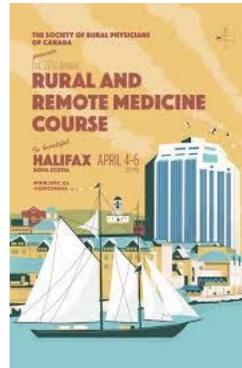


# Layered Learning: Teaching Multilevel Learners in Rural Sites

Dr. Chris Patey  
Dr. Lyn Power  
Dr. Paula Slaney



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## Learning Objectives:

At the end of the session you should be able to:



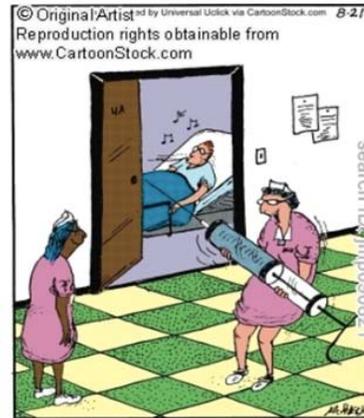
1. To identify challenges associated with multilevel learners in a clinical setting
2. To develop strategies to help overcome barriers to multilevel learners in a clinical setting
3. To describe and utilize teaching techniques useful for clinical settings with multilevel learners.

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## Disclosure

Dr. Chris Patey  
 Dr. Lyn Power  
 Dr. Paula Slaney

We love to teach!  
**Nothing else to disclose!!**



"We don't have to anesthetize patients anymore. I just walk in with this and they pass out in a second."

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- **Multilevel Learners**  
 Having medical learners of various levels of training and possibly discipline in a clinical setting at the same time.
- **Vertical Integration:**  
 Teaching and learning roles are shared across all learner stages in a clinical setting.

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## Key Features:



- Active learning in small groups
- Varying learning needs
- Sharing experience & knowledge
- Negotiated learning/sharing
- Collaboration

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## Why layer learners?

- Benefits
- Demand for more placements
- Accreditations purposes
- Recruitment

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## Do preceptors value this model?

How would you rate the educational value of the layered model for the learners involved?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely valuable	19	46.3	55.9	55.9
	Somewhat valuable	15	36.6	44.1	100.0
	Total	34	82.9	100.0	
Missing	System	7	17.1		
Total		41	100.0		

Source: Identifying Barriers to Layering of Learners, Lyn Power

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## Where can we layer learning?

- Procedure clinic
- CC patient encounter. Review in the kitchen.
- ER Setting

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# In the Literature...

[BMC Med Educ.](#) 2014; 14: 234.

PMCID: PMC4287585

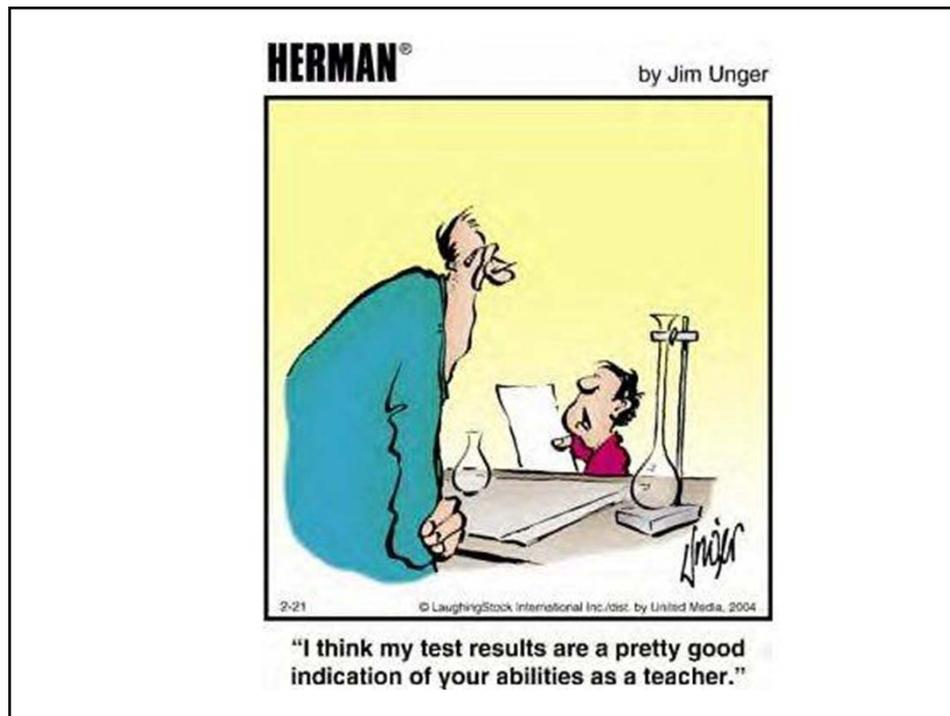
Published online 2014 Oct 24. doi: [10.1186/1472-6920-14-234](https://doi.org/10.1186/1472-6920-14-234)

## **Benefits and challenges of multi-level learner rural general practices – an interview study with learners, staff and patients**

[Tracy Morrison](#),<sup>1</sup> [James Brown](#),<sup>2</sup> [Melanie Bryant](#),<sup>3</sup> and [Debra Nestel](#)<sup>4</sup>

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## Benefits for Learners



- Confidence
- Part of a Team
- Job satisfaction
- Teaching by learners closer in experience.
- In turn, increase the skills and satisfaction of student teachers.
- They become the center of learning.

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## Benefits to GP's



- Time efficiency
- Relations with colleagues
- Morale
- Decreased demands
  - More deep breathing and nodding.
- Job satisfaction
- Bring back the Fun in DR!

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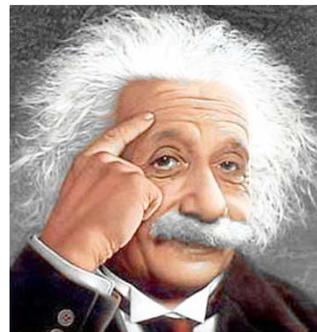
## Progression of Education



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## Simplify - You will be SMARTER!

Continuous Improvement  
Being Up to date  
Life long learning



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## You will be FASTER!

Higher patient volumes  
Reduced workload  
Increased Time efficiency



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## You will be HAPPIER!

Morale  
Enthusied Supervisors  
Collegiality  
Reduced isolation  
Supportive network



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## There will be Challenges

Elbow room  
Time with patients  
Building Capacity  
Coordination  
Stage of Career  
Student Autonomy



"Correct. And in the case of a cardiac arrest, every second counts. Who can tell me why? Anyone? Clock's ticking."

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## Other challenges

- Training as a teacher
- Knowledge of learning outcomes
- Variations between medical schools
- Consent



"Actually, you're my *second* patient if you count that cadaver in med school."

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How can we overcome these challenges?



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How best to become involved with Multi Level Learners?



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## RESEARCH ARTICLE

## Open Access

## The learner's perspective in GP teaching practices with multi-level learners: a qualitative study

Jennifer S Thomson<sup>1\*</sup>, Katrina Anderson<sup>1</sup>, Emily Haesler<sup>1</sup>, Amanda Barnard<sup>2</sup> and Nicholas Glasgow<sup>3</sup>

Thomson et al. *BMC Medical Education* 2014, **14**:55  
<http://www.biomedcentral.com/1472-6920/14/55>

*Learners identified **practice environments** that fostered a positive learning experience for multi level learners:*

- 1) Strong teaching culture
- 2) Flexible learning methods
- 3) Dedicated learning space
- 4) Organized teaching arrangements
- 5) Group tutorials in the practice

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## Development of Multilayered Educator

- Surrounded by spectrum of learners, you improve at asking questions up the chain of command finding **margins of knowledge**.
- From dogmatic to **open ended learning**
- Less focus on facts and more on **process**
- Attuned to **learner reception/absorption**.
- Progressed to learner **centeredness**.
- More **flexible** allowing learners to drive the teaching interaction.
- Increase **confidence** in teaching as clinical becomes more routine!



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## General Karma...



### Differentiated Instruction

Target to individual level of learner.

Reduce the amount of teaching that a trainee at any level judges to be over head or boring so that everyone is engaged.

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### 1) Broadening

- Changing the specifics of a case to make it more challenging or interesting
- “What if the patient was 45 instead of 75? How would that change the management?”



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## 2) Targeting

- Targeting medical knowledge questions at specific team members based on difficulty
- Bella – “How do we decide if this patient with pneumonia needs to be admitted
- Daniel – What is the most common type of bacteria?
- Liam – “ What are the most common complications of pneumonia?”

Microbial Agent	Community-Acquired	Nosocomial
<i>Streptococcus pneumoniae</i>	20-60	10-20
<i>Haemophilus influenzae</i>	3-10	10-20
<i>Staphylococcus aureus</i>	3-5	15-30
Gram-negative bacilli	3-10	50-70
Miscellaneous agents	3-5	
<i>Legionella</i> sp.	2-8	4
<i>Mycoplasma pneumoniae</i>	1-6	
<i>Chlamydia pneumoniae</i>	4-6	
Aspiration pneumonia	6-10	

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## 3) Novelty

- Discussing a newly published article

**JAMA** The Journal of the  
American Medical Association

**CFP MFC** Official Publication of  
The College of  
Family Physicians of Canada

**UpToDate**

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### 4) Up the Ladder

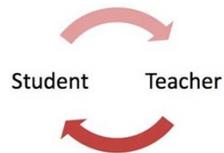
Ask the same question to medical student then to resident.



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### 5) Student as the Teacher

- Lyn can you show Chris how to examine for Ascites?



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## 6) Teaching to the Top

- Teach to the most senior level on the team
- Johnny “The next thing to try in heart failure patient who is already on maximum doses of inotropic agents and cannot tolerate further afterload is...”

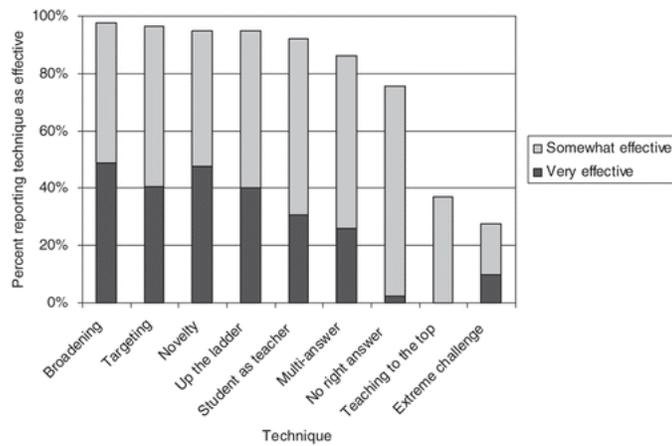


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Med Teach. 2011;33(12):e644-50. doi: 10.3109/0142159X.2011.610844.

### Effective multilevel teaching techniques on attending rounds: a pilot survey and systematic review of the literature.

Certain LK<sup>1</sup>, Guarino AJ, Greenwald JL.



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## Multilayered Essentials

- Strong teaching culture and ethos
- Enjoyment of Learning
- Flexibility in teaching delivery.
- GP supervisors



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## Endless possibilities



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## References

1. Morrison et al. BMC Medical Education 2014, 14:234
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3. Towards vertical integration in general practice education: literature review and discussion paper. O'Regan A<sup>1</sup>, Culhane A, Dunne C, Griffin M, McGrath D, Meagher D, O'Dwyer P, Cullen W
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