

## **ASSIGNMENT NO. 2**

HP341\_A2\_Cruz

### **My ICT development project concept**

#### **Task**

After looking at the different areas of our work as an educator and how ICT plays a role in these areas and the different issues in ICT which we are faced with, your task is to reflect on your own organization's ICT needs and expound on a concept for an ICT development plan to address a specific need and issue in any of the different areas in HPEd.

#### **Procedure**

1. Reflect on your organization's current context in the different areas of HPEd: Curriculum & Instruction, Evaluation, Research, and Organizational management.
2. Identify 3 most pressing issues in any of these areas where you think ICT can play a significant role in addressing these gaps.
3. For each of these 3 identified gaps, propose a concept for an ICT-based project that you think will be feasible to implement within your capacity and role in your organization. Identify possible ICT issues for each concept which should be a major consideration in the development of the implementation plan later on.

## 1. Reflect on your organization's current context in the different areas of HPEd: Curriculum & Instruction, Evaluation, Research, and Organizational management.

Organization: Philippine Board of Anesthesiology (PBA)

The Philippine Board of Anesthesiology (PBA) is recognized by the Philippine Regulatory Commission (PRC) Board of Medicine as the body that grants the title of Diplomate to an anesthesia resident graduate who has passed 3 qualifying exams of the PBA: the written, orals, and practical exams.

The passing rate for the written exams is usually 60 to 70%. Passers of the written exam will proceed to take the oral exams of which 85 to 90% will pass. Finally the practical examinations usually have 95 to 99% passing rate. So usually about 120 candidates are conferred the title Diplomate of Anesthesiology every year.

At present, I am an examiner of the PBA but there is so much room for improvement in terms of the curriculum, assessment, research and organizational management. I will focus on the curriculum, assessment and research gaps. The PBA Organizational management I feel is so full of “problem-politics” and I feel even the best of ICT will not solve.

### The Curriculum, Evaluation and Research

There are 67 anesthesia training institutions in the Philippines. Anesthesia training in the Philippines is a 3-year program. Together with Brazil, it is the shortest anesthesia training program in the world. In other countries like the US, UK, Singapore, Malaysia, Australia, anesthesia training takes anywhere from 5 to 9 years.

To be honest, I would not say our training is as rigorous as that of the developed nations. The following I hope can someday be improved:

- **Non-standard training**: Training in the 67 training institutions is **not standardized**. There is a curriculum but the methods of its implementation vary across all the different training institutions. Some are modular meaning each resident rotates in a specific service like Obstetrics or General Surgery for a specific period. Most however are not modular. The residents are assigned to different services everyday depending on the service patients admitted for surgery.
- **Too complex curriculum content ( many irrelevant topics)** : The content of the curriculum is too complex for the trainees, especially for the generalist training in the provinces. We need to align our curriculum with the anesthesia needs of our country, especially for the hospitals in the underserved areas. For example, including heart and lung transplant or awake craniotomy are too complex and not really needed by the generalist. These topics can be studied in advanced subspecialty training. Maybe this is the reason why many graduates fail the diplomate exams...there are too many “nice to know” questions instead of the “must know” or essential questions.

- **Claims to be Outcome-based Curriculum (but it's not)** We claim the curriculum to be as outcome-based curriculum but there is still much to be desired when it comes to assessment of both outcomes. And anesthesia is mainly a competency-based specialty. Outcomes are so difficult to assess. Our assessment tools are still evolving and have much to be desired. And more so, majority of the faculty of these 67 training institutions are not formally trained how to do valid assessments of the residents' competencies and outcomes, instead they... rather we all play it by ear and base it on instinct. Also, formative assessments of residents are done by faculty of their own institutions. There has to be external assessment by faculty from other institutions. Now I realize, our curriculum is more a time-based curriculum rather being a competency or outcome-based curriculum. Its time to revise the curriculum and improve evaluation and assessment – both formative and summative.
- **Research-** At present, the PBA does not require a graduate to have research output but this is highly encouraged. Personally, I would like to impose a research requirement – at the very least a case report maybe. But in order to require this from the graduate, there should be a way enabling them to do so by maybe offering research or scientific writing workshops.

## 2. Identify 3 most pressing issues in any of these areas where you think ICT can play a significant role in addressing these gaps.

The three (3) most pressing issues in Anesthesia training in the Philippines where ICT can play a significant role are the following:

### 1. Too broad curriculum content/too many nice to know topics but not really useful

- ICT can help **align the curriculum with the needs of anesthesia training** in the different regions of the Philippines
- Create a **needs assessment T committee** that can meet regularly online and present which areas or topics the trainees need more guidance with.
- Employ **Data Analytics and Decision Support Systems**: By analyzing large datasets from patient records which are available because of our online patient database, we can take a look into outcomes, and trends, while data analytics can provide insights that support evidence-based anesthesia practices and training. These insights can aid in predicting patient outcomes, optimizing anesthesia protocols, and improving patient safety.
- Create an **ONLINE BANK** of recorded presentations of the mentioned specific topics that may be accessed as needed by trainees
- **Curriculum Mapping Software tools** for mapping curriculum standards and aligning them with learning objectives, assessments and resources. Mapping allows educators to visualize and standardize the curriculum across different year levels divisions..

## 2. **Non-standard training /minimal protected time for didactic activities:**

In government hospitals especially, Anesthesia is mainly a service specialty. We cater to various cutting and non-cutting specialties to provide anesthesia care. In PHG for example, it is always emphasized that service comes first. Because of this, training has become non-standard with minimal to no protected time to attend lecture activities. ICT can help alleviate this gap:

- Invest in a **Learning Management System (LMS)** that will provide both synchronous and asynchronous sessions of at least core anesthesia principles of anatomy, physiology and pharmacology so that all trainees have access to same knowledge
- Similarly, invest in **Digital Curriculum libraries** that serve as online repositories for vetted and standardized curriculum materials and compiled of evidence based and best anesthesia practice practices for common case scenarios
- **Create or adapt free online video anesthesia tutorials** for basic anesthesia techniques like spinal, epidural and general anesthesia which emphasize proper conduct of anesthesia and patient safety
- Have regular **online tele/ video conferences** to discuss anesthetic plans for difficult cases, dilemmas/ the aim of which is to improve patient outcome and standardize anesthesia care for such cases.
- Have **anesthesia simulation exercises** common anesthesia scenario and crisis situations to assess decision making and provide relevant feedback

## 3. **Lack of valid assessment tools and lack of competent evaluators.**

I am often upset to find out that a new program applies for accreditation having fresh graduates with no training in assessment and resident evaluation as chairs and training officers of the new program. Definitely the maldistribution of anesthesiologists in the rural areas is a perennial problem. And some hospitals attract trainees in the guise of having a training program even without competent trainers because they need human resource to meet the need for anesthesiologists in their hospitals.. This is sad because patient safety may be compromised.

- Conduct **Trainee Assessment Workshops** for EXTERNAL EXAMINERS using simulation videos of specific anesthetic techniques or scenarios and objective assessments checklists that can be validated ( meaning evaluators have the same or almost the same assessment scores for the video)
- **Online assessments to streamline evaluation process** of case-based scenarios, and objective structured clinical examinations (OSCEs) again with a checklist of correct responses. Likewise, standardized online quizzes, tests, and assessments can be delivered through platforms like Google Forms or other LMS platforms to gauge trainees' theoretical knowledge and understanding of trainees nationwide
- Develop **digital rubric** that clearly outline the assessment criteria and performance levels for each anesthesia skill and outcome (simulation exercise). Example of a

digital rubric is one designed to assess the performance of a trainee during an intubation procedure simulation. The assessment focuses on specific criteria aligned with learning outcomes related to airway management and procedural skills. (this is one of the Rubric assessment checklist we use in the PGH.) The rubric provides clear guidance to assessors and ensures a standardized approach to evaluating intubation by a trainee

### Digital Rubric: Intubation Procedure Assessment

Criteria	Exemplary (4)	Proficient (3)	Developing (2)	Novice (1)
<b>Airway Preparation</b>	Independently sets up airway equipment and ensures all necessary tools are ready and functional.	Prepares airway equipment effectively, with minor assistance or adjustments needed.	Partially prepares airway equipment, requires assistance in setting up tools.	Fails to properly set up airway equipment, lacking organization and readiness.
<b>Patient Positioning</b>	Skillfully positions patient to achieve optimal alignment for intubation, maintaining patient comfort.	Positions patient adequately, with minor adjustments required.	Adequate patient positioning, but may need guidance on optimal alignment.	Struggles with patient positioning, causing discomfort or suboptimal alignment.
<b>Technique and Skill</b>	Demonstrates precise and confident intubation technique, achieving successful intubation on the first attempt.	Intubation technique is proficient, requiring a reasonable number of attempts for successful intubation.	Attempts intubation with some hesitation and multiple attempts, requiring guidance.	Struggles with intubation technique, resulting in multiple failed attempts.
<b>Communication</b>	Effectively communicates with the team, providing clear instructions and	Communicates well, but may require	Communication is somewhat limited or	Poor communication, leading to confusion

Criteria	Exemplary (4)	Proficient (3)	Developing (2)	Novice (1)
	updates throughout the procedure.	prompts to provide updates or instructions.	unclear, affecting team coordination.	and misalignment among the team.
<b>Patient Safety</b>	Demonstrates a strong commitment to patient safety, adhering to infection control, and preventing complications.	Ensures patient safety measures are followed, with minor oversight.	Follows safety protocols but may miss some critical steps, requiring reminders.	Fails to prioritize patient safety, disregarding infection control or safety procedures.
<b>Adaptability</b>	Effectively adapts to unexpected challenges or complications during the procedure, maintaining composure.	Adapts to challenges, but may experience minor setbacks in response to unexpected events.	Struggles to adapt to unexpected situations, requiring guidance to manage complications.	Demonstrates difficulty managing unexpected challenges, resulting in procedure disruption.
<b>Overall Proficiency</b>	Mastery of the procedure, showcasing excellent technical skills, communication, and patient safety.	Strong overall performance, meeting most criteria proficiently.	Adequate performance, demonstrating a developing skillset with room for improvement.	Performance falls significantly short of expectations, requiring substantial improvement.

#### ACADEMIC INTEGRITY STATEMENT

*As a student of the University of the Philippines, I pledge to act ethically and uphold the value of honor and excellence.*

*I understand that suspected misconduct on given assignments/examinations will be reported to the appropriate office and if established, will result in disciplinary action in accordance with University rules, policies and procedures. I may work with others only to the extent allowed by the Instructor.*

*mcleny*