

THE VALUE OF NEAR PEER TEACHERS: DESIGNING A RESIDENT AS TEACHER PROGRAM

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SESSION OBJECTIVES



Reflect on

The value of using near-peer teachers for medical students



Brainstorm

Key steps for design of resident as teachers' initiatives



Apply

A framework for resident as teacher program design and implementation



Apply

Apply principles for systematic program evaluation



WHY RESIDENT AS TEACHER PROGRAMS

Medical students spend more time with residents than faculty

Students view residents as some of their most memorable clinical teachers

Residents spend at least a quarter of their time supervising and teaching students

Residents value their teaching role greatly regardless of their career aspirations

Many regulatory bodies include teaching and supervision of peers and students as an essential competency for junior doctors

Increasing faculty time constraints makes it important to develop effective near peer teaching programmes

STEPS IN DEVELOPING EDUCATIONAL PROGRAMS



DESIGN



IMPLEMENTATION



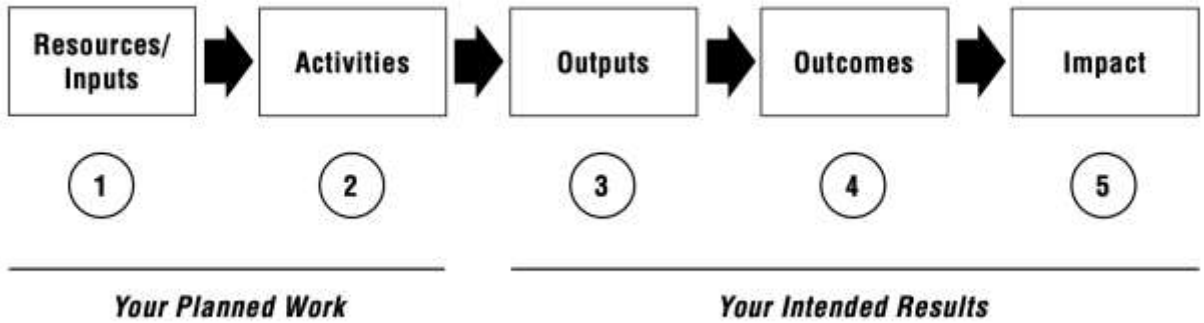
EVALUATION

A SUGGESTED FRAMEWORK FOR PROGRAM DESIGN

THE PROGRAM LOGIC MODEL-

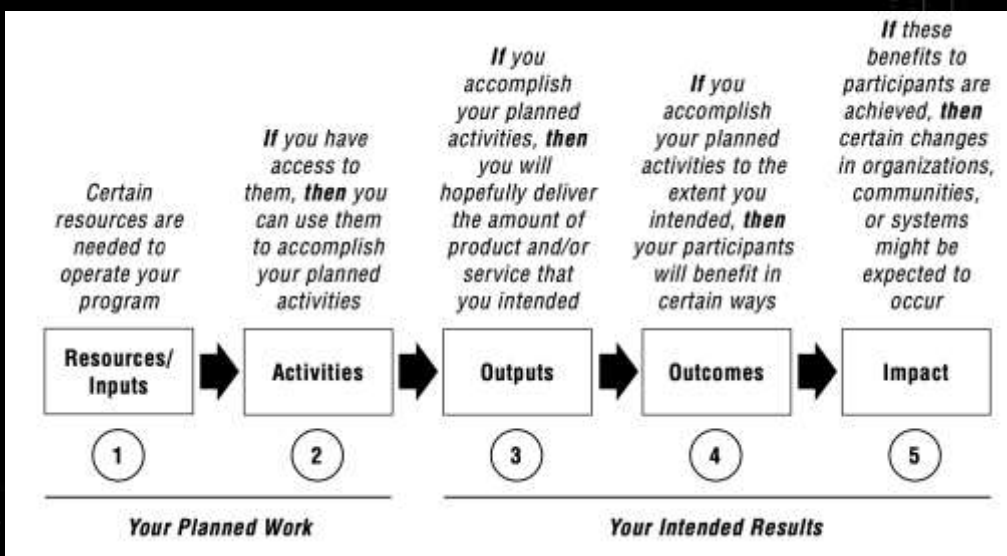
- The program logic model is defined as:
 - A picture of how your organization does its work – the theory and assumptions underlying the program
 - Links outcomes (both short- and long-term) with
 - Program activities/processes
 - Theoretical assumptions/principles of the program

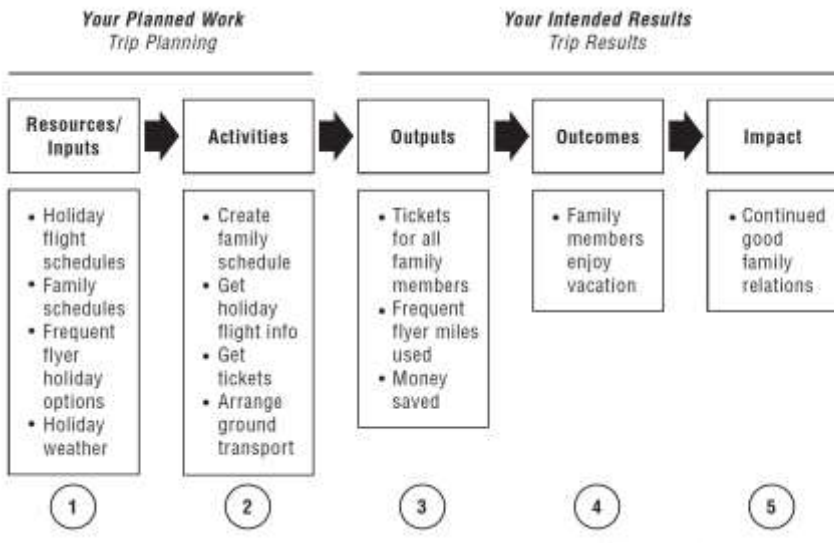
THE BASIC LOGIC MODEL



W.K. Kellogg Foundation Evaluation Handbook (1998)

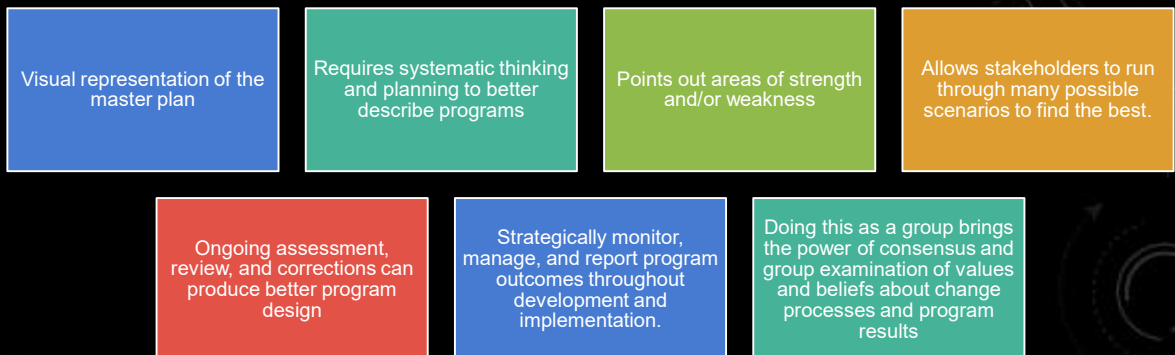
A MORE DETAILED LOOK





A practical application

VALUE OF THE LOGIC MODEL



LET'S APPLY THE MODEL TO A R-A-T PROGRAM

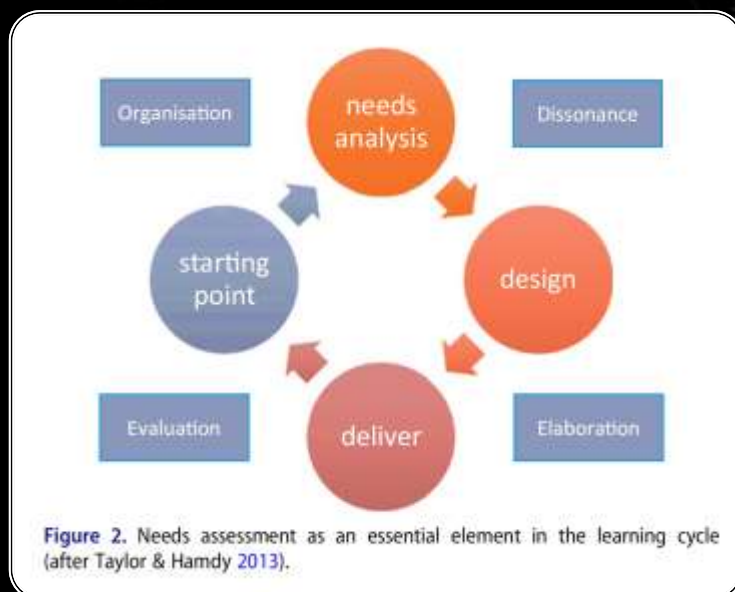
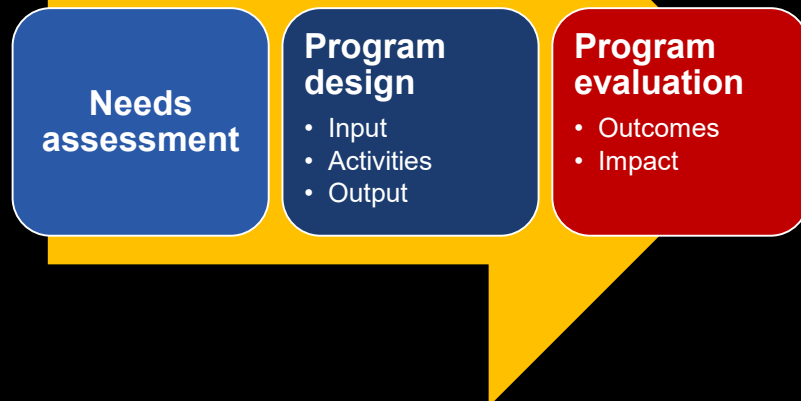


Figure 2. Needs assessment as an essential element in the learning cycle (after Taylor & Hamdy 2013).

PROGRAM DESIGN

Inputs

- Resources available for program design, implementation and evaluation
 - Funding
 - administrative personnel
 - Faculty leadership, volunteer faculty, invited experts,
 - Space, Educational resources, media support, equipment
 - Consultants

Activities

- Interventions designed to bring about intended results and include
 - Processes (developing curricula, teaching, mentoring, research, field trips, workplace teaching)
 - Educational strategies (didactics, workshops, shadowing of teaching sessions, coaching and feedback)
 - Application of technology
 - Format of educational sessions
 - Selection of required teachers

PROGRAM DESIGN: INPUTS

- Leader or leadership team
- Other team members- administrators, IT, logistical support etc
- Faculty
 - Core faculty – who work with the leadership team in program design, monitoring and engaged in teaching several sessions.
 - Guest faculty – who may be invited to teach specific sessions based on their expertise in a given area.
 - Faculty for assessment of residents – if a program decides to conduct formal assessment of residents' teaching skills (such as OSTE), evaluators would be needed.
 - Faculty observers – some faculty who cannot offer the time for formal teaching may be willing to have residents accompany them on their rounds or clinical teaching sessions. This allows residents to serve as co-teachers and receive feedback on their teaching skills

PROGRAM LEADERSHIP

- The program leader's role:
 - Defines overall goals and objectives
 - Assembles an effective team
 - Develops an implementation strategy
 - Explains clearly to stakeholders the need for the program, principles and approach
- Shared understanding by all team members is crucial
- Planners should be aware of existing best practices, their impact and understand feasibility

WHAT ARE THE GOALS AND OBJECTIVES? FOR THE RESIDENT TEACHERS

- Acquiring practical skills and knowledge about teaching and learning that can be applied in their teaching roles
- Applying the evidence and principles that underlie effective approaches to teaching and learning
- Reflecting on their educational role during residency as well as with a view to the role of education in their future careers
- Acquisition of leadership skills essential for those interested in future educational leadership roles

WHAT ARE THE GOALS AND OBJECTIVES? FOR FACULTY LEADING THESE INITIATIVES

- Faculty involvement in RaT programs may vary from a leadership role to participation in an aspect of the teaching
- Contribute to building educational capacity in their institution, department
- Creating a positive learning culture for all learners and the department or institution
- Building residents' professional identity as teachers

WHAT ARE THE GOALS AND OBJECTIVES? FOR THE INSTITUTION

- A culture of effective education within the program.
- Clinical role-models for students leading to improved perceptions of a given specialty.
- Peer leaders who can directly and indirectly influence others in providing effective teaching to peers, junior peers, other team members and students.
- Capacity to identify and develop future leaders in education.

Designing activities: Content and strategies

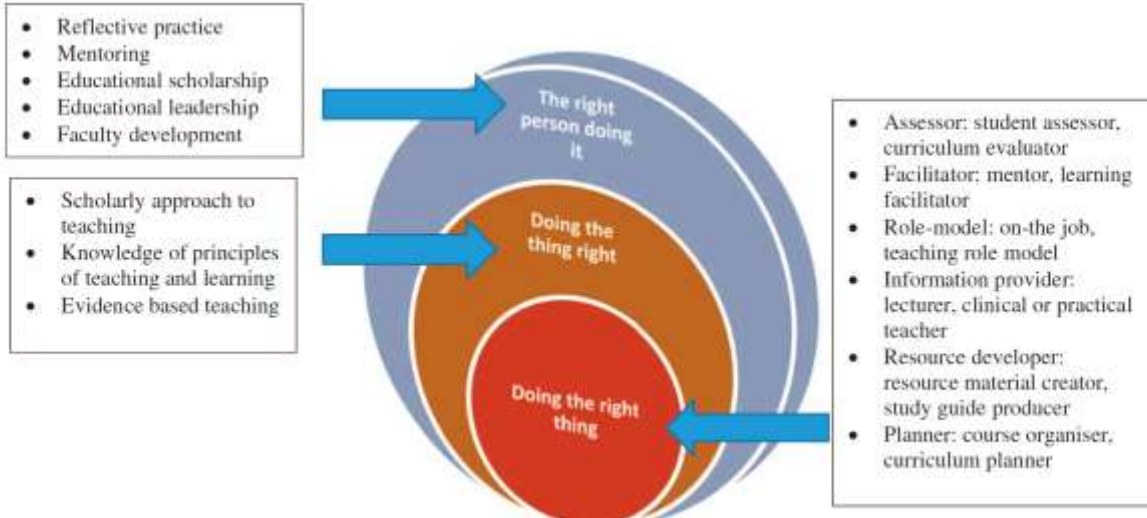


Figure 4. Professional standards of the Academy of Medical Educators (used with permission, 2014).

PROGRAM FORMATS

- Short workshops
- Workshop series
- Block rotations
- Longitudinal programs
- Fellowships

INTENDED OUTCOMES

Outputs: direct products of activities

- Length of the program
- Number of didactic sessions
- Number of workshops
- Field trips to other educational institutions
- Number of participants
- Number of teachers

Outcomes: benefits of the program

- Short term (1–3 years)
 - Easier to measure
 - Changes in participants' knowledge, skills, behaviour and attitudes
- Academic achievements (leadership roles, publications, presentations)
- Long term (4–6 years)

Table 1. Approaches to consider in evaluating a Resident as Teacher program using the Kirkpatrick model (Kirkpatrick 1994).

Level of evaluation (Kirkpatrick)	Outcome	Measures
1. Reactions	<ul style="list-style-type: none"> • Satisfaction • Perceived relevance • Suggestions for improvement 	<ul style="list-style-type: none"> • Resident surveys • Faculty surveys • Focus groups • Short narratives
2a. Attitudes, perceptions	<ul style="list-style-type: none"> • Self-efficacy • Confidence • Learner-centredness • Perceived value 	<ul style="list-style-type: none"> • Resident surveys • Self-assessed confidence in teaching pre and post • Reflections/narratives on attitude towards teaching
2b. Knowledge and skills	<ul style="list-style-type: none"> • Principles of teaching and learning principles • Adult learning theory • Techniques for giving feedback • Principles of learner assessment 	<ul style="list-style-type: none"> • Knowledge test • Self-assessment
3. Behaviour	<ul style="list-style-type: none"> • Demonstration of skills, behaviour and knowledge 	<ul style="list-style-type: none"> • OSTE • Direct observation • Microteaching and debriefing • Multisource feedback • Peer assessment • Self-assessment • Learner assessment
4a. Benefits to learners, patients	<ul style="list-style-type: none"> • Improving learning of others • Increased mentoring of learners • Recognition and remediation of problem learners 	<ul style="list-style-type: none"> • Changes in learner performance • Self-reports • Documentation of mentoring • Documentation of efforts at remediation
4b. Benefits to institution	<ul style="list-style-type: none"> • Sustained RaT programs • Change in education culture 	<ul style="list-style-type: none"> • Number of residents on clinical educator career tracks • Educational leadership roles • Educational scholarship • Formation of teacher networks

POTENTIAL BENEFITS OF RESIDENT AS TEACHER PROGRAMS

For residents

- Development and improvement in teaching skills.
- Enhanced self-efficacy and identity as a teacher.
- Improved ability to assess and provide feedback to learners
- Interest in education as a career focus

For learners (peers and students)

- Satisfaction with near-peer learning
- Ability to better understand clinical reasoning
- Improvement in clinical and patient care skills
- Increased willingness to admit deficiencies.
- Increased receptivity to feedback
- Cognitive congruence
- Social congruence

For institutions

- Demonstrating recognition of value of teaching
- Forming a community of educators (faculty and trainees)
- Developing future educational leaders
- Creating an educational culture that values teaching and encourages an evidence-based approach to teaching and learning
- Reputation for educational scholarship
- Possible patient care outcomes

REFERENCES

- Mann KV, Sutton E, Frank B. Twelve tips for preparing residents as teachers. *Med Teach*. 2007;29(4):301–306
- Heflin MT, Pinheiro S, Kaminetzky CP, McNeill D. “So you want to be a clinician-educator. . .”: designing a clinician-educator curriculum for internal medicine residents. *Med Teach*. 2009;31(6):e233–e240
- Hill AG, Yu TC, Barrow M, Hattie J. A systematic review of resident-as-teacher programmes. *Med Educ*. 2009;43(12):1129–1140.
- Ramani S, Mann K, Taylor D, Thampy H. Residents as teachers: near peer learning in clinical work settings: AMEE Guide No. 106. *Med Teach*. 2016;38(7):642–655.
- Achkar MA, Hanauer M, Morrison EH, Davies MK, Oh RC. Changing trends in residents-as-teachers across graduate medical education. *Adv Med Educ Pract*. 2017;8:299–306.
- Srinivasan M, Li ST, Meyer FJ, Pratt DD, Collins JB, Braddock C. “Teaching as a competency”: competencies for medical educators. *Acad Med*. 2011;86(10):1211–1220.