

CHAPTER 23

Faculty development for implementation of an EPA-based program

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Abstract

Faculty development, trainee orientation and stakeholder engagement are essential elements of change management in the implementation of EPAs. An effective strategy addresses stakeholder needs over the various stages of planning, piloting, and implementation of EPAs. It encompasses faculty and all other stakeholders, i.e., clinical supervisors and assessors, non-workplace-based teaching faculty, coaches or advisers for trainees' portfolios, members of clinical competence committees, administrators, program directors and other leaders. Best practices involve engaging with stakeholders as essential partners working toward a shared vision, building a sense of a community of practice, planning a range of activities in a continuous, dynamic, and enabling process, and including trainee development alongside faculty development.

This chapter introduces evolving conceptions of faculty development and identifies key principles and strategies to guide the design of an effective plan. A range of approaches is outlined from passive to active, with various modes of delivery including face-to-face and hybrid and self-directed learning. Factors to consider are discussed and the significance of context is acknowledged. The importance of resourcing faculty and other stakeholders and the need to make a business case supported by ongoing evaluation are highlighted. Three examples of strategies in practice illustrate some key ideas. An analysis of the specific needs of different stakeholder groups, with potential approaches and a directory of accessible digital resources to support faculty development, trainee orientation, and engagement with other stakeholders, is also provided.

How to cite this book chapter:

Boland J, Chen HC, Chou FC, Fitzpatrick J, Frick S. Faculty development for implementation of an EPA-based program. In: ten Cate O, Burch VC, Chen HC, Chou FC, Hennis MP. (Eds). *Entrustable Professional Activities and Entrustment Decision-Making in Health Professions Education*, Chapter 23, pp. 275–291. [2024] London: Ubiquity Press. DOI: <https://doi.org/10.5334/bdc.w>

This chapter uses cross-references to other chapters of the same book. For those who read this chapter as a standalone publication: all cross-references can be found at: <https://doi.org/10.5334/bdc>

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Introduction

The implementation of an EPA-based framework for health professions education requires a change in educational practices and culture that is beyond that often needed with typical curricular innovations. An EPA-based curriculum involves an interactive, intensive teaching, learning, and assessment culture that may be new to many of the members of the institution. A key element of change management is faculty development and the orientation of any other stakeholder groups, including trainees, managers, and administrative personnel. The vital importance of engagement and consultation with the wider stakeholder community is addressed in Chapter 22. Faculty development is described as all activities that health professionals pursue to improve their knowledge, skills, and behaviors as teachers and educators, as leaders and managers, and as researchers and scholars in both individual and group settings.¹ For the purpose of this chapter, other key stakeholders (such as trainees and administrators) are included in the discussion. Faculty development, while essential, is an often-underappreciated aspect of curricular reform.² Most challenging, arguably, is the cultural change required for the adoption of new practices including the impetus for change and the value of the proposed innovation. Many stakeholders may need to shift from the educational paradigm in which they were trained (for example, the shift from using proficiency scales and scoring rubrics to entrustment–supervision scales) and adapt their practices to support a curriculum that provides learning activities allowing assessment of the EPAs, with a focus on entrustment. Educational programs must allocate resources toward the faculty development that will support implementation of change not just in the curriculum but in stakeholder practices.

Moving to EPA-based training will involve changes in both curricular and assessment structures. First, outcome expectations are defined by a focus on units of work that may be entrusted to a competent trainee rather than on the competencies of a trainee. It relies heavily on the concept of entrustment and links decisions around the entrustment and supervision of trainees to assessment, longitudinal progression, and achievement of outcomes. This has consequences for how clinical supervisors and clinical sites engage with trainees. First, supervising clinicians need to be able to talk to trainees about trust and entrustment and use EPA descriptions to guide learning and teaching. Second, trainees need to be proactive about identifying their EPA-specific learning needs, negotiating experiences, seeking feedback, gathering evidence of attainment of EPAs, and accepting greater responsibility when ready.³ Stakeholders must understand data from assessments and believe that they are credible, meaningful, and useful, and that the processes used are acceptable.⁴ Curricular alignment of the EPAs with the training program must be visible and understandable to faculty and trainees alike. Faculty development must be defined for, and promoted to, an institution's members in a manner that clearly connects with its capacity to contribute to organizational change.⁵ Moreover, they must have confidence in the process used to support EPA-based training and assessment, including summative entrustment decision-making. Table 23.1 shows, as an example, changes to be anticipated in culture and prac-

Table 23.1: Changes in culture and practice required.

Common changes in culture and practice when implementing EPAs and WBA	
For supervisors	For trainees
<ul style="list-style-type: none"> • Adopt a shared understanding of standards depicted in EPAs descriptions • Increase direct observations of trainee in the performance of EPAs • Apply the concept of entrustment decisions to assessment and feedback • Promote a trainee growth mindset through awarding of increased responsibility • Make time for teaching and assessment in the clinical day • Use new technologies to support the EPA-based curriculum 	<ul style="list-style-type: none"> • Adopt a growth mindset to achieve entrustment for a greater responsibility • Be proactive in seeking and responding to feedback • Collaborate actively with supervisors • Share responsibility for collecting evidence of competence • Use new technologies to support the EPA-based curriculum

tice for supervisors and trainees. While many of these conditions may be in place in contexts where workplace-based assessment is already embedded, an EPA framework can bring additional challenges and responsibilities for supervising faculty and trainees. This chapter provides a general overview of key principles in faculty development, important for successful implementation of curricular interventions with examples specific to changes needed for an EPA-based curriculum.

Faculty development: for whom?

Fundamentally, development of faculty and other stakeholders is about supporting the implementation and management of change.⁵ Implementation science provides a valuable framework to apply evidence-based faculty development approaches while also ensuring attention to drivers that promote and reinforce change.⁶ Implementation science focuses on the uptake and incorporation of change into regular practice and outlines the importance of considering key drivers that support and sustain transformative change within an educational program. It also highlights the importance of gaining consensus on the need for change, which in turn requires a clear articulation of the rationale on the part of those leading it. Another valuable aspect of implementation science is the attention to context and how initiatives need to be adjusted to local contexts to be successful. An effective program of faculty development in a particular context aims for a shared vision for change, an understanding of the concept and language of EPAs, and a sense of responsibility to achieve that change.⁷ A shared understanding of an EPA-based curricular system is critical, and includes trainees as a key stakeholder for change; hence, we include considerations for trainee development.⁸ While the terminology used for stakeholder groups and roles may vary with context, we include eight groups: (a) clinical supervisors, (b) non-workplace-based teaching faculty, (c) trainees, (d) portfolio advisers and coaches, (e) clinical competency committee members, (f) program directors and other educational leaders, and (g) administrative personnel. Champions are an important category and can be recruited from within several of these groups (e.g., supervisors, trainees, administrators). The prior educational experience and their expectations are unlikely to be homogenous for each stakeholder group. Nonetheless, the needs of each group are generally described below and further addressed later in this chapter.

Faculty development: conceptions, principles, and strategies

Conceptions

There have been many conceptions of faculty development in recent decades. One is a deficit model suggesting they need to be ‘developed’ with new knowledge or skills. In recent decades, however, there has been increasing attention to faculty development as the building of an empowered ‘community of practice.’⁹ A community of practice has been defined by Lave and Wenger as a group of people who share a common concern or a passion for something they do, or learn how to do as they interact regularly.^{10,11} This latter conception of faculty development highlights the need for a continuous and dynamic process where faculty enable each other’s development. Faculty development should therefore aim to empower all stakeholders as members of the same community of practice, raise awareness of the value each stakeholder plays, and actively involve them as essential partners from the earliest stages of the change process including discussions on development and implementation.

Guiding principles for the development of a faculty development strategy

The establishment of a strategy for faculty development is highly context-specific. Those responsible for designing and implementing it need to respond to local conditions, opportunities,

Table 23.2: Stakeholder groups defined.

(a) Clinical supervisors
These include all frontline clinical supervisors (e.g., faculty, senior trainees) who are responsible for teaching, conducting workplace-based assessments, and making ad hoc entrustment decisions. They do not need to know how to write an EPA but they need to appreciate how they were derived. They need to be able to observe effectively, give feedback, use the entrustment–supervision scale and understand what the levels mean. They need to appreciate the concept of trust and be aware of the factors that may influence entrustment decisions. See Chapters 17–19 for an elaboration of workplace-based assessment to support entrustment decision-making.
(b) Non-workplace-based teaching faculty
These are faculty who have the important role of teaching classroom courses, developing intentional learning activities including simulation exercises to prepare for patient care, and instructing trainees in nonclinical settings. They need to know the content of the EPAs. While they do not have responsibility for conducting workplace-based assessment, they need to be aware of how their trainees will be assessed in the workplace. They can help introduce the concept of trust and hold trainees accountable for the factors that enable entrustment (e.g., agency, reliability, integrity, capability, humility).
(c) Trainees
Trainees need to be properly oriented to their role in an EPA-based system. They need to have sufficient understanding of EPAs to be agents in their own learning and help support the behavioral change required of both clinical supervisors and themselves. They need to know what factors enable and impact entrustment and what they will be assessed on.
(d) Portfolio advisers and coaches
Advisers and coaches provide guidance to trainees to promote their professional growth, which requires establishing trusting and supportive relationships with trainees. They need to know how to interpret data within a portfolio, monitor progress, advise on progress toward achievement of EPAs, and mediate the outcomes of multisource feedback. They may be required to provide a report to a clinical competence committee.
(e) Clinical competency committee (CCC) members
These individuals need to understand and synthesize information from multiple sources, identify patterns of performance to determine a broad picture of a trainee's progression, and make summative entrustment decisions. The chair of a CCC has a particularly important role in ensuring equitable and consistent procedures. See Chapter 21 for the role and functions of a CCC.
(f) Program directors and other educational leaders
This group needs to be able to provide a sound and compelling vision and rationale for change when leading that change. They need to be able to facilitate the acquisition of new skills and inspire changes in behavior for others. They are centrally involved in planning the faculty development strategies and may be helpful in identifying and procuring needed resources.
(g) Administrative personnel
These individuals play an important role in providing logistical support to program directors and trainees. They have a key role in the management of the IT infrastructure to support workplace-based assessment and are responsible for pulling together all the assessment data that is collected for clinical competency committees.

and constraints. The work by Van Schaik et al. can provide useful guidance for the development of an accessible and adaptable strategy to support implementation of EPAs.² While Van Schaik's paper is concerned with 'faculty' in the conventional sense, the points are equally valid for other stakeholders and for the effective orientation of trainees, which is optimally done as a paired activity with members of faculty.

- *Create a blueprint* to inform the design and implementation of faculty development activities. This involves identifying the target group or groups with a plan that covers the various stages involved from piloting to implementation and consolidation.
- *Build on existing resources*, networks, and communities. Some faculty development activities can tap into training activities and resources already available internally or externally (e.g., training on how to give effective feedback).
- *Target different needs* and competence levels for different stakeholders utilizing a repertoire of activities, with flexible and adaptable opportunities, which optimize relevance for individual faculty members.
- *Encourage co-creation* in the workplace to involve all stakeholders in the development and continuous improvement of new strategy, workflows, and processes.
- *Promote collaboration* between practicing clinical supervisors and health profession educators to significantly enhance the design and delivery of faculty development. The involvement of credible peers has a powerful impact, when combined with external expertise.
- *Tap into faculty's intrinsic motivation* for professional development, following the principles of self-determination theory, supporting autonomy, competence and relatedness. Intrinsic motivation is augmented if there is a sense of interconnectedness and engagement. This approach may be complemented with some strategies that tap into extrinsic motivation, such as recognition and rewards.
- *Develop curriculum leaders, champions and faculty developers*. Faculty development to support curricular reform needs to be sustained, to ensure maintenance of skills and practices, and to accommodate new faculty. Champions can also be recruited from among the trainees, and recent graduates of the program.
- *Evaluate for continuous improvement*. This is essential and should encompass the impact on both the faculty and the trainees they teach and the quality of the training program. Evidence from evaluation can justify the continued investment in faculty development.

Instituting a faculty development program that extends over time is of particular relevance for EPAs, where implementation may be phased over a period of time. Changes in practice need to be reinforced and sustained, especially where new roles are concerned in an EPA-based system, such as portfolio advisers, champions, and CCC members. Steinert et al.¹² caution against an overreliance on formal structured approaches such as workshops and short courses and advocate a move to methods that involve experiential learning in the workplace that include guided reflection, peer coaching, and mentoring – a function that champions could help serve. Recommendations from the Core AAMC EPAs pilot in the US provide an example of using more experiential faculty development strategies and of creating a community of practice of all who teach and assess the EPAs.⁷ These include pairing faculty development and trainee orientation to better inculcate a culture of shared entrustment, reciprocal feedback-seeking behaviors, and meaningful trainee–educator partnerships. They also recommend aligning assessment skill development with initiatives to enhance clinical skills and creating multiple opportunities for deliberate practice after self-assessment training, which resulted in reduced variability in faculty assessments of trainees. Box 23.1 shows an example derived from another pilot using the AAMC Core EPAs.¹³

Modes of delivery

A blueprint for faculty development will need a range of strategies and activities. It is possible to identify a range of modes of delivery from the relatively passive, such as written material to more active approaches requiring deeper engagement as seen in Figure 23.1,¹⁴ which is not an exhaustive list.

Box 23.1: Strategies in practice – Example A: Faculty development for the Educating Pediatricians Across the Continuum project in the USA.

Background

The Association of American Medical Colleges (AAMC) in the United States ran a competency-based education pilot called EPAC (for Education in Pediatrics across the Continuum) at four different institutions including the University of California San Francisco (UCSF). The pilot program used an EPA framework for student assessment and advanced students from medical school to postgraduate training based on achievement of a specified level of entrustment on the AAMC 13 core EPAs. What is unique about this program from a faculty development perspective is that it only involved a small subset of students (approximately four annually) and the faculty who worked with or supervised those students. These faculty, along with the rest of the students and faculty, were still part of the regular curriculum using traditional assessments. Even though the program primarily impacted faculty in the pediatrics department, the EPAC students also worked with faculty in other departments.

Elements of the faculty development strategy at UCSF

Because the EPAC students would be rotating through multiple departments, UCSF ensured that all stakeholders were aware of the program and bought into the rationale for a competency-based education pilot. These stakeholders understood that the students would be assessed using a different (i.e., EPA) framework, but they were not expected to have literacy around EPAs. Because of the relatively few supervising clinicians involved in the pilot, a strategy was employed using students as the drivers of change. Faculty development efforts focused on two groups: the local leaders of and students in the EPAC program.

The local EPAC program leaders received intensive faculty development to ensure that they understood EPA principles and how these principles applied to the curriculum and assessment at the institution. They functioned as EPA champions among institutional leaders and other faculty, and could be engaged in the competency committees that made summative advancement decisions. The local leaders also provided ongoing development of the EPAC students.

Primary efforts went into the development and engagement of the EPAC students. By ensuring that the EPAC students fully understood the 13 core EPAs, how to use the entrustment–supervision scale, and the program's expectations of them, the students became partners in faculty development and drivers of curricular change. They were able to faculty-develop the small group of supervising clinicians working with and assessing them. The students made sure their supervising clinicians understood the core EPAs and how to use the scale, and pointed out opportunities for observation and assessment related to each of the EPAs. Additional questions or concerns that the students did not feel equipped to address were referred to the local leaders. Students pushed the faculty for actionable feedback that would allow them to gain further autonomy. They corrected the faculty when faculty were tempted to grade-inflate by reminding the faculty that the entrustment–supervision scale was not a proficiency rating scale but a supervision scale and that they should not be provided with less supervision before they are ready. This strategy not only empowered the students; it also allowed for a very targeted and experiential approach to the faculty development of supervising clinicians with few additional resources.

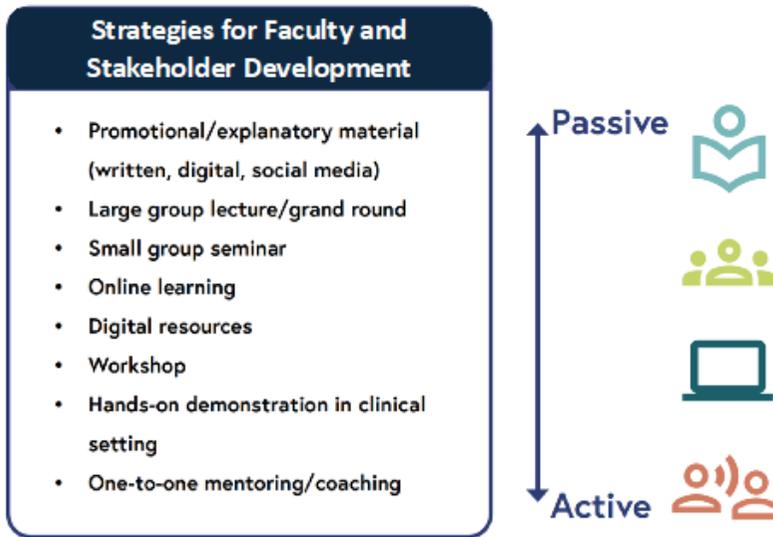


Figure 23.1: Strategies for faculty development.¹⁴

Materials that explain the innovation have a place and can reach a large audience, especially with the advent of social media. Traditionally, faculty development has been commonly envisioned as *events* that bring people together in a room, for face-to-face engagement.¹ As noted above, faculty should have opportunities to learn through facilitated skills practice and collegial approaches are important in setting standards and developing a shared mental model of expectations in trainees' performance of EPAs. While these face-to-face activities are extremely valuable, alternative approaches that harness other methodologies should be considered. Use of remote synchronous or asynchronous learning, independent learning, new communication technologies, and digital resources allow increased logistical flexibility and support different learning preferences.¹⁵ New communication technologies can replicate many of the active learning features of the face-to-face workshop. Digital resources, such as explanatory animations and demonstrations of good practice in the workplace, can be incorporated into workshops and made available for just-in-time self-directed learning.

Factors to consider in designing a faculty development strategy

A range of factors need to be considered when devising an overall strategy for faculty development.¹⁶ The list of factors in Table 23.3 has been compiled on the strength of the insights and experience of those engaged in EPA implementation. What is needed will vary significantly depending on the scale of faculty development, the stage of rollout of EPAs, and the level of familiarization and experience with CBE and WBA. A strategic choice to be made is whether faculty development is mandatory or optional. Is it aimed only at faculty who are willing to undertake WBA, or are all faculty expected to do it? Are only those who are trained regarded as legitimate or qualified assessors? While compulsory faculty development or the requirement of teaching qualifications for specific roles can help ensure key stakeholders are trained, one caution is that they may be difficult to enforce and unlikely to meet development goals if implemented without attention to resources and the environment.¹⁷ Challenges experienced by faculty for participating in optional faculty development (e.g., lack of time) also exist for compulsory faculty development.¹⁸ Implementation decisions related to all of the factors above will inform the approach.

Table 23.3: Factors to consider when planning faculty development.

Factors to consider	Think of
1. Scale	Program, regional, national
2. Stage of roll out the process	Preparation, piloting, implementation
3. Familiarization with CBE/WBA	Nature and scale of change involved
4. Whom to target	All or self-selected, mandatory or optional
5. Target group	Their particular needs
6. Aims and objectives	Expected effectiveness
7. Content and topics to be included	What is most useful for the target group
8. Activities	What will participants do; active learning
9. Format and group size	Large/small; online/face-to-face/hybrid
10. Venue	Where is most accessible for participants
11. Materials and space	Room, handouts, technology
12. Preparation by participants	Flipping the classroom; readings, questions
13. Evaluation of effectiveness	Reaction, learning, behavior, result
14. Follow up activities	Addition activities, support groups
15. Promoting engagement	Communication, rewards and recognition
16. Timing	Planning a series of opportunities scheduled over time
17. Delivered by	Insiders, outside expertise, peers
18. Resources	Making a business case
19. Expertise	A balance of internal and external expertise

Needs assessment and potential approaches

The design of faculty development requires clarity about each group's training needs (new knowledge, skills, practices), specific aims and objectives for training, and strategies to sustain the changes after initial development.¹⁶ Based on this needs analysis, the next step is to select appropriate methodologies for each target group. Table 23.4 summarizes new knowledge, skills, and attitudes needed by each target group and potential approaches.^a The degree of overlap in the needs of different groups is significant, as indicated in the first row in Table 23.3: knowledge, skills, attitudes, and potential approaches common for all groups.

In addition to conducting needs analyses for various stakeholders, one must consider that enabling and constraining factors, and challenges and opportunities are very context-specific.¹⁶ Particular cultural traits of the profession or the institution (e.g., a reputation for innovation, commitment to education, or desire to lead curriculum reform) may prove pertinent as something that can be used for leverage. Similarly, it is important to anticipate common issues that may arise in one's specific context for each stakeholder group.

^a This table was inspired by the yield of a break-out group exercise in the International Online Ins and Outs of EPAs course (www.epa-courses.nl) across 10 deliveries of the course. This is not intended as an exhaustive list.

Table 23.4: Suggested needs and approaches for various stakeholder groups.

	Knowledge, skills, and attitudes needed	Potential approaches
Common for all groups	<ul style="list-style-type: none"> • the rationale for change to CBE • concept of EPAs and entrustment • entrustment–supervision levels and scales • learner factors enabling entrustment (e.g., the A RICH framework) • operationalizing the EPA program in one’s context • how to use the technology for the system • a growth mindset • engaging in team work 	<ul style="list-style-type: none"> • common presentations • blended/hybrid learning • a way to respond to issues e.g., hotline, champions • FAQ section on the program website • continued attention and reinforcement • interdisciplinary and interprofessional approaches
Clinical supervisors/assessors	<ul style="list-style-type: none"> • providing effective feedback • documenting workplace-based assessments • making time in the clinical day • coaching in the moment (e.g., SMART, RC2C techniques) • identifying opportunities for entrustment decisions • the ‘big picture,’ i.e., curriculum overview • what progression of trainee should look like • applying the A RICH criteria for trainee trustworthiness when carrying out assessments (i.e., agency, reliability, integrity, capability, and humility)¹⁹ • address deficits/gaps for achieving the next level of entrustment 	<ul style="list-style-type: none"> • workshops (roleplay, scenario discussion) • online learning (instructional, video demonstration) • role modeling • demonstrations • peer observation and feedback • mentoring • toolkits and guidelines (paper-based or online)
Non-workplace-based Teaching faculty	<ul style="list-style-type: none"> • know the EPA curriculum • aligning their teaching to the EPAs • rethinking professionalism in terms of the A RICH criteria • applying the A RICH criteria for trainee trustworthiness to nonclinical learning environments 	<ul style="list-style-type: none"> • curriculum review meetings • workshops (e.g., on mapping learning activities to EPAs) • other methods, as for supervisors/assessors but with different focus
Trainees	<ul style="list-style-type: none"> • taking responsibility for their own learning • seeking feedback proactively • responding to feedback • identifying opportunities for entrustment decisions • negotiating entrustment decisions with supervisors • collecting and reviewing evidence of own progress in portfolio 	<ul style="list-style-type: none"> • orientation process • workshops (roleplay/simulation, scenario discussions) • near peer teaching of new trainees by senior trainees
Portfolio advisers	<ul style="list-style-type: none"> • providing feedback to support ongoing trainee development • mentoring as an effective longitudinal coach • analyzing and synthesizing data points • recognizing when trainees are on track (or not) • identifying when support or remediation is necessary • reporting to CCC and program director 	<ul style="list-style-type: none"> • regular meetings as a community of advisers • workshops (roleplay, scenario discussion) • online learning resources • role modeling by more experienced portfolio advisers • guidelines (paper-based or online)
CCC members	<ul style="list-style-type: none"> • understanding program outcome expectations and developmental trajectories • appreciating the importance of their role • understanding the entire assessment system including psychometrics, context, and validity of available data • analyzing and synthesizing assessment data • engaging effectively in meetings • group facilitation skills for sound decision-making (chair) 	<ul style="list-style-type: none"> • workshops with mock CCC for practice of consensus decision-making • case studies • guidelines on procedures for CCCs (paper-based or online) • special training for the CCC chair

(Continued)

Table 23.4: Continued.

	Knowledge, skills, and attitudes needed	Potential approaches
Program directors/ leaders	<ul style="list-style-type: none"> • leading change management • undertaking curriculum development in health professions education • planning entire assessment system including understanding of psychometrics, context, and validity of data • planning delivery of the EPA-based curriculum • designing and planning remediation for underperforming students • developing approaches for accelerated students • demonstrating alignment of the EPA curriculum with accreditation requirements • planning and delivering faculty development • providing training in effective group facilitation for sound decision-making • tapping into internal and external resources • planning piloting and implementation 	<ul style="list-style-type: none"> • access existing training programs <ul style="list-style-type: none"> ◦ leadership training courses ◦ EPA development and implementation courses (e.g., Ins and Outs course) • linking into relevant institutional, national and international networks • (Inter)national teamwork for creating the curriculum • peer consulting from existing and functional programs • develop supportive teams
Admin. personnel	<ul style="list-style-type: none"> • understanding the entire EPA program and assessment processes • supporting program director • organizational skills • directing all stakeholders to resources • preparing reports for CCCs • supporting users in use of technology • preparing accreditation reports 	<ul style="list-style-type: none"> • briefing meetings • training in data management system

Resourcing faculty development

Faculty development is a significant investment and requires resources, as evident from each of the strategies in practice featured in this chapter. Faculty development programs are not just an investment in individuals; they are an investment in the health of the institution, especially so in the case of longitudinal programs.²⁰ Programs must promote engagement, utilize appropriate recognition and rewards where feasible, and include an evaluation process for effectiveness. Strategies for finding and engaging people who will buy into and commit to the new curriculum and faculty development efforts include identifying and rewarding early champions, harnessing the goodwill of early adopters and those with an interest in education, and involving outside expertise. Those planning faculty development need to be able to identify and tap into available resources inside and outside the institution and make a business case for additional resources to budget-holders. A sound business case involves identifying the problem, as well as alternatives and the ideal solution. It offers an executive summary for the project and outlines the resources needed with the project scope, risks, and a timeline. This can include resources for materials, activities, outside expertise, and protected time for stakeholder development. It is necessary to identify resources and facilities required and make a sound business case to those in control of funding for the faculty development strategy. Another effective strategy for resourcing faculty development is to partner internationally in the planning and resourcing of faculty development.²¹ Whatever the source of the funding, however, there is a need for constant attention to the business model – sustainability being heavily influenced by costs of delivery and number of participants.

A significant ongoing resource need is protected time for supervisors and assessors to implement and sustain change. While this is a matter for contractual arrangements by the institution, the availability of protected time may impact on engagement with faculty development and successful change in practice. A strategy that was employed by Singapore's Ministry of Health is explained in Box 23.2.

Box 23.2: Strategies in practice – Example B: Singapore’s cascade model of training with a multidisciplinary approach.

Background

EPAs were first introduced into the postgraduate year 1 medical training in Singapore in 2014. Following a pilot study for selected health care professions, EPAs were made mandatory for all residency programs by the Ministry of Health (MOH) in 2022. The implementation aimed to involve 50 medical disciplines across four years, undergraduate and advanced nurse training, and other undergraduate health care professional training (speech therapy, dietetics, physiotherapy, occupational therapy, diagnostic radiography, radiation therapy).

Elements of the faculty development strategy

Due to the large effort across multiple professionals, the Singapore MOH decided to use a cascade model of training the trainers. After sending a MOH team to the ‘Ins and Outs of Entrustable Professional Activities’ international course, their next step was to raise awareness for the need to change among faculty members and trainees through multiple communication channels, including town halls and education conferences at health care institutions. They identified stakeholders who were likely to be early adopters for the initial wave of training and invited external experts to lead workshops and help train MOH facilitators and early adopters. These MOH facilitators then provided supplemental in-house EPA workshops to additional stakeholders.

The MOH then conducted a series of in-depth specialty and institution-based training sessions using trained MOH and local facilitators from the targeted institution. Structured workshops on EPA development and EPA implementation were customized to each specialty based on their progress and with support from the local facilitators. Consultation sessions were embedded within the workshops to allow facilitators to exercise flexibility in the learning outcomes for respective specialties. The facilitators supported these specialties through their EPA development and implementation, gradually reducing their assistance as specialties became more independent.

The MOH also appointed and trained faculty members from each program to serve as EPA champions and change leaders. Embedded within the program and specialty, they could coordinate change efforts and were best equipped to assess risks, anticipate resistance, and remove obstacles unique to each specialties’ context. This cascade approach of ongoing efforts to train new trainers as subject matter experts to roll out national-level faculty development initiatives will help to further reinforce the adoption and implementation of EPAs.

The MOH provided several resources using a faculty development framework. They provided funding for those attending the international course and for the engagement of external experts. They also resourced institutions to provide the trained MOH and local facilitators with protected time away from their clinical commitments to conduct workshops and guide programs. Certain individuals with a keen interest in faculty development were further supported to conduct nation-wide faculty development initiatives. The MOH also produced a comprehensive online faculty development package with resources to help the faculties in their implementation of EPAs. It includes a wide array of content ranging from EPA literature to case scenario videos and to practical tips when implementing EPAs on the ground, with links to digital resources (accessible at <https://go.gov.sg/eparesourcepackage>).

The value of digital resources

Many of the faculty development strategies outlined above can be effectively supported with the judicious use of appropriate digital resources such as narrated PowerPoint presentations, multimedia presentations, instructional videos, whiteboard animations, and demonstration videos of workplace-based assessment in practice.²² They can be used effectively to reach large audiences and are important in providing a convincing rationale for the changes that will be required. Easily accessible whiteboard animations or video demonstrations can provide just-in-time learning opportunities for busy clinicians e.g., to view in advance of completing a WBA. Demonstration of how to provide effective feedback when conducting WBAs, in various clinical scenarios for different EPAs, can prove powerful tools in faculty development workshops. They can assist in the process of developing a shared mental model by prompting discussion of standards of performance expected at different levels of supervision for EPAs.

When utilizing digital resources, one of the choices to be made is whether to use those developed by others or to develop one's own, set in one's cultural and organizational context and clinical settings. There are several free-to-use online resources on how to give effective feedback which provide general guidance. More recently, specific resources have been created, and shared, to support the introduction of EPAs in specific contexts. They are included as separate resources in Chapter 25. Bespoke resources, developed specifically to explain the rationale in *one's own* context and demonstrate supervisors', assessors', and trainees' functioning in one's clinical environment, have the obvious advantage of being authentic, relatable, and credible for one's stakeholders. Box 23.3 provides an account of the process used to develop bespoke digital resources to support the introduction of EPAs and workplace-based assessment within the Internship in Ireland. Collaboration between institutions offers valuable opportunities to share the cost of developing digital resources that can be adapted for use in different professional contexts.

Box 23.3: Strategies in practice – Example C: Creating resources to support rollout of a national program: Internship in Ireland.

Background

A new national curriculum framework was developed in Ireland for the internship program – the first year of postgraduate medical training. The framework comprises three elements: (a) *knowing* (knowledge guides), (b) *doing* (seven EPAs), and (c) *being* (professional behaviors, values, and practices), and a system of programmatic assessment using new workplace-based assessment tools. In 2003, the Medical Council approved the EPA-based framework for implementation by intern training networks across the country (<https://www.lenus.ie/handle/10147/638294>).

Elements of a faculty development strategy

The Medical Intern Unit devised a strategy to support implementation nationally, including meetings with stakeholders to raise awareness using town hall meetings on zoom and in-person in hospital sites face-to-face workshops in hospital sites and creation of digital resources.

(Continued)

Creation of digital resources to support faculty development

The Medical Intern Unit created a set of digital resources for its use and for the use of intern training networks in a cascade model of training. These focused on the EPAs and the workplace-based assessment tools and were explicitly set in the context of intern training, carefully scripted, and professionally produced. They included multimedia presentations to explain the rationale for EPAs and describe the seven EPAs, instructional animations to explain how to conduct workplace-based assessments, and authentic videos to demonstrate WBA in practice.

Features of authentic video demonstrations

The videos were set in clinical settings with credible scenarios for internship training and were relatable for supervisors and trainees in that context. Learning goals were clearly established for each one and scenarios were developed by clinicians through a facilitated process. Scripts were written and peer-reviewed by clinicians and the demonstrations were acted by clinicians, trainees, and professional actors.



Tips for scripting authentic video demonstrations

(a) Think of three/four key messages for each one, (b) identify staging and props needed, (c) demonstrate best practice in the feedback conversation, (d) describe what the characters are feeling and how this might be expressed, and (e) make the script feel authentic for the audience.

The planning process

Given a defined budget for production of a digital resources, the steps taken were to:

1. create a matrix (of EPAs and WBA tools)
2. prioritize which EPAs to demonstrate
3. select which WBA tool to demonstrate for each EPA
4. select the supervision level for trainee performance in each video
5. recruit a team of practicing clinicians to draft scenarios, write scripts, and act in the videos
6. ensure diversity in the selection of clinicians/trainees/actors across the range of videos

Links to digital resources for presentations and animations: [Introduction to EPAs](#), [The 7 EPAs for the internship](#); [How to do a case based discussion](#); [How to do a case presentation](#); [How to do a direct observation](#)

Links to video demonstrations: [Demo of a direct observation](#); [Demo of direct observation of a clinical task](#); [Demo of a case based discussion](#); [Demo of a case presentation](#)

The importance of evaluation

Appropriate and timely evaluation of faculty development is vital to inform future strategies and to demonstrate the value of faculty development in times of limited resources.¹⁶ A range of evaluation methods will be required, from surveys to more longitudinal research, and a number of evaluation models exist. While not without its limitations, the Kirkpatrick model of training evaluation provides one potentially valuable framework for the design of evaluation with successive levels of evidence sought, from reaction, learning, and behavior to results.²³ Other approaches to evaluation include the CIPP framework, which provides an analytic basis for decision-making, focusing on context, input, process and product evaluation. While offering comprehensive insights, the CIPP model can be resource-intensive, demanding considerable time, personnel, and financial resources to conduct an extensive evaluation.²⁴ Moreover, it is claimed that evaluators may not deal with issues that go against the concerns of the decision maker. The logic model involves visual representation of the relationship between program inputs, activities, outputs and outcomes. One of the limitations of the logic model, however, is that programs (such as implementation of an EPA framework) are not necessarily linear and sequential. Each approach to evaluation has its strengths and limitations but they can usefully inform program design, implementation, and evaluation. More details about the various models for evaluation to achieve continuous quality improvement can be found in Chapter 24.

Conclusions

Implementing EPAs as a framework for competency-based education is a major change management process requiring ongoing faculty development. Effective needs assessment as an important first step involves determining what type of faculty development each stakeholder group needs in one's specific context. A successful faculty development strategy involves mapping out engaging activities over time for successive phases of piloting and implementation. An effective strategy also utilizes a range of approaches including face-to-face, blended/hybrid approaches, and self-directed learning. Clinical leadership and institutional commitment are key to effecting change and should be clearly visible to those engaging in faculty development. Faculty development needs to combine support from credible peers, external expertise, accessible resources, and flexible learning opportunities. It needs to be appropriately resourced, by making a sound business case for it to fund-holders. The development of bespoke digital learning resources can effectively support faculty development in workshop situations and for self-directed, just-in-time learning by supervisors and trainees. Opportunities exist, within and outside the institution, to collaborate with other bodies or international partners to share the cost of faculty development. Evaluation and review of the faculty development strategy is key to future planning and justifying the necessary investment of resources.

Competing interests

The authors declare that they have no competing interests.

Acknowledgments

Box 23.1: H. Carrie Chen (former site co-director of EPAC at UCSF). Box 23.2: M. Yap (Director, Professional Training and Assessment Standards Division, Ministry of Health, Singapore),

Box 23.3: Boland, J Geoghegan, R Jenkins, J Offiah, G: The power of authentic demonstrations when training health professionals in the conduct of workplace based assessment. 2023 AMEE Conference Workshop, Glasgow

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