

PET 2017



WEO Program for Endoscopic Teachers.
Rome, Italy; September 14-16, 2017

Concepts for Effective Endoscopy Training

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Training Teachers of Endoscopy

- **WEO – Program for Endoscopic Teachers**

- Worldwide programming: Rio de Janeiro, Moscow, Bogota, Chicago, Bangkok, Hyderabad ...>> Rome, Singapore
- Facilities, Programing, Resources, Training Models, etc. → *teaching interaction*

- **UK – Train the Colonoscopy Trainers**

- UK → Ireland, Australia, Canada, Netherlands, Scandinavia, Poland, US (Mayo)
- Interpersonal interaction & communication
- Basic procedural technique, ergonomics
- Real-time human cases and feedback

Goals for Optimal Endoscopy Training

- Deliver skilled endoscopists who are:
 - Safe
 - Thorough
 - Efficient
 - Effective

Requirements for Optimal Endoscopy Training

- Appropriate training environment
- Modern equipment
- Culture to ensure sufficient opportunity
- Motivated reasonably adept trainees
- High quality trainers / training
- Robust assessment

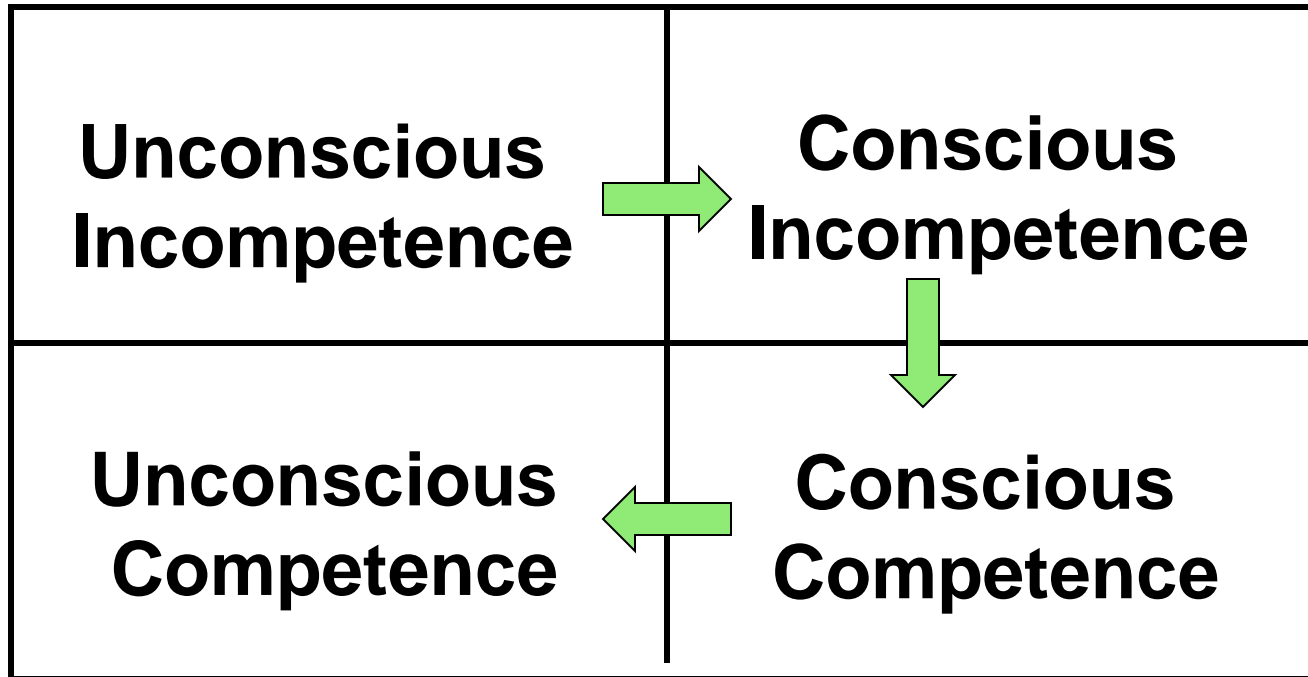
The Training Environment for Gastrointestinal Endoscopy

- *Didactic-Topical training*
 - Clinical patient care, assessment, judgment
 - Sedation & monitoring
 - Risk management

The Training Environment for Gastrointestinal Endoscopy

- *Didactic Topical Training*
- ***Technical Training Domains***
 - Manual, Visual, Cognitive
 - Pre and Intra-procedure
 - Consistency
 - Communication

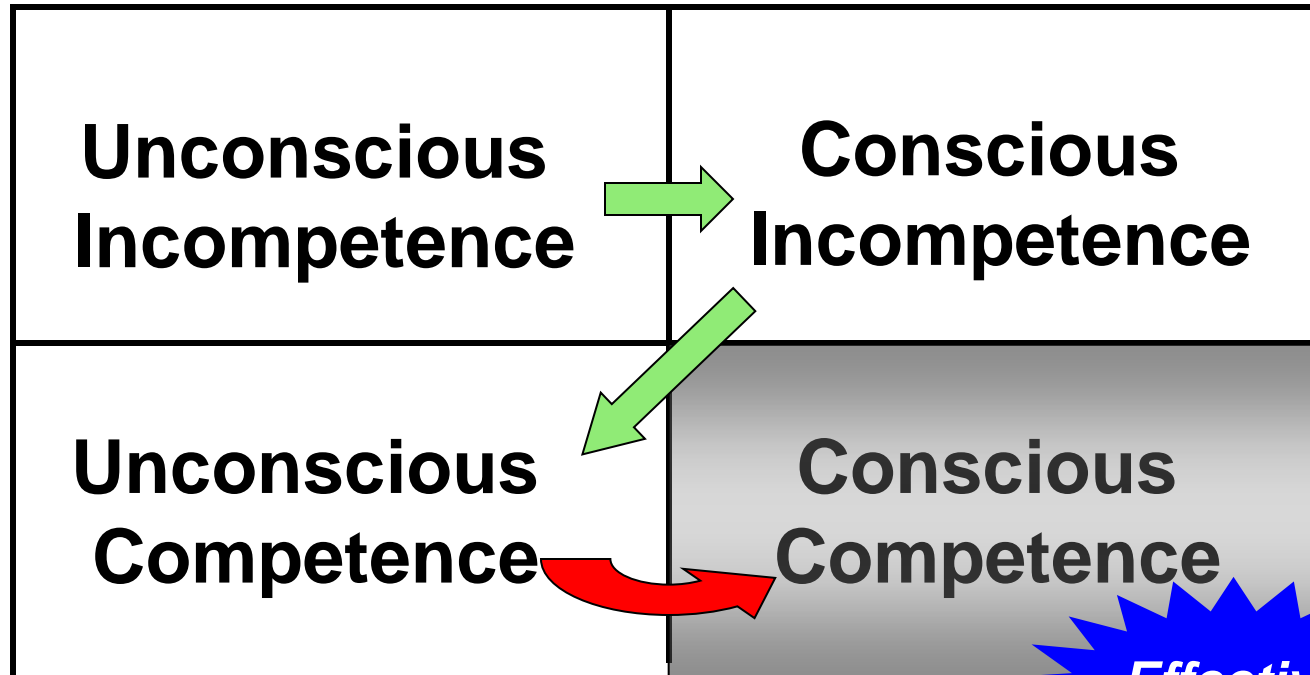
Knowledge/Skill Awareness (Peyton)



- **Explicit:** Conscious, Rule-based, Can be Verbalized
- **Implicit:** Not available for recall, difficult to verbalize.

“Expertise induced Amnesia”

Knowledge/Skill Awareness

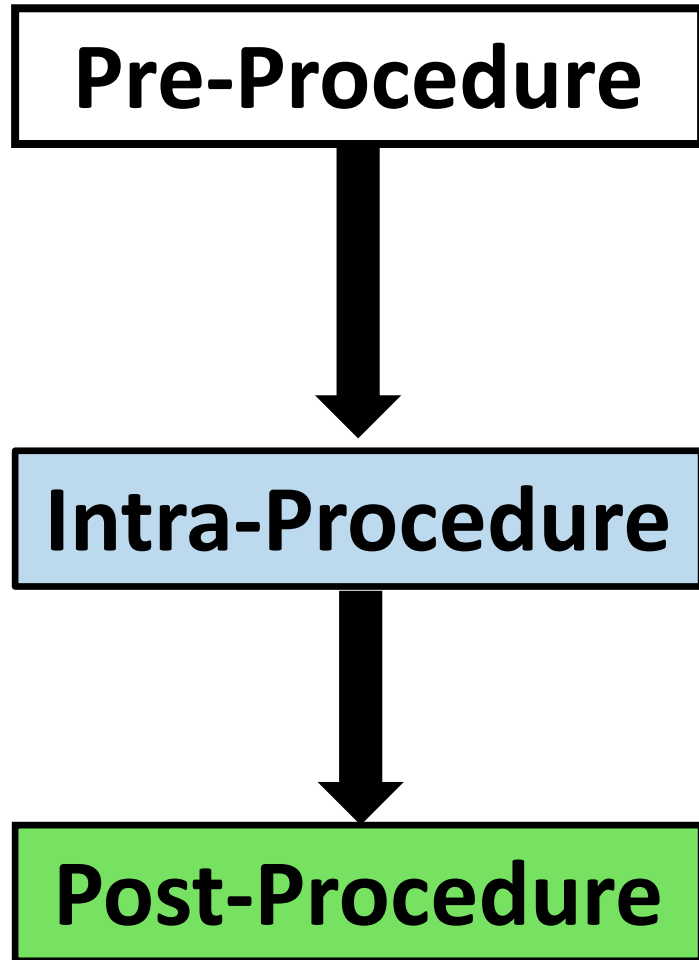


*Effective
Trainer*

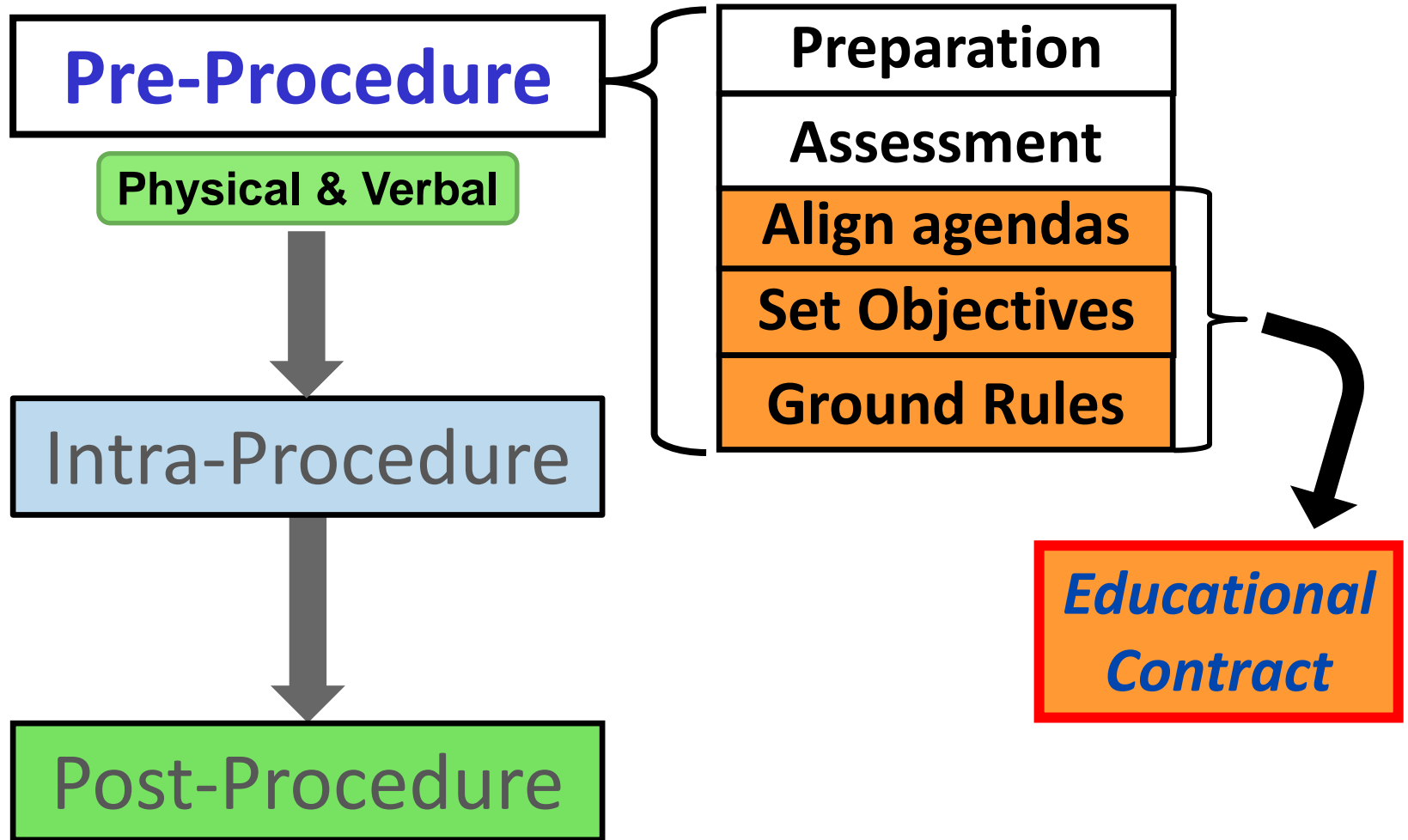
- Explicit Deconstruction
- Explicit Explanation

**“Those who know, do.
Those that understand, teach.” Aristotle**

The Training Interaction*



The Training Interaction*



Early Unrefined Agenda & Objectives

- Patient: Safe, Comfortable, Quality Exam
- Trainee:
 - Procedural
 - Reach the cecum
 - Complete exam independently
- Trainer:
 - Knowledge: Pre-, Post, Intra procedure
Awareness of patients needs
 - Skills: Endoscopic Technique
Time Management
 - Attitudes: Motivation
Interactions w/ staff, patients

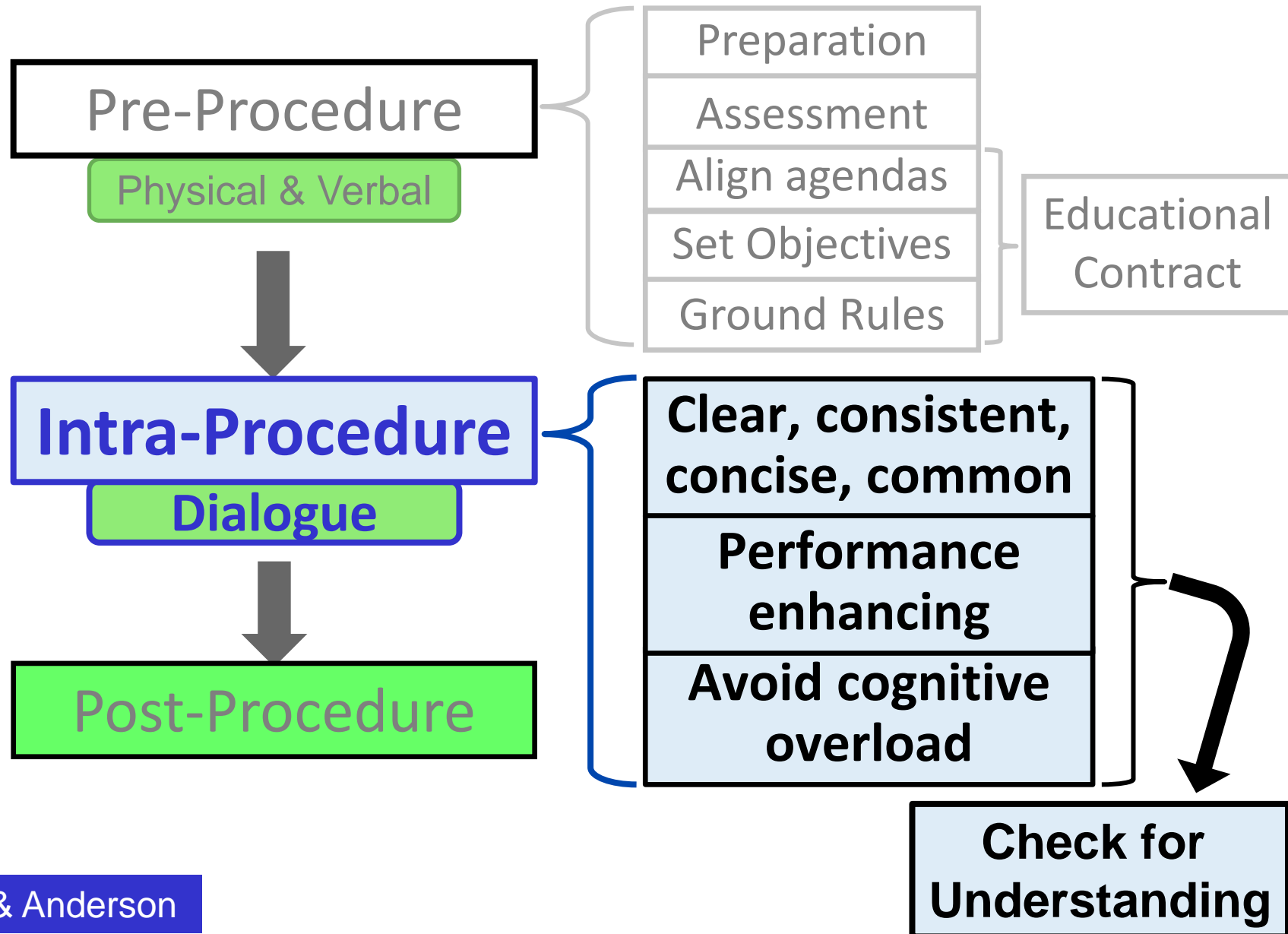
Educational Contract

- Aligning Agendas:
 - **Mutual understanding of Goals**
- Setting Learning Objectives:
 - **Training needs, specific to level of experience**
 - **Composite of dual objectives; SMART**
- Ground Rules:
 - **Roles & Responsibilities**
 - **Ensures patient safety**
 - **Scheduling and time demands**

II. Intra-Procedure

- Technical aspects dominant
 - Pattern recognition
 - Decision making
 - Recognition & Response to Adverse Events
 - Tenor and decorum
-

The Training Interaction*



* Valori & Anderson

Intra-procedural Instruction

- Rm entry to departure >> 'scope in - scope out'
 - Courtesy, Efficiency, Conversational
- Timing -
- Type –
- Language –
- Teaching Vignettes -

Consent

What must be covered?

- ✓ Indications
- ✓ Risks
- ✓ Common / major complications
- ✓ Alternatives
- ✓ For both procedure & sedation

- ✓ Duty - Check-off
- ✓ Timidity vs Nuisance
- ✓ Insufficient, or intimidating
- ✓ Non-respectful

ALSO, an opportunity to:

- Allay fears
- Clarify goals
- Identify risks, misunderstandings
- Establish rapport with patient

Intra-procedural Instruction

- Rm entry to departure
- **Timing - Selective vs. Urgent, Slow or Stop to talk**
- **Type**
- **Language**
- **Teaching Vignettes**

Dual Task Interference

- Concept of Cognitive Overloading
 - Providing / Receiving excessive verbal commentary or guidance during procedure
- Importance esp. during skill acquisition
- Varies significantly with Experience, Age
- Dual task performance improves with skills

Intra-procedural Instruction

- Rm entry to departure
- Timing – care with cognitive overload
- Type - Directive, Inquisitive, Observational, Praise, ..
- Language
- Teaching Vignettes

Intra-procedural Instruction

- Rm entry to departure
- Timing – care with cognitive overload
- Type - Directive, Inquisitive, Observational, Praise, ...
- Language - Specific and Consistent
- Teaching Vignettes -

12 Endoscopic Instructions

- Stop
- Withdraw / Pull back
- Advance / Insert
- Insufflate / blow
- Aspirate / suction
- Tip Up
- Tip Down
- Tip Left
- Tip Right
- Clockwise torque
- Counter-clockwise torque
- Slow down / Slowly

Intra-procedural Instruction

- Rm entry to departure
- Timing -
- Type -
- Language –
- Teaching Vignettes -
 - Algorithms for repetitive predictable challenges
 - Deconstructed guidance
 - Generates specific learning objectives
 - Improves Conscious Competence of trainer
 - Enhances efficiency

Opportunistic Instruction & Feedback

- Situational
- May depart from “contract”
- Instruction vs. Feedback
- Demonstration vs. instruction
 - Experience dependent
 - Time & Safety constraints

When to take over during Colonoscopy

- **3 Primary Considerations** more important than skill acquisition, instruction, feedback:
 - Patient Safety, Comfort
 - Exam Quality
 - Exam Efficiency
- Can technical challenge be identified?
- Can resolution be explained, understood, performed?
- Is resolution beyond skill of trainee?
- Should also employ demonstration, commentary
- Ideally change in roles is temporary.

Partial Task Practice

- Reducing task difficulty to aid learning
- *Fractionation*: practicing components of a skill that are normally done simultaneously
- *Simplification*: practicing a simplified version of a whole skill – esp. for complex skills
- *Segmentation*: separates skill into component parts and progressively adds new components.

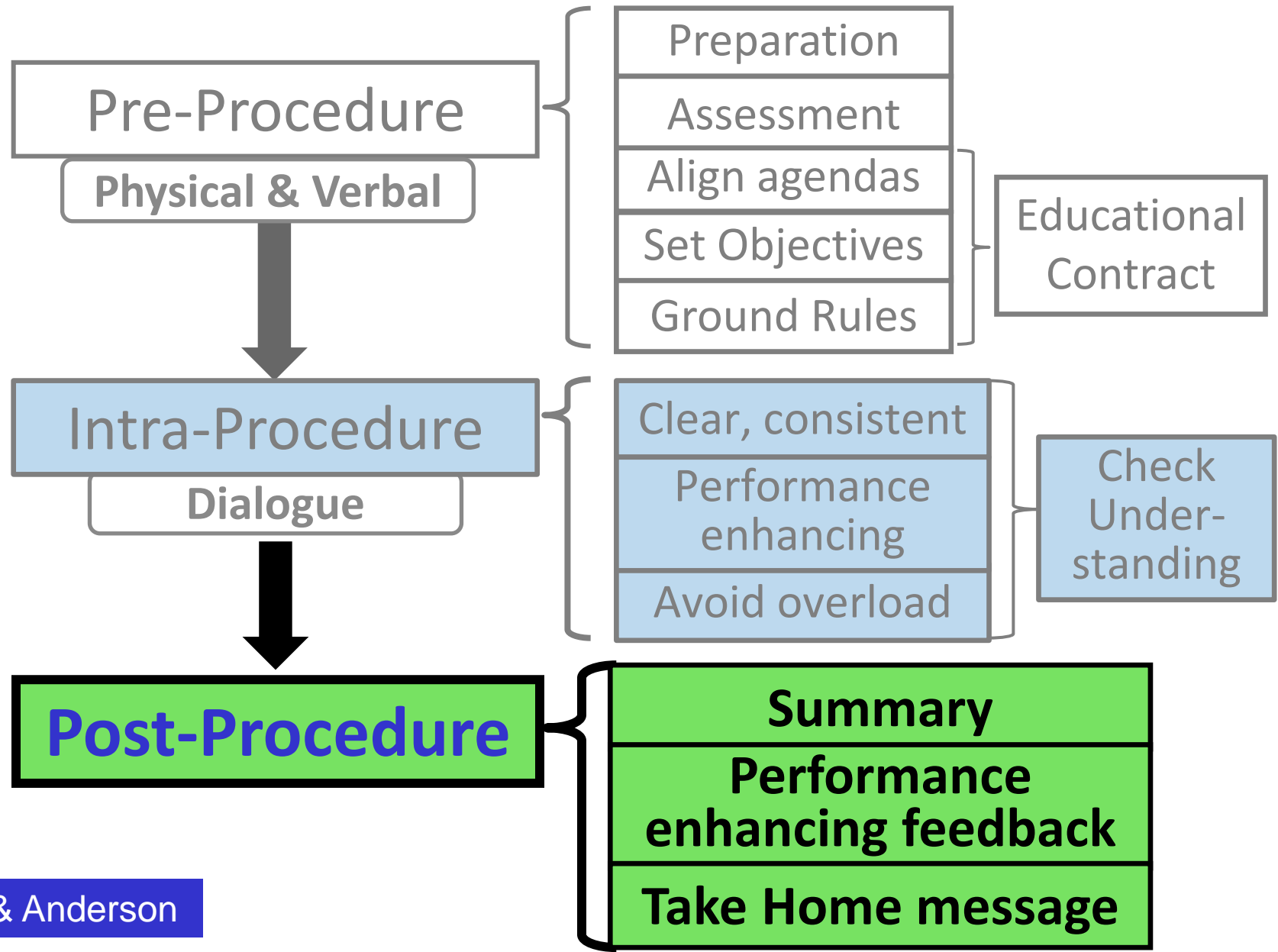
III. Post-Procedure

Patient Care

Communication

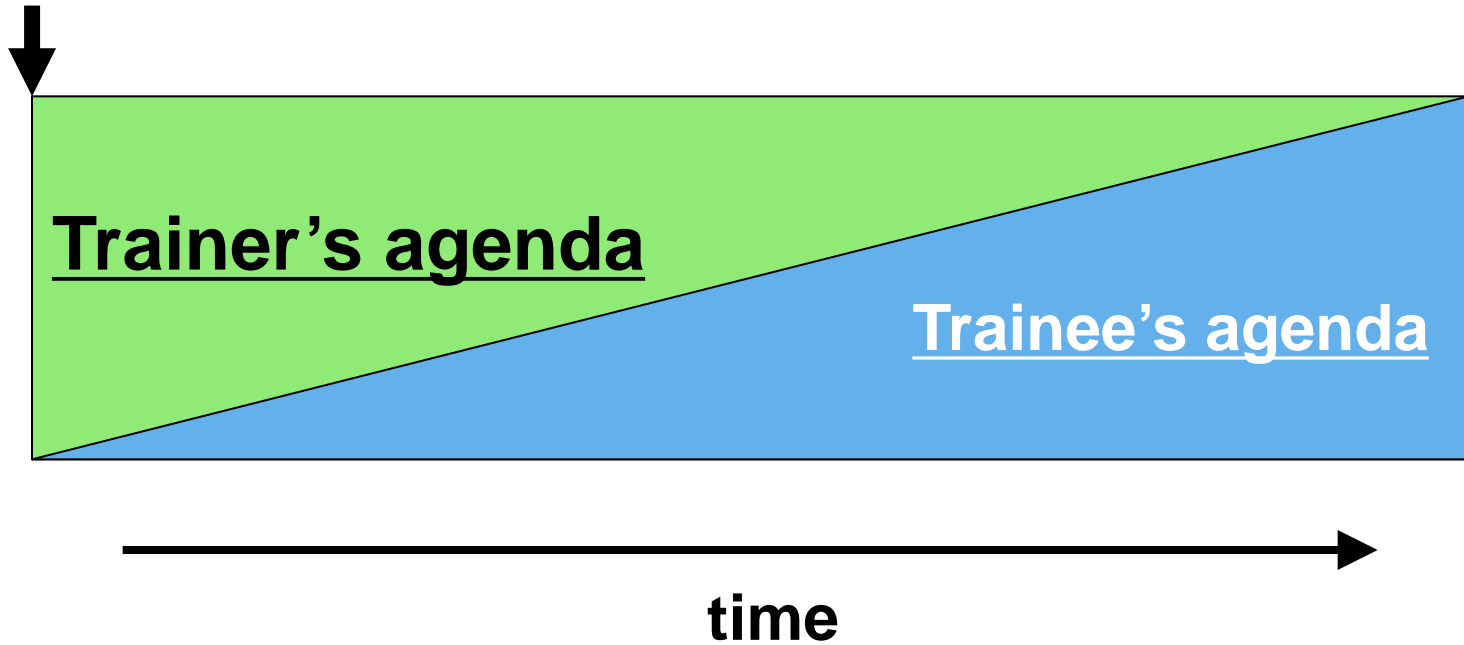
The Training Interaction

The Training Interaction*



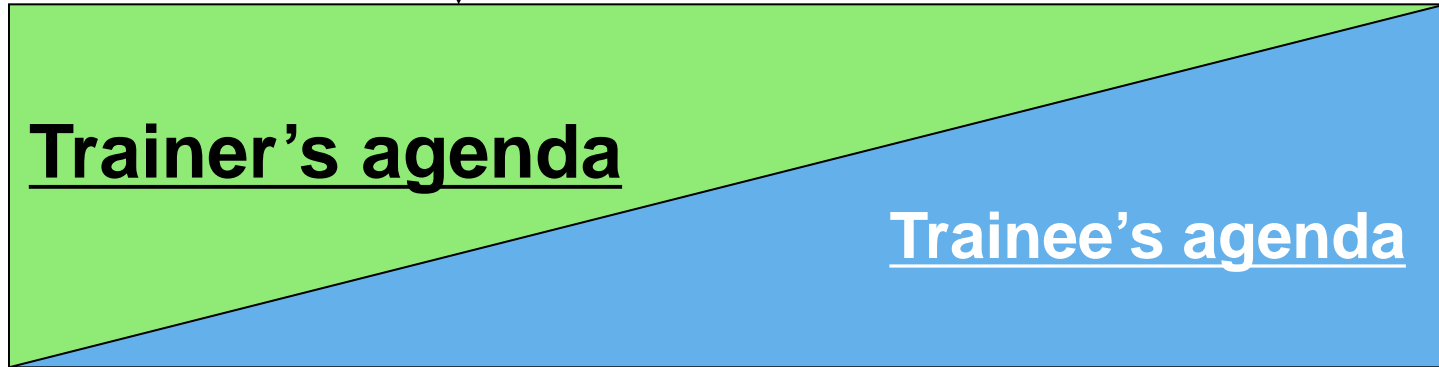
* Valori & Anderson

Initial training & Addressing Gaps*



* After Valori, R.

Maturing Trainee skills



time

Suggestions to fellows

- Being prepared greases the skids → know the patients details, procedural plans
- No procedure is a make or break event for a trainee
 - ... but it may be for the patient.
- Patience is two way street
- Remember, young staff may be on learning curve for some techniques, & for training
- All staff have time pressures of their own
- Observation is the first step in modelling a skill

Take Home Messages:

- Procedural teaching is an active process
- Conscious Competence of the *teacher* enables deconstruction & teaching of individual tasks
- Pre, Intra, and Post procedure teaching tasks:
 - ✓ Establishing an Educational Contract of aligned agendas, objectives, and ground rules
 - ✓ Clear & consistent communication
 - ✓ Avoidance of cognitive overload
 - ✓ Provision of performance enhancing feedback
- Ask → Converse → Take-home message
- See Vignette of modern colonoscopy technique.