

Panel Discussion

“Towards a multidisciplinary and integrated curriculum in health care education“

IAMSE Sponsored Session

Friday June 17, 2022

International Association of Medical Science Educators



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IAMSE is an international organization with a focus on advancing medical science education through faculty development.

- > 2000 members worldwide
- Annual meeting
- Webinar series
- Publications (Journal, IAMSE Manuals)
- Travel Grant program
- Research Grant program



Train you to become a better educator



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About IAMSE



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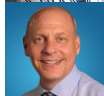


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Introducing the panelists



- Silvia Lizett Olivares Olivares, Tecnológico de Monterrey, Mexico



- Neil Osheroff, Vanderbilt University School of Medicine, USA



- Belinda del Carmen Carrión Chavarría, Tecnológico de Monterrey, Mexico



- Peter G.M. de Jong, Leiden University Medical Center, Netherlands (moderator)



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Session Layout

3 short presentations:

- Silvia Lizett Olivares Olivares: **Curriculum Reform**
- Neil Osheroff: **Session-Level Integration of Foundational and Clinical Sciences**
- Belinda del Carmen Carrión Chavarría: **Clinical Reasoning**

Questions from the audience



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**When I hear
“multidisciplinary and integrated teaching”,
I think of:**

Curriculum Reform

Silvia Lizett Olivares Olivares
Tecnológico de Monterrey

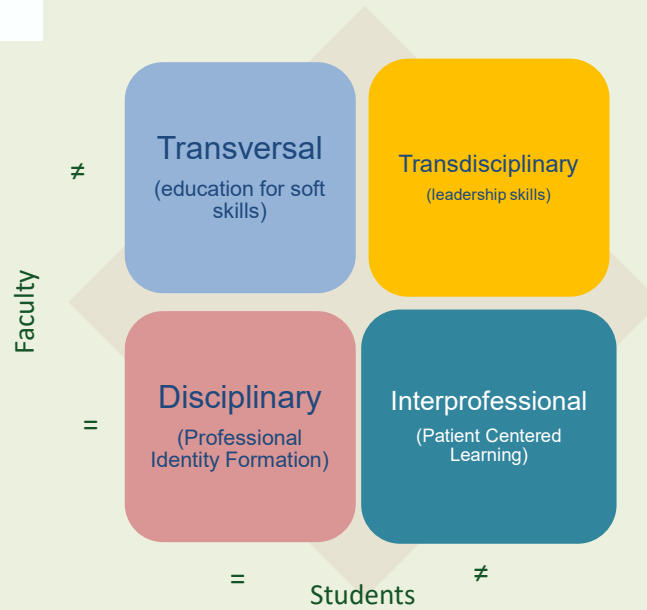


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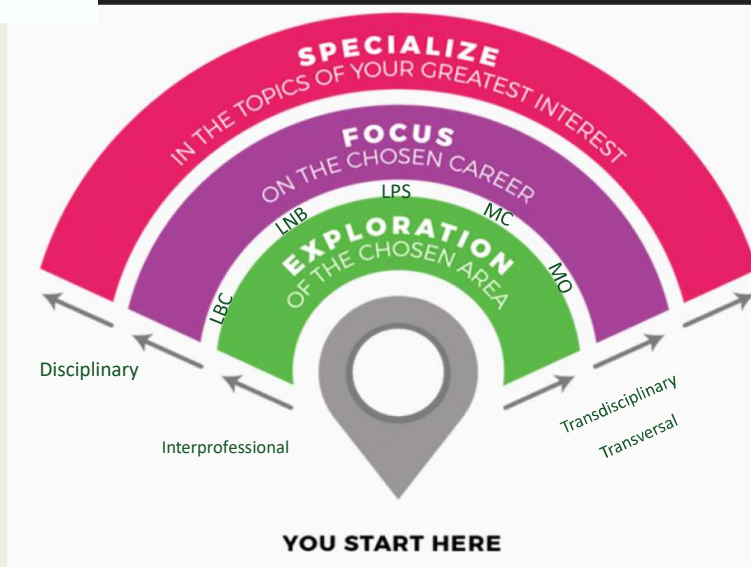
Competence Based Education



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Pathways



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When I hear
 “multidisciplinary and integrated teaching”,
 I think of:

*Creating Session-Level Integration of Foundational
 and Clinical Sciences*

Neil Osheroff

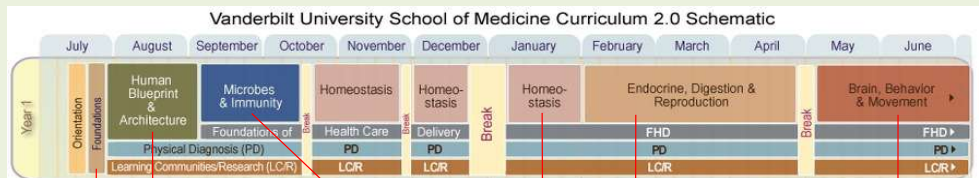
Vanderbilt University School of Medicine



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FMK Phase



Professionalism
 Health Care
 Health Care Systems
 Leadership

Infection & Antimicrobials
 Immune Response
 Inflammation
 Autoimmune Diseases
 Rheumatology

Endocrinology
 GI/Nutrition
 Reproduction

Neuroscience
 Brain/Neurology
 Mind (Psychiatry/ Behavior)
 Musculoskeletal

Proteins, Nucleic Acids
 Signal Transduction
 Metabolism, Genetics
 Cell & Tissue Biology
 Fundamentals, Introductory
 Pathology, Anatomy, and
 Pharmacology

Cardiovascular
 Pulmonary
 Renal
 Hematology

All disciplines are incorporated into every block

- Transdisciplinary
- Interdisciplinary
- Multidisciplinary
- Complementary
- Correlation
- Sharing
- Temporal Coordination
- Nesting
- Harmonization
- Awareness
- Isolation

Harden, R. M. (2000)
 Med Educ 34, 551

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Session-Level (Cognitive) Integration

Creation of semantic networks in the mind of the learner



Nodes = clinical features
Connectors = foundational science mechanisms

“Studies of memory and categorization have shown us that cognitive integration of basic and clinical sciences can be incredibly valuable in helping students organize, retain, and apply knowledge in order to solve clinical problems...” N. N. Woods 2021

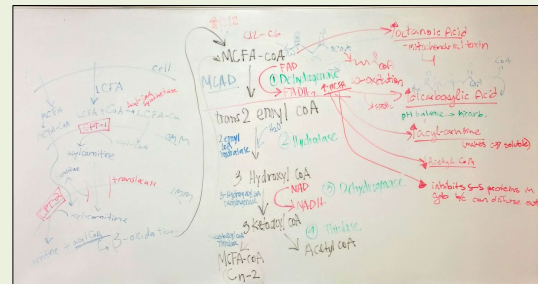
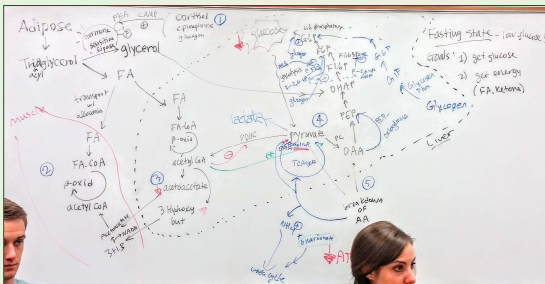
Use of Active Learning



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Case-Based Learning

- **Learner-centered, active learning format that simulates clinical practice in a safe setting**
- Scaffold “deep” medical science knowledge in a clinical context
- Begin to develop clinical reasoning skills
- Develop self-regulated learning skills
- Foster teamwork, communication, and leadership skills
- Foster intrinsic motivation to drive learning



CBL sessions help to ease the transition into the clinical phases.

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When I hear
“multidisciplinary and integrated teaching”,
I think of:

Clinical Reasoning

Belinda del Carmen Carrión Chavarría
Tecnológico de Monterrey



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REASON



- BASIC SCIENCES PROVIDE:
- Knowledge of prevalence upon gender, age and location
- Understand basis of disarray that originates the symptom

CONSTRUCT



EVIDENCE BASED MEDICINE
MEDICINE BASED ON EXPERTS

DECISION-MAKING



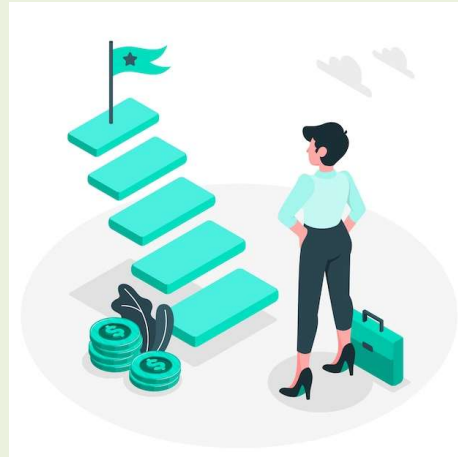
NOVICE

- COMMON SYMPTOMS+
- PREVALENCE AND FREQUENCY
- =LIKELY DIAGNOSIS

Lisk K, Agur AM, Woods NN. Exploring cognitive integration of basic science and its effect on diagnostic reasoning in novices. *Perspect Med Educ.* 2016 Jun;5(3):147-53. doi: 10.1007/s40037-016-0268-2. PMID: 27246965; PMCID: PMC4908035.

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- Train diagnostic accuracy based on justification of:
- Explain the reason of differential diagnosis
- Explain what additional information is needed to confirm diagnosis
- Propose initial management



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Discussion with the audience

What do YOU think of when you hear
*“multidisciplinary and integrated
teaching”?*



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