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Integrated Faculty Development, Support, and Retention Strategies for Distributed Academic Health Systems: A Scoping Review Protocol

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We use this protocol and it's working

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Keywords: faculty development, professional development, distributed education, multi-campus, academic health systems, faculty retention, faculty support, teaching faculty, medical education, retention strategies for distributed academic health system, distributed academic health system, distributed healthcare education systems challenge, distributed healthcare education system, distributed healthcare education, academic health system, integrated faculty development, strategies for faculty development, healthcare education systems challenge, faculty spread, healthcare education system, studies on faculty development, quality healthcare education at multiple training site, faculty spread across various location, faculty, healthcare education, faculty reaction, workforce readiness, quality healthcare education, retention strategy, multiple training site, main campus counterpart, workforce readiness in underserved area, retention, distributed site, distributed setting, scr guideline, learner experience

Abstract

Introduction: Distributed academic health systems depend on faculty spread across various locations to provide high-quality healthcare education at multiple training sites. Faculty at these dispersed sites often face professional isolation, limited development opportunities, unclear career paths, heavy workloads, and less support compared to their main campus counterparts. These issues lead to burnout, higher turnover rates (30% more at distributed sites), and inconsistent educational standards, which ultimately affect learner experiences and workforce readiness in underserved areas. Although these challenges are widely acknowledged, there is limited systematic evidence on effective, integrated strategies for faculty development, support, and retention in such distributed settings.

Purpose: This scoping review systematically examines integrated faculty development, support, and retention strategies employed in distributed academic health systems, focusing on their implementation and reported outcomes at various levels—faculty reactions, learning, behavioral changes, educational quality, and system-wide impacts.

Methods: Following Arksey and O'Malley's framework (with Levac's refinements) and PRISMA-ScR guidelines, this review will include studies on faculty development, support, or retention strategies focused on distributed healthcare education systems challenges. Studies must report outcomes in at least one category. A thorough search across seven databases and grey literature will inform a narrative synthesis, structured using the Kirkpatrick-Moore outcomes framework. Data extraction employs a tiered approach to ensure feasibility.

Guidelines

- PRISMA Extension for Scoping Reviews (PRISMA-ScR) Checklist
- Arksey and O'Malley Scoping Review Framework with Levac refinements
- PRESS (Peer Review of Electronic Search Strategies) guidelines
- Kirkpatrick-Moore outcomes framework for organizing faculty development outcomes
- Organizational support theory for retention strategies

Materials

- Computers with internet connection
- Reference management software (Mendeley/EndNote/Zotero)
- Covidence systematic review software for screening and data management
- Microsoft Word and Excel for data extraction and analysis
- Statistical software for descriptive analysis (SPSS/R/Stata)

Objectives

- 1 Explore integrated faculty development, support, and retention strategies used in distributed academic health systems.
 - 1.1 Identify types of faculty development programs (content areas, delivery modalities, organizational structures) implemented in distributed healthcare education systems.
 - 1.2 Describe faculty support structures (mentorship, communities of practice, technological infrastructure, administrative support) provided to faculty at distributed sites.
 - 1.3 Describe retention strategies (compensation models, career pathways, recognition systems, protected time, workload management) employed at distributed sites.
 - 1.4 Analyze reported outcomes across reaction/satisfaction, learning/competence, behavioral change, educational quality, and system-level domains (Kirkpatrick-Moore framework).
 - 1.5 Examine how development, support, and retention strategies are integrated within distributed systems.
 - 1.6 Identify barriers and facilitators influencing faculty development, support, and retention in distributed healthcare education systems.

Methodology Overview

- 2 Follow the methodological framework established by Arksey and O'Malley (2005), incorporating enhancements recommended by Levac et al. (2010).
- 3 Adhere to the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) guidelines.
- 4 Develop and register the protocol on protocols.io.
- 5 Use Kirkpatrick-Moore outcomes framework to organize faculty development outcomes across multiple levels.
- 6 Apply organizational support theory to understand retention factors.



Stage 1: Identify the research questions

- 7 Primary Research Question
 - 7.1 What integrated faculty development, support, and retention strategies are used in distributed academic health systems, and what outcomes are reported across reaction/satisfaction, learning/competence, behavioral change, educational quality, and system-level domains?
- 8 Secondary Research Questions
 - 8.1
 - What types of faculty development programs are implemented in distributed healthcare education systems to address distributed-specific challenges?
 - What faculty support structures are explicitly provided for faculty at distributed sites?
 - What retention strategies are employed to address the unique retention challenges of distributed sites?
 - How are faculty development, support, and retention strategies integrated or coordinated within distributed systems?
 - What barriers and facilitators influence the implementation, effectiveness, and sustainability of faculty strategies in distributed healthcare education systems?

Stage 2: Identify relevant studies

- 9 Databases: PubMed/MEDLINE, Embase, Scopus, CINAHL, Web of Science, ERIC, Google Scholar (first 200 results), grey literature sources.
- 10 Create the search strategy using three core concepts requiring education-specific context
 - 10.1 Concept 1 (Faculty Development/Support/Retention + Education):

Faculty development, professional development, teaching development, pedagogical development, clinical teaching, faculty mentorship, faculty support, faculty retention, career development) AND (teaching, education, pedagogy, curriculum, educational, instructional)
 - 10.2 Concept 2 (Distributed Setting):

Multi-site, distributed, multi-campus, decentralized, networked, regional, satellite campus, community-based, remote sites, geographically dispersed, rural training,

clinical training network, academic health system

10.3 Concept 3 (Healthcare Education):

Medical education, health professions education, nursing education, healthcare education, clinical education, allied health education, pharmacy education, dental education, graduate medical education

11 Adapt the search strategy for each database using appropriate controlled vocabulary (MeSH, Emtree) and syntax.

12 Sample PubMed Search Strategy:

((("faculty development" OR "professional development" OR "teaching development" OR "faculty mentorship" OR "faculty support" OR "faculty retention")

AND

("teaching" OR "education" OR "pedagogy" OR "curriculum"))

AND

("multi-site" OR "distributed" OR "multi-campus" OR "regional campus" OR "satellite campus" OR

"academic health system")

AND

("medical education"[MeSH] OR "health professions education" OR "nursing education" OR

"healthcare education" OR "faculty"))

AND

(2015:2025[dp])

13 Manually search grey literature, including conference proceedings (AMEE, AAMC, ICRE), MedEdPORTAL, and organizational reports.

Stage 3: Study selection

14 Include studies involving healthcare education faculty in distributed systems (full-time faculty, community-based educators, adjunct faculty, virtual faculty, educational leaders).

15 Include studies describing faculty development, retention, or support strategies in distributed healthcare education systems that address distributed-specific challenges.

16 Include studies that report outcomes related to:
(a) Faculty competency/skill development
(b) Faculty satisfaction/engagement/wellbeing

- (c) Faculty retention/turnover
- (d) Teaching quality/educational impact
- (e) Program feasibility/acceptability/sustainability.

- 17 Include studies focusing on health professions education (medicine, nursing, allied health, pharmacy, dentistry, public health).
- 18 Include studies employing any research design (quantitative, qualitative, mixed-methods, program descriptions).
- 19 Include grey literature sources such as conference proceedings, dissertations, and organizational reports if they provide sufficient methodological information.
- 20 Exclude studies focusing exclusively on single-site faculty development without multi-site implementation.
- 21 Exclude studies describing generic programs that coincidentally exist in multi-site systems but don't address distributed challenges.
- 22 Exclude studies focusing on student/learner development without faculty focus.
- 23 Exclude studies focusing exclusively on faculty research development without educational component.
- 24 Exclude opinion pieces, commentaries, or editorials without empirical data or program description.
- 25 Exclude studies that are in a non-English language.
- 26 Exclude studies published before 2015.

Stage 4: Data Charting

- 27 Develop the data extraction form using a tiered approach:
 - Tier 1 (all studies) captures core variables
 - Tier 2 (purposive subset 30-40%) captures detailed implementation.
- 27.1 Study Identification

- Study ID, authors, year, country
- Study design and methodology
- System characteristics (number of sites, site types, governance model)
- Faculty characteristics (types, professions, career stage, sample size)

27.2 Intervention Type and Description

- Intervention category: Faculty Development / Faculty Support / Faculty Retention / Integrated Approach
- Brief description
- Target population
- Delivery modality (in-person, online, hybrid, ongoing)

27.3 Faculty Development Programs (if applicable)

- Content areas (pedagogical, clinical teaching, scholarship, leadership, technology, IPE, other)
- Delivery modality and duration
- Organizational structure
- Distributed-specific design elements

27.4 Faculty Support Structures (if applicable)

- Mentorship programs
- Communities of practice
- Technology infrastructure
- Administrative support
- Resource access
- Communication systems

27.5 Faculty Retention Strategies (if applicable)

- Compensation/incentive models
- Promotion pathways
- Protected time
- Recognition mechanisms
- Workload management
- Career development opportunities

27.6 Integration Mechanisms

- How development, support, and retention connect
- Coordinated governance or strategic planning

27.7 Outcomes Reported (Kirkpatrick-Moore Framework)

For EACH outcome:

- Level 1 (Reaction/Satisfaction): Participant satisfaction, engagement, morale
- Level 2 (Learning/Competence): Knowledge, skills, confidence gains
- Level 3 (Behavioral Change): Teaching practice changes, method adoption
- Level 4a (Educational Quality): Teaching quality, student outcomes, scholarship
- Level 4b (System-Level): Retention rates, recruitment success, sustainability

For each: measurement method, timing, direction of findings, and statistical significance

27.8 Barriers and Facilitators

- Barriers by category (logistical, educational, technology, cultural, learner, site-specific)
- Facilitators by category
- Strategies to address barriers

27.9 Equity Considerations

- Access equity across sites
- Outcome equity across sites
- Resource equity across sites

27.10 Quality Indicators

- Needs assessment conducted (Y/N)
- Theoretical framework used (Y/N)
- Outcomes systematically measured (Y/N)
- Context adequately described (Y/N)
- Limitations acknowledged (Y/N)

28 Pilot the data extraction form on 10 studies and refine based on team consensus.

29 Two reviewers will independently extract 20% of studies; single reviewers will extract the remaining with 10% quality checks.

Stage 5: Collate, summarize, and report the results

30 Compile, summarize, and present extracted data using tables, figures, and visual formats.

31 Conduct narrative synthesis organized by:
(a) Faculty development program types and modalities



- (b) Faculty support structure models
- (c) Faculty retention strategy approaches
- (d) Outcomes by Kirkpatrick-Moore levels
- (e) Integration mechanisms
- (f) Barriers and facilitators
- (g) Equity analysis.

- 32 Create an outcomes heatmap showing intervention types × outcome levels × evidence quantity.
- 33 Develop a conceptual model for integrated faculty capacity building in distributed systems.
- 34 Identify knowledge gaps: underrepresented intervention types, outcome levels with insufficient evidence, and methodological limitations.

Stage 6 (Optional): Conduct Stakeholder Consultation

- 35 Engage faculty development experts to review the outcomes framework application and synthesis approach.
- 36 Consult with Dubai Health Flex Campus Network faculty to ensure relevance to distributed faculty experiences.

Dissemination

- 37 Submit the final manuscript to a peer-reviewed journal specializing in faculty development or medical education (target: JMIR Medical Education, Academic Medicine, Medical Teacher, Journal of Graduate Medical Education, Journal of Continuing Education in the Health Professions).
- 38 Present key findings at prominent national and international conferences (such as AMEE, AAMC, and ICRE).
- 39 Develop a practical toolkit for distributed faculty development based on findings.

Timeline

- 40
 - Month 1: Protocol registration, search validation, and extraction form development
 - Months 1-2: Database searches and citation management

- Months 3-4: Title/abstract screening
- Months 4-5: Full-text screening and subset identification
- Months 6-8: Tier 1 data extraction (all studies)
- Months 7-9: Tier 2 data extraction (detailed subset)
- Month 8: Mid-extraction calibration meeting
- Months 10-11: Data synthesis, framework development, visual creation
- Months 11-12: Manuscript preparation and submission

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