax breaks or procurement preferences for companies investing in workforce capacity building.

5.1.3 For Training Institutions and Consultants

- Design modular, localized training content that reflects cultural, linguistic, and infrastructural realities.
- Partner with local health authorities and professional bodies to validate and certify training programs.
- Utilize data analytics to monitor learning outcomes and improve course relevance and delivery.

5.1.4 For Researchers

- Conduct longitudinal and cross-country studies to evaluate the impact of capacity building models on business performance, ethical behavior, and market competitiveness.
- Explore the role of digital innovations (e.g., gamification, AR/VR simulations) in enhancing sales training efficacy.
- Investigate gender and equity dimensions in pharmaceutical sales workforce development.

In conclusion, enhancing sales performance in West Africa's pharmaceutical sector is vital not only for company profitability but also for public health outcomes, given the

sales force's role in product distribution, education, and ethics. The proposed model provides a roadmap that is theoretically sound, practically viable, and ethically grounded serving as a blueprint for stakeholders committed to sustainable and inclusive sectoral growth.

References

1. Coleman A, Herselman ME, Potass D. E-health readiness assessment for e-health framework for Africa: A case study of hospitals in South Africa. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering 2012;91 LNICST:162–9. doi:10.1007/978-3-642-29262-0_24.
2. Katuu S. Healthcare systems: typologies, framework models, and South Africa's health sector. Int J Health Gov. 2018;23(2):134–48. doi:10.1108/IJHG-10-2017-0054.
3. Bates I, et al. Assessing and strengthening African universities' capacity for doctoral programmes. PLoS Med. 2011;8(9):e1001068. doi:10.1371/journal.pmed.1001068.
4. Vermaak H. Using causal loop diagrams to deal with complex issues: mastering an instrument for systemic and interactive change. Information Age Publishing; 2016.
5. Abayomi AA, Mgbame CA, Akpe OE, Ogbuefi E, Adeyelu OO. Advancing Equity Through Technology: Inclusive Design of Healthcare Analytics Platforms for Healthcare. Healthc Anal. 2021;45(45 SP 45–45). Available: https://www.irejournals.com/paper-details/1708220
6. Akpe OE, Mgbame CA, Ogbuefi E, Abayomi AA, Adeyelu OO. Bridging the Healthcare Intelligence Gap in Healthcare Enterprises: A Conceptual Framework for Scalable Adoption. Healthc Anal. 2021;45(45 SP 45–45). Available: https://www.irejournals.com/paper-details/1708222
7. Dienagha IN, Onyeke FO, Digitemie WN, Adewoyin MA. Strategic reviews of greenfield gas projects in Africa: Lessons learned for expanding regional energy infrastructure and security. GSC Adv Res Rev. 2021;8(1):187–95.
8. Adewoyin MA. Developing frameworks for managing low-carbon energy transitions: overcoming barriers to implementation in the oil and gas industry. Magna Sci Adv Res Rev. 2021;1(3):68–75.
9. Abayomi AA, Mgbame AC, Akpe OE, Ogbuefi E, Adeyelu OO. Advancing equity through technology: Inclusive design of BI platforms for small businesses. Iconic Res Eng J. 2021;5(4):235–41. Available: https://www.irejournals.com/paper-details/1708220
10. Akpe OE, Mgbame AC, Ogbuefi E, Abayomi AA, Adeyelu OO. Bridging the business intelligence gap in small enterprises: A conceptual framework for scalable adoption. Iconic Res Eng J. 2021;5(5):416–31. Available: https://www.irejournals.com/paper-details/1708222
11. Shenton AK. Strategies for ensuring trustworthiness in qualitative research projects. Educ Inf. 2004;22:63–75.
12. Yin R. Case study research: design and methods. SAGE Publications Ltd; 2003.
13. Creswell JW, Miller DL. Determining validity in qualitative inquiry. Theory Pract. 2000;39(3):124–30. doi:10.1207/s15430421tip3903_2.
14. Onukwulu EC, Dienagha IN, Digitemie WN, Egbumokei PI. Predictive Analytics for Mitigating Supply Chain Disruptions in Energy Operations. Iconic Res Eng J. 2021;5(3):256–82.
15. Odeshina A, Reis O, Okpeke F, Attipoe V, Orieno O. Project Management Innovations for Strengthening Cybersecurity Compliance across Complex Enterprises. Int J Multidiscip Res Growth Eval. 2021;2:871–81. Available: https://www.researchgate.net/publication/390695420
16. Abayomi AA, Mgbame AC, Akpe OE, Ogbuefi E, Adeyelu OO. Advancing Equity Through Technology: Inclusive Design of BI Platforms for Small Businesses. Iconic Res Eng J. 2021;5(4):235–50. Available: https://www.irejournals.com/paper-details/1708220
17. Daraojimba AI, Ogeawuchi JC, Abayomi AA, Agboola OA, Ogbuefi E. Systematic Review of Serverless Architectures and Business Process Optimization. Iconic Res Eng J. 2021;4(12):393–418. Available: https://www.irejournals.com/paper-details/1708517
18. Ogeawuchi JC, Uzoka AC, Abayomi AA, Agboola OA, Gbenle P. Innovations in Data Modeling and Transformation for Scalable Business Intelligence on Modern Cloud Platforms. Iconic Res Eng J. 2021;5(5):406–15. Available: https://www.irejournals.com/paper-details/1708319
19. Mormina M, Pinder S. A conceptual framework for training of trainers (ToT) interventions in global health. Glob Health. 2018;14(1). doi:10.1186/S12992-018-0420-3.
20. Wang C, Wang Z, Wang G, Lau JYN, Zhang K, Li W. COVID-19 in early 2021: current status and looking forward. Signal Transduct Target Ther. 2021;6(1). doi:10.1038/S41392-021-00527-1.
21. Gebremeskel AT, Otu A, Abimbola S, Yaya S. Building resilient health systems in Africa beyond the COVID-19 pandemic response. BMJ Glob Health. 2021;6(6). doi:10.1136/BMJGH-2021-006108.
22. Chianumba EC, Ikhalea N, Mustapha AY, Forkuo AY, Osamika D. A conceptual framework for leveraging big data and AI in enhancing healthcare delivery and public health policy. IRE J. 2021;5(6):303–10.
23. Ogeawuchi JC, Uzoka AC, Abayomi AA, Agboola OA, Gbenle P. Innovations in Data Modeling and Transformation for Scalable Healthcare Intelligence on Modern Cloud Platforms. Healthc Anal. 2021;45(45 SP 45–45). Available: https://www.irejournals.com/paper-details/1708319
24. Nikolopoulos K, Buxton S, Khammash M, Stern P. Forecasting branded and generic pharmaceuticals. Int J Forecast. 2016;32(2):344–57. doi:10.1016/J.IJFORECAST.2015.08.001.
25. Waako PJ, et al. Existing capacity to manage pharmaceuticals and related commodities in East Africa: An assessment with specific reference to antiretroviral therapy. Hum Resour Health. 2009;7. doi:10.1186/1478-4491-7-21.
26. Egger D, Ollier E. Managing the health millennium development goals - the challenge of management

strengthening: lessons from three countries. Making Health Systems Work; 2007.
27. Patton M. Qualitative Research & Evaluation Methods. 3rd ed. Sage Publications; 2002.
28. Adekunle BI, Chukwuma-Eke EC, Balogun ED, Ogunsola KO. A predictive modeling approach to optimizing business operations: A case study on reducing operational inefficiencies through machine learning. Int J Multidiscip Res Growth Eval. 2021;2:21.
29. Ogunsola KO, Balogun ED, Ogunmokun AS. Enhancing financial integrity through an advanced internal audit risk assessment and governance model. Int J Multidiscip Res Growth Eval. 2021;2:21.
30. Vledder M, Friedman J, Sjöblom M, Brown T, Yadav P. Improving Supply Chain for Essential Drugs in Low-Income Countries: Results from a Large Scale Randomized Experiment in Zambia. Health Syst Reform. 2019;5(2):158–77. doi:10.1080/23288604.2019.1596050.
31. Adeleke IT, Suleiman-Abdul QB, Aliyu A, Ishaq IA, Adio RA. Deploying unqualified personnel in health records practice: Role substitution or quackery? Implications for health services delivery in Nigeria. Health Inf Manag J. 2019;48(3):152–6. doi:10.1177/1833358318800459.
32. Alonge EO, Eyo-Udo NL, Ubamadu CB, Daraojimba AI. Digital Transformation in Retail Banking to Enhance Customer Experience and Profitability. 2021;1.
33. Chianumba EC, Ikhalea N, Mustapha AY, Forkuo AY, Osamika D. A conceptual framework for leveraging big data and AI in enhancing healthcare delivery and public health policy. IRE J. 2021;5(6):303–10.
34. Bhatnagar A. Health worker motivation: individual, organizational and cultural factors. World Health Organization; 2017.
35. Capacity Development: Practice Note. UNDP; 2008.
36. Using Training to Build Capacity for Development. 2008. doi:10.1596/978-0-8213-7378-1.
37. Oluoha OM, Odeshina A, Reis O, Okpeke F, Attipoe V, Orieno O. Development of a Compliance-Driven Identity Governance Model for Enhancing Enterprise Information Security. Iconic Res Eng J. 2021;4(11):310–24. Available: https://www.irejournals.com/paper-details/1702715
38. Onifade AY, Ogeawuchi JC, Abayomi AA, Agboola OA, George OO. A Conceptual Framework for Integrating Customer Intelligence into Regional Market Expansion Strategies. Iconic Res Eng J. 2021;5(2):189–205. Available: https://www.irejournals.com/paper-details/1708471
39. Vermaak H. Working Interactively with Causal Loop Diagrams: Intervention Choices and Paradoxes in Practical Applications. Wiley; 2007.
40. Ijsselmuiden DMHG. Africa's neglected area of human resources for health research – the way forward. SAMJ. 2012;102(4):228–33.
41. Mgbame CA, Akpe OE, Abayomi AA, Ogbuefi E, Adeyelu OO. Barriers and Enablers of Healthcare Analytics Tool Implementation in Underserved Healthcare Communities. Healthc Anal. 2020;45(45 SP 45–45). Available: https://www.irejournals.com/paper-details/1708221
42. Omar IA, Jayaraman R, Debe MS, Salah K, Yaqoob I, Omar M. Automating Procurement Contracts in the Healthcare Supply Chain Using Blockchain Smart Contracts. IEEE Access. 2021;9:37397–409. doi:10.1109/ACCESS.2021.3062471.
43. Fayoumi A, Williams R. An integrated socio-technical enterprise modelling: A scenario of healthcare system analysis and design. J Ind Inf Integr. 2021;23:100221. doi:10.1016/J.JII.2021.100221.
44. Komi LS, Chianumba EC, Yeboah A, Forkuo DO, Mustapha AY. Advances in Community-Led Digital Health Strategies for Expanding Access in Rural and Underserved Populations. 2021.
45. Mustapha AY, Chianumba EC, Forkuo AY, Osamika D, Komi LS. Systematic Review of Digital Maternal Health Education Interventions in Low-Infrastructure Environments. Int J Multidiscip Res Growth Eval. 2021;2.
46. Osho GO. Decentralized Autonomous Organizations (DAOs): A Conceptual Model for Community-Owned Banking and Financial Governance. Unknown Journal; 2020.
47. Omisola JO, Chima PE, Okenwa OK, Tokunbo GI. Green Financing and Investment Trends in Sustainable LNG Projects A Comprehensive Review. Unknown Journal; 2020.
48. Seims L, Cheburet S, Dedzo M. Leadership and management to empower the health workforce. In: DeLuca MA, Soucat A, editors. Transforming the global health workforce. 1st ed. New York University, College of Nursing; 2013.
49. Hailu DM, et al. Turn-over rate of academic faculty at the College of Health Sciences, Addis Ababa University: a 20-year analysis (1991 to 2011). Hum Resour Health. 2013;11(61):1–6.
50. Akpe OE, Mgbame AC, Ogbuefi E, Abayomi AA, Adeyelu OO. Bridging the Business Intelligence Gap in Small Enterprises: A Conceptual Framework for Scalable Adoption. Iconic Res Eng J. 2021;5(5):416–31. Available: https://www.irejournals.com/paper-details/1708222
51. Melville N, Kraemer K, Gurbaxani V. Information technology and organizational performance: An integrative model of IT business value. MIS Q. 2004;28(2):283–321. doi:10.2307/25148636.
52. See-To EWK, Ngai EWT. Customer reviews for demand distribution and sales nowcasting: a big data approach. Ann Oper Res. 2018;270(1–2):415–31. doi:10.1007/S10479-016-2296-Z.
53. Aguilar-Palacios C, Munoz-Romero S, Rojo-Alvarez JL. Cold-Start Promotional Sales Forecasting through Gradient Boosted-Based Contrastive Explanations. IEEE Access. 2020;8:137574–86. doi:10.1109/ACCESS.2020.3012032.
54. Akpe OE, Ogeawuchi JC, Abayomi AA, Agboola OA, Ogbuefi E. Systematic Review of Last-Mile Delivery Optimization and Procurement Efficiency in African Logistics Ecosystems. Iconic Res Eng J. 2021;5(6):377–88. Available: https://www.irejournals.com/paper-details/1708521
55. Hayatu N, Abayomi AA, Uzoka AC. Systematic Review of Cross-Border Collaboration in Telecom Projects Across Sub-Saharan Africa. Iconic Res Eng J. 2021;4(7):240–67. Available: https://www.irejournals.com/paper-details/1708633

56. Koumamba AP, Bisvigou UJ, Ngoungou EB, Diallo G. Health information systems in developing countries: case of African countries. BMC Med Inform Decis Mak. 2021;21(1). doi:10.1186/S12911-021-01597-5.
57. Maldonado S, Miranda J, Olaya D, Vásquez J, Verbeke W. Redefining profit metrics for boosting student retention in higher education. Decis Support Syst. 2021;143:113493. doi:10.1016/J.DSS.2021.113493.
58. Dieleman M, et al. Human resource management interventions to improve health workers' performance in low and middle income countries: a realist review. Health Res Policy Syst. 2009;7(7):1–13.
59. Analoui F, Danquah JK. Critical capacity development. 2017. doi:10.1007/978-3-319-47416-8.
60. Adebisi B, Aigbedion E, Ayorinde OB, Onukwulu EC. A Conceptual Model for Predictive Asset Integrity Management Using Data Analytics to Enhance Maintenance and Reliability in Oil & Gas Operations. Int J Multidiscip Res Growth Eval. 2021;2.
61. Onukwulu EC, Dienagha IN, Digitemie WN, Egbumokei PI. Framework for Decentralized Energy Supply Chains Using Blockchain and IoT Technologies. Iconic Res Eng J. 2021;4(12):329–54.
62. Onifade AY, Ogeawuchi JC, Abayomi AA, Agboola OA, George OO. Advances in Multi-Channel Attribution Modeling for Enhancing Marketing ROI in Emerging Economies. Iconic Res Eng J. 2021;5(6):360–76. Available: https://www.irejournals.com/paper-details/1708473
63. Akpe OE, Ogeawuchi JC, Abayomi AA, Agboola OA. Advances in Stakeholder-Centric Product Lifecycle Management for Complex, Multi-Stakeholder Energy Program Ecosystems. Healthc Anal. 2021;45(45 SP 45–45). Available: https://www.irejournals.com/paper-details/1708349
64. Daraojimba AI, Ojika FU, Owobu WO, Abieba OA, Esan OJ, Ubamadu BC. A Conceptual Framework for AI-Driven Digital Transformation: Leveraging NLP and Machine Learning for Enhanced Data Flow in Retail Operations. 2021. Available: https://www.researchgate.net/publication/390928712
65. Nacchia M, Fruggiero F, Lambiase A, Bruton K. A Systematic Mapping of the Advancing Use of Machine Learning Techniques for Predictive Maintenance in the Manufacturing Sector. Appl Sci. 2021;11(6):2546. doi:10.3390/APP11062546.
66. Zhu X, Ninh A, Zhao H, Liu Z. Demand Forecasting with Supply-Chain Information and Machine Learning: Evidence in the Pharmaceutical Industry. Prod Oper Manag. 2021;30(9):3231–52. doi:10.1111/POMS.13426/SUPPL_FILE/SJ-PDF-1-PAO-10.1111_POMS.13426.PDF.
67. Feaster WW, et al. Clinician Cognition and Artificial Intelligence in Medicine. In: Intelligence-Based Medicine: Artificial Intelligence and Human Cognition in Clinical Medicine and Healthcare. 2020. p. 193–266. doi:10.1016/B978-0-12-823337-5.00007-X.
68. Balogun ED, Ogunsola KO, Ogunmokun AS. A risk intelligence framework for detecting and preventing financial fraud in digital marketplaces. Iconic Res Eng J. 2021;4(8):134–49.
69. Onifade AY, Ogeawuchi JC, Abayomi AA, Agboola OA, George OO. A Conceptual Framework for Integrating Customer Intelligence into Regional Market Expansion Strategies. Iconic Res Eng J. 2021;5(2):189–205. Available: https://www.irejournals.com/paper-details/1708471
70. Ghaffar A, Ijsselmuiden C, Zicker F. Changing mindsets: Research capacity strengthening in low- and middle-income countries. Council on Health Research for Development (COHRED); 2010.
71. Boydell L. Partnerships: a literature review. 2007.
72. Morgan P. The idea and practice of systems thinking and their relevance for capacity development. ECDPM; 2005.
73. Topp S. Health worker performance, practice and improvement. World Health Organization; 2017.
74. Alonge EO, Eyo-Udo NL, Ubanadu BC, Daraojimba AI, Balogun ED, Ogunsola KO. Enhancing data security with machine learning: A study on fraud detection algorithms. J Front Multidiscip Res. 2021;2(1):19–31. doi:10.54660/.IJFMR.2021.2.1.19-31.
75. Adekunle BI, Chukwuma-Eke EC, Balogun ED, Ogunsola KO. Machine learning for automation: Developing data-driven solutions for process optimization and accuracy improvement. Mach Learn. 2021;2(1).
76. Egbuhuzor NS, Ajayi AJ, Akhigbe EE, Agbede OO, Ewim CPM, Ajiga DI. Cloud-based CRM systems: Revolutionizing customer engagement in the financial sector with artificial intelligence. Int J Sci Res Arch. 2021;3(1):215–34. doi:10.30574/ijsra.2021.3.1.0111.
77. Balogun ED, Ogunsola KO, Samuel A. A cloud-based data warehousing framework for real-time business intelligence and decision-making optimization. Int J Bus Intell Framew. 2021;6(4):121–34.
78. Chahal D, Mishra M, Palepu S, Singhal R. Performance and cost comparison of cloud services for deep learning workload. ICPE 2021 - Companion of the ACM/SPEC International Conference on Performance Engineering. 2021. p. 49–55. doi:10.1145/3447545.3451184.
79. Okolie CI, Hamza O, Eweje A, Collins A, Babatunde GO, Ubamadu BC. Leveraging Digital Transformation and Business Analysis to Improve Healthcare Provider Portal. Iconic Res Eng J. 2021;4(10):253–7.
80. Leung NHZ, Chen A, Yadav P, Gallien J. The impact of inventory management on stock-outs of essential drugs in sub-Saharan Africa: Secondary analysis of a field experiment in Zambia. PLoS One. 2016;11(5). doi:10.1371/JOURNAL.PONE.0156026.
81. Topaz M, Seger DL, Slight SP, et al. Rising drug allergy alert overrides in electronic health records: an observational retrospective study of a decade of experience. JAMA. 2016;23:601–8.
82. Abisoye A, Akerele JI. A High-Impact Data-Driven Decision-Making Model for Integrating Cutting-Edge Cybersecurity Strategies into Public Policy, Governance, and Organizational Frameworks. Int J Multidiscip Res Growth Eval. 2021;2(1):623–37. doi:10.54660/.IJMRGE.2021.2.1.623-637.
83. Hayatu N, Abayomi AA, Uzoka AC. Advances in Managed Services Optimization for End-to-End Network Performance in High-Density Mobile Environment. Iconic Res Eng J. 2021;3(9):301–22. Available: https://www.irejournals.com/paper-details/1708634
84. Hayatu N, Abayomi AA, Uzoka AC. Systematic Review

of Cross-Border Collaboration in Telecom Projects Across Sub-Saharan Africa. Iconic Res Eng J. 2021;4(7):240–67. Available: https://www.irejournals.com/paper-details/1708633
85. Brynjolfsson E, Jin W, McElheran K. The power of prediction: predictive analytics, workplace complements, and business performance. Bus Econ. 2021;56(4):217–39. doi:10.1057/S11369-021-00224-5/TABLES/5.
86. Ajiga DI. Strategic framework for leveraging artificial intelligence to improve financial reporting accuracy and restore public trust. Int J Multidiscip Res Growth Eval. 2021.
87. Dienagha IN, Onyeke FO, Digitemie WN, Adewoyin MA. Strategic reviews of greenfield gas projects in Africa: Lessons learned for expanding regional energy infrastructure and security. GSC Adv Res Rev. 2021;8(1):187–95. doi:10.30574/gscarr.2021.8.1.0156.
88. Determinants of effective organisational capacity training: lessons from a training programme on health workforce development with participants from three African countries. BMC Public Health. [Online]. Available: https://link.springer.com/article/10.1186/s12889-019-7883-x
89. Taylor P, Clarke P. Capacity for a change: document based on outcomes of the 'capacity collective' workshop Dunford House, 25–27 September, 2007. Institute of Development Studies; 2008.
90. Ashiedu BI, Ogbuefi E, Nwabekee S, Ogeawuchi JC, Abayomi AA. Developing Financial Due Diligence Frameworks for Mergers and Acquisitions in Emerging Telecom Markets. Iconic Res Eng J. 2020;4(1):183–96. Available: https://www.irejournals.com/paper-details/1708562
91. Bihani D, Ubamadu BC, Daraojimba AI, Osho GO, Omisola JO. AI-Enhanced Blockchain Solutions: Improving Developer Advocacy and Community Engagement through Data-Driven Marketing Strategies. Iconic Res Eng J. 2021;4(9).
92. Stake R. Multiple case study analysis. The Guilford Press; 2006.
93. Merriam S. Qualitative research: a guide to design and implementation: revised and expanded from qualitative research and case study applications in education. Jossey-Bass; 2009.
94. Komi LS, Chianumba EC, Yeboah A, Forkuo DO, Mustapha AY. A Conceptual Framework for Telehealth Integration in Conflict Zones and Post-Disaster Public Health Responses. 2021.
95. Chen Z, et al. of medical features and risk prediction of acute kidney injury for critical patients using temporal electronic health record data with attention-based neural network. Front Med. 2021;8. doi:10.3389/FMED.2021.658665/FULL.
96. Komi LS, Chianumba EC, Yeboah A, Forkuo DO, Mustapha AY. Advances in Public Health Outreach Through Mobile Clinics and Faith-Based Community Engagement in Africa. 2021.
97. Omisola JO, Etukudoh EA, Okenwa OK, Tokunbo GI. Geosteering Real-Time Geosteering Optimization Using Deep Learning Algorithms Integration of Deep Reinforcement Learning in Real-time Well Trajectory Adjustment to Maximize. Unknown Journal; 2020.
98. Osho GO, Omisola JO, Shiyanbola JO. A Conceptual Framework for AI-Driven Predictive Optimization in Industrial Engineering: Leveraging Machine Learning for Smart Manufacturing Decisions. Unknown Journal; 2020.
99. Ashiedu BI, Ogbuefi E, Nwabekee S, Ogeawuchi JC, Abayomi AA. Leveraging Real-Time Dashboards for Strategic KPI Tracking in Multinational Finance Operations. Iconic Res Eng J. 2021;4(8):189–205. Available: https://www.irejournals.com/paper-details/1708537
100. Uzoka AC, Ogeawuchi JC, Abayomi AA, Agboola OA, Gbenle TP. Advances in Cloud Security Practices Using IAM, Encryption, and Compliance Automation. Iconic Res Eng J. 2021;5(5):432–56. Available: https://www.irejournals.com/paper-details/1708519
101. Hayatu N, Abayomi AA, Uzoka AC. Advances in Managed Services Optimization for End-to-End Network Performance in High-Density Mobile Environment. Iconic Res Eng J. 2021;3(9):301–22. Available: https://www.irejournals.com/paper-details/1708634
102. Alonge EO, Eyo-Udo NL, Ubanadu BC, Daraojimba AI, Balogun ED. Enhancing data security with machine learning: A study on fraud detection algorithms. J Data Secur Fraud Prev. 2021;7(2):105–18.
103. Adekunle BI, Chukwuma-Eke EC, Balogun ED, Ogunsola KO. Machine learning for automation: Developing data-driven solutions for process optimization and accuracy improvement. Mach Learn. 2021;2(1):18.
104. Ogunmokun AS, Balogun ED, Ogunsola KO. A Conceptual Framework for AI-Driven Financial Risk Management and Corporate Governance Optimization. Int J Multidiscip Res Growth Eval. 2021;2.
105. Johnston LSVB, et al. An analysis of the adoption and implementation of breastfeeding policies in Washington state clinics. J Community Med Health Educ. 2017;7(3):1–9.
106. Chen H. Theory-driven evaluation: Conceptual framework, application and advancement. Springer Fachmedien Wiesbaden; 2012.
107. Wu S, Legido-Quigley H, Spencer J, Coker RJ, Khan MS. Designing evaluation studies to optimally inform policy: What factors do policy-makers in China consider when making resource allocation decisions on healthcare worker training programmes? Health Res Policy Syst. 2018;16(1). doi:10.1186/S12961-018-0292-2.
108. Terry N. Existential challenges for healthcare data protection in the United States. Ethics Med Public Health. 2017;3(1):19–27. doi:10.1016/J.JEMEP.2017.02.007.