

Making Sense of IPE Assessment

John Tegzes, MA, VMD, Dipl. ABVT
Director of Interprofessional Education
Western University of Health Sciences
Pomona, CA

Interprofessional Education and Collaborative Practice

- **Interprofessional education** “occurs when two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes.”
- **Interprofessional (or collaborative) care** “occurs when multiple health workers from different professional backgrounds provide comprehensive health services by working with patients, their families, carers (caregivers), and communities to deliver the highest quality of care across settings.”

- *Framework for Action on Interprofessional Education and Collaborative Practice, WHO 2010.*

Educational Assessment

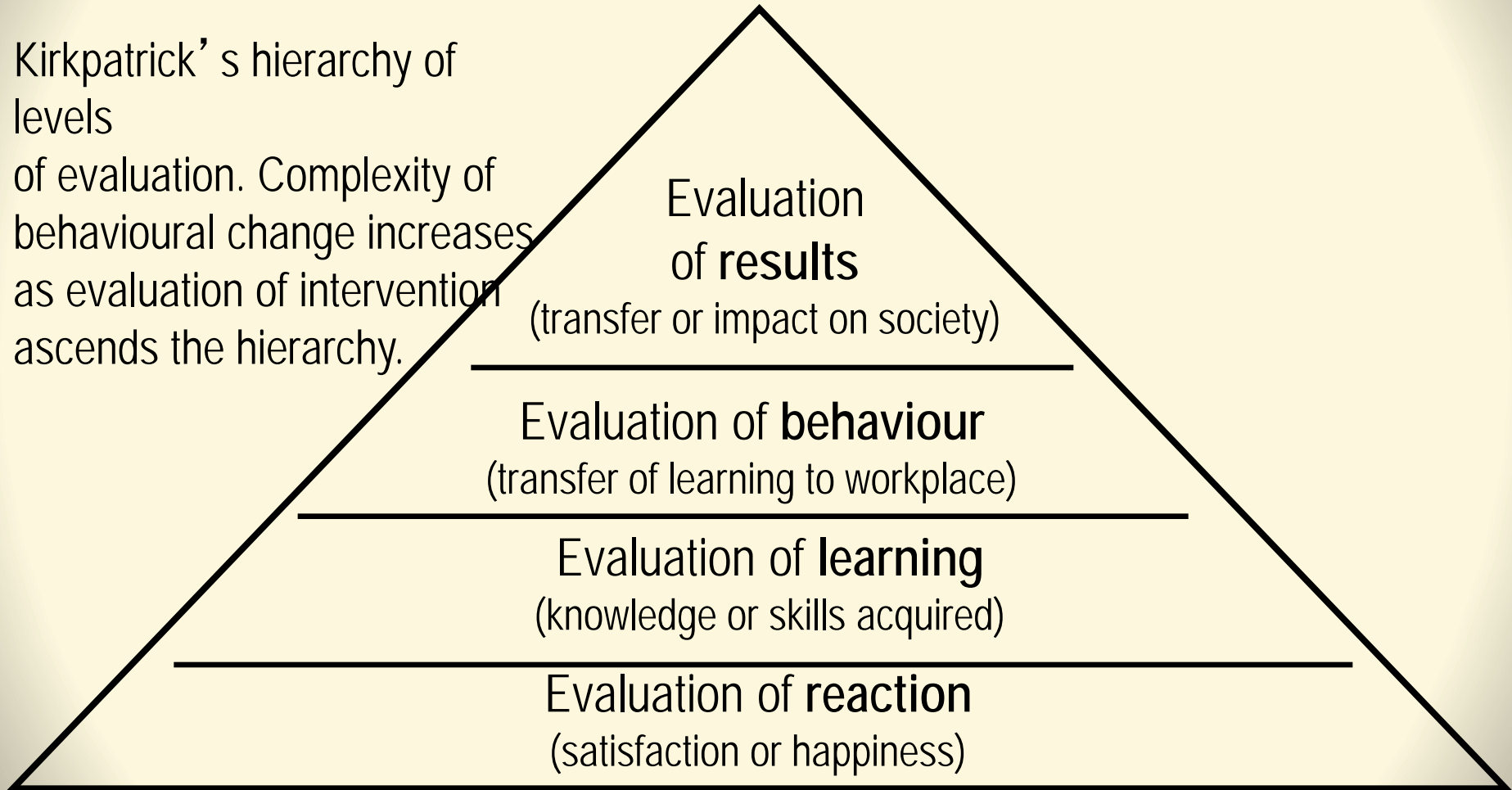
- **Educational assessment** is the process of documenting, usually in measurable terms, **knowledge, skills, attitudes, and beliefs**. Assessment can focus on the individual learner, the learning community (class, workshop, or other organized group of learners), the institution, or the educational system as a whole (also known as granularity)

Educational Assessment

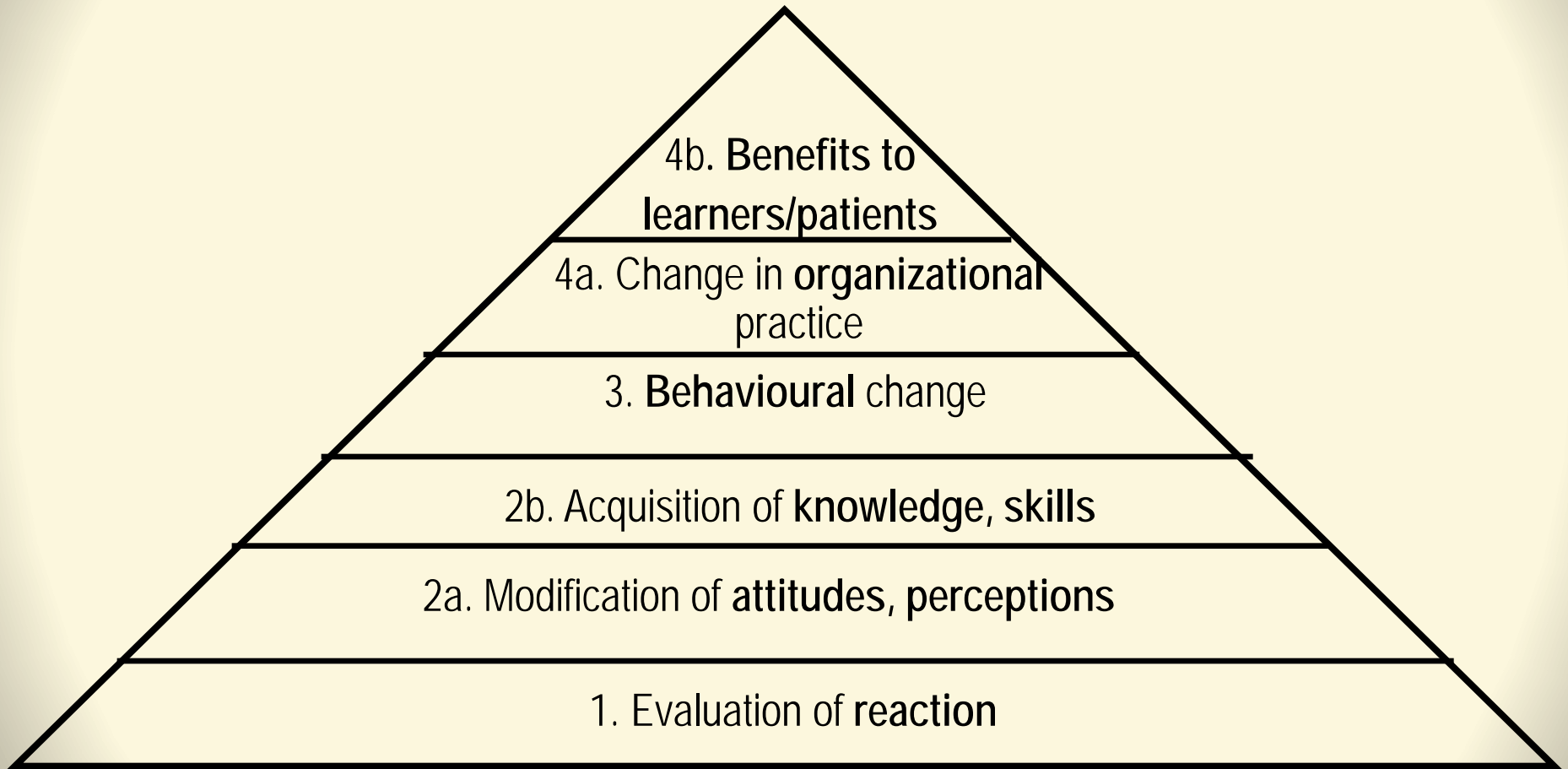
- **K** - Knowledge
- **S** - Skills
- **A** – Attitudes
- **B** - Behaviors

Kirkpatrick's Framework

Kirkpatrick's hierarchy of levels of evaluation. Complexity of behavioural change increases as evaluation of intervention ascends the hierarchy.



Kirkpatrick's Levels of Outcomes (Adapted)



Assessment

- Individuals
- Teams
- Health care systems
- Programs (educational)
- Institutions

IPEC Competency Domains

- Values and ethics for interprofessional practice
- Roles and responsibilities
- Interprofessional communication
- Teams and teamwork

Pair and Share

- How would you plan to the IPEC competencies?
- Specify how you would assess knowledge, skills, attitudes, and behaviors in dental students in all years of the curriculum.

IPE at WesternU

- Required core content for all entry-level students



IPE at WesternU

- Dental Medicine
- Medical Assistant
- Nursing
- Optometry
- Osteopathic Medicine
- Pharmacy
- Physical Therapy
- Physician Assistant
- Podiatric Medicine
- Public Health
- Veterinary Medicine

Competency Domains

IPEC

- Roles/responsibilities
- Teams/teamwork
- Ethics/values
- Communication

WesternU

- Communication
- Collaboration
- Teams and Teamwork in Healthcare
- Professional Scopes of Practice
- One Health

Conceptual framework

- Self-regulation learning theory used to guide the development and implementation of the curriculum

Butler, D. L., Winne, P. H. (1995). Feedback and self-regulated learning: A theoretical synthesis. *Rev Ed Res* 65 (3): 245-281.

- Problem-based learning used to deliver facilitated small team case studies

Azer, S. A. (2007). *Navigating Problem-Based Learning*. Sydney: Elsevier.

Facilitated Case-Based Curriculum

- Small teams
- Faculty facilitated
- 134 groups per case, each with 9-10 learners



Assessment of Attitudes

- Pre- and Post-Course surveys
- Focus groups



Assessment of Skills

- Facilitator evaluations of each student after each small team session



Facilitator rubric

	Unsatisfactory	Satisfactory	Exceptional
Participation	Does not listen or pay attention, exhibits a lack of respect to others, comments are irrelevant and uninformed, and comments reflect no understanding of the concepts discussed. Arrives with little, if any, preparation and may be late.	Actively participates in discussions. Displays interest in comments of others. Comments demonstrate assimilation of information provided by other group members. Arrives on time with evidence of preparation.	Enthusiastically and appropriately participates, actively and respectfully listens to other group members, ideas are relevant and reflect an understanding of the concepts/materials. Frequently asks questions to engage others in discussion. Arrives on time and is fully prepared.

Assessment of Knowledge

- New endeavor begun in the 2012-2013 academic year
- Used the “Progress Test” model with pre-test and a post-test at conclusion of the course
- Five additional exams during the academic year
 - one at the conclusion of each case study
- Multiple choice exam with both A-type and X-type questions
- Focused on all five competency domains

Assessment of behaviors

- Self-Reflection essay at the end of each case study used to develop critical thinking of concepts presented in the small team sessions

The intent is that this will help to anchor learning that will potentially translate to new behaviors once the learners are in the clinics.

Self-reflection rubric

Criteria	Levels of Achievement	
	unsatisfactory = 0 points	satisfactory = 1 point
What surprised you?	Does not respond to the prompt. Does not use "I" statement when responding to the prompt.	Responds to the prompt using "I" statements. Demonstrates active involvement in the learning process.
What did you learn that you didn't know before?	Does not respond to the prompt. Does not use "I" statement when responding to the prompt.	Responds to the prompt using "I" statements. Demonstrates active involvement in the learning process.
What did you already know, but learning something new has, or might change your opinion?	Does not respond to the prompt. Does not use "I" statement when responding to the prompt.	Responds to the prompt using "I" statements. Demonstrates active involvement in the learning process.
What knowledge and learning might you take with you and apply in your life or career?	Does not respond to the prompt. Does not use "I" statement when responding to the prompt.	Responds to the prompt using "I" statements. Demonstrates active involvement in the learning process.
Was there something you wish you would have done differently?	Does not respond to the prompt. Does not use "I" statement when responding to the prompt.	Responds to the prompt using "I" statements. Demonstrates active involvement in the learning process.

Data mining

- What can be done with the data you collect?

Results

- Compared pre-test and post-test results as a composite, and by profession
- Data from 823 first-year learners included

Overall Learner Performance (n=823)

	Pre-Test	Post-Test	Difference
Mean	37.9	78.0	40.1
Median	36.7	83.3	46.6
St Dev	11.0	15.4	4.4

Profession	N	Pre-Test	Post-Test	Difference
Dental Medicine	67	36.8	78.7	41.9
Nursing	55	38.8	68.0	29.2
Optometry	85	35.3	77.3	42.0
Osteopathic Medicine	212	38.7	77.3	38.6
Pharmacy	116	35.0	91.0	56.0
Physical Therapy	53	38.1	82.5	44.4
Physician Assistant	93	42.1	76.9	34.8
Podiatric Medicine	40	37.8	63.6	25.8
Veterinary Medicine	102	38.0	74.2	36.2

Behaviors

- Objective Structured Clinical Examination (OSCE)
 - Generally used with individuals
- Team OSCE, or TOSCE
- Interprofessional, or iOSCE

What is a TOSCE?

- ✓ **T**eam
- ✓ **O**bjective
- ✓ **S**tructured
- ✓ **C**linical
- ✓ **E**xamination

- **Realistic scenario** with standardized patients, student doctor. Video/audio recorded
- **Challenges students** to be:
 - Patient-centered
 - Include family
 - Work collaboratively
- **Focus on safety; continuity of care**
- Ambulatory (outpatient)
- Asynchronous
- Geriatrics focus

Time Frames

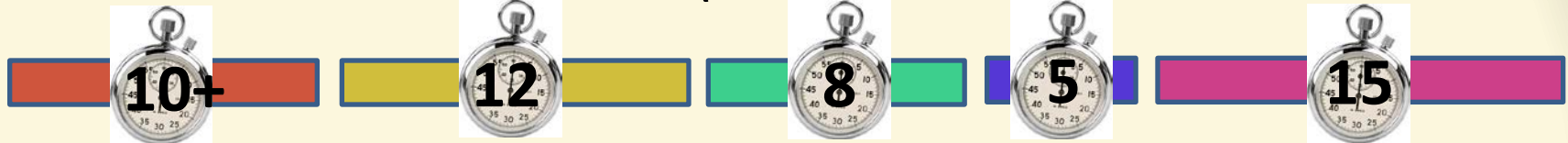
Review
Pt chart

Pt/caregiver
Encounter

Follow-up
(Phone)

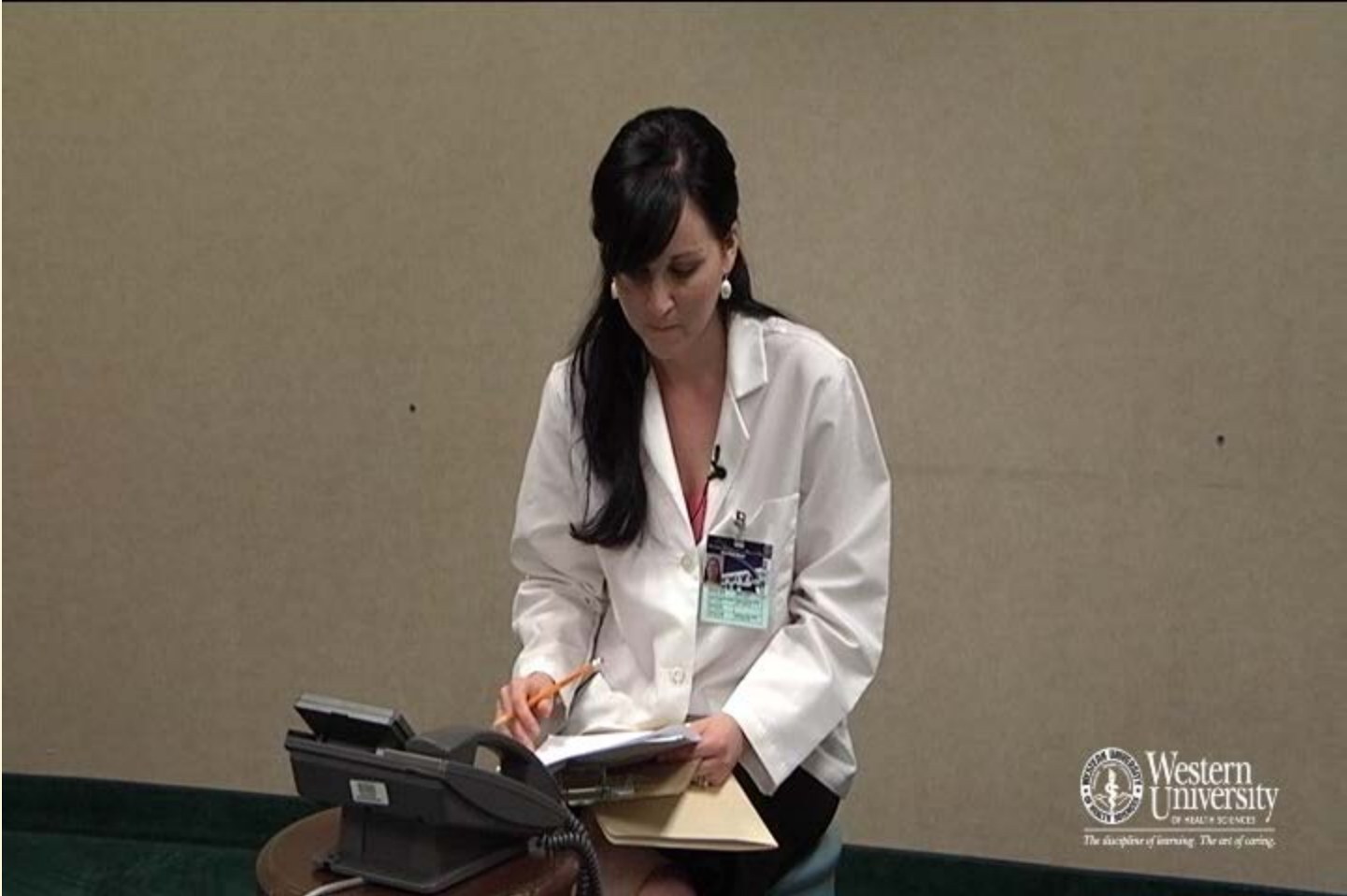
Debrief

Group
Debrief



- **Student reviews chart** – At least 10 min before sees patient
- **Patient encounter** – 12 min, with 2 & 1-min warnings
- **Follow up** – Up to 8 min to conduct follow-up via phone
- **Debrief** – 5 min – standardized patients return, give student feedback from patient & caregiver perspectives
- **Group Debrief** – 15 min – facilitator and/or faculty-led

Video Sample – Dental Medicine Student



Western University
OF HEALTH SCIENCES

The discipline of learning. The art of caring.

Video Sample – Physical Therapy Student



Western University
OF HEALTH SCIENCES

The discipline of learning. The art of caring.

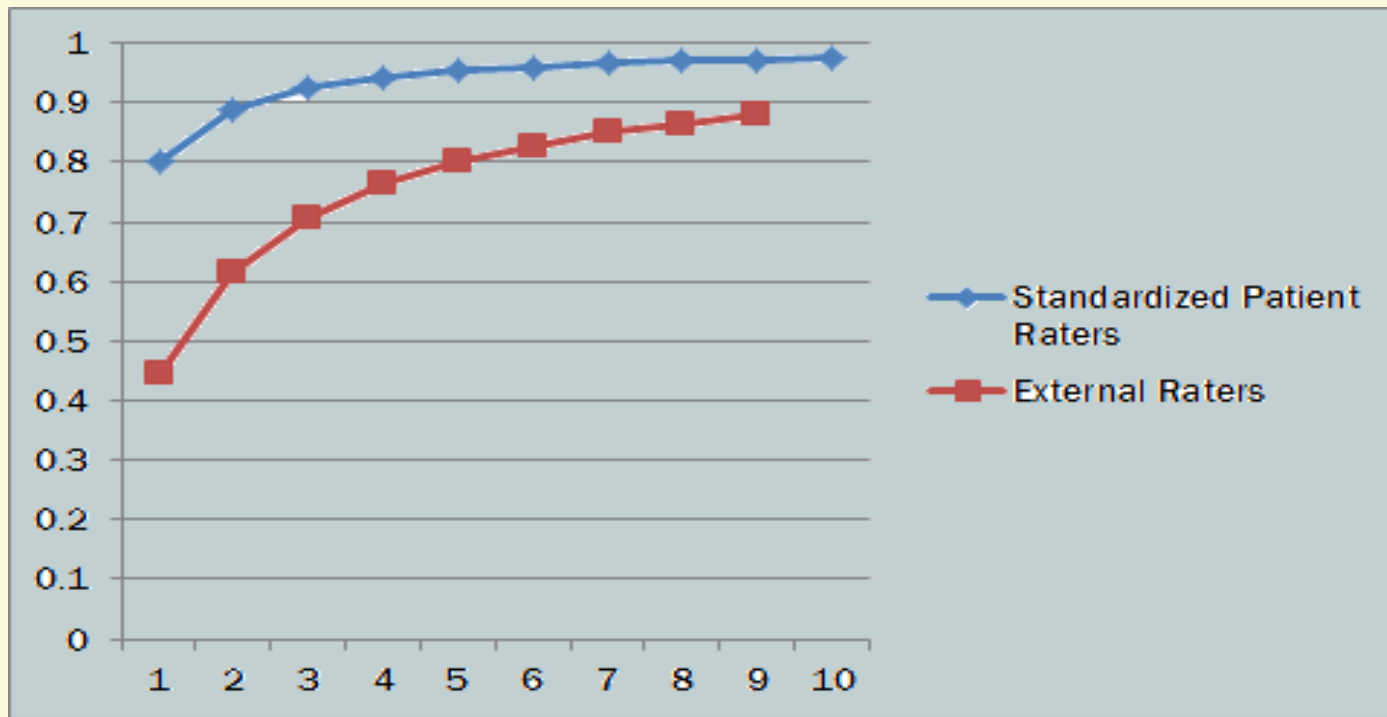
Video Sample

Topic: Abuse (Not Specific to Profession)



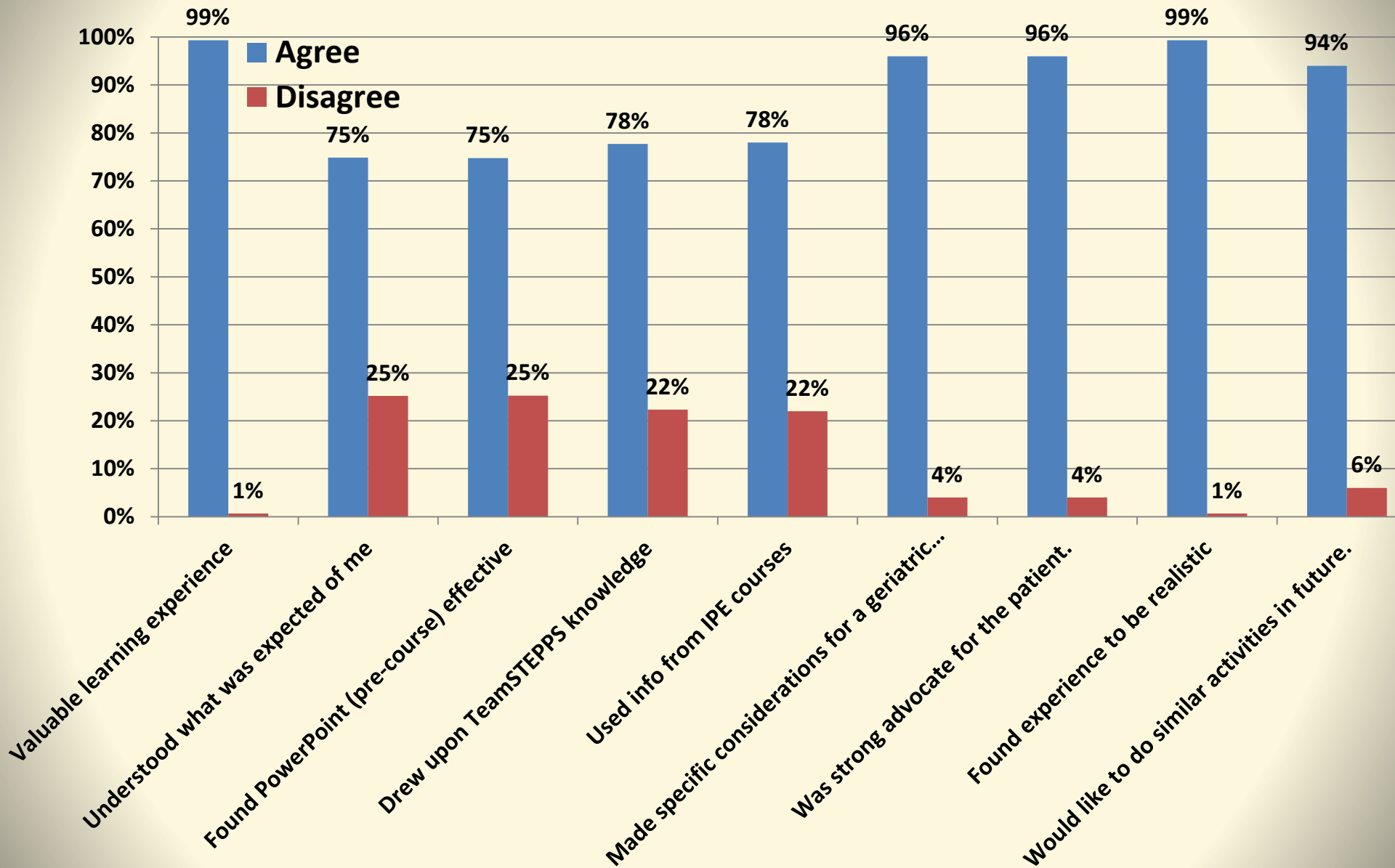
Reliability Analyses

Reliability by Number of Raters (Decision Study)



- Actors were more reliable source of ratings

Student Evaluations



And if that weren't enough

- Assessing program effectiveness
 - At WesternU every academic program undergoes university review every five years

Assessing program effectiveness

- Self-study that includes:
 1. Program history, mission, and goals
 2. Student learning outcomes
 3. Curriculum assessment
 4. Faculty assessment
 5. Student body assessment
 6. Physical resources
 7. Support staff
 8. External environment
 9. Summary

Questions and discussion

