

Good morning!





Competency Achieving Medical Education - Challenges & Solutions

Competencia logrando educación médica-retos y soluciones

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Intern's dilemma

El dilema del pasante

Paciente: "doctor, tengo miedo. Esta es mi primera vez para tener un procedimiento "

Pasante: "sé cómo te sientes. ¡ Esta es mi primera vez también! "

- Patient : “Doctor, I am scared. This is my first time to have a procedure”
- Intern : “I know how you feel. This is my first time too!”



Expectations from medical graduate

Las expectativas del graduado médico

- Parents of a medical student : Be a good doctor!
 - Patient : Be kind and caring!
 - Patient's family : Be an expert!
 - Medical institutions : Be a competent professional!
- Los padres de un estudiante de medicina: ser un buen médico!
 - Paciente: ¡ sea amable y cariñoso!
 - Familia del paciente: ¡ sea un experto!
 - Instituciones médicas: ¡ sea un profesional competente!



Quotations

Citas

- “I have no objection for doctors becoming rich but not by exploitation”
Anonymous
- “What comes up again and again in malpractice cases is that patients say they were rushed or ignored or treated poorly”
Malcolm Gladwell
- “Failure to provide information, an explanation, and an apology actually increases the risk of litigation and erodes the patient-doctor relationship”
Study by St. Mary’s Hospital, London
- "No tengo ninguna objeción para que los médicos se conviertan en ricos, pero no por la explotación" anónimo
- "lo que surge una y otra vez en casos de negligencia es que los pacientes dicen que fueron apresurados o ignorado o tratados mal"
Malcolm Gladwell
- "el no proporcionar información, una explicación y una disculpa en realidad aumenta el riesgo de litigios y erosiona la relación paciente-médico" estudio del hospital St. Mary's, Londres

Why change/modify curriculum and its structure? ¿Por qué cambiar/modificar el currículo y su estructura?

- Societal expectations and needs
 - Emphasis on patient centered health care
 - Student/end-user centered education
 - Advent of information technology
 - Best evidence in medical education (BEME)
 - **Basic sciences can be taught effectively in clinical context**
- Las expectativas y necesidades de la sociedad
 - Énfasis en la atención médica centrada en el paciente
 - Educación centrada en el usuario final/estudiante
 - La llegada de la tecnología de la información
 - Mejor evidencia en la educación médica (BEME)
 - Las ciencias básicas pueden enseñarse eficazmente en el contexto clínico



Curriculum planning & design

What it means in practice?

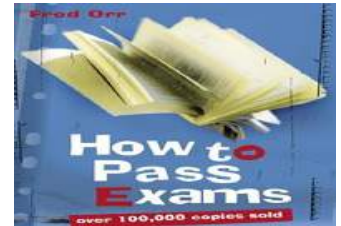
Competency based
“Able to do/perform”



Outcome based

“Often used in reference to the performance at exams and other metrics”

“Able to show”



Tradition based

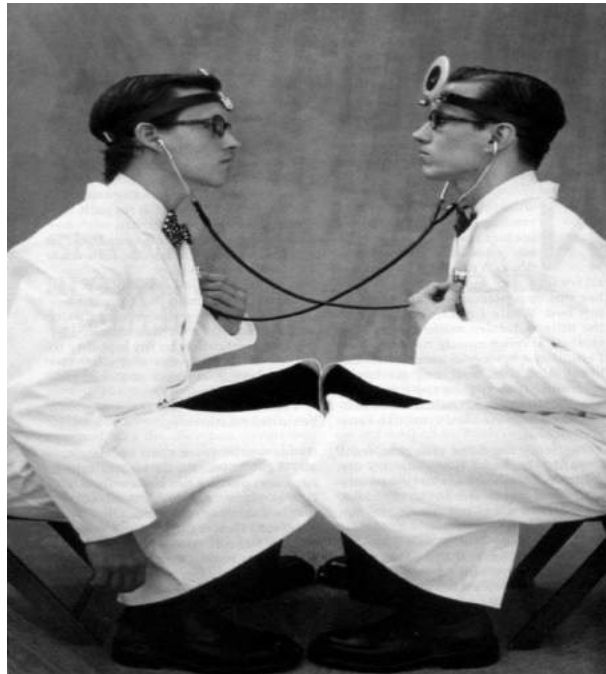
“Based on expectations and learning objectives”

“Able to achieve”

**EXPECTATIONS
REALITY**

Patient, Dr. Google and Internet doctors

- “Doctor knows the best so does the patient !”
"El doctor sabe lo mejor así que lo hace el paciente!"



3 Pillars of competence

3 pilares de competencia



Competence

Competencia

- The state or quality of being adequately well **qualified**
- The ability to **do something successfully** efficiently
- ‘The state of being **sufficiently capable** and properly qualified to do something at a **level that is acceptable**’
- El estado o la calidad de estar adecuadamente bien calificado
- la capacidad de hacer algo con éxito eficientemente ‘
- el estado de ser suficientemente capaz y adecuadamente calificado para hacer algo en un nivel que es aceptable ‘

NG Patil et al, WJS, 2003

NG Patil et al, WJS, 2003

Professionalism

Profesionalismo

N.G. Patil AMEE 2012

- Set of **values & standards**
 - a professional must **achieve, maintain and exhibit**
 - in terms of **competence, care, compassion**
 - with high moral values, honesty, integrity and dedication
- Conjunto de valores y normas
 - un profesional debe lograr, mantener y exhibir
 - en términos de competencia, cuidado, compasión con altos valores morales, honestidad, integridad y dedicación



Reminder

WHO Definition of Health

- Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity



- “Healthy body and Healthy mind”

A perception Una percepción

“Tomorrow’s health professionals are taught by today’s teachers with yesterday’s curriculum”

"Los profesores de hoy enseñan los profesionales de la salud de mañana con el currículo de ayer"





Fit for Purpose : Fit to pass exams

Apto para el propósito: apto para aprobar exámenes

Is he/she fit for Practice?

¿Es apto para la práctica?



Qualitification not just Qualification!

How clinicians learn to manage?

- Script memory /Pattern recognition
- Exposure
- Experience
- Analytic skills

-
- Memoria de script/reconocimiento de patrones
 - Experiencia de exposición
 - Habilidades analíticas



Essential competencies



- Dexterity (Hand)
- Judgment (Head)
- Communication (Hear)
- Patient safety (Him & Her)

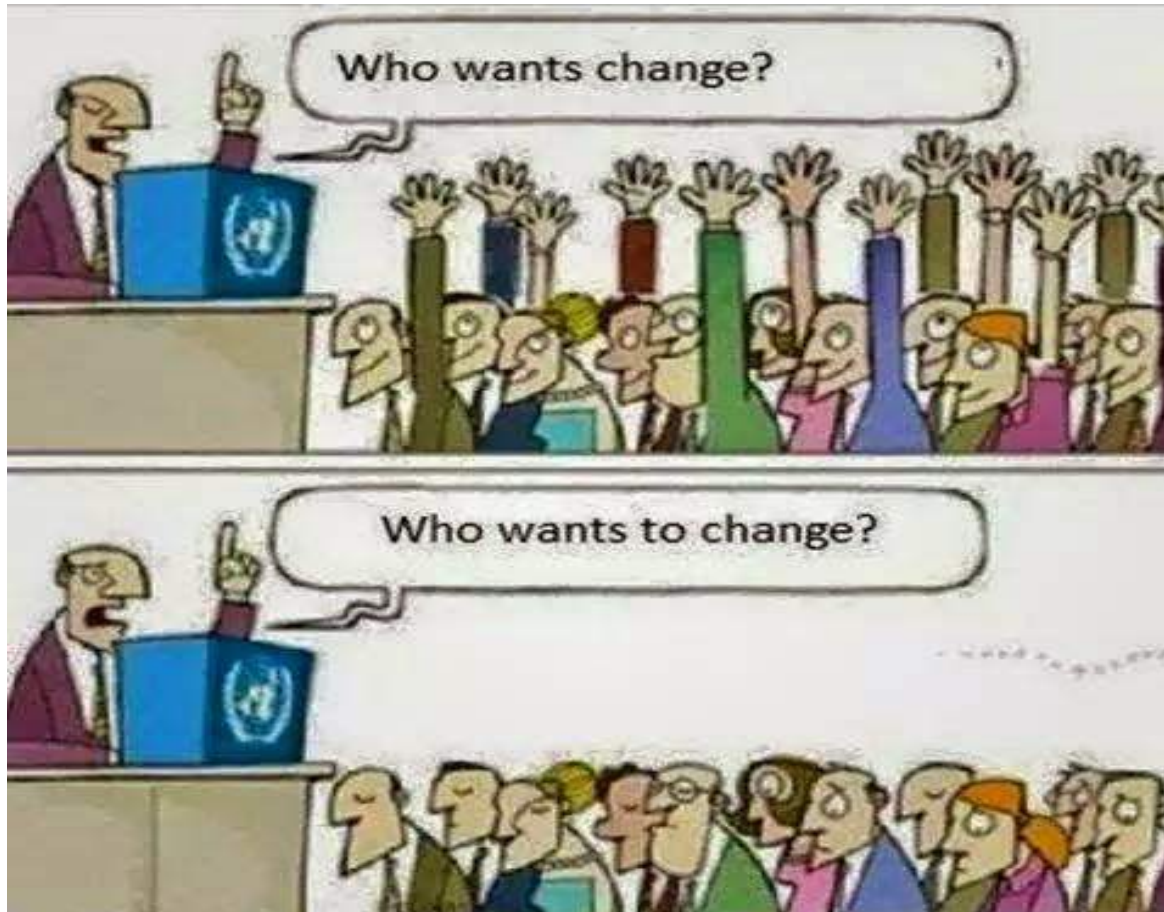


Retained Instrument

- Most common retained instrument is a malleable retractor
- Retention is usually the result of two process errors
 - ✦ Loss of focus
 - ✦ No count



Fact of life!



Source of complications & deaths in health care

- Lack of prevention
 - Attendance/Access
 - Investigations
 - Communication
 - Drugs
 - Procedures
- La falta de prevención
 - Asistencia/acceso
 - Investigaciones
 - Comunicación
 - Drogas
 - Procedimientos



Competency framework

Marco de competencias

ACGME

CanMED

USA & Canada

Six ACGME Core Competencies



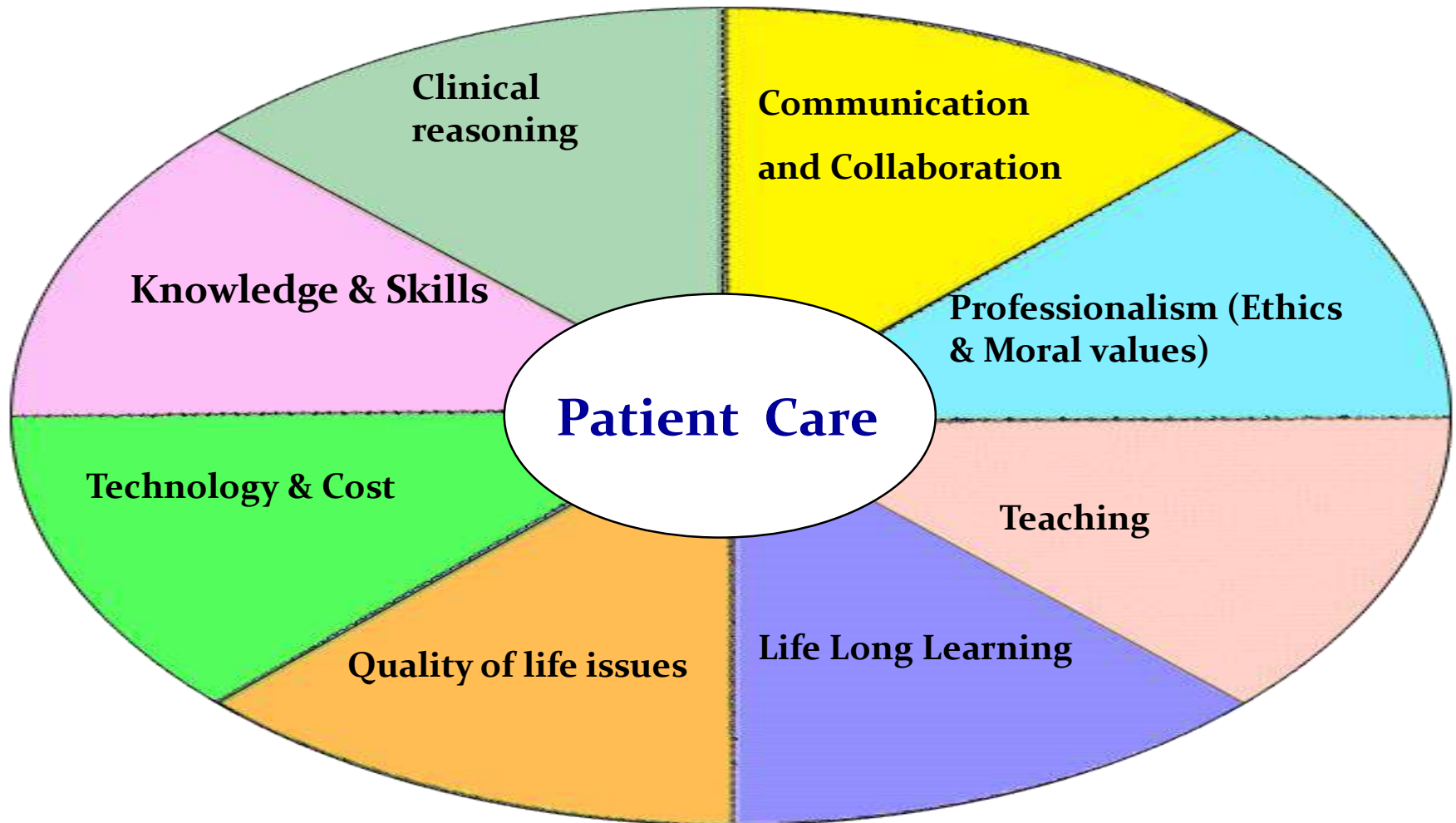
Department of Graduate Medical Education (GME)



CANMEDS

Patient care in the centre of competency framework

El cuidado del paciente en el centro del marco de competencias



Competency Achieving Curriculum

La competencia logrando currículo

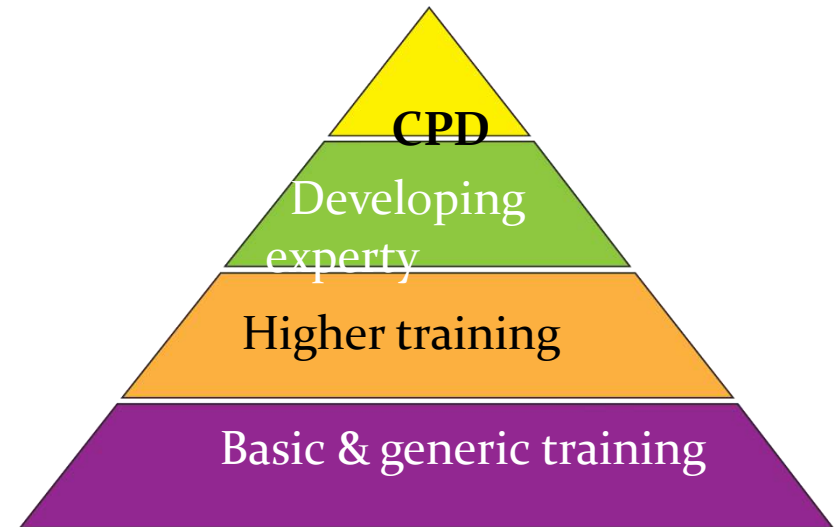


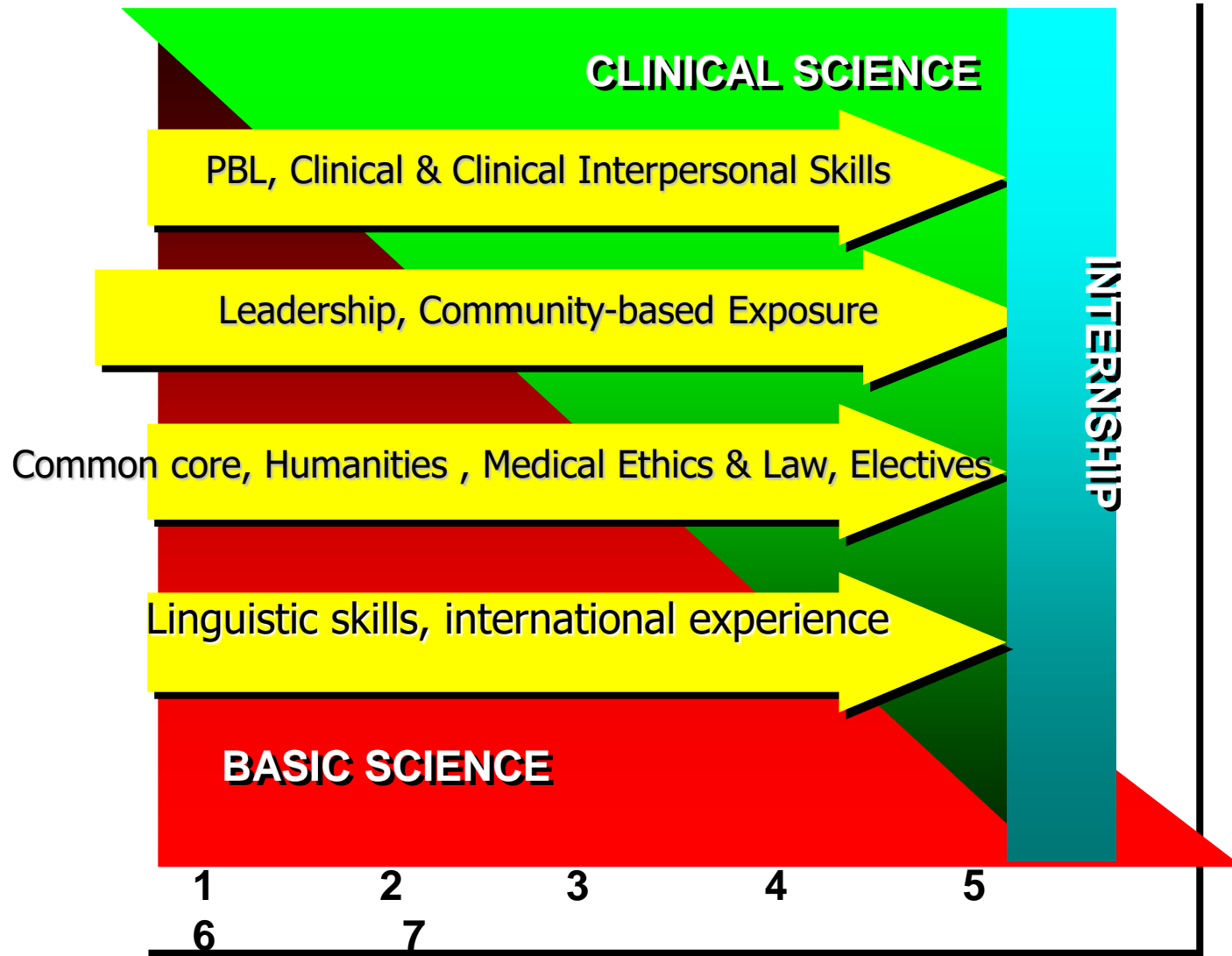
Ascending competency/ Competency progression

Climbing the ladder

Competencia ascendente/progresión de la competencia

** Subiendo la escalera **





Changing face of learning environment

Cambiar la cara del entorno de aprendizaje



We live in digital age

Vivimos en la era digital



Memorization is outsourced to
technology

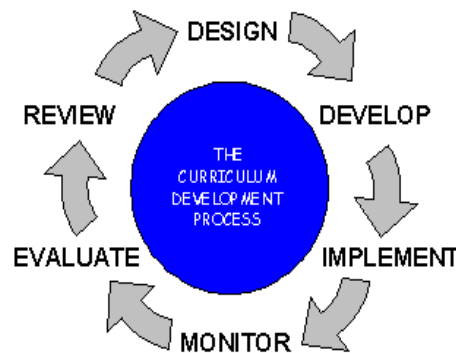
La memorización se externaliza a
la tecnología

Developing competency based curriculum

Desarrollar un currículo basado en competencias

- Syllabus
- Teaching and Learning methods
- Assessment
- Evaluation : Quality assurance

- Programa
- Los métodos de enseñanza y aprendizaje
- Evaluación
- Evaluación: aseguramiento de la calidad

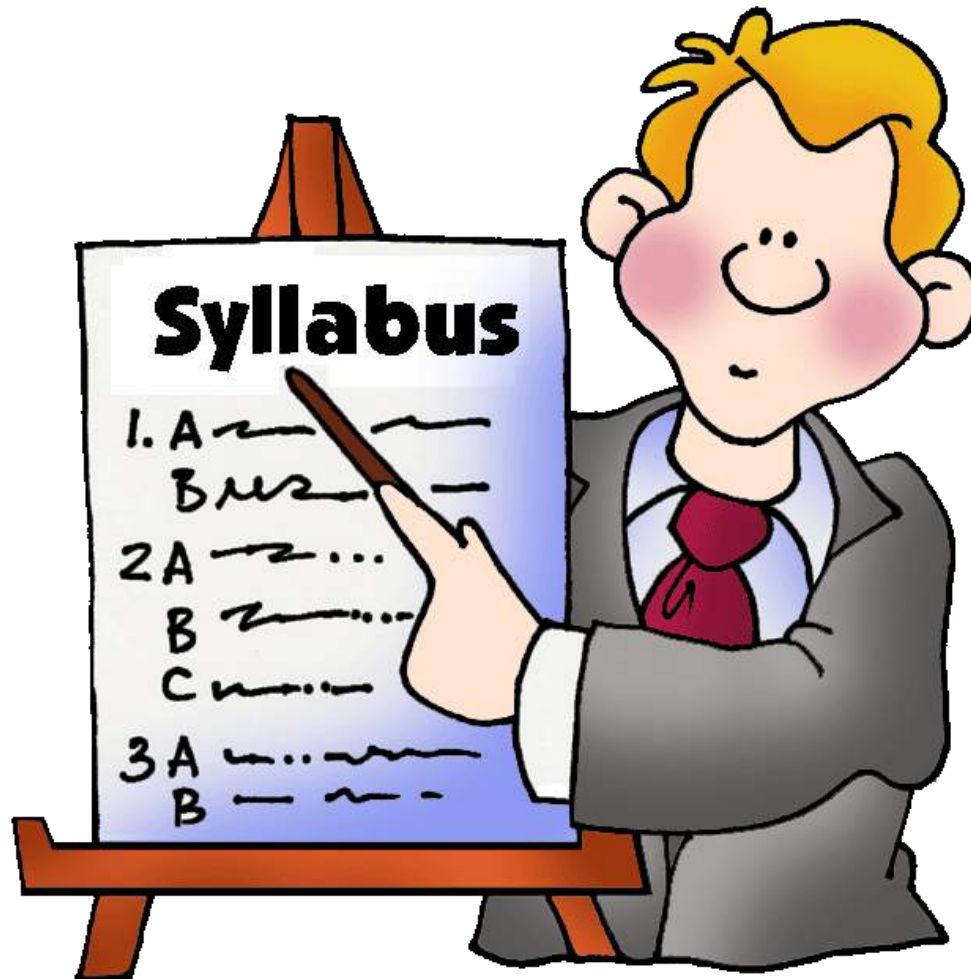


Strategies to implement competency based curriculum

- Competence centered syllabus
- Teaching of basic sciences in clinical context
- Early clinical exposure and experience
- Hippocratic oath



Step 1 : Writing competency based syllabus



Domains of Syllabus

Dominios del plan de estudios

- Las competencias de resultados
- Nivel de competencia
- Los métodos de enseñanza y aprendizaje
- Evaluación
- Outcome competencies
- Level of proficiency
- Teaching & learning methods
- Assessment



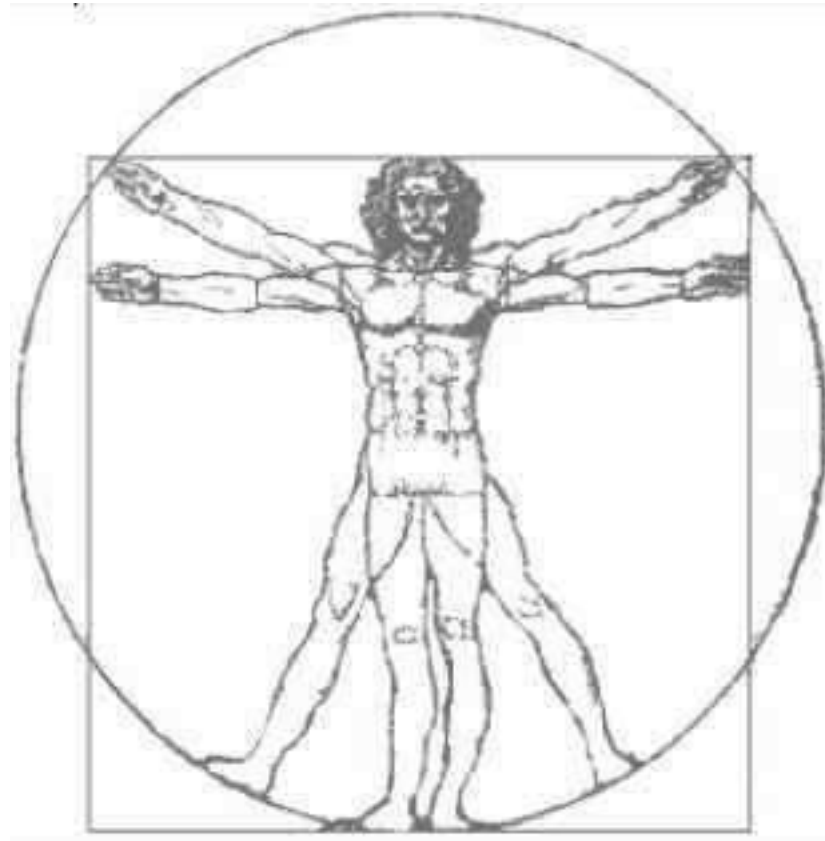
Outcomes Competencies	Level of proficiency : knowledge, skills and attitudes	Teaching and Learning Methods	Assessment
MBBS GRADUATE			

Outcomes Competencies	Level of proficiency : knowledge, skills and attitudes	Teaching and Learning Methods	Assessment
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MBBS/MD GRADUATE

<p>Must be able to:</p> <ol style="list-style-type: none"> 1. Provide effective primary care 2. Institute management plan to carry out appropriate treatment 3. Communicate skillfully to patients and relatives 	<p><u>Knowledge:</u></p> <ul style="list-style-type: none"> •Practical application of basic and clinical sciences <p><u>Skills :</u> Diagnostic and procedural skills and safe prescription practice and sound judgment</p> <p><u>Attitude:</u></p> <ul style="list-style-type: none"> .Exhibit compassion and care .Patients are not part of furniture! 	<ol style="list-style-type: none"> 1. Lectures based on case scenarios 2. Interactive tutorials/PBL 3. Seminars 3. Practicals 4. Bedside teaching 5.Rural health centre visits 6. Learning at Skills development centre 	<ol style="list-style-type: none"> 1. MCQs 2. EMQs 3. SAQs 4. Case reports 5. Minicase 6. Clinical & Practical tests 7. Work place assessment during internship 8. Logbook 9. Portfolios
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Why learn Anatomy?



Learning of Anatomy

Outcome competencies	Level of proficiency (Knowledge, Skills, Attitudes)	Training / Learning Tools & Methods	Assessment
<p>Must be able to demonstrate :</p> <ul style="list-style-type: none">• Surface anatomy in context of general and systemic physical examination• Structural anatomy related to procedures• Cross sectional anatomy in context of imaging• Histology related to molecular biology	<p><u>Knowledge:</u></p> <p>Skills</p> <p><u>Attitudes</u></p>		

Outcomes Competencies	Level of proficiency : knowledge, skills and attitudes	Teaching and Learning Methods	Assessment
Ethics and Communication			
<p>1. Must be able to define the code of health ethics</p> <p>2. Must be able to communicate skillfully to patients and relatives</p>	<p><u>Knowledge:</u> Code of ethics</p> <p><u>Skills :</u> Acquire moral & ethical values and mutual respect</p> <p><u>Attitude:</u> .Exhibit compassion and care .Patients are not part of furniture!</p>	<p>1. <u>Lectures based on case-based scenario</u></p> <p>2. Seminars for individual and group presentations</p>	<p>1. Write an essay on ethical issues / principles</p> <p>2. MCQs / Short question & answer related to case based scenarios</p>

ACUTE ABDOMEN

Outcome competencies	Level of proficiency (Knowledge, Skills, Attitudes)	Training / Learning Tools & Methods	Assessment
Must be able to : Elicit signs of peritonitis and Initiate preliminary treatment and prepare patients for emergency intervention and obtain informed consent	<p><u>Knowledge:</u> Define acute abdomen •Surgical anatomy of acute abdomen •Various causes and etiological factors of acute abdomen in different age & gender groups •Common causes of acute abdomen</p> <p><u>Skills</u> Putting together history and physical findings to make appropriate diagnosis •Differentiate between signs of peritonism and peritonitis •Setting priorities and interpretation of investigations •Procedural skills : e.g. venous access, arterial puncture, naso-gastric intubation</p> <p><u>Attitudes</u> •Acute abdomen is an acute emergency • ‘Sun does not set’ on acute abdomen till definitive treatment is undertaken expediently</p>	•Interactive tutorial •Scenario based case presentations • Videos and manikins for practical procedures	•MCQs & EMQs •OSCE •Case based assessment

Control of bleeding

Outcome competencies	Level of proficiency (Knowledge, Skills, Attitudes)	Training / Learning Tools & Methods	Assessment
<p>Must be able to:</p> <ul style="list-style-type: none"> • Understand the principle of haemostasis • Perform bleeding control with basic procedural techniques 	<p><u>Knowledge</u></p> <ul style="list-style-type: none"> • Management of haemorrhagic shock • Blood loss and risk of massive transfusion • Basic principle of bleeding control • Anatomy of major vessels and collaterals <p><u>Skills</u></p> <ul style="list-style-type: none"> • Basic technique of pressure and packing • Appropriate use of tourniquet 	<ul style="list-style-type: none"> • Lectures • Basic skills Course (BSC) <ul style="list-style-type: none"> • Practice at skills lab/OT • Demonstration 	<ul style="list-style-type: none"> • MCQs • OSCE

Step 2 :

Teaching & Learning methods

- Lectures : Scenario based
- Learning : Interactive, practical & evidence based
- PBLT



Scenario based teaching

A practical approach

Examples

Anatomy

Scenario for lecture & demonstration:
Cartagena health team visited rural high schools and conducted comprehensive health check up including general and systems examination.

- Teaching points : surface anatomy of various organs essential to physical examination

Physiology

Fluid and electrolyte balance

Scenario :

Mr. Dehydration, 45 –year-old gentleman was admitted to hospital with 2 days history of vomiting and diarrhea. His tongue was dry and he looked pale.

- Teaching points : Daily requirement of fluid and electrolytes and normal values.

Pathophysiology

Hypertension and Diabetes

Scenario:

Mrs. Prosperous , 40-year-old lady was diagnosed to be suffering from blood pressure and diabetes while being investigated for surgery for cervical cancer.

- Teaching points : How blood pressure and blood sugar is maintained at normal level in human beings?

Step 3 : Scenario based learning

Paso 3: el aprendizaje basado en escenarios

- Learning of basic and clinical sciences in practical context e.g. PBL, CBL etc.
- Aprendizaje de las ciencias básicas y clínicas en el contexto práctico, por ejemplo, PBL, CBL etc.



Saiko. S.

Training with simulation Learning to swim before you dive!

Entrenamiento con simulación ; aprendiendo a nadar antes de bucear!



Structured Training Program for MAS Credentialing

Hands-on Practice



Simulation

Simulación

- Use simulation to learn and practice
- Correct mistakes
- Practice again
- Correct mistakes
- Practice to be perfect
- Observe
- Assist
- Perform under supervisor
- **Simulation can lead to Psuedo-confidence and Over-confidence!**
- **Clinical presentation can differ in practice than what is learnt in workshops**



- Utilice la simulación para aprender y practicar
- Corregir errores
- Practique de nuevo
- Corregir errores
- Practica para ser perfecto
- Observe
- ASSIST
- desempeñarse bajo supervisor
- Simulación puede conducir a psuedo-confianza y exceso de confianza!
- La presentación clínica puede diferir en la práctica de lo aprendido en los talleres

Skills Development centers

Centros de desarrollo de habilidades

- Should not become a status symbol
- Lot of hardware but not enough soft ware



"But I'm sure my regular doctor is better than you. He has a Mercedes, you know."

-
- No debe convertirse en un símbolo de estado
 - Gran cantidad de hardware, pero no suficiente Soft ware

Step 4 :

Assessment domains

- Knowledge and its application : Written test and orals : MCQs, EMQs, SAQs, Minicase etc.
- Practical skills : e.g. Diagnostic & procedure related
- Communication : e.g. OSCE, Short & Long case exams
- Professionalism : e.g. decision making, judgment, patient safety

Quotations on Assessment

- “Students can cope with bad teaching but they cannot cope with bad assessment” (*modified from Boud, 1995*)
- “Los alumnos pueden hacer frente a la mala enseñanza, pero no pueden hacer frente a la mala evaluación “
(modificada de Boud, 1995)
- Assessment drives learning. But does assessment process drives students to expected professional competency?



Work place assessment

Indirect approach

- Chart audit
- Practice audit
- Prescription practice

A Miller : BMJ 2010;341:c5064



Direct approach

- Videos
- Supervisor, Peers and Patient reports :
Multisource feedback
(360 degree evaluation)
- Mini-clinical evaluation exercise
- Direct observation of procedural skills
- Case based discussion

INTERN ASSESSMENT REPORT

Note to Chief of Service/Supervising Officer filling in this form: This report is essential for your intern's future. It will be used by the Universities/Licentiate Committee as evidence that registration criteria have been fulfilled. ***Please see the Guidelines for Intern Assessment on the overleaf before completing the following evaluation form.***

After completing this form, please return by mail to the relevant University/Licentiate Committee; also send a copy to HAHO, and retain a copy for your own files. Your help is very much appreciated.

At the request of the intern, the hospital may provide a copy of this report to the intern if the request is made immediately following its completion.

	Unacceptable	Needed Help & Counselling	Average	Good	Excellent
Professional knowledge					
Clinical skill					
Attitude to patients					
Attitude to staff					
Willingness to learn					
Organizational ability					
Clinical judgement					
Attendance at educational activities					
Use of medical language					
Communication skills					
Sense of responsibility					

If an intern was assessed the rating of “Needed Help & Counselling”, please specify if help and counselling is also required by members in the Institute of Medical and Health Sciences Education (HKU)/Office of Educational Services(CUHK)/Licentiate Committee. If follow-up by the University/Licentiate Committee is recommended, please specify the specific points that should be addressed.

General comments (additional sheet if necessary):

<p>Name of Supervising Officer: _____</p> <p>Position: _____</p>	<p>Put a “✓” against the following:</p> <ul style="list-style-type: none"> • I met & discussed this report with the intern. <input type="checkbox"/> • I read the Intern Logbook presented by this intern during this meeting. <input type="checkbox"/> <p>Signature: _____</p> <p>Date: _____</p>
<p>Name of Chief of Service: _____</p>	<p>Did discuss this report with this intern. <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Signature: _____</p> <p>Date: _____</p>

<p><i>To be completed by the above-named intern:</i></p> <p>I confirm that I have read and discussed this review with my internship supervisor. I know that I must submit Intern Logbook and the Rotation</p>	<p>Signature: _____</p> <p>Date: _____</p>
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New kid on the block!

Entrustable Professional Activities

- Entrustment in this case refers to the ability to effectively perform a professional activity without direct supervision
- Brings trust and supervision into assessment which are intuitive for faculty working with trainees
- Entrustment decisions allow inference about a learner's competence

Challenges & Reality



Competency achieving curriculum

List of competencies

- Dexterity
- Interactive communication
- Appropriate physical examination
- Investigations & its interpretation
- Practical skills : Basic & advanced
- Treatment plan
- Prescription practice : Right medication, Indications, dosage and allergies
- Patient management in different settings : Out patient, In-patient, A&E, preventative
- Patient safety
- Evidence based Practice (EBM)
- Ethical behaviour
- Auditing of practice
- Fit for practice
- Health economics
- Team work
- Managerial skills
- Cost effectiveness
- Social responsibility
- Meeting societal expectations
- Cultural awareness & sensitivity

Initiatives

- Online competency based syllabus (Curriculum map)
- Early clinical exposure & experience
- Skills development centres / Simulation
- Case based learning of basic sciences
- Integration : Team based & inter-professional
- Capstone experience
- Electives
- Effective Internship
- Logbooks/Mini-portfolios
- Fitness to practice committee
- Online health
- Role models
- Teaching residence to teach



Bad Role model

Video



Ultimate assessment

La evaluación definitiva



- Do you trust your graduates to look after you and your family?
- ¿Confías en que tus graduados cuiden de ti y de tu familia?

Step 5 : *Evaluation*

Promise should match the outcomes

- **Follow the careers of graduates through alumni unit**

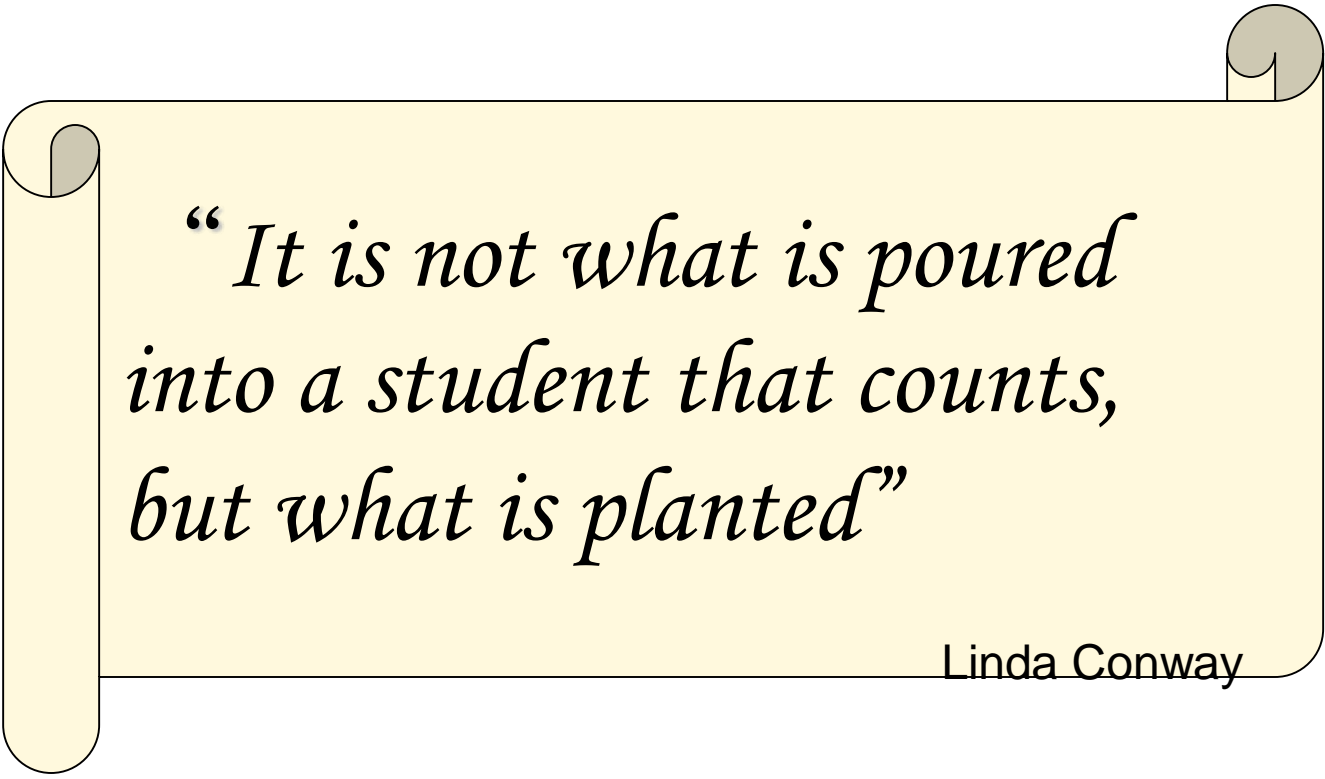


Competency Achieving Medical Education - Challenges & Solutions

ABSTRACT

- There is a perception that medical schools are in **danger of producing 'fit to pass exams' graduates than 'Fit to practice'**
- Medical profession need to revolutionize curriculum to truly articulate the role of medical schools **by providing 'Competency Achieving Syllabus'** which should clearly **demonstrate practical approach in creation of undifferentiated doctors, tomorrow's specialists with generic skills; and graduates who can perform well during internship**
- Hay una percepción de que las escuelas de medicina están en peligro de producir "apto para aprobar los graduados de los exámenes" que "apto para la práctica" la profesión médica necesita para revolucionar el currículo para articular verdaderamente el papel de las escuelas de medicina mediante la prestación de 'competencia logrando Plan de estudios ' que debe demostrar claramente el enfoque práctico en la creación de médicos no diferenciados, los especialistas del mañana con habilidades genéricas; y graduados que pueden rendir bien durante las prácticas





*“It is not what is poured
into a student that counts,
but what is planted”*

Linda Conway

Thank you
Gracias

