

AM Last Page: Longitudinal Integrated Clerkships

Professor Jennene Greenhill, PhD, MSPD, associate dean and director, Flinders University Rural Clinical School and Associate Professor Lucie Walters, PhD, MBBS, Rural Medical Education, Flinders University Rural Clinical School

Longitudinal integrated clerkships (LICs) represent a pedagogical and theoretical paradigm shift in health professional student clinical education.^{1,2} They occur when short block rotations are replaced by longer clinical immersion experiences (of at least a semester) during which “students...

- participate in comprehensive care of patients over time,
- participate in continuing learning relationships with these patients’ clinicians, and
- meet the majority of the year’s core clinical competencies across multiple disciplines simultaneously through these experiences.”³

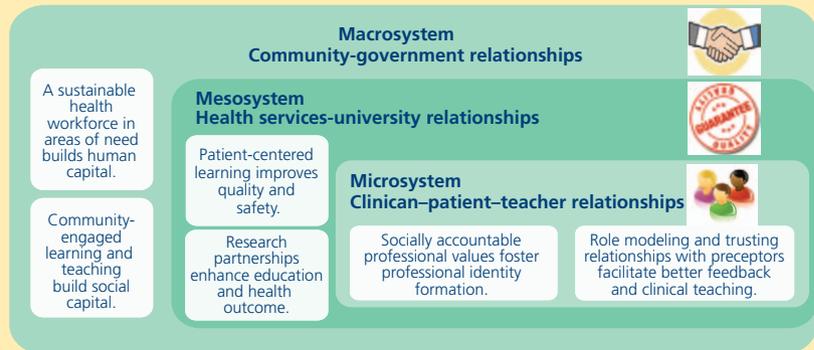
Continuity⁴ and symbiosis⁵ are key LIC concepts.

Continuity facilitates symbiotic relationships at multiple system levels:

The *microsystem*—At the personal level LICs help foster clinician-to-patient relationships and shape physicians’ professional identity.

The *mesosystem*—At the nexus between health services and the university, LICs improve quality and safety and facilitate research partnerships.

The *macrosystem* level—LICs promote community–government relations and provide social and human capital by involving students in community-engaged learning that attracts and retains clinicians.



The relationships fostered by LICs among students, faculty clinicians, and communities have wide, lasting outcomes.⁶

For students	For clinicians	For communities
<ul style="list-style-type: none"> • Equivalent or better academic results • Clinical mastery • Being part of the team 	<ul style="list-style-type: none"> • Improved reward-to-effort ratio and job satisfaction • Meaningful relationships with near peers • Work-ready graduates 	<ul style="list-style-type: none"> • Altruistic, person-centered clinicians • Improved interprofessional practice skills • Workforce for underserved areas

Sound theory underpins LICs.

Cognitivism⁷	<ul style="list-style-type: none"> • Continuity in clinical learning reduces cognitive load. Learners are more familiar with their surroundings, which results in greater working memory to learn while in the clinical environment. • Integrating knowledge and skills in the care of each patient provides emotional cues for recalling knowledge and develops schema for clinical reasoning.
Situated learning⁸	<ul style="list-style-type: none"> • Knowledge is meaningful when acquired within a clinical community of practice with specific norms, symbols, and rituals of power (such as clinical notes, investigation results, and ward rounds). • Students learn to be doctors by applying knowledge and skills rather than learning about medicine.
Transformative learning⁹	<ul style="list-style-type: none"> • Students begin to transition to clinicians when they experience a disorientating process that takes them out of their comfort zone and when they reflect on their experiences. • Students change their worldviews (values, personal identity, and self-expectations) guided by peers and clinical supervisors; they try different roles and engage in critical discourse to become work-ready clinicians.

LICs are educationally sound and potentially benefit all.

References

- Norris TE, Schaad DC, deWitt D, Ogur B, Hunt D; Consortium of Longitudinal Integrated Clerkships. Longitudinal integrated clerkships for medical students: An innovation adopted by medical schools in Australia, Canada, South Africa, and the United States. *Acad Med.* 2009;84:902–907.
- Gum LF, Richards JN, Walters L, Forgan J, Lopriore M, Nobes C. Immersing undergraduates into an interprofessional longitudinal rural placement. *Rural Remote Health.* 2013;13: 2271.
- International Consortium of Longitudinal Integrated Clerkships. Consensus LIC definition. 2007. Cambridge, MA.
- Hirsh DA, Ogur B, Thibault GE, Cox M. “Continuity” as an organizing principle for clinical education reform. *N Engl J Med.* 2007;356:858–866.
- Prideaux D, Worley P, Bligh J. Symbiosis: A new model for clinical education. *Clin Teach.* 2007;4:209–212.
- Walters L, Greenhill J, Richards J, et al. Outcomes of longitudinal integrated clinical placements for students, clinicians and society. *Med Educ.* 2012;46:1028–1041.
- van Merriënboer JGJ, Sweller J. Cognitive load theory and complex learning: Recent developments and future directions. *Educ Psychol Rev.* 2005;17:147–177.
- Lave J, Wenger E. *Situated Learning: Legitimate Peripheral participation.* New York, NY: Cambridge University Press; 2007.
- Mezirow J. Understanding transformation theory. *Adult Educ.* 1994;44:222–232.

Author contact: jennene.greenhill@flinders.edu.au