

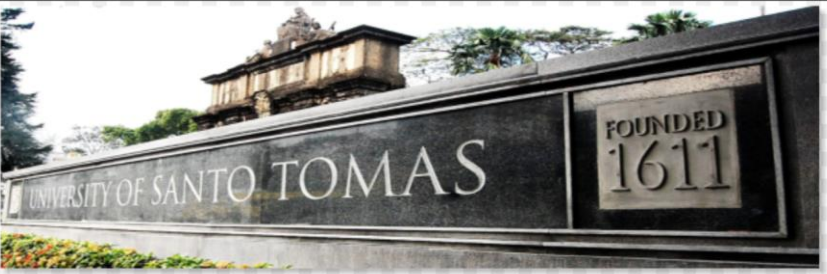


# MEDICAL EDUCATION in the DIGITAL AGE: REFORMS AND CHALLENGES

QS SUBJECT FOCUS SUMMIT – MEDICINE  
*Universities Innovating for Future Healthcare*  
Kaohsiung Convention Center  
October 16-18, 2017

Ma. Lourdes D. Maglinao, MD, MHPed, FICS, FAFN  
Dean, Faculty of Medicine and Surgery  
University of Santo Tomas, PHILIPPINES









## OUTLINE

- Brief historical background
- Traditional methods of teaching
- Outcome-based education
- Use of technology in Medical Education
- Challenges in adopting technology
- Trends in Medical Education





## ***HISTORICAL MILESTONES***

**1959**- The Medical Act.

**1967** – The Association of Philippine Medical Colleges was founded

**1968** – Granting of MD degree after 4 years

**1970** – content based curriculum converted to objective based curriculum

**1978-81** – Competency based Curriculum “**5 Star Physician**”

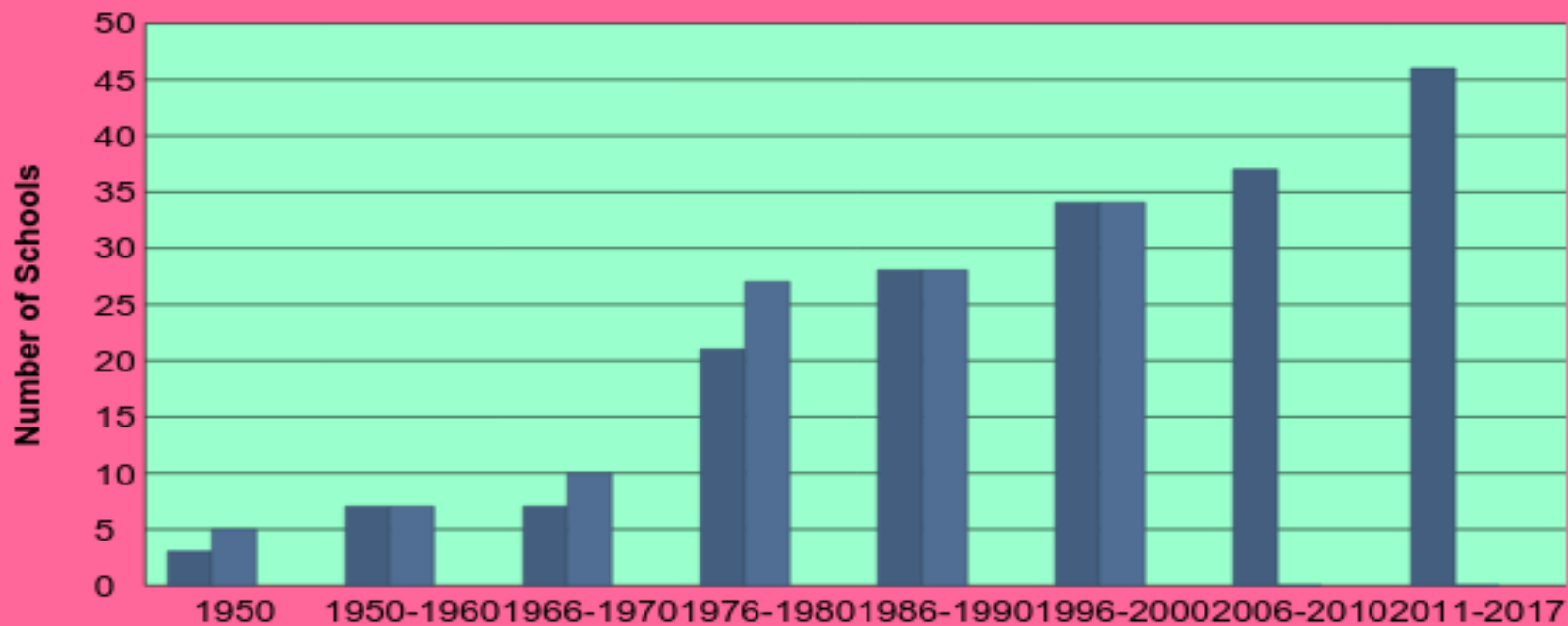
**1982** – Integration of Primary Health Care in Medical Curriculum.

**1999** – The APMC affiliated with the Philippine Accrediting Association of Schools, Colleges and University (PAASCU)

**2012** – Commission on Higher Education (CHED)- CHED MEMO #46 series 2012

**2017** – 46 Medical Schools









- Students
- COE
- Faculty
- Research
- Physicians Licensure Examination
- Programs
- Top performing school
- International linkages





## 2017 Best Philippine Schools to Study

# MEDICINE

Based on overall board exam performance, number of examinees, top performing examinees, accreditation status, and faculty-student ratio.

1	<b>University of Santo Tomas</b> - 96.11%
2	<b>UE Ramon Magsaysay Mem. Medical Center</b> - 95.49%
3	<b>University of the Philippines-Manila</b> - 85.52%
4	<b>DLSU-Health Sciences Institute</b> - 81.60%
5	<b>FEU-Nicanor Reyes Medical Foundation</b> - 80.82%
6	<b>Saint Luke's College of Medicine</b> - 77.03%
7	<b>Cebu Institute of Medicine</b> - 77.00%
8	<b>Xavier University</b> - 70.74%
9	<b>West Visayas State University-La Paz</b> - 70.13%
10	<b>Silliman University</b> - 67.70%
11	<b>Saint Louis University</b> - 67.47%
12	<b>Pamantasan ng Lungsod ng Maynila</b> - 67.44%
13-25	See <b>FULL RANKINGS</b> at <a href="http://bit.ly/2yFY2LL">http://bit.ly/2yFY2LL</a> .



Here are the top passers:

TOP PASSERS: SEPTEMBER 2017 PHYSICIAN BOARD EXAM TOPNOTCHERS

RANK	NAME	SCHOOL	RATING %
1	VINCENT EDOUARD ANTHONY RETARDO GULLAS	UNIVERSITY OF SANTO TOMAS	90.50
2	JAN DAVID CHOA MONZON	DE LA SALLE UNIVERSITY- HEALTH SCIENCES INSTITUTE	90.08
2	ROBERT CARANDANG REÑA	DE LA SALLE UNIVERSITY- HEALTH SCIENCES INSTITUTE	90.08
3	KARL PHILLIP LUMIO AVILLO	WEST VISAYAS STATE UNIVERSITY-LA PAZ	90.00
4	MARC VINCENT NGO BARCELONA	UNIVERSITY OF SANTO TOMAS	89.83
5	ANA ERYKA ELAINE ADRIANO PERALTA	UNIVERSITY OF SANTO TOMAS	89.67
6	ALDRIC CRISTOVAL CHUA REYES	UNIVERSITY OF THE PHILIPPINES-MANILA	89.58
7	MARK ANDRIAN ORILLOZA YANO	CEBU INSTITUTE OF MEDICINE	89.50
8	STEPHANIE MARIE CARBON SENO	UNIVERSITY OF SANTO TOMAS	89.42
9	SIMON LIM GO	UNIVERSITY OF SANTO TOMAS	89.33
10	KELVIN KEN LEE YU	UNIVERSITY OF SANTO TOMAS	89.25

SCHOOL

RANK	SCHOOL	TOTAL NO. OF EXAM.	TOTAL NO. PASSED	PERCENTAGE PASSED
1	CEBU INSTITUTE OF MEDICINE	122	122	100.00%
1	SAINT LUKE'S COLLEGE OF MEDICINE	83	83	100.00%
2	WEST VISAYAS STATE UNIVERSITY-LA PAZ	101	100	99.01%
3	PAMANTASAN NG LUNGSOD NG MAYNILA	108	106	98.15%
4	UNIVERSITY OF THE PHILIPPINES-MANILA	150	146	97.33%
5	UNIVERSITY OF SANTO TOMAS	482	468	97.10%
	ATENEO DE MIA UNIV. SCHOOL OF MED. & PUBLIC HEALTH-PASIG	138	134	97.10%
6	UNIVERSITY OF THE EAST RAMON MAGSAYSAY MEM MEDICAL CTR	326	316	96.93%
7	XAVIER UNIVERSITY	56	54	96.43%
8	SAN BEDA COLLEGE	106	100	94.34%
9	CEBU DOCTORS UNIVERSITY-COLLEGE OF MEDICINE	110	103	93.64%
10	FAR EASTERN UNIVERSITY-NICANOR REYES MEDICAL FOUNDATION	268	248	92.54%



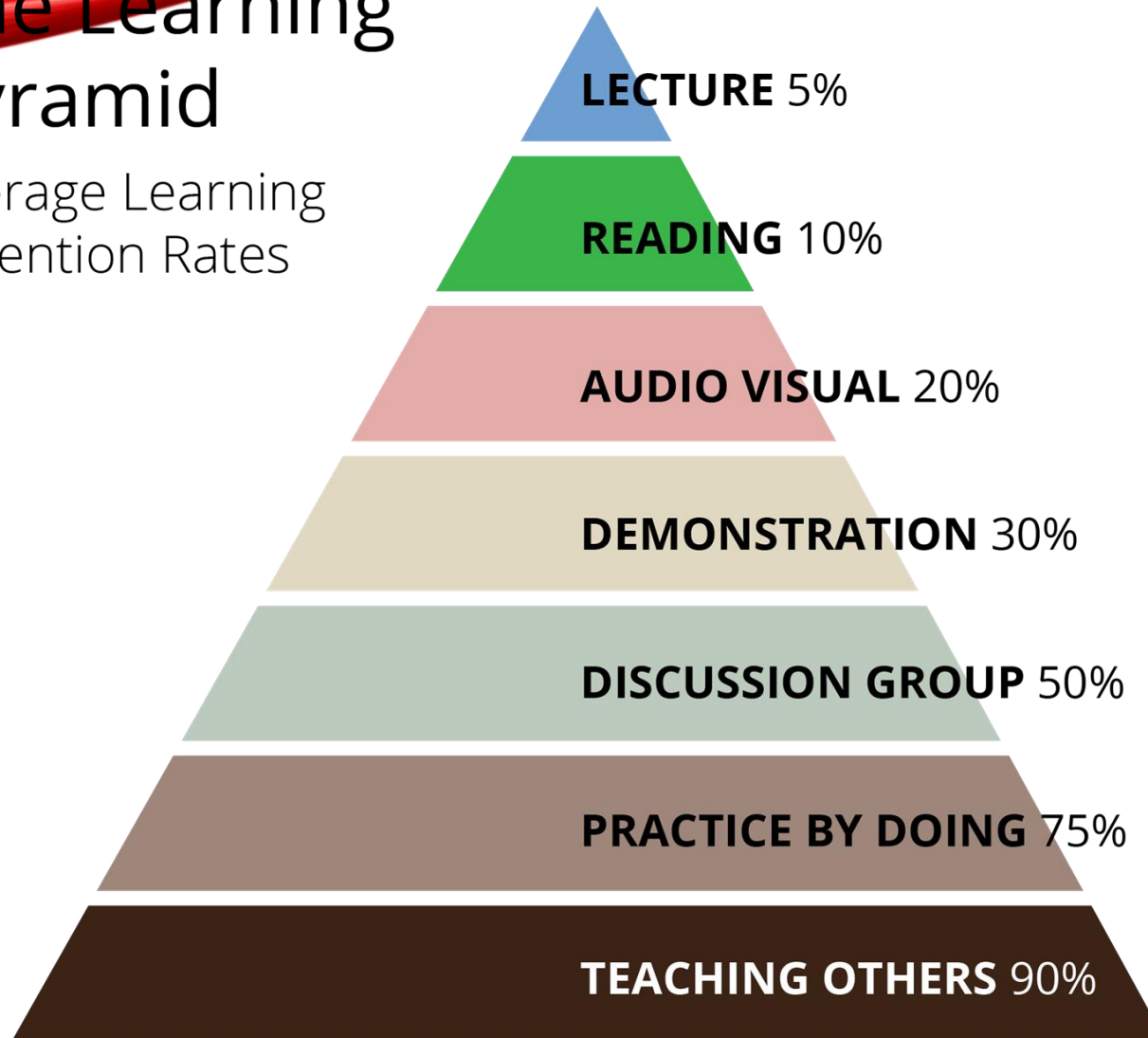
# TRADITIONAL METHOD OF TEACHING





# The Learning Pyramid

Average Learning Retention Rates



*Adapted from NTL Institute for Applied Behavioral Science*



## USE OF TECHNOLOGY IN THE TRADITIONAL SETTING





# USE OF TECHNOLOGY IN THE TRADITIONAL SETTING







Republic of the Philippines  
OFFICE OF THE PRESIDENT  
**COMMISSION ON HIGHER EDUCATION**



**CHED MEMORANDUM ORDER**

No. 18  
Series of 2016

**SUBJECT: POLICIES, STANDARDS AND GUIDELINES FOR THE DOCTOR OF  
MEDICINE (M.D.) PROGRAM**

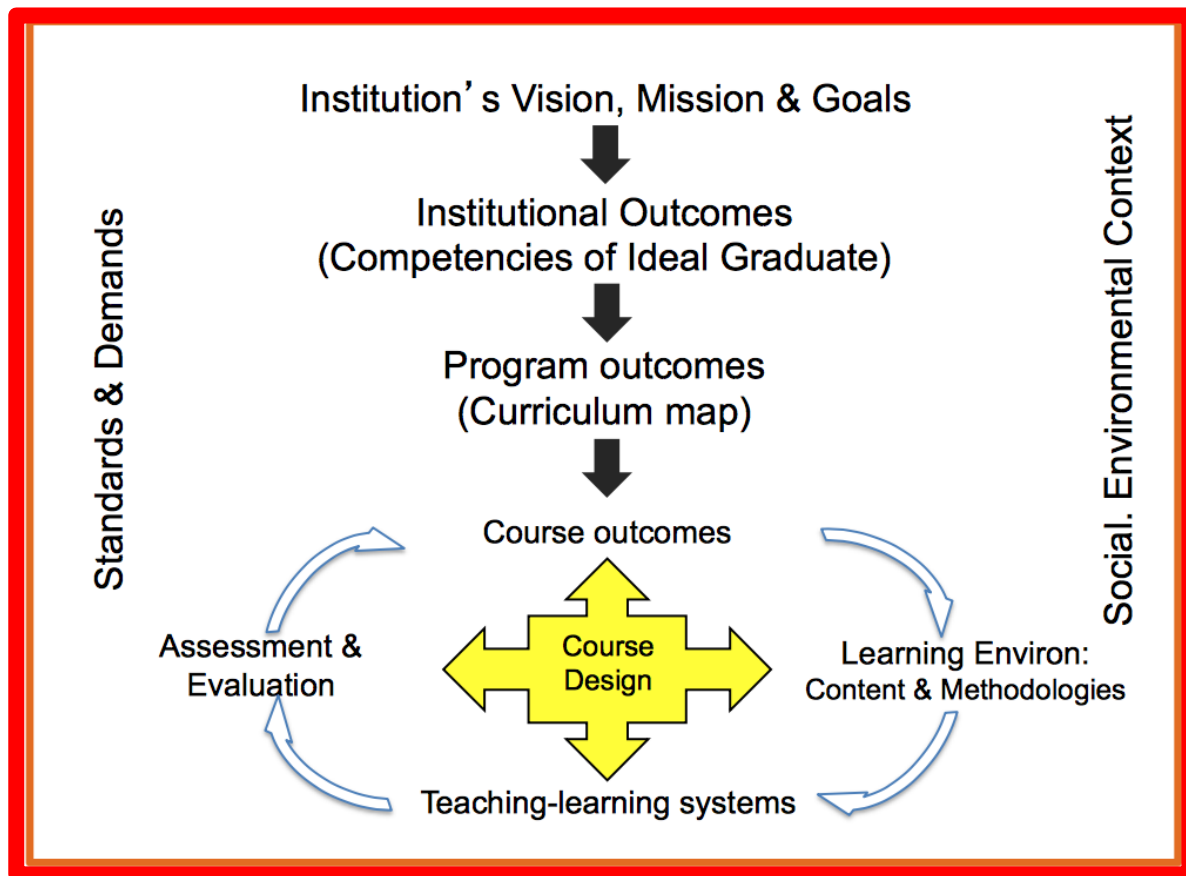
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In accordance with the pertinent provisions of Republic Act 2382, otherwise known as the "Medical Act of 1959 as amended", and Republic Act No. 7722, otherwise known as the "Higher Education Act of 1994", in pursuance of an outcome-based quality assurance system as stipulated under CMO No. 46 s. 2012 and for the purpose of rationalizing medical education in the country with the end in view of keeping apace with the demands of national relevance and global responsiveness, the following Policies, Standards and Guidelines (PSGs) for the Doctor of Medicine Program are hereby adopted and promulgated by the Commission.

***"rationalizing medical education in the country with the end in view in keeping apace with the demands of national relevance and global responsiveness"***



# FRAMEWORK FOR OBE

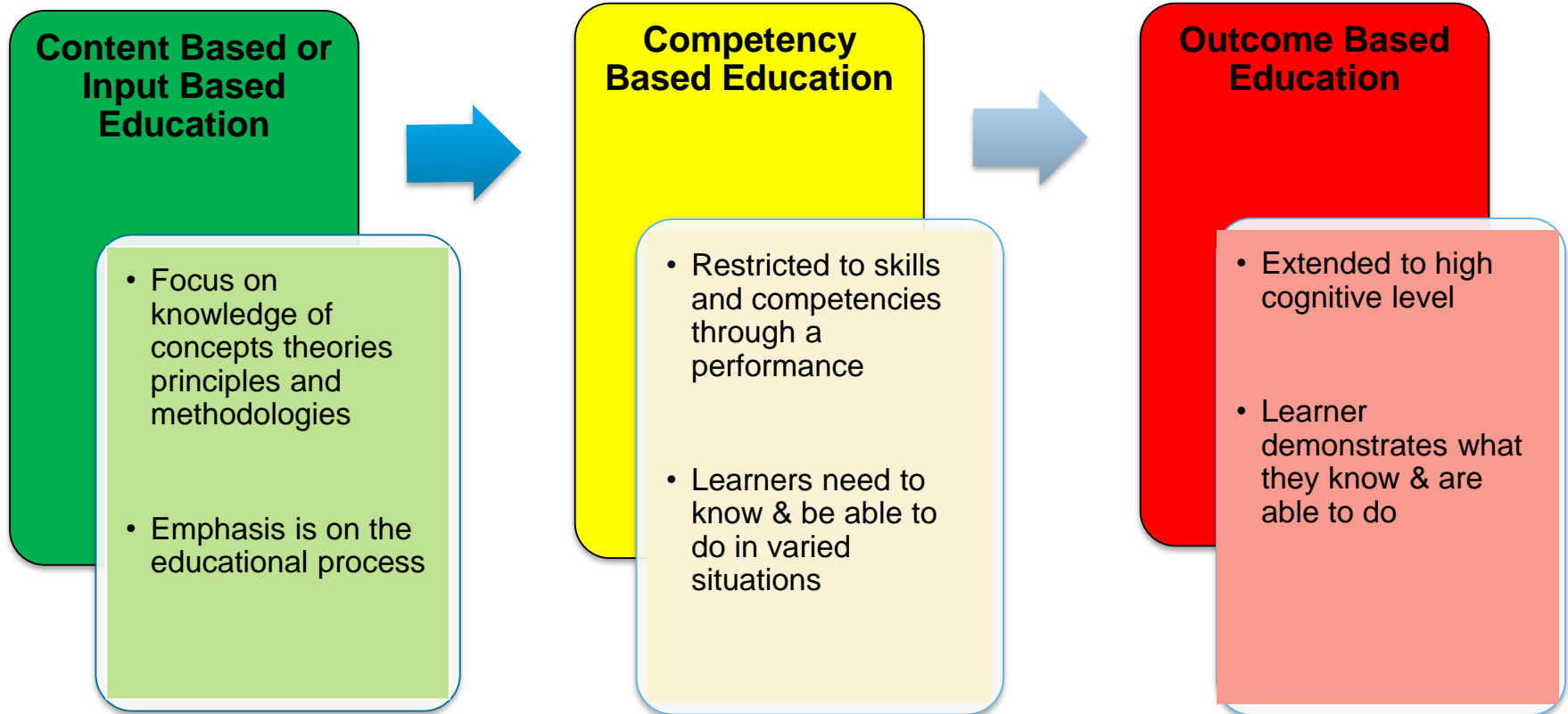


**MACROCURRICULUM**

**MICROCURRICULUM**



# MEDICAL EDUCATION IN THE PHILIPPINES





# OUTCOMES BASED TEACHING AND LEARNING APPROACH



Student centered course

Teachers are facilitators of  
learning

Addresses the principle of  
constructive alignment



# USE OF TECHNOLOGY IN MEDICAL EDUCATION

## About Us

UST a leading academic institution

History

Mission and Vision

Administrators

Statutes and Organizational Structure

The University Seal & Hymn

Awards and Honors +

Religious Formation +

UST Telephone Directory

Academic Calendar 2017-2018

UST EdTech Center is the leading training center on ICT teacher professional development specializing on mass wide elearning deployment in the Philippines. The center's impact and contribution to the advancement of ICT-based teacher professional education has been recognized both in international and national professional institutions.

## Services Offered

# EDTECH

## UST EDUCATIONAL TECHNOLOGY CENTER


Media Production

Digital Media Asset Management


Digital Broadcasting

Innovative Learning & Technology

Technical Support Services

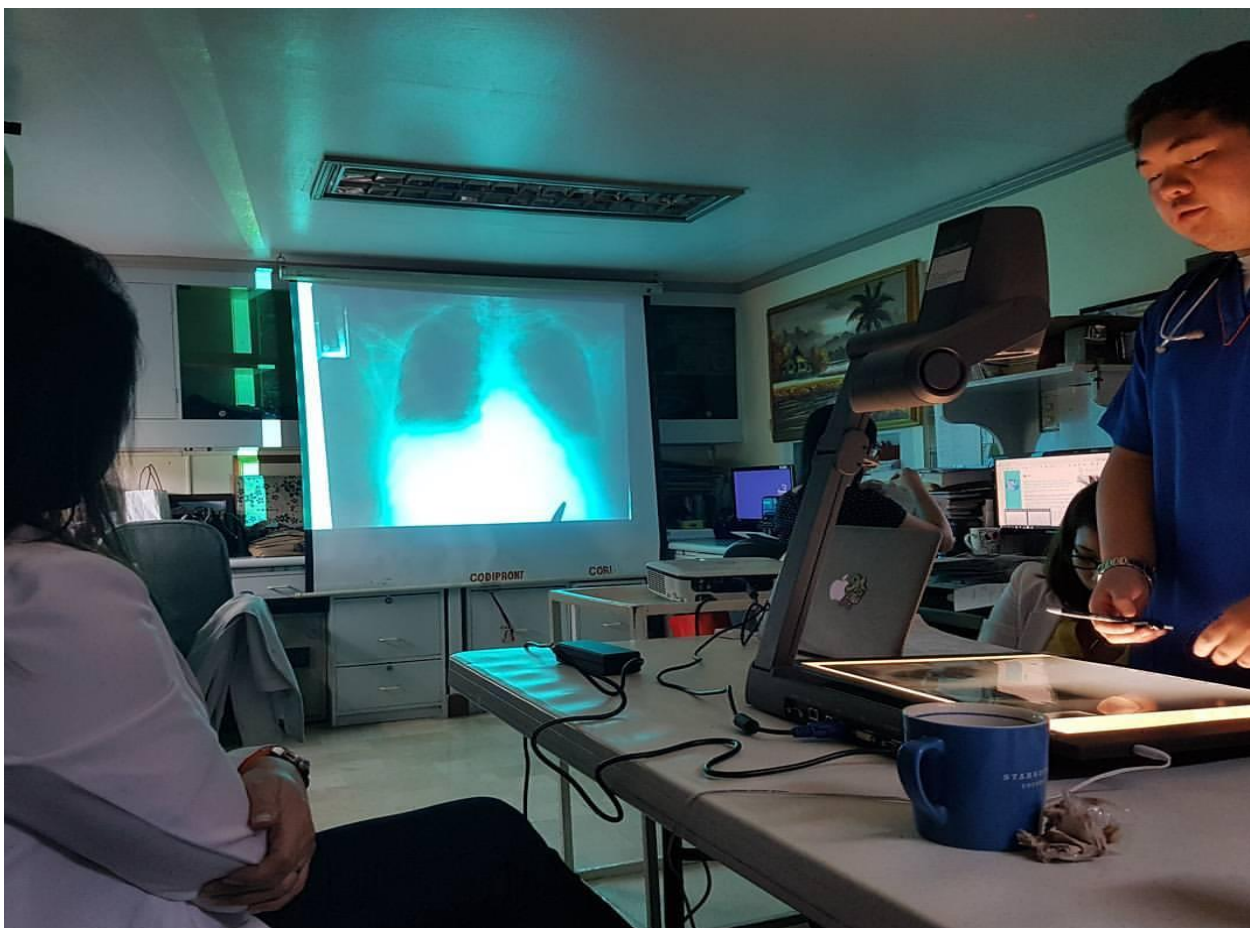


MENU



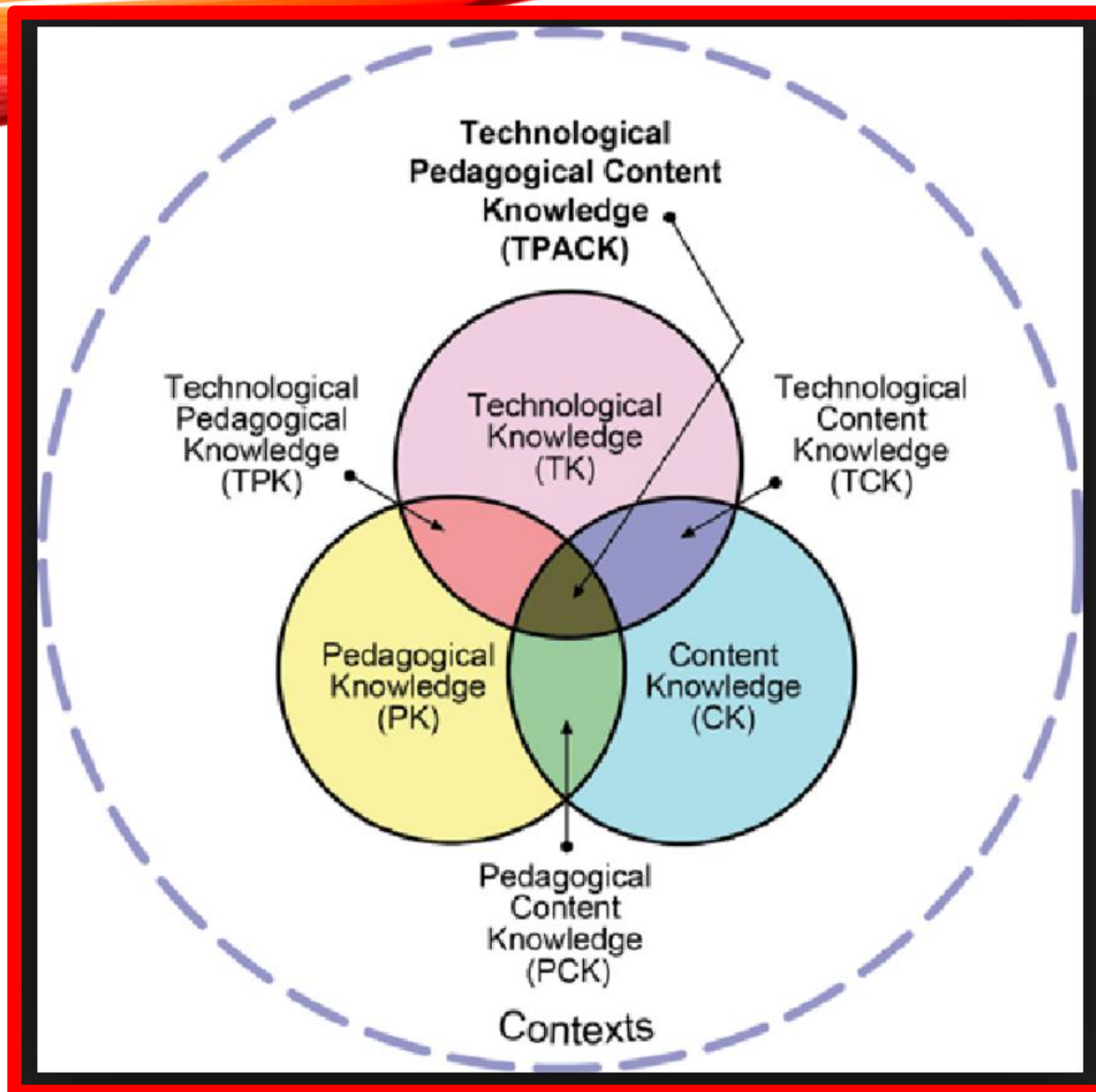


# USE OF TECHNOLOGY IN MEDICAL EDUCATION





# TPACK





# FLIPPING ONLINE

## Flipping Online

	<u>Traditional Classroom</u>	<u>Flipped Classroom</u>
Before Class		Read and/or Watch lecture before class
During Class	Listen and take notes in class	Student centered discussion and formative quizzes. Students consolidate understanding with professor
After Class	Students consolidate understanding	Students further consolidate and apply learnings.



**TED ED**

**TEDEd**

Edit Lesson

Review Student Work

Share Lesson



**TED**

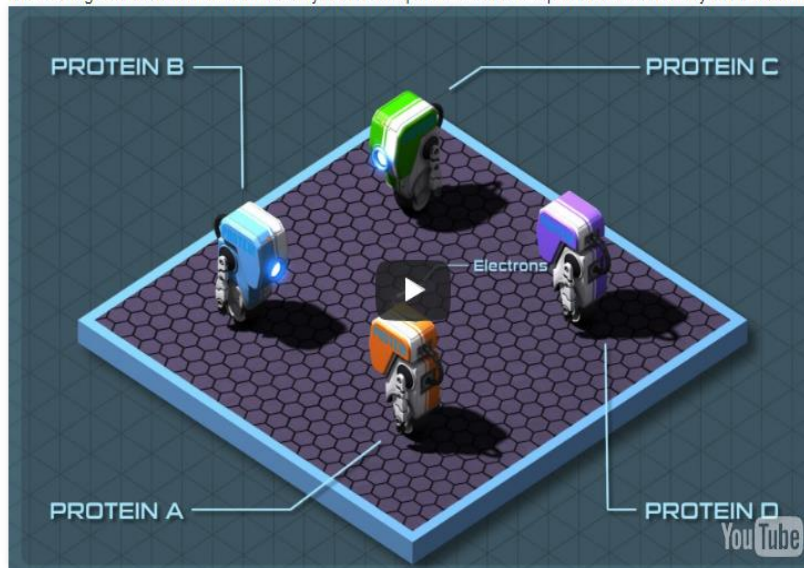
# The operating system of life - George Zaidan and Charles Morton

LESSON CREATED BY **EARL LOUIS SEMPIO** USING **TEDEd**

VIDEO FROM **TEDEd** YOUTUBE CHANNEL

## Let's Begin...

Humans, octopi and pine trees alike are all made up of cells, tiny but sophisticated systems that keep life going. Cells are almost like tiny factories run by robots, with the nucleus, DNA, proteins, lipids, and vitamins and minerals all playing critical roles. George Zaidan and Charles Morton lay out the blueprint of a cell and explain how biochemistry binds all life together.



Watch

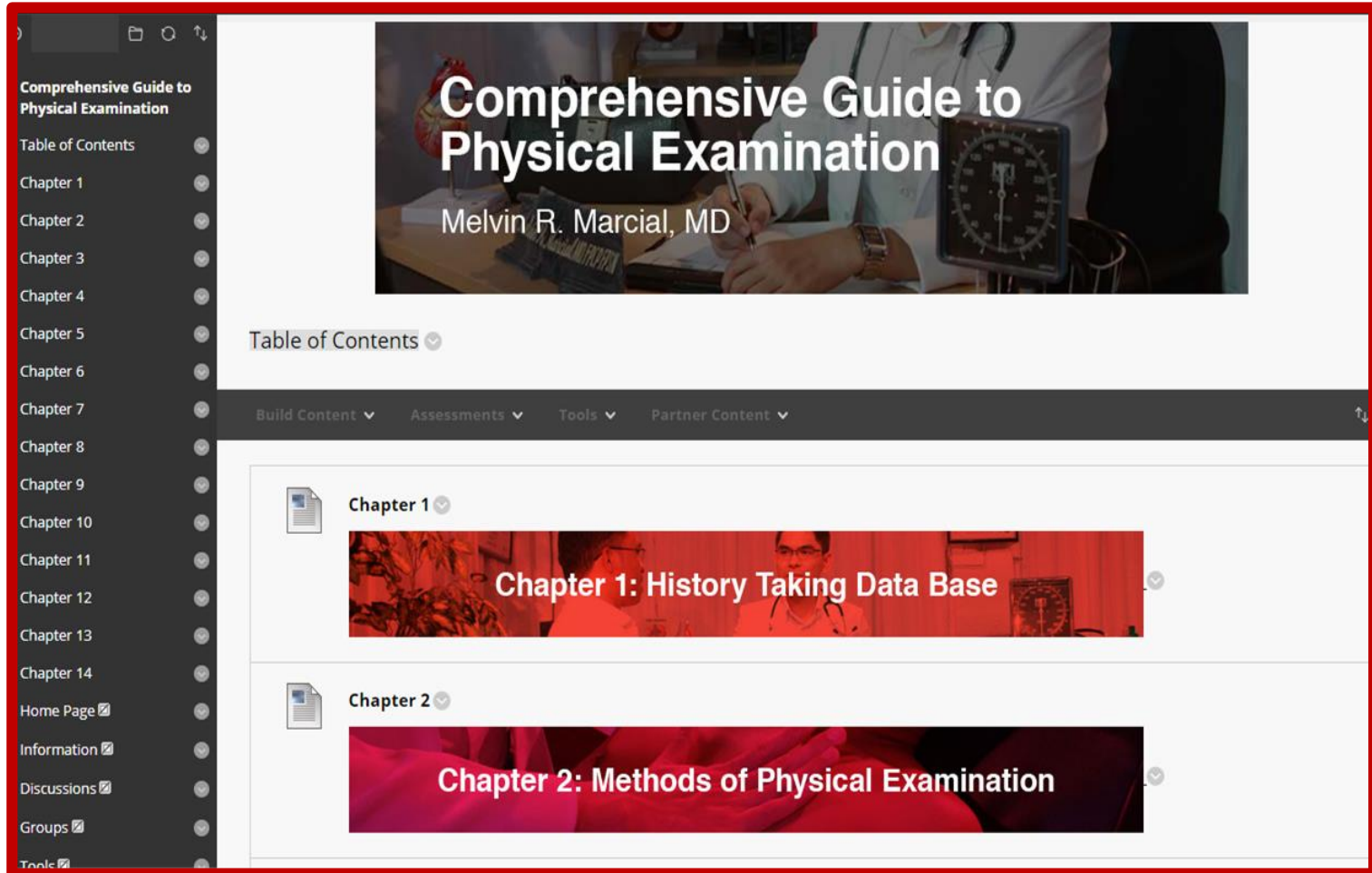
Think

Dig Deeper

Discuss



# COMPREHENSIVE GUIDE TO PE: ONLINE



The screenshot displays the user interface of the 'Comprehensive Guide to Physical Examination' online platform. On the left, a dark sidebar contains a 'Table of Contents' and a list of chapters from 1 to 14, along with links for 'Home Page', 'Information', 'Discussions', 'Groups', and 'Tools'. The main content area features a large header image of a doctor in a white coat with a stethoscope, writing on a notepad. Overlaid on this image is the title 'Comprehensive Guide to Physical Examination' and the author's name 'Melvin R. Marcial, MD'. Below the header, there is a 'Table of Contents' dropdown menu and a navigation bar with tabs for 'Build Content', 'Assessments', 'Tools', and 'Partner Content'. The main content area lists two chapters: 'Chapter 1: History Taking Data Base' and 'Chapter 2: Methods of Physical Examination', each with a corresponding thumbnail image.





# USE OF ONLINE TOOLS FOR TRADITIONAL METHODS

The screenshot displays the BIOCHEM 1ABCD MED online course management system. The interface includes a top navigation bar with the course name, a dropdown menu, and an 'Information' tab. A purple success message at the top states: 'Success: Guidelines for First year Students created.' The left sidebar contains a 'Course Management' section with a 'Control Panel' and various tools like 'Content Collection', 'Course Tools', 'Evaluation', 'Grade Center', 'Users and Groups', 'Customization', 'Packages and Utilities', and 'Help'. The main content area shows the 'Guidelines for First year Students' document, which is enabled with 'Statistics Tracking'. The document content includes the department name, guidelines for first-year students, rules on computation of grades and student promotion for the academic year 2017-2018, a list of department staff, and a section on 'Biochemistry as a Subject'.

**BIOCHEM 1ABCD MED** Information Edit Mode is: ON

Success: Guidelines for First year Students created.

Information

Build Content Assessments Tools Partner Content

**Guidelines for First year Students**

Enabled: Statistics Tracking

Department of Biochemistry, Molecular Biology and Nutrition  
Guidelines for First year Students  
Rules on Computation of Grades and Student Promotion  
Academic Year 2017-2018

**Department Staff**

1. Jose S. Blas, MD (JSB) – Department Chair
2. Mary Jocelyn Yu-Laygo, MD (JYL)
3. Imelda A. Dakis, MD (IAD)
4. Redario C. Laygo, MD (RCL)
5. Mary Josephine Ruby Dytuco-Tiongson, MD (RDT)- Laboratory Supervisor
6. Noel Martin S. Bautista, MD (NSB)
7. Ma. Gina A. Macaranas, MD (GAM)- Chief of Section, Medical Nutrition
8. Peter P. Ng, MD, Ph.D. LLB (PPN)
9. Blen J. Matawaran, MD (BJM)- Department Secretary
10. Mary Anne D. Chiong, MD (MDC)
11. Malou F. Tapang, MD (MFT)
12. Earl A. Sempio, MD(EAS)
13. Eric S. Mendoza, MD(ESM)

**Biochemistry as a Subject**

- Biochemistry is a yearly subject, divided into 4 shifts and bears the weight of 8 units.
- The course is given twice weekly for 4 hours each meeting, allotted as follows:




# WEB PRESENCE TO WEB-CENTRIC

**MED ETHICS 3 (3CD MED)**  
Content  
Course Information  
Discussions  
Groups  
Tools  
Help  
Announcements

## Medical Ethics III

Course Information

 **Schedule**

Week	Date	Topic	On-ground	Online
0	1/16	Orientation	Simultaneous	
1	1/23	Human Life and Hippocratic Oath	Interactive Lecture	ReWrite Hippocratic Oath
2	1/30	Human Experimentation, Research, IRB and Bioethics committee	Interactive Lecture	Multiple Choice pretest
3	2/6	Referrals / Honoraria	Interactive Lecture	Multiple Choice Pretest
4	2/13	Truth-Telling, Informed Consent and Professional Secrecy	Interactive Lecture	Multiple Choice Pretest
5	2/20	Interviewing and Communicating	Interactive Lecture	Multiple Choice Pretest
6	2/27	Phone and Internet Consultation	Interactive Lecture	Multiple Choice Pretest
7	3/6	Integration		
	3/13	<b>Shifting exams</b>	None	
8	3/20	Social Media Interaction		Exam








**MED ETHICS 3 (3CD MED)** (Course is unavailable to students) > Content

**MED ETHICS 3 (3CD MED)**

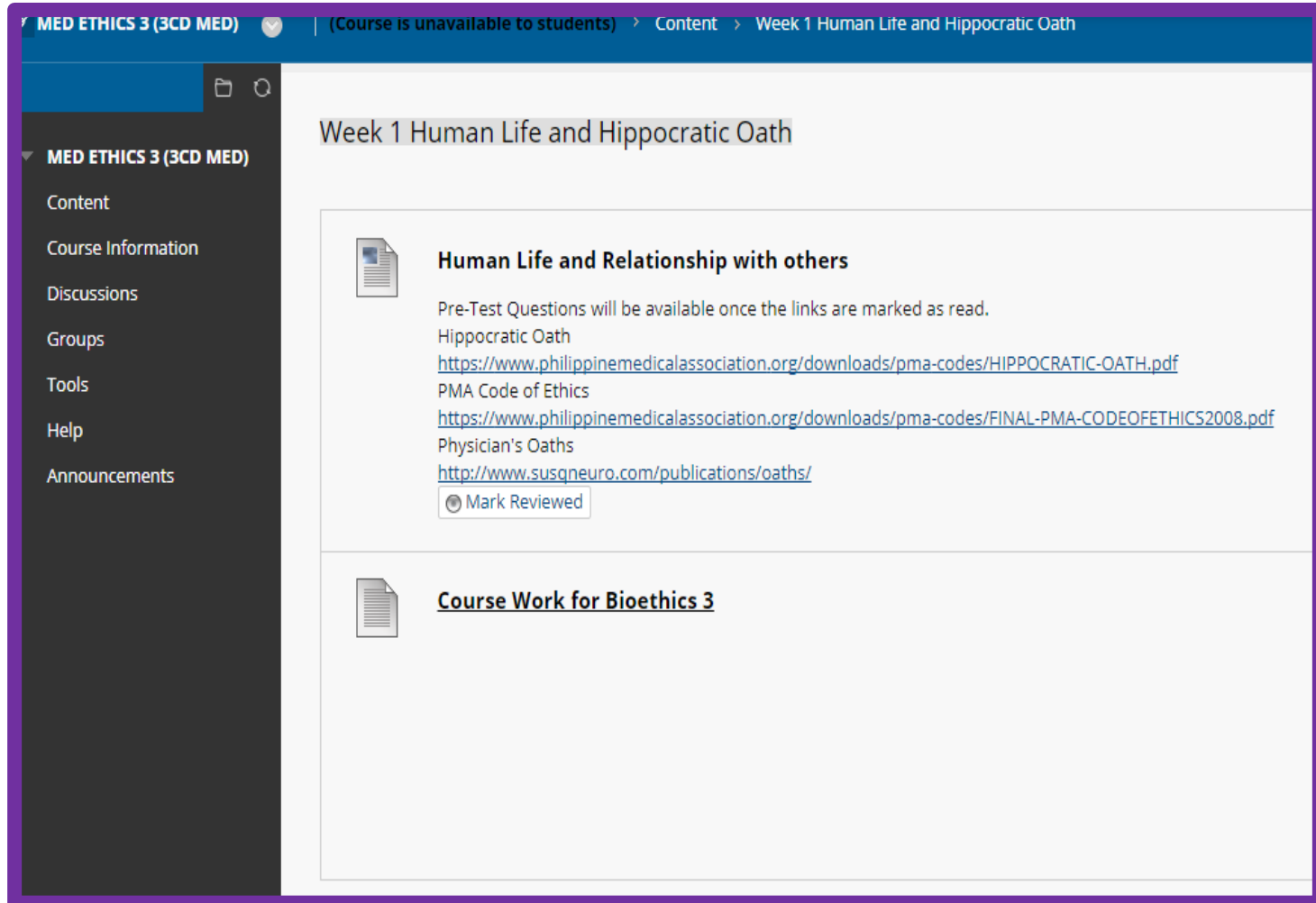
- Content
- Course Information
- Discussions
- Groups
- Tools
- Help
- Announcements

**Content**

-  **Week 1 Human Life and Hippocratic Oath**
-  **Week 2 Human Experimentation**
-  **Week 3 Referrals / Honoraria**
-  **Week 4 Truth Telling Informed Consent and Professional Secrecy**
-  **Week 5 Interviewing and Communicating**



# ADAPTIVE RELEASE



**MED ETHICS 3 (3CD MED)** | (Course is unavailable to students) > Content > Week 1 Human Life and Hippocratic Oath

**Week 1 Human Life and Hippocratic Oath**

**Human Life and Relationship with others**

Pre-Test Questions will be available once the links are marked as read.

Hippocratic Oath  
<https://www.philippinemedicalassociation.org/downloads/pma-codes/HIPPOCRATIC-OATH.pdf>

PMA Code of Ethics  
<https://www.philippinemedicalassociation.org/downloads/pma-codes/FINAL-PMA-CODEOFETHICS2008.pdf>

Physician's Oaths  
<http://www.susqneuro.com/publications/oaths/>

**Course Work for Bioethics 3**






# ADAPTIVE RELEASE

**MED ETHICS 3 (3CD MED)** (Course is unavailable to students) > Content > Week 1 Human Life and Hippocratic Oath


**MED ETHICS 3 (3CD MED)**

- Content
- Course Information
- Discussions
- Groups
- Tools
- Help
- Announcements


## Week 1 Human Life and Hippocratic Oath

**Week 1 Pretest**

Pretest questions will be available until Friday 5pm

**Human Life and Relationship with others**

Pre-Test Questions will be available once the links are marked as read.  
Hippocratic Oath  
<https://www.philippinemedicalassociation.org/downloads/pma-codes/HIPPOCRATIC-OATH.pdf>  
PMA Code of Ethics  
<https://www.philippinemedicalassociation.org/downloads/pma-codes/FINAL-PMA-CODEOFETHICS2008.pdf>  
Physician's Oaths  
<http://www.susqneuro.com/publications/oaths/>  
☒ Reviewed

**Course Work for Bioethics 3**



# LEARNING MANAGEMENT SYSTEM

+

115.31.MEETHICS3.3-CMED (MED ETHICS 3)

Welcome

My Home Page

Course Organizer

My Facilitator

Class Notes

Collaborate

Round Table

Our Blogs

My Reactions

Groups

Resources

Tools

My Grades

Help

## Needs Grading

Instructors can view attempts ready for grading or review on the **Needs Grading** page. Click **Grade All** to begin grading and reviewing immediately, or sort columns or apply filters to narrow the list. [More Help](#)

Grade All

Needs Reconciliation

Filter

Category

Item

User

Date Submitted

All Categories

All Items

All Users

Any Date

Go

Enter dates as mm/dd/yyyy

72 total items to grade.

Page 1 of 3

Category	Item Name	User Attempt	Date Submitted	Due Date
Assignment	Video Recorded Role-Playing	Anonymous Group (Attempt ID: 19381)	January 15, 2016 3:24:15 PM	March 7, 2016
Assignment	Human Experimentation	STEVEN JOHNSON LIM	January 27, 2016 9:29:49 PM	January 31, 2016
Assignment	Human Experimentation	KRIZIA MARIE LIM	January 29, 2016 7:54:08 PM	January 31, 2016
Assignment	Human Experimentation	KRISTINE KATE LOUISE LIM	January 30, 2016 5:12:06 PM	January 31, 2016
Assignment	Human Experimentation	MYDIELE MARIE MADAYAG	January 30, 2016 8:41:00 PM	January 31, 2016



Assignment Instructions

Comment 1 of 2

Powered by crocodoc

Madayag, Myrielle Marie D. 3C

February 1, 2016  
Medical Ethics

TUSKEGEE/MENGELE EXPERIMENTATION

1) How does it violate human and patient rights?

The subjects were recruited with misleading promises of "special free treatment," which were actually spinal taps done without anesthesia to study the neurological effects of syphilis, and they were enrolled without their informed consent. Furthermore, the subjects received heavy metals therapy, standard treatment in 1932, but were denied antibiotic therapy when it became clear in the 1940s that penicillin was a safe and effective treatment for the disease. When penicillin became widely available by the early 1950s as the preferred treatment for syphilis, this therapy was again withheld. On several occasions, the USPHS actually sought to prevent treatment.

Evidently, the rights of the research subjects were violated. The Tuskegee Study raised a host of ethical issues such as informed consent, racism, paternalism, unfair subject selection in research, maleficence, truth-telling and justice, among others. The first major ethical issue to be considered is informed consent, which refers to telling potential research participants about all aspects of the research that might

Assignment Details

GRADE  
LAST GRADED ATTEMPT /10

ATTEMPT  
1/30/16 8:41 PM /10

SafeAssign 92% overall match

SUBMISSION

MED ETHICS HW- TUSKEGEE EXPT- MADAYAG 3C.docx

10:57 PM  
08/02/2016

**SAFE  
ASSIGN**



# SAFE ASSIGN

1 The subjects were recruited with misleading promises of "special free treatment," which were actually spinal taps done without anesthesia to study the neurological effects of syphilis, and they were enrolled without their informed consent. 2 Furthermore, the subjects received heavy metals therapy, standard treatment in 1932, but were denied antibiotic therapy when it became clear in the 1940s that penicillin was a safe and effective treatment for the disease. When penicillin became widely available by the early 1950s as the preferred treatment for syphilis, this therapy was again withheld. On several occasions, the USPHS actually sought to prevent treatment.

3 Evidently, the rights of the research subjects were violated. The Tuskegee Study raised a host of ethical issues such as informed consent, racism, paternalism, unfair subject selection in research, maleficence, truth-telling and justice, among others. 2 The first major ethical issue to be considered is informed consent, which refers to telling potential research participants about all aspects of the research that might reasonably influence their decision to participate. 4 It is a widely held notion among ethicists, medical practitioners and researchers that informed consent is one crucial factor that makes any research involving human subjects ethical. 2 Moreover, the USPHS practiced deception in recruiting subjects for the study. It was never explained to the subjects that the survey was designed to detect syphilis. 5 The term "bad blood," which was a local colloquialism for everything from anemia to leukemia, was used by the doctors and never defined for the subjects. 2 Subjects were never told they had syphilis, the source of the disease, or treatment. 2 The treatment suggested consisted of spinal

MED ETHICS HW- TU...

Word Count: 696

Attachment ID: 110924775

92%

Citations (6/6)

✓ Select Sources & Resubmit

1 <http://rastafari.tv/10-cons...>

2 <http://www.socialworker.c...>

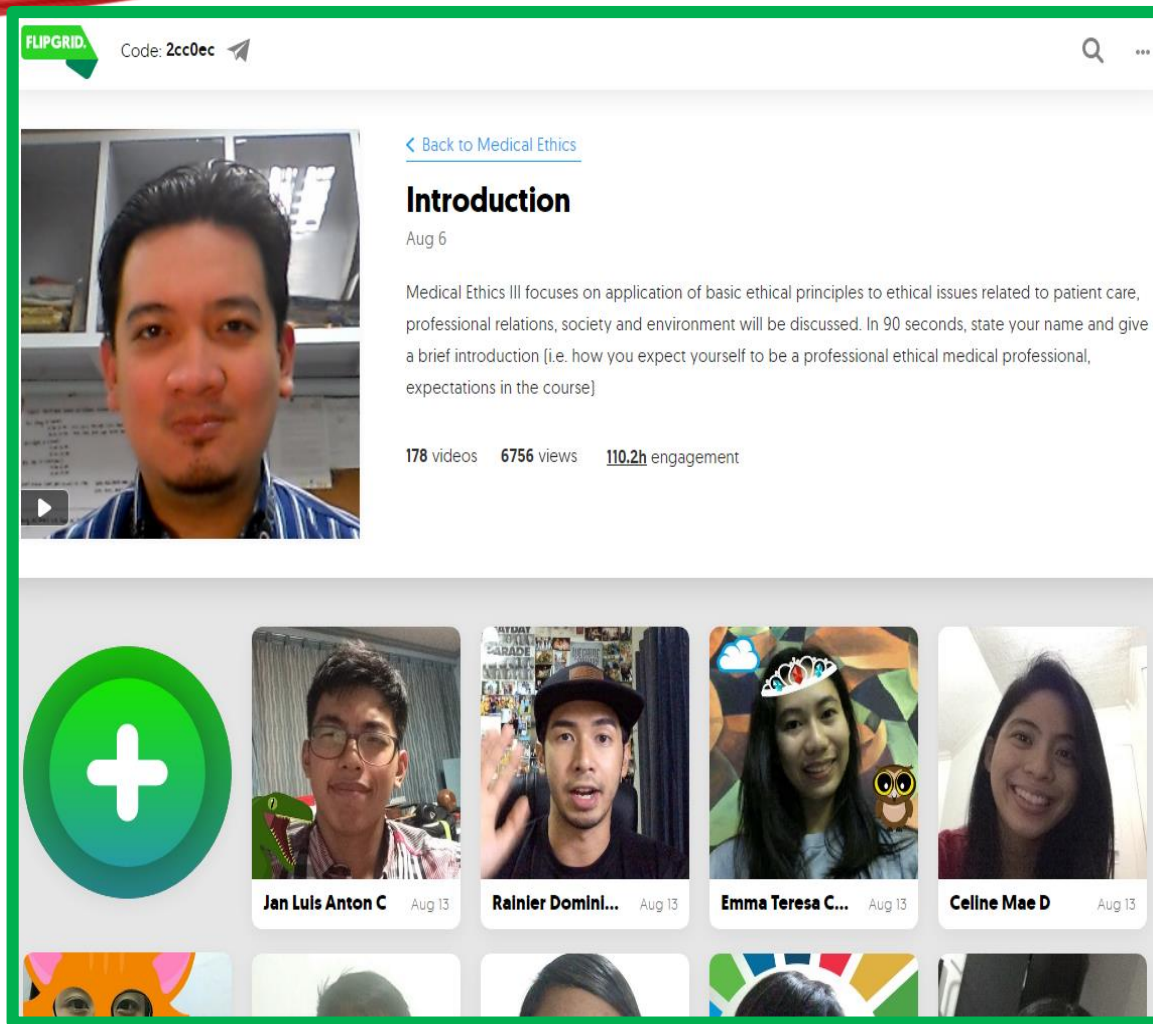
3 <http://www.ajol.info/index...>

4 Another student's paper

5 Another student's paper

6 Another student's paper





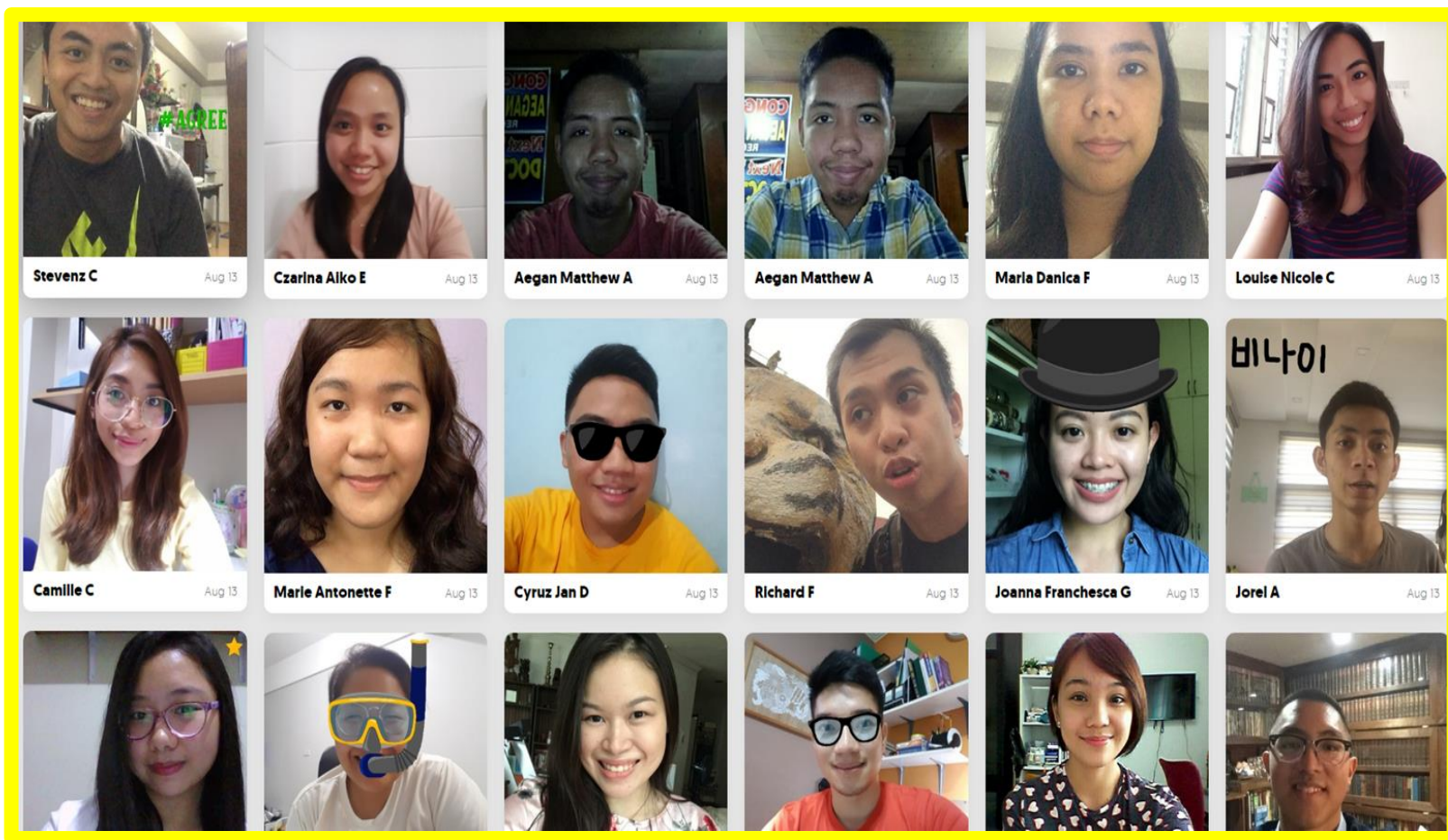
# FLIPGRID

is a video response platform that allows educators to host video based discussions with students.

Educators create topic grids and students respond with recorded videos to discuss, reflect, and share via webcam, tablet or mobile device.



# FLIPGRID DISCUSSIONS







# The NEW ENGLAND JOURNAL of MEDICINE

[HOME](#)[ARTICLES & MULTIMEDIA ▾](#)[ISSUES ▾](#)[SPECIALTIES & TOPICS ▾](#)[FOR AUTHORS ▾](#)[CME ▸](#)

## Perspective

### Saying Goodbye to Lectures in Medical School — Paradigm Shift or Passing Fad?

Richard M. Schwartzstein, M.D., and David H. Roberts, M.D.

N Engl J Med 2017; 377:605-607 | [August 17, 2017](#) | DOI: 10.1056/NEJMp1706474



# CHALLENGES IN ADOPTING TECHNOLOGY





# ***GENERATION GAP***

**ADMINISTRATION  
Policy Maker**

**“Baby Boomers”  
(1946-1964)**

**(Age 47-65)**

**FACULTY**

**Baby Boomers  
Generation X**

**(1965-1982)**

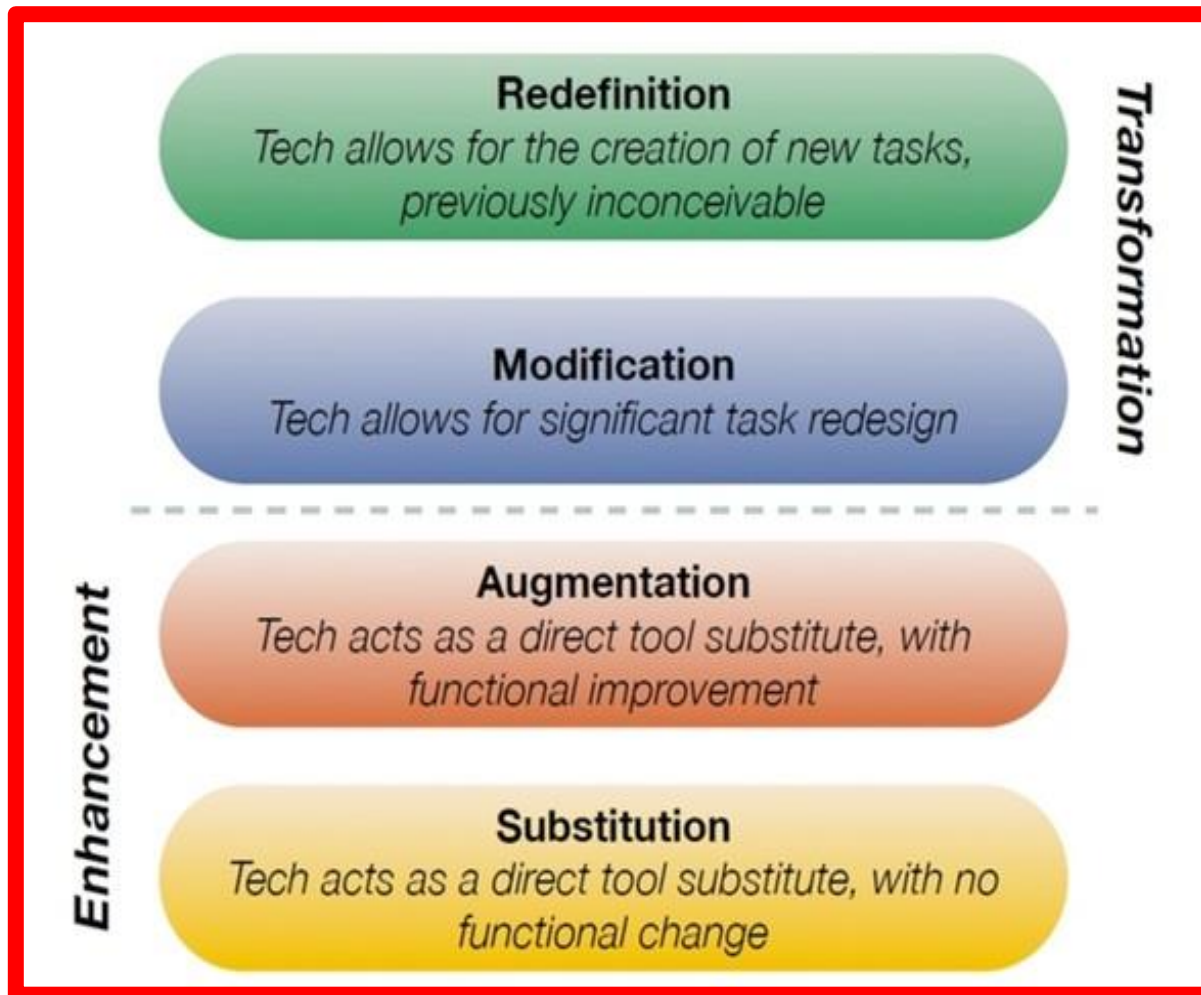
**(Age 30-46)**

**STUDENTS  
GENERATION Y OR  
MILLENNIALS  
(1983-2002)**

**Peter Pan Boomerang  
Generation  
Generation Me  
(Age 19-29)**



# SAMR MODEL

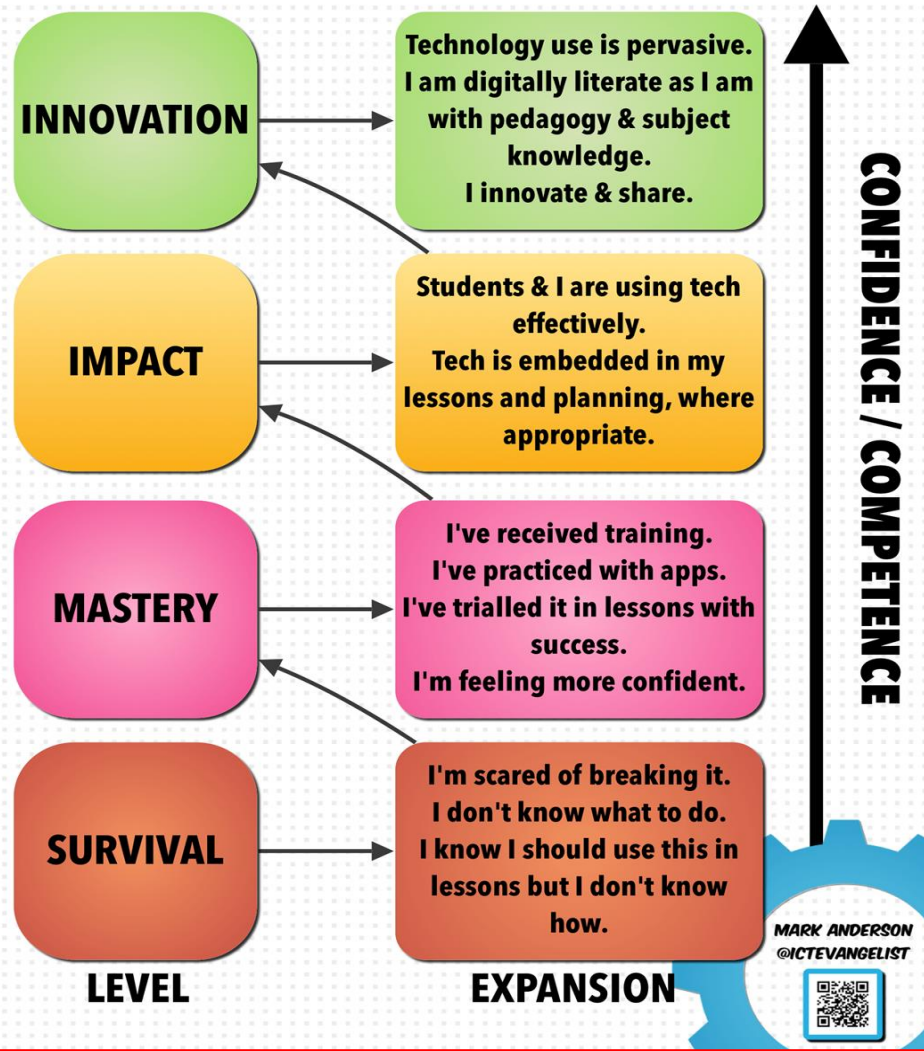




# Teacher confidence in use of technology

based upon the work of Mandinach and Cline

(Classroom Dynamics: Implementing a Technology-Based Learning Environment)



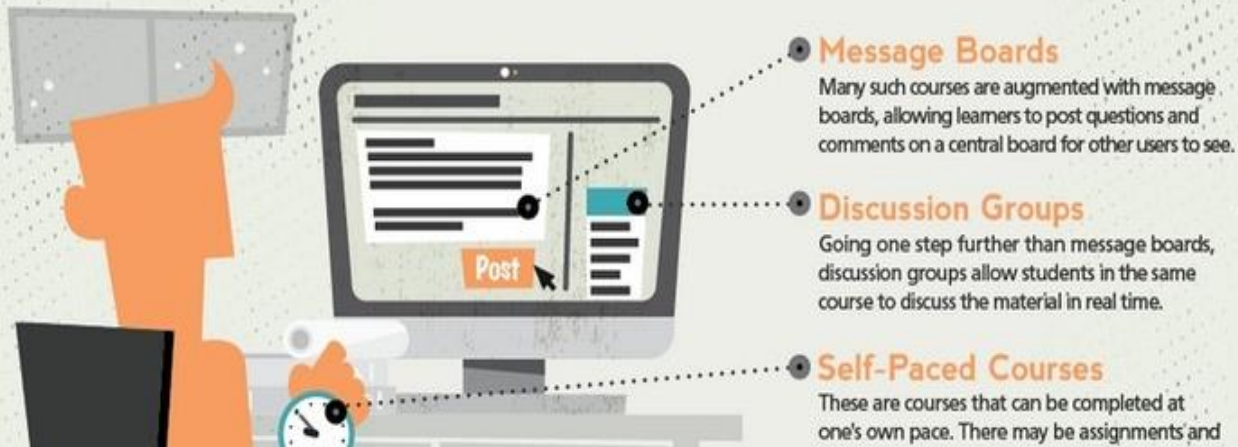


# WHAT IS e-LEARNING?

E-learning is an approach to administering education and training through the use of modern technology. Videoconferencing, shared chat, and digital course materials make it possible for entire classes to be held in the cloud rather than in a lecture hall. Below, we explore the two common types of e-learning and how they can be implemented at organizations.

## ASYNCHRONOUS e-LEARNING

Asynchronous e-learning occurs when students begin and complete a training course at different times, according to their own schedule. Common features of asynchronous e-learning include:





# New & Emerging Trends in Education

## *Distance Learning*

- Courses are offered 24\*7 from a location of student's choice


## *Open Learning*

- Provide distance education in a more flexible manner

## *Online/Virtual /E-Learning*

- Combines face-to-face teaching with internet-based learning.




**EDUCATION**  
DATABASE ONLINE

Choose Your State ▾
Online Education ▾
About
Blog
G+

## Online Medical Schools

### FIND A SCHOOL

- 1 Associate's ▾
- 2 Nursing & Healthcare ▾
- 3 Medical Assisting ▾

**FIND NOW**

Sponsored Schools

**Online Medical Education**

### Now is a Great Time to Enroll in an Online Medical School


By visiting the unique online school page for one of the thirteen medical schools displayed below, you'll be able to obtain comprehensive info to help you make an informed decision about where to enroll. [Kaplan University](#), the highest ranking school below, will train students to become physicians, doctors, nurses, dentists, etc. and give them an outstanding chance at finding employment, directly comparable to an on-campus school. At present, according to the US Bureau of Labor Statistics there are 274,160 people employed as physicians and surgeons alone in the US, and their average annual salary is \$173,860. Anesthesiologists make on average \$211,750 per year and there are about 37,450 of them employed today.

**Medical Common Job Tasks**

- ▶ giving shots
- ▶ taking a medical history
- ▶ transcribing audio recordings

**Popular Journals & Magazines**

- ▶ [Group Practice Journal](#) »
- ▶ [Healthcare Design](#) »
- ▶ [Clinical Examples in Radiology Newsletter](#) »
- ▶ [Cardiology Coding Alert](#) »





← → ↻  <https://oum.edu.ws>



# WELCOME TO OCEANIA UNIVERSITY OF MEDICINE

Our unique blend of distance learning and hands-on clinical training brings med school to you.



## WHAT WE ARE ABOUT

Oceania University of Medicine students have the best of all worlds...The challenging preclinical program is presented online followed by traditional clinical rotations arranged at affiliated teaching hospitals. Graduates are currently practicing or training in Australia, Canada, New Zealand, Samoa, and United States.



## ADMISSIONS

If you always dreamed of becoming a physician but "life" got in the way, Oceania University of Medicine is right for you. The flexibility of online medical school allows non-traditional students to balance school with work and family obligations. The median age for OUM students is 40.5 with a range from 22 to 62 years of age.



## HOW IT WORKS

The rigorous curriculum is based largely on American and Australian medical education models. The program is typically completed in four-and-a-half to five years. Accreditation provides a requisite credential that medical school graduates need for licensure and post-graduate training.



# The Rise of the Empowered Patient

Once marginalized, consumers are taking more control over their own treatments

By Nicholas Brody Illustrations by Greg Betza



The degree of trust that any industry's consumers place in its most established authorities can have profound impacts on the nature and range of the products offered, the complexity of the transactions, and, ultimately, the prevailing business models that will determine the industry's success or failure. Consider the recent global financial crisis. While many traditional financial institutions have survived this international recession, the faith that many personal investors once placed in the accepted "market authorities"—including investment house advisors and portfolio managers, many of whom encouraged consumer expectations of unfettered market growth—has been severely damaged. This erosion of trust has fueled increased regulatory scrutiny of the sector, skepticism among its core and peripheral constituencies, and a reevaluation



## Consumer Health Resources:

Patients and their advocates have an unprecedented amount of information sources available to them

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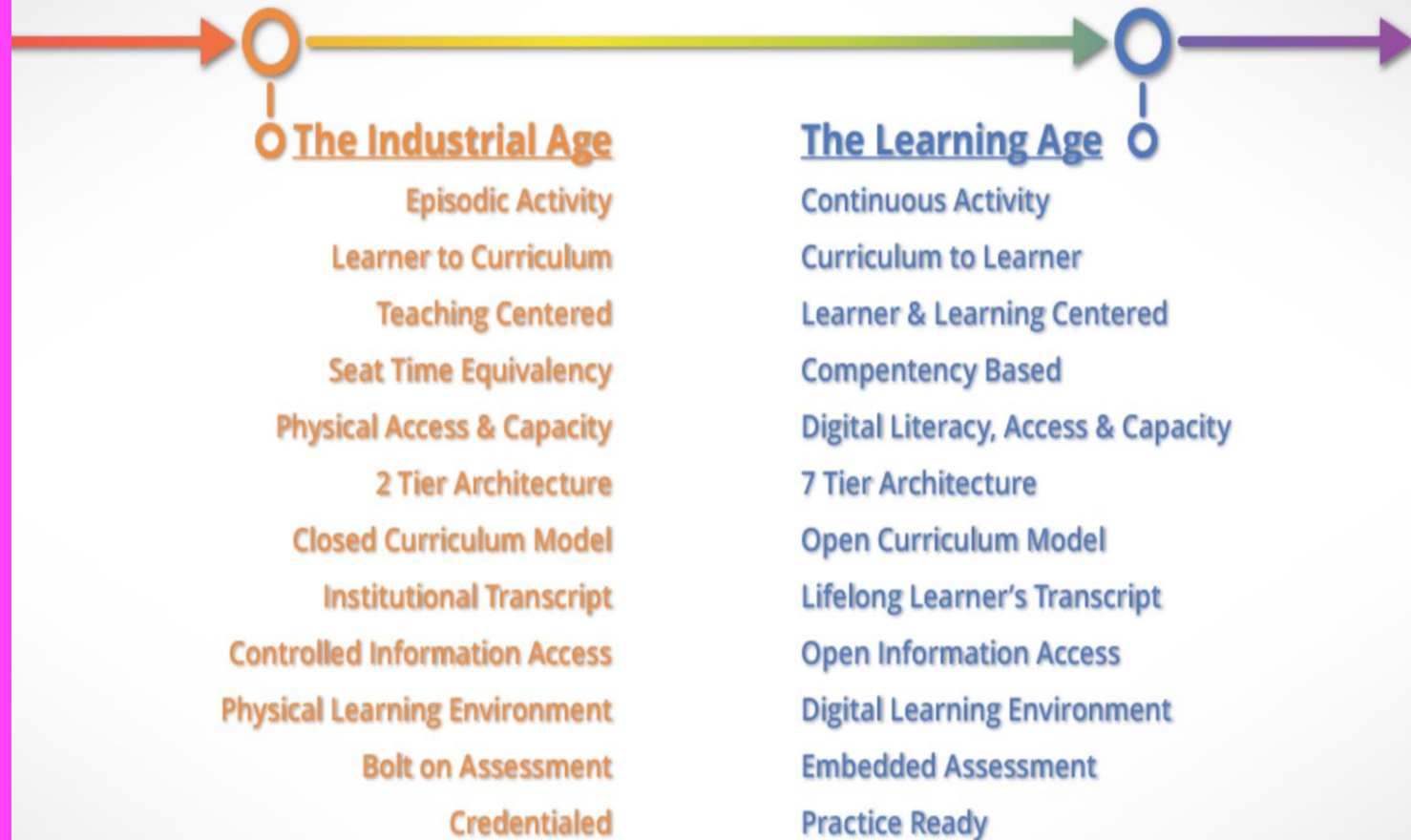


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# Paradigm Shift







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