

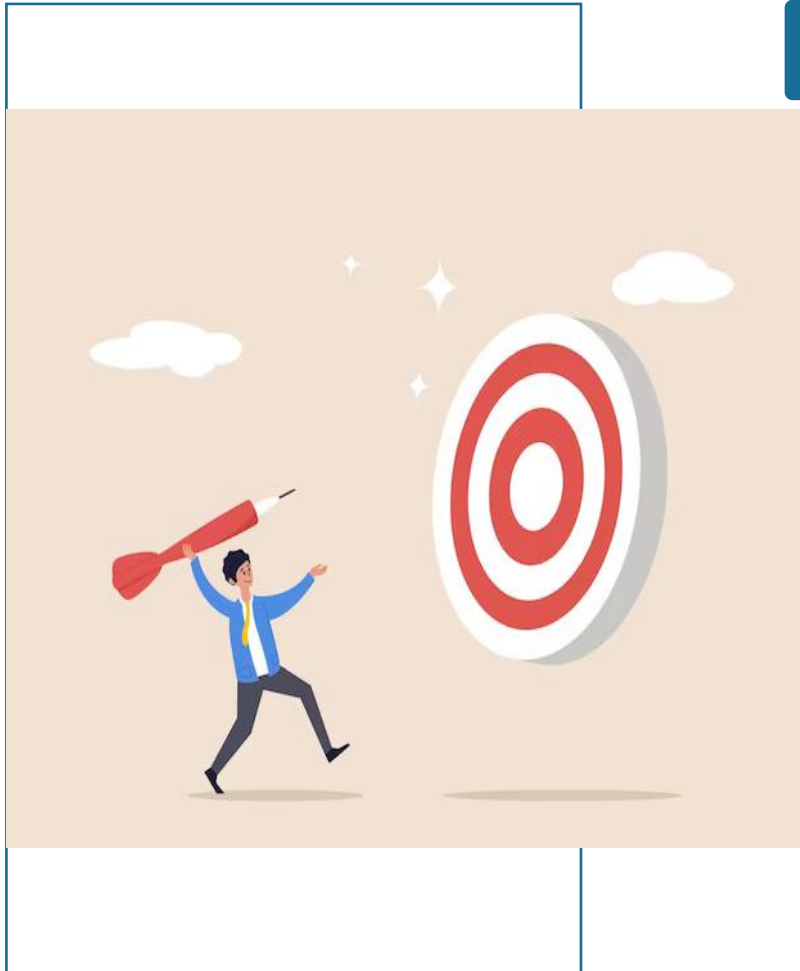
Teacher-Made Tests' Specificity and Sensitivity in Measuring Students' Academic Performance at Public Universities: Evidence from Ethiopia

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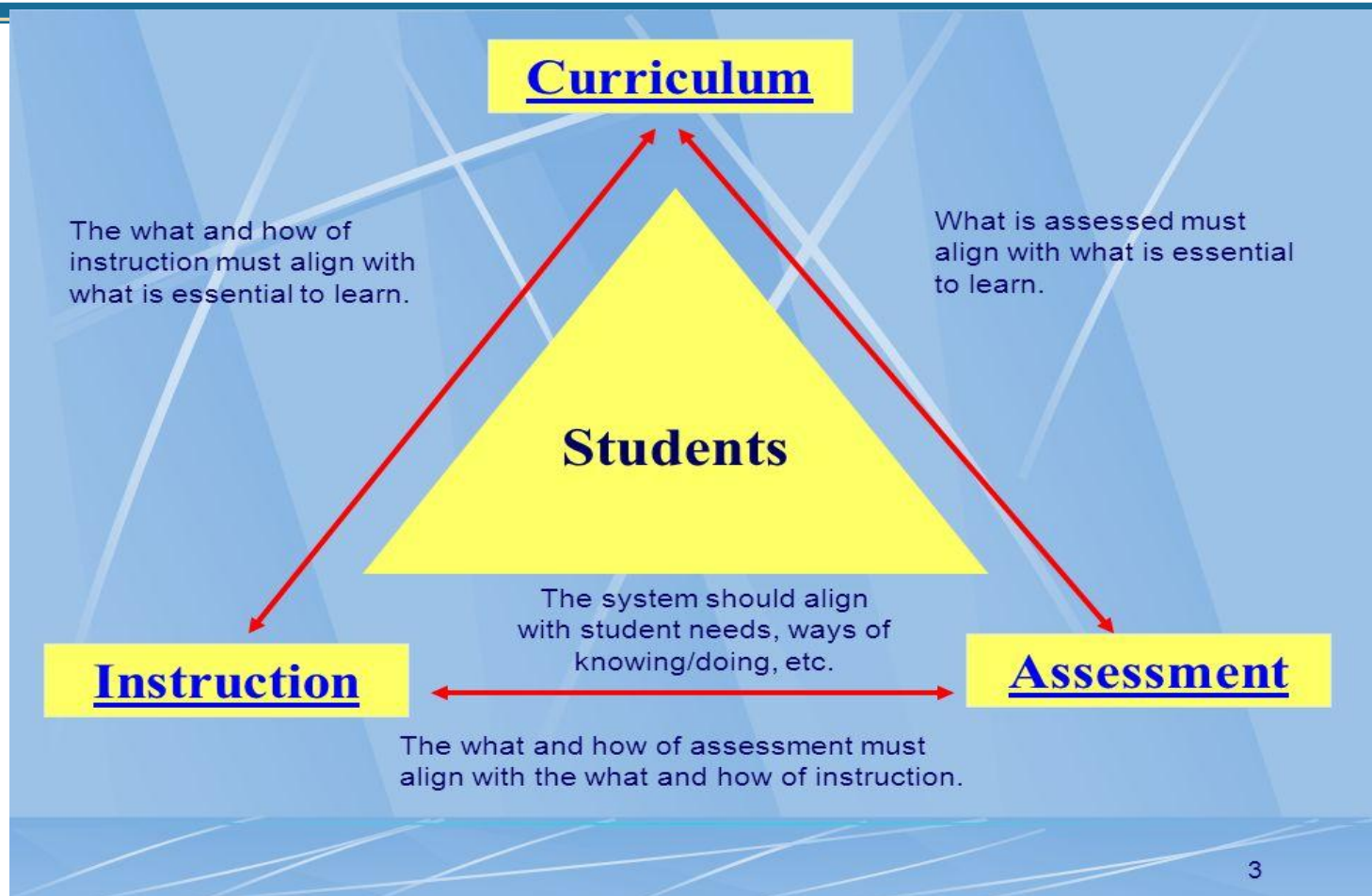
25th-29th August 2025

Targets of the Presentation



- **Introduction**
- **Results & Discussion**
- **Conclusion**

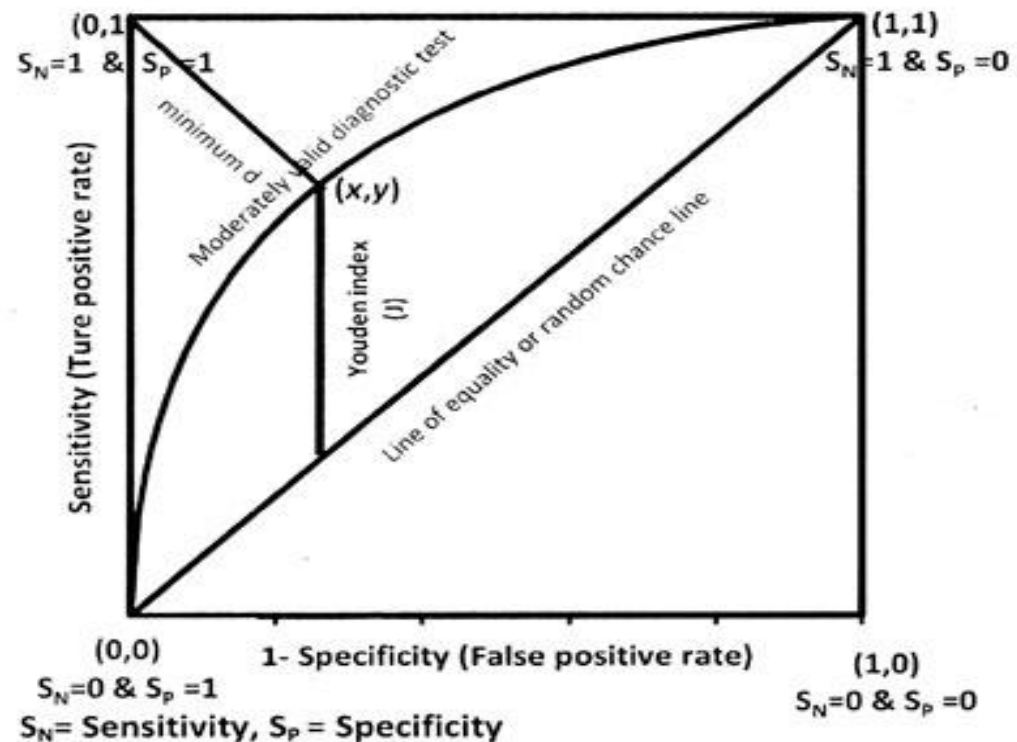
Introduction



Int...

If assessment matters, what matters in turn?

- Measure's quality (Naumann, 2019; Polikoff, 2010,...): specificity & sensitivity



Int...

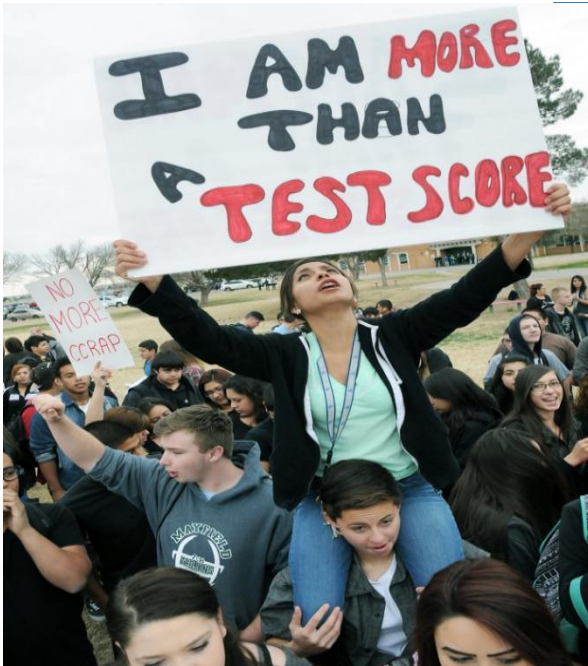
Issues frequently arise are:



(Brown, 2012; Eric, 2021; Lukmanul, 2020; Quansah, 2019; Singh, 2022...)

- teachers of all educational levels are criticized by:
 - the measurement assumptions
- 90% of HEIs TMTs are out of quality

Int...



(Berhanu, 2022; Brown, 2012; Campos, 2022; Chala, 2020; Edu.Road Map, 2018-2030; Mebratu, 2016; Singh, 2022; Tesfamariam, 2021)

- Globally: Tests resistance movements have emerged
- Locally, on Ethio HEIs measurement quality:
 - questions have been raised from parents, employers, and customers
- Indicators to suspect exams quality of Ethio HEIs:
 - 81.6% of stdts' are engaged in academic cheating
 - grade inflation
 - graduates' unemployment rate increased to 9.22 %

Int...

Attempts:



(Edu.Road Map, 2018-2030;
Eyob, 2022; Metages, 2019)

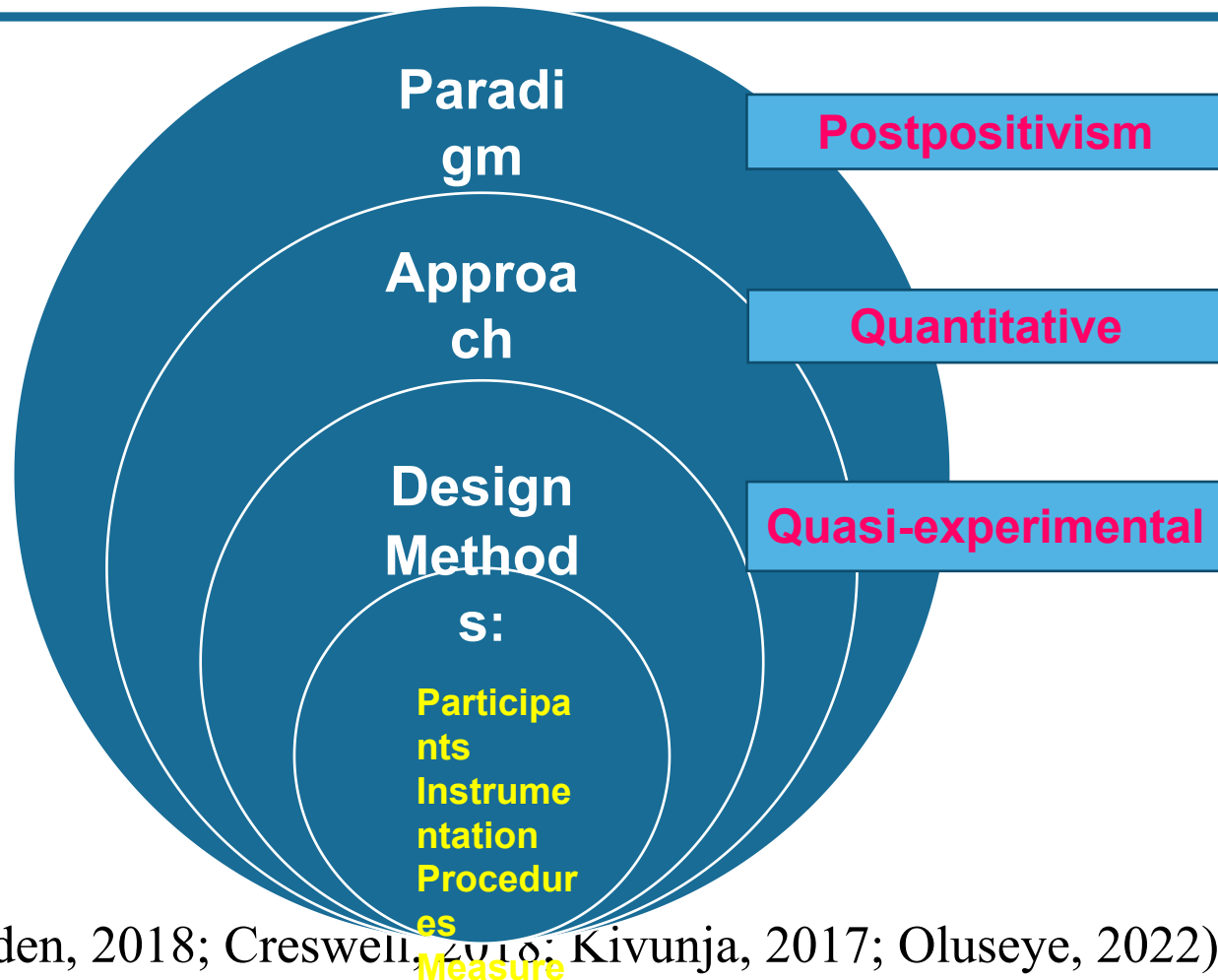
- Harmonizing HEI measurement
- Researches have been conducted
 - only on CA
- MoE has come with STs
 - but it is controversial

Research Question



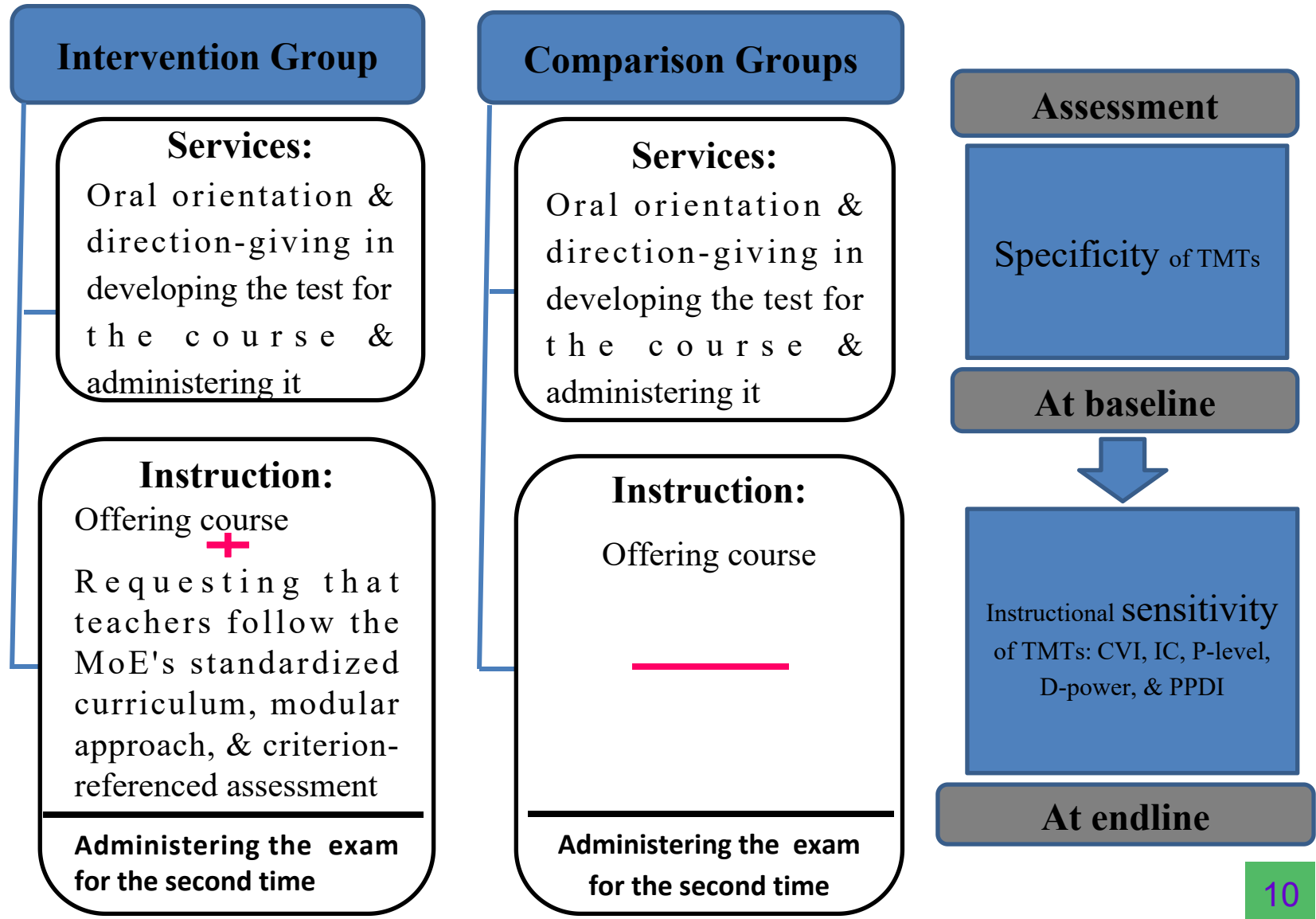
1. What is the specificity of TMTs in measuring students' academic performance in public universities at **pre-instructional** intervention?
2. What differences were observed between public universities in the specificity and students' academic performance at **pre-instructional** intervention?
3. What are the instructional sensitivities of TMTs in measuring students' academic performance in public universities at **post-instructional** intervention?
4. What differences were observed between public universities in the instructional sensitivity of TMTs and students' academic performance at **post-instructional** intervention?

Methodology

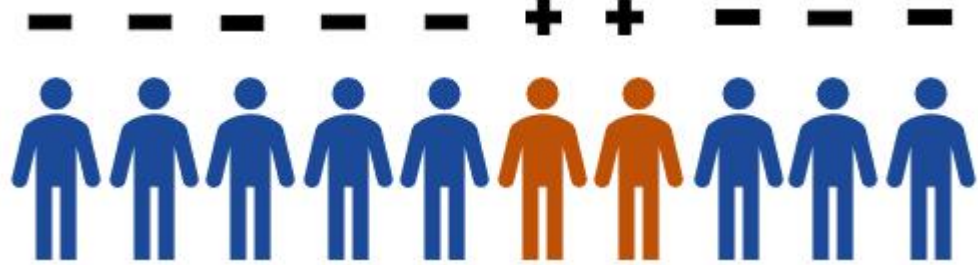


(Borden, 2018; Creswell, 2018; Kivunja, 2017; Oluseye, 2022)

Instructional Intervention



Key Findings



Pre- instruction

RQ1, Specificity (Using Bayes' theorem; Arif, 2015):

- .6 to .61 < .7, a Type-I error range of .39 to .40

RQ2, Differences in specificity:

- In specificity: an $F_{2, 77} = .163$ at $\alpha = .849 > .05$,
- for the students' academic performance:
 - an $F_{2, 219} = .146$ at $\alpha = .865 > .05$,

* *Consistent with Lemecha's (2020), Tesfamariam's (2021), Yizengaw's (2018) ... studies found graduates' GPA's & competence are mismatched*

Key find...



Post- instruction

RQ3, Sensitivity (using Omolola, 2018; Maria, 2012) from:

- PPDI was $.07 < .2$ for all universities
- psychometrics: CVI b/n $.60$ & $.61 < .83$, IC is $\alpha = .59$ to $.65 < .7$
- performance: P ranges $.45 - .51$, but $< .6$, D is $.005$ to $.06 < .2$

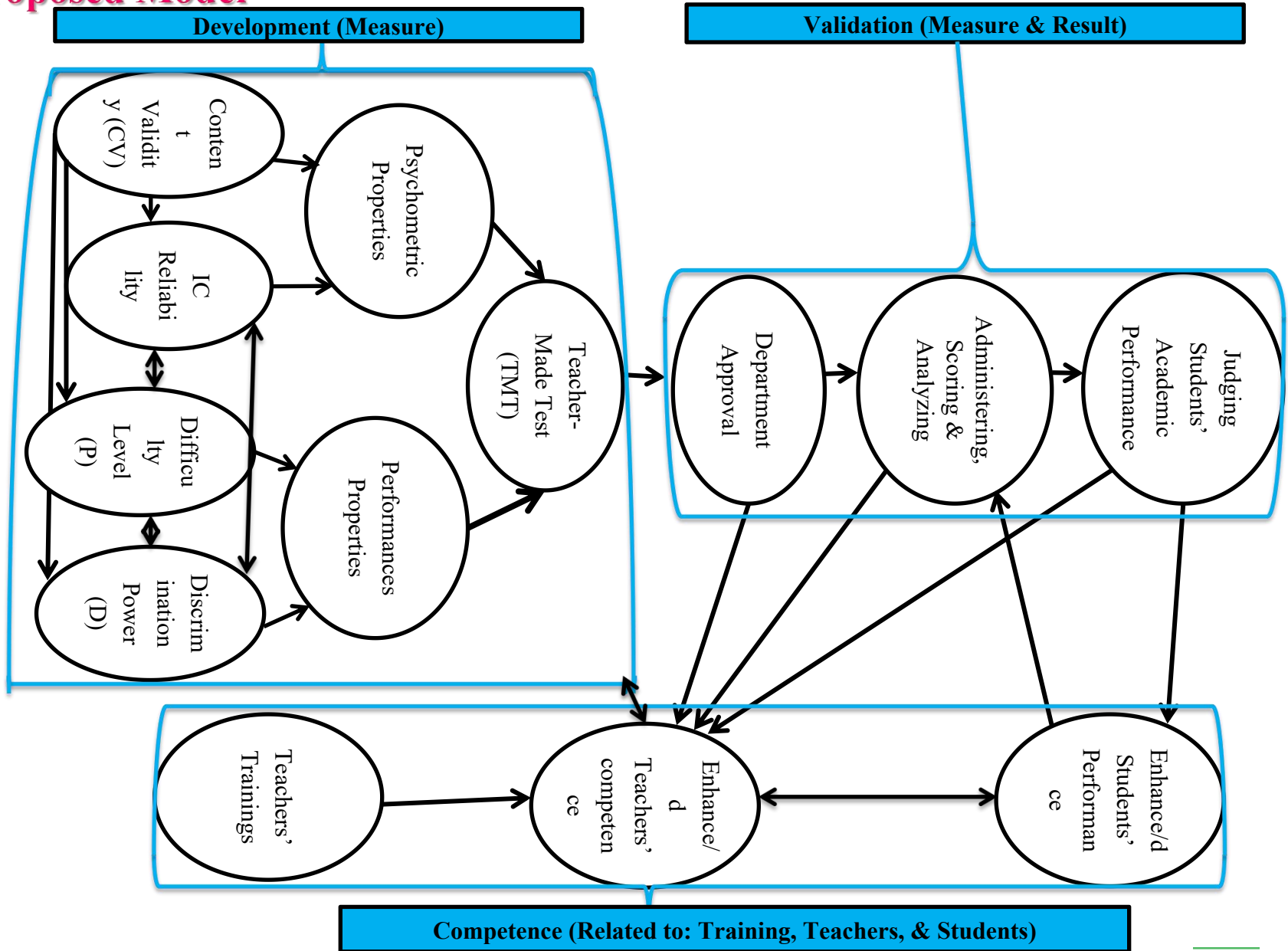
RQ4, Differences: No significant d/f in sensitivity:

- for all parameters at $\alpha = .1$ to $.983 > .05$,
- academic perfo with at $\alpha = .872 > .05$

**Consistent with local studies (Lemecha, 2020; Sewagegn, 2019...):*

- *Saying Ethiopian HEIs measures are uniformly questionable in reflecting graduates actual competence*

Proposed Model



System Model of TMT Properties in Measuring University Students' Academic Performance

Conclusion



- Working measure violates the assumptions & unable to:
 - detect differences b/n students' surface & deep knowledge
 - reflect effects of curriculum & instruction
- Strength:
 - combining specificity & sensitivity
 - proposing new model
- Limitation:
 - not too strong intervention, needing further intervention
- For further research:
 - investigating reasons for teachers developing ineffective measures

The End!



Be Honoured!