Journal Website

Article history:
Received 03 January 2024
Revised 25 February 2024
Accepted 17 March 2024
Published online 07 April 2024

International Journal of Education and Cognitive Sciences

Volume 5, Issue 1, pp 60-68

E-ISSN: 3041-8828

Identifying the Components of a Skill-Based In-Service Training Model in the Education Department of the Ministry of Health, Treatment, and Medical Education

Zahra. Bahrevar[1], Fatemeh. Hamidifar[2]*, Yalda. Delgoshai[3], Abbas. Khorshidi[3]

1. PhD student, Department of Educational Management, Central Tehran Branch, Islamic Azad University, Tehran, Iran.
2. Assistant Professor, Department of Educational Management, Central Tehran Branch, Islamic Azad University, Tehran, Iran.
3. Assistant Professor, Department of Educational Management, Central Tehran Branch, Islamic Azad University, Tehran, Iran.
4. Full Professor, Department of Educational Management, Central Tehran Branch, Islamic Azad University, Tehran, Iran.

*** Corresponding author email address**: fatemehhamidifar@gmail.com

A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Bahrevar, Z., Hamidifar, F., Delgoshai, Y., Khorshidi, A. (2024). Identifying the Components of a Skill-Based In-Service Training Model in the Education Department of the Ministry of Health, Treatment, and Medical Education. *International Journal of Education and Cognitive Sciences*, *5*(1), 60-68.
https://doi.org/10.61838/kman.ijecs.5.1.8

A B S T R A C T

Purpose: The objective of this study was to identify the critical components and dimensions necessary for developing a skill-based in-service training model tailored to the Education Department of the Ministry of Health, Treatment, and Medical Education in Iran. The goal was to provide a structured framework that enhances the competencies of healthcare professionals and aligns with the dynamic needs of the healthcare system.

Methodology: This qualitative study employed semi-structured interviews with a purposive sample of 11 experts, including university professors and specialists in policy-making, human resources, and educational planning. Participants were selected based on their extensive experience and expertise in the relevant fields. The data were analyzed using MaxQDA software, and theoretical saturation was achieved. The key components and dimensions were identified through thematic analysis, ensuring a comprehensive understanding of the essential elements for effective skill-based training.

Findings: The study identified several critical components for an effective skill-based in-service training model: needs identification, goal setting, structure determination, content determination, human resources, financial resources, physical resources, technological resources, implementation, planning, and evaluation. Key indicators included collaborative needs assessment, alignment of training objectives with organizational goals, practical and hands-on training content, the involvement of experienced instructors, and adequate financial and physical resources. The findings highlight the importance of a comprehensive and integrated approach to training that addresses both theoretical and practical aspects.

Conclusion: This study provides a structured framework for developing skill-based in-service training programs in the healthcare sector. By incorporating a thorough needs assessment, aligning training with organizational goals, emphasizing practical content, engaging experienced instructors, and ensuring adequate resources, healthcare organizations can enhance the competencies of their professionals. Continuous evaluation and feedback mechanisms are crucial for maintaining the effectiveness of the training programs. These findings offer valuable insights for policymakers and educators in designing and implementing effective in-service training models.

Keywords: *Skill-based training, in-service training, healthcare education, training model, qualitative research, needs assessment, educational planning, healthcare professionals.*

1. Introduction

training for healthcare professionals is paramount. The effectiveness of in-service training programs hinges on their ability to adapt to the dynamic needs of the healthcare system, ensuring that professionals are well-equipped to handle the complexities of modern medical practice (Devajit & Haradhan Kumar, 2022; Heidari et al., 2024; Hoseini, 2023; Qiu & Piskorz-Ryń, 2024; Rao & Elias-Medina, 2024).

The importance of skill-based training in healthcare is well-documented. According to Ameme et al. (2016), training frontline healthcare workers in public health surveillance and disease outbreak investigation is crucial for improving health outcomes (Ameme et al., 2016). Similarly, Schneider et al. (2011) highlight the significance of applied epidemiology training programs in building a competent global public health workforce. These programs underscore the need for a comprehensive training model that addresses both the theoretical and practical aspects of healthcare education.

A robust training model must incorporate various components, including needs assessment, goal setting, content development, and evaluation. The process begins with a thorough needs assessment to identify the gaps in skills and knowledge among healthcare professionals. As Devadason, Subramaniam, and Daniel (2010) point out, understanding these gaps is essential for integrating relevant skills into the formal curriculum (Devadason et al., 2010). The alignment of training objectives with organizational goals is another critical aspect, as emphasized by Lane and Brown (2011) in their discussion on nephrology training programs (Lane & Brown, 2011).

for providing a conducive learning environment (Heidari et al., 2024). Sidhu et al. (2007) demonstrate the effectiveness of laboratory-based training in improving vascular anastomosis skills, illustrating the importance of well-equipped training facilities (Sidhu et al., 2007).

The implementation of training programs must be carefully planned and executed. This involves a blend of direct (in-person) and indirect (virtual) teaching methods, as well as the organization of workshops, seminars, and educational camps (Hennessy et al., 2022; Kazemi & Ashrafi, 2014; Lucas et al., 2021). Bartels et al. (2013) discuss the benefits of activating older adults with serious mental illness for collaborative primary care visits, highlighting the need for diverse training approaches to cater to different learning styles and needs (Bartels et al., 2013).

n today's rapidly evolving healthcare environment, the need for continuous professional development and skill-based

The content of training programs plays a pivotal role in ensuring their effectiveness. Offiah et al. (2019) emphasize the importance of simulation training in medical education, noting that such hands-on experiences enhance the retention of clinical skills among medical students (Offiah et al., 2019). Similarly, Bashankaev, Baido, and Wexner (2010) review various simulation training methods and their impact on surgical education, highlighting the need for high-fidelity training environments that mimic real-world scenarios (Bashankaev et al., 2010).

Human resources, particularly the expertise of instructors, are crucial for the success of training programs (Ghorashi et al., 2023; Heidari et al., 2024; Tursunbayeva, 2019). Little et al. (2005) discuss the Skilled Counselor Training Model, which focuses on skills acquisition, self-assessment, and cognitive complexity. This model underscores the importance of experienced instructors who can effectively transfer knowledge and skills to trainees (Little et al., 2005). Additionally, Krimshtein et al. (2011) highlight the role of interdisciplinary communication training for nurses in improving patient care in intensive care units, further emphasizing the need for skilled educators (Krimshtein et al., 2011).

Financial and physical resources are also essential components of a successful training model. Adequate funding is necessary to procure both hardware and software equipment, as well as to hire skilled instructors. The availability of suitable physical spaces for training, as well as the necessary technological infrastructure, such as simulation labs and virtual reality tools, are critical

Finally, the evaluation of training programs is crucial for ensuring their effectiveness and for making necessary adjustments (Golabchi et al., 2024; Hamidi et al., 2024; Heidari et al., 2024; Kashmari et al., 2024). Traicoff et al. (2008) emphasize the importance of developing a standard curriculum for Field Epidemiology Training Programs (FETP), which includes continuous evaluation and feedback mechanisms (Traicoff et al., 2008). Similarly, Roffers, Cooper, and Sultanoff (1988) explore the application of counseling skills in actual client interviews, demonstrating the need for practical assessments to gauge the effectiveness of training (Roffers et al., 1988).

The literature underscores the importance of a well-rounded approach to in-service training, incorporating various elements that contribute to the overall effectiveness

E-ISSN: 3041-8828

of the program. As highlighted by Ash et al. (2019), the theoretical underpinnings and proposed mechanisms of cognitively-based compassion training provide a framework for understanding the impact of emotional and cognitive factors on skill acquisition. This perspective is particularly relevant in the healthcare context, where empathy and communication skills are as crucial as technical competencies (Ash et al., 2019). Furthermore, Croock et al. (2002) discuss the tools for training design and evaluation, emphasizing the need for a systematic approach to developing and assessing training programs. This aligns with the objective of this study to create a structured model that not only addresses the immediate training needs but also incorporates mechanisms for ongoing evaluation and improvement (Croock et al., 2002).

In summary, this study aims to develop a comprehensive skill-based in-service training model for the Education Department of the Ministry of Health, Treatment, and Medical Education in Iran. By incorporating a thorough needs assessment, aligning training objectives with organizational goals, developing relevant content, leveraging experienced instructors, ensuring adequate financial and physical resources, and implementing robust evaluation mechanisms, this model seeks to enhance the competencies of healthcare professionals and improve health outcomes. The findings from this study will provide valuable insights for policymakers and educators in designing and implementing effective in-service training programs that meet the evolving needs of the healthcare sector.

2. Methods and Materials

2.1. Study Design and Participants

This qualitative research aimed to identify the components of a skill-based in-service training model in the Education Department of the Ministry of Health, Treatment, and Medical Education. The study was conducted using semi-structured interviews, and data analysis was performed with MaxQDA software until theoretical saturation was achieved.

The statistical population included all university professors and specialists in the fields of policy-making, human resources, and educational planning employed in the Education Department of the Ministry of Health, Treatment, and Medical Education, the University of Applied Science and Technology, and the Technical and Vocational Training Organization in the academic year 2021-2022. Participants were selected based on the following inclusion criteria:

A minimum of three years of relevant work experience, teaching, study, and in-service training related to the subject.

Education in fields such as Educational Management, Higher Education Management, Educational Planning, etc.

Sufficient expertise and experience in in-service training, evidenced by publishing articles, books, or research projects.

Holding at least a Master's degree in Educational Management, Higher Education Management, Educational Planning, or related fields.

2.2. Data Collection

Data were collected through semi-structured interviews with selected participants. The interview guide was developed based on a comprehensive review of the literature and expert opinions. Each interview lasted between 60 to 90 minutes and was conducted either in person or virtually, depending on the participants' preferences and availability.

2.3. Data Analysis

The interviews were recorded and transcribed verbatim. The data were then analyzed using MaxQDA software. The analysis process involved coding the data, identifying themes, and categorizing them into broader components of the skill-based in-service training model. Theoretical saturation was considered achieved when no new themes or categories emerged from the data.

3. Findings and Results

The study included 11 participants with diverse backgrounds in educational planning, public management, human resource management, and educational technology, holding various positions in the Ministry of Health, Treatment, and Medical Education, universities, and private educational companies. The participants' academic qualifications ranged from Master's degrees to PhDs, with significant experience in their respective fields. Out of the 11 participants, 4 were women and 7 were men, with work experience ranging from 20 to 52 years. The participants included 2 educational planners (1 female, 1 male), 4 public managers (all male), 2 human resource managers (all male), 1 technology manager (male), and 2 educational managers (both female). This demographic diversity provided a comprehensive perspective on the essential components and dimensions required for a successful skill-based in-service

E-ISSN: 3041-8828

training model, with participants' roles ranging from senior planners and team members in skill-based training programs to professors and administrative experts.

Table 1

Open Codes (Indicators) and Axial Codes (Components and Dimensions) Derived from Expert Interviews

Dimensions	Components	Indicators
Needs	Identifying needs	Determining job needs
		Collaboration of all employees in the educational needs assessment process
		Determining the difference between existing and desired competencies
	Goal setting	Alignment of organizational goals and strategies with educational needs
		Determining the overall objectives and behaviors of the training course
		Aligning organizational skill training activities with changes
	Structure determination	Supportive organizational culture
		Alignment of laws and regulations with the implementation of skill-based training programs
		Existence of educational contracts and MOUs between the ministry and reputable educational centers
	Content determination	Content based on teamwork
		Workshop, operational, and laboratory content
		Publishable content and findings
Resources	Human	Availability of expert instructors with communication skills
		Availability of expert instructors with technological skills
		Availability of expert instructors with practical experience and background
		Availability of expert instructors familiar with modern teaching methods
	Financial	Budget for procuring hardware equipment
		Budget for procuring software equipment
		Budget for hiring skilled instructors
	Physical	Availability of physical space
		Infrastructure for group training
	Technological	Availability of intelligent software
		Expert instructors with technological skills
		Availability of simulation capabilities in skill training
		Availability of virtual and augmented reality in skill training
Implementation	Teaching methods	Direct/in-person
		Indirect/virtual
		Holding skill workshops and seminars
		Conducting educational camps aligned with needed skills
		Learner-centered education
	Planning	Pilot execution
		Final execution
Evaluation	Self-assessment	Self-awareness
		Organization-centered
		Colleague-centered

E-ISSN: 3041-8828

Norm-based	Existence of skill tests
	Existence of standard tests
	Existence of documents for comparing test scores across different classes
Criterion-based	Continuous evaluation of the impact of training on learners' performance and skills at least six months after the course
	Evaluation of allocated credit resources for training
	Evaluation of space and facilities appropriate for skill-based in-service training
	Evaluation of the content of skill-based in-service training
	Evaluation of instructors' skills and qualifications by a team

The findings from the semi-structured interviews with experts revealed several key components and dimensions crucial for developing a skill-based in-service training model in the Education Department of the Ministry of Health, Treatment, and Medical Education. Each subcategory is discussed below, supported by quotations from the interviewees to illustrate the insights gathered.

Identifying Needs: The process of determining job needs involves collaboration among all employees in the educational needs assessment process. One interviewee emphasized, "The involvement of every employee in identifying educational needs ensures that the training is relevant and comprehensive." Additionally, identifying the difference between existing and desired competencies is crucial for tailoring the training programs. Another participant noted, "Understanding the gap between current skills and the desired level of competence helps in designing effective training modules."

Goal Setting: Ensuring alignment between organizational goals and educational needs is essential for the success of training programs. This involves setting overall objectives and behaviors for the training courses. An expert mentioned, "The goals of the training must be in line with the strategic objectives of the organization to be truly effective." Furthermore, aligning organizational skill training activities with changes in the industry is vital to keep the training relevant.

Structure Determination: A supportive organizational culture and alignment of laws and regulations with the implementation of skill-based training programs are critical. One interviewee stated, "A supportive culture and favorable policies make it easier to implement new training initiatives." Additionally, having educational contracts and MOUs between the ministry and reputable educational centers ensures the credibility and quality of the training programs.

Content Determination: The content of the training must be based on teamwork, workshop, operational, and laboratory activities. An expert highlighted, "Hands-on, practical content is more effective in skill development than theoretical knowledge alone." The content should also be publishable, ensuring transparency and the sharing of knowledge.

Human Resources: The availability of expert instructors with communication, technological, and practical experience is essential. One participant remarked, "Instructors with real-world experience and strong communication skills can significantly enhance the learning experience." Furthermore, instructors familiar with modern teaching methods are necessary to provide high-quality training.

Financial Resources: Adequate budget for procuring hardware and software equipment and hiring skilled instructors is necessary. An interviewee mentioned, "Without sufficient financial resources, it's challenging to provide the necessary tools and hire qualified instructors."

Physical Resources: Availability of appropriate physical space and infrastructure for group training is crucial. One expert noted, "A well-equipped physical space is fundamental for conducting effective training sessions."

Technological Resources: The availability of intelligent software and simulation capabilities, including virtual and augmented reality, is important for modern skill training. An expert stated, "Advanced technologies like VR and AR can create immersive learning environments that enhance skill acquisition."

Implementation: The teaching methods should include both direct (in-person) and indirect (virtual) approaches, along with holding skill workshops, seminars, and educational camps. One participant emphasized, "A blended approach that combines in-person and virtual training is most effective in today's context."

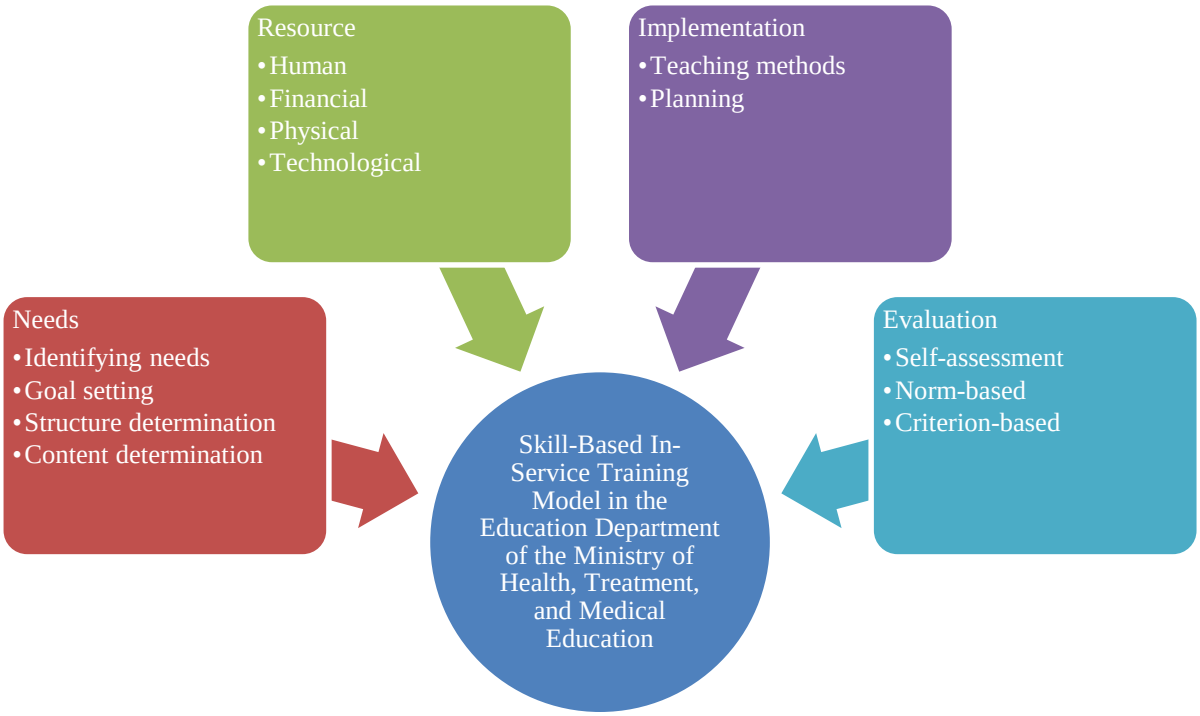
E-ISSN: 3041-8828

Planning: Effective planning involves both pilot and final execution of the training programs. An expert remarked, "Pilot testing allows us to refine the training program before full-scale implementation."

Evaluation: Self-assessment, organization-centered, colleague-centered, norm-based, and criterion-based evaluations are necessary to measure the effectiveness of the training. One interviewee highlighted, "Continuous evaluation and feedback are crucial for improving the training programs over time." This includes skill tests, standard tests, and comparison of test scores across different classes, as well as continuous evaluation of the impact of training on learners' performance and skills at least six months after the course. Additionally, evaluating allocated credit resources, physical space and facilities, training content, and instructors' skills and qualifications by a team ensures comprehensive assessment and improvement of the training programs.

Figure 1

Final Conceptual Model



4. Discussion and Conclusion

The findings from this study have identified critical components and dimensions necessary for developing a skill-based in-service training model tailored to the Education Department of the Ministry of Health, Treatment, and Medical Education in Iran. The identified components include needs identification, goal setting, structure determination, content determination, human resources, financial resources, physical resources, technological resources, implementation, planning, and evaluation. These components were further elaborated into specific indicators, such as the involvement of all employees in the educational needs assessment process, alignment of organizational goals with training objectives, availability of expert instructors, and the use of advanced technological tools like simulation and virtual reality for training.

The data revealed that a comprehensive needs assessment is foundational to effective training programs, ensuring that the skills being taught are directly relevant to the current and future demands of the healthcare environment. This aligns with the findings of Ameme et al. (2016), who emphasized the importance of tailored training programs in improving health outcomes (Ameme et al., 2016). The goal-setting process is crucial for aligning the training programs with the strategic objectives of the organization, ensuring that the training contributes to overall organizational effectiveness (Lane & Brown, 2011; Robison et al., 2021).

E-ISSN: 3041-8828

The content of the training must be practical and hands-on, focusing on teamwork and real-world applications. Offiah et al. (2019) demonstrated the effectiveness of simulation training in retaining clinical skills, which supports our finding that practical, operational, and laboratory-based content is essential (Offiah et al., 2019). The role of experienced instructors is critical, with Little et al. (2005) emphasizing the importance of skilled educators in enhancing training outcomes (Little et al., 2005). Financial and physical resources, including the availability of appropriate spaces and technological infrastructure, were also identified as vital components (Sidhu et al., 2007).

The importance of a thorough needs assessment in developing effective training programs cannot be overstated. Identifying the specific needs of healthcare professionals ensures that training programs are relevant and can effectively address the gaps in skills and knowledge. This finding is consistent with the work of Devadason, Subramaniam, and Daniel (2010), who highlighted the need for integrating relevant skills into the formal curriculum based on identified gaps (Devadason et al., 2010).

The alignment of training objectives with organizational goals ensures that the training programs are not only relevant but also contribute to the strategic objectives of the organization. This is crucial for the overall effectiveness of the training programs, as noted by Lane and Brown (2011) in their study on nephrology training programs. The goal-setting process ensures that the training is focused and directed towards achieving specific outcomes that are beneficial for both the individuals and the organization (Lane & Brown, 2011).

The content of the training programs must be practical and hands-on to ensure that the skills being taught can be directly applied in real-world scenarios. This finding is supported by Offiah et al. (2019), who found that simulation training enhances the retention of clinical skills among medical students. Practical, operational, and laboratory-based content provides learners with the opportunity to practice and refine their skills in a controlled environment before applying them in real-life situations (Offiah et al., 2019).

Experienced instructors play a crucial role in the success of training programs. As noted by Little et al. (2005), skilled educators are essential for effective training. They bring real-world experience and expertise to the training programs, ensuring that the learners receive high-quality education and guidance (Little et al., 2005). The availability of financial and physical resources is also critical for the success of training programs. Adequate funding ensures that the necessary tools and equipment are available, and suitable physical spaces provide a conducive learning environment.

The findings of this study are well-supported by previous research. For instance, the importance of a comprehensive needs assessment is echoed in the work of Ameme et al. (2016), who emphasized the need for tailored training programs to improve health outcomes (Ameme et al., 2016). Similarly, the alignment of training objectives with organizational goals is supported by Lane and Brown (2011), who noted the significance of aligning nephrology training with workforce, patient, and educational needs (Lane & Brown, 2011).

The necessity of practical, hands-on training content is reinforced by the findings of Offiah et al. (2019), who demonstrated the effectiveness of simulation training in retaining clinical skills (Offiah et al., 2019). The role of experienced instructors is further supported by Little et al. (2005), who emphasized the importance of skilled educators in enhancing training outcomes (Little et al., 2005). Finally, the critical role of financial and physical resources in the success of training programs is highlighted by Sidhu et al. (2007), who found that well-equipped training facilities are essential for effective skill acquisition (Sidhu et al., 2007).

This study has several limitations that should be acknowledged. First, the study relied on semi-structured interviews, which, while providing rich qualitative data, may be subject to interviewer bias and participant recall bias. Additionally, the sample size was relatively small and may not be representative of all healthcare professionals in the Education Department of the Ministry of Health, Treatment, and Medical Education. The study also focused on a specific context within Iran, which may limit the generalizability of the findings to other regions or healthcare systems.

Future research should aim to address these limitations by incorporating a larger and more diverse sample size to enhance the generalizability of the findings. Longitudinal studies could provide deeper insights into the long-term impacts of skill-based in-service training programs on healthcare professionals' performance and patient outcomes. Additionally, quantitative methods, such as surveys or experimental designs, could complement the qualitative findings and provide a more comprehensive understanding of the effectiveness of these training programs. Exploring the impact of specific components, such as technological tools and simulation training, on different healthcare specialties could also provide valuable insights for tailoring training programs to specific needs.

E-ISSN: 3041-8828

Based on the findings of this study, several practical recommendations can be made for the development and implementation of skill-based in-service training programs in the healthcare sector. Firstly, a thorough needs assessment should be conducted to identify the specific skills and knowledge gaps among healthcare professionals. This will ensure that the training programs are relevant and effectively address the identified needs. Secondly, training objectives should be aligned with organizational goals to ensure that the programs contribute to the strategic objectives of the organization. Practical, hands-on content should be emphasized to enhance skill acquisition and retention.

Furthermore, experienced instructors with real-world expertise should be engaged to provide high-quality training. Adequate financial and physical resources should be allocated to ensure the availability of necessary tools and conducive learning environments. Finally, continuous evaluation and feedback mechanisms should be implemented to monitor the effectiveness of the training programs and make necessary adjustments. By following these recommendations, healthcare organizations can develop effective skill-based in-service training programs that enhance the competencies of their professionals and improve health outcomes.

Acknowledgments

The cooperation of all participants in the research is thanked and appreciated.

Declaration of Interest

The authors of this article declared no conflict of interest.

Authors Contributions

All authors equally contributed.

Ethics principles

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

References

Ameme, D. K., Nyarko, K. M., Afari, E., Antara, S., Sackey, S. O., & Wurapa, F. (2016). Training Ghanaian Frontline Healthcare Workers in Public Health Surveillance and Disease Outbreak Investigation and Response. *Pan African Medical Journal*, *25*. https://doi.org/10.11604/pamj.supp.2016.25.1.6179

Ash, M. J., Harrison, T., Pinto, M. D., DiClemente, R. J., & Negi, L. T. (2019). A Model for Cognitively-Based Compassion Training: Theoretical Underpinnings and Proposed Mechanisms. *Social Theory & Health*, *19*(1), 43-67. https://doi.org/10.1057/s41285-019-00124-x

Bartels, S. J., Aschbrenner, K. A., Rolin, S. A., Hendrick, D. C., Naslund, J. A., & Faber, M. J. (2013). Activating Older Adults With Serious Mental Illness for Collaborative Primary Care Visits. *Psychiatric Rehabilitation Journal*, *36*(4), 278-288. https://doi.org/10.1037/prj0000024

Bashankaev, B., Baido, S., & Wexner, S. D. (2010). Review of Available Methods of Simulation Training to Facilitate Surgical Education. *Surgical Endoscopy*, *25*(1), 28-35. https://doi.org/10.1007/s00464-010-1123-x

Croock, M. B. M. d., Paas, F., Schlanbusch, H., & Merriënboer, J. V. (2002). ADAPTIT: Tools for Training Design and Evaluation. *Educational Technology Research and Development*, *50*(4), 47-58. https://doi.org/10.1007/bf02504984

Devadason, E. S., Subramaniam, T., & Daniel, E. G. S. (2010). Final Year Undergraduates' Perceptions of the Integration of Soft Skills in the Formal Curriculum: A Survey of Malaysian Public Universities. *Asia Pacific Education Review*, *11*(3), 321-348. https://doi.org/10.1007/s12564-010-9090-4

Devajit, M., & Haradhan Kumar, M. (2022). Development of Grounded Theory in Social Sciences: A Qualitative Approach. *Studies in Social Science & Humanities*, *1*(5), 13-24. https://www.paradigmpress.org/SSSH/article/view/342

Ghorashi, N., Ismail, A., Ghosh, P., Sidawy, A., & Javan, R. (2023). AI-Powered Chatbots in Medical Education: Potential Applications and Implications. *Cureus*, *15*(8), e43271. https://doi.org/10.7759/cureus.43271

Golabchi, H., Kiaee, M., & Kameli, M. J. (2024). Designing a Superior Service Delivery Model in Education to Enhance Public Satisfaction [Research Article]. *Iranian Journal of Educational Sociology*, *7*(1), 189-197. https://doi.org/10.61838/kman.ijes.7.1.18

Hamidi, A., Faghihi, A., & Teimoornezhad, K. (2024). Identifying and Ranking Factors Affecting Policymaking of Public Administrators' Education. *Public Management Researches*, *16*(62), 63-96. https://doi.org/10.22111/jmr.2022.42740.5807

Heidari, H., Doshman Ziari, E., Barzegar, N., Faghiharam, B., & Mehdizadeh, A. H. (2024). Designing an E-Learning Model for Health Tourism Marketing Case Study: Educational Healthcare Centers of Islamic Azad University, Tehran. *International Journal of Innovation Management and Organizational Behavior (IJIMOB)*, *4*(1), 20-27. https://doi.org/10.61838/kman.ijimob.4.1.3

Hennessy, S., D'Angelo, S., McIntyre, N., Koomar, S., Kreimeia, A., Cao, L., Brugha, M., & Zubairi, A. (2022). Technology Use for Teacher Professional Development in Low- and Middle-Income Countries: A systematic review. *Computers and Education Open*, *3*, 100080. https://doi.org/10.1016/j.caeo.2022.100080

Hoseini, M. (2023). Patient Experiences with AI in Healthcare Settings. *AI and Tech in Behavioral and Social Sciences*, *1*(3), 12-18. https://doi.org/10.61838/kman.aitech.1.3.3

Kashmari, A., Shahabizadeh, F., Ahi, G., & Mahmoudi Rad, A. (2024). Comparison of the Effectiveness of Cognitive-Behavioral Therapy Combined with Self-Compassion and Cognitive-Motor Activities Versus Cognitive-Motor Intervention Alone on Death Anxiety and Aging Perception in the Elderly. *Journal of Psychological Dynamics in Mood Disorders (PDMD)*, *3*(1), 86-99. https://doi.org/10.22034/pdmd.2024.453836.1083

E-ISSN: 3041-8828

Kazemi, A., & Ashrafi, M. (2014). In-service training programs for Iranian EFL teachers revisited. *International Journal of Asian Social Science*, *4*(10), 1062-1076. https://ideas.repec.org/a/asi/ijoass/v4y2014i10p1062-1076id2699.html

Krimshtein, N. S., Luhrs, C., Puntillo, K., Cortez, T. B., Livote, E., Penrod, J. D., & Nelson, J. E. (2011). Training Nurses for Interdisciplinary Communication With Families in the Intensive Care Unit: An Intervention. *Journal of Palliative Medicine*, *14*(12), 1325-1332. https://doi.org/10.1089/jpm.2011.0225

Lane, C., & Brown, M. (2011). Alignment of Nephrology Training With Workforce, Patient, and Educational Needs. *Clinical Journal of the American Society of Nephrology*, *6*(11), 2681-2687. https://doi.org/10.2215/cjn.02230311

Little, C., Packman, J., Smaby, M. H., & Maddux, C. D. (2005). The Skilled Counselor Training Model: Skills Acquisition, Self-Assessment, and Cognitive Complexity. *Counselor Education and Supervision*, *44*(3), 189-200. https://doi.org/10.1002/j.1556-6978.2005.tb01746.x

Lucas, M., Bem-Haja, P., Siddiq, F., Moreira, A., & Redecker, C. (2021). The relation between in-service teachers' digital competence and personal and contextual factors: What matters most? *Computers & Education*, *160*, 104052. https://doi.org/10.1016/j.compedu.2020.104052

Offiah, G., Ekpotu, L., Murphy, S., Kane, D., Gordon, A. D., O'Sullivan, M., Sharifuddin, S. F., Hill, A. D., & Condron, C. (2019). Evaluation of Medical Student Retention of Clinical Skills Following Simulation Training. *BMC Medical Education*, *19*(1). https://doi.org/10.1186/s12909-019-1663-2

Qiu, H., & Piskorz-Ryń, O. (2024). Understanding Patient Adherence to Hypertension Management Guidelines. *KMAN Counseling & Psychology Nexus*, *2*(1), 70-76. https://doi.org/10.61838/kman.psychnexus.2.1.11

Rao, A. R., & Elias-Medina, A. (2024). Designing an internet of things laboratory to improve student understanding of secure IoT systems. *Internet of Things and Cyber-Physical Systems*, *4*, 154-166. https://doi.org/10.1016/j.iotcps.2023.10.002

Robison, M. K., Unsworth, N., & Brewer, G. A. (2021). Examining the effects of goal-setting, feedback, and incentives on sustained attention. *Journal of Experimental Psychology: Human Perception and Performance*, *47*(6), 869-891. https://doi.org/10.1037/xhp0000926

Roffers, T., Cooper, B. A., & Sultanoff, S. M. (1988). Can Counselor Trainees Apply Their Skills in Actual Client Interviews? *Journal of Counseling & Development*, *66*(8), 385-388. https://doi.org/10.1002/j.1556-6676.1988.tb00893.x

Sidhu, R., Park, J., Brydges, R., MacRae, H., & Dubrowski, A. (2007). Laboratory-Based Vascular Anastomosis Training: A Randomized Controlled Trial Evaluating the Effects of Bench Model Fidelity and Level of Training on Skill Acquisition. *Journal of Vascular Surgery*, *45*(2), 343-349. https://doi.org/10.1016/j.jvs.2006.09.040

Traicoff, D., Walke, H., Jones, D., Gogstad, E. K., Imtiaz, R., & White, M. (2008). Replicating Success: Developing a Standard FETP Curriculum. *Public Health Reports*, *123*(1_suppl), 28-34. https://doi.org/10.1177/00333549081230s109

Tursunbayeva, A. (2019). Human Resource Technology Disruptions and Their Implications for Human Resources Management in Healthcare Organizations. *BMC Health Services Research*, *19*(1). https://doi.org/10.1186/s12913-019-4068-3

E-ISSN: 3041-8828