

How can socially constructed knowledge held in communities of practice be reliably assessed?

Richard Harris & John Begley, Trinity College London



**Future of English Language
Teaching Conference** **ONLINE**





How can socially constructed knowledge held in communities of practice be reliably assessed?

Lessons from TESOL assessment development

Richard Harris
John Begley

Introduction



Teach English Online (the TEO course)



Certificate in Online Teaching (CertOT)



Developing a rating scale

- 'Communities of practice'
- 'Socially constructed knowledge'
- 'Validity'
- Rating scale design

Communities of practice

“Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly.” (Wenger, 2011 p.1)

Two crucial conditions for a community of practice:



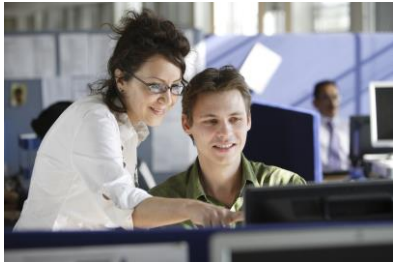
A shared experience over time



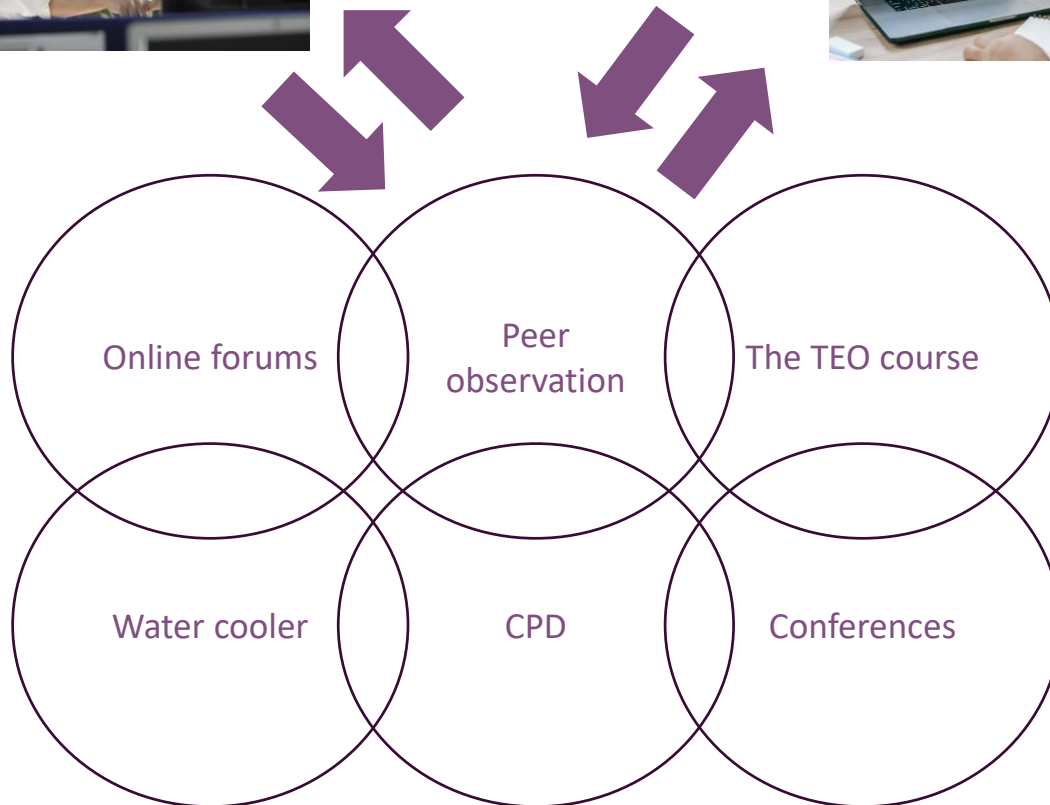
Commitment to shared understanding

“Indigenous” and “naturally occurring” (Jacoby & McNamarra, 1999)

Communities of practice in TESOL online



Knowledge developed
and shared locally

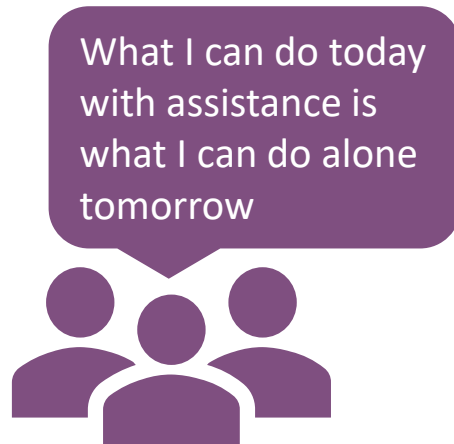


Knowledge shared
internationally



Social constructivism

Knowledge can be co-created



Knowledge generated through social interaction is greater than the sum of its parts.

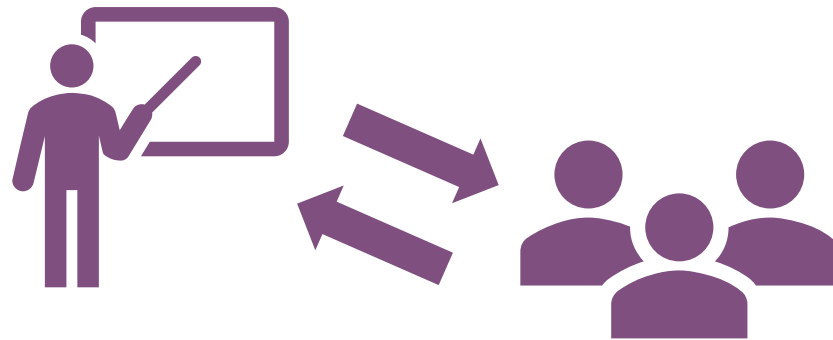


"Socially mediated attention develops into [...] more independent and voluntary attention" (Vygotsky, 1978, p.128)

Social constructivism *"serves to open boundaries through inquiry"* (Hirtle, 1996)

Social constructivism in TESOL

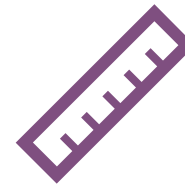
"Whether teachers enter their classrooms with formal professional training or simply on the basis of their command of English, they embark on a process of learning to teach." (Freeman & Johnson, 1998)



Social constructivism in local and international communities of practice means that teaching practice is dynamic

Validity

"The most important question of all in [...] testing [is] does the test test what it is supposed to test?" (Alderson, Clapham & Wall, 1995, p.170)



"It is incorrect to use the unqualified phrase 'the validity of the test'." (AERA, APA, NCME, 2014, p.23)

Validity - Concepts



Validity as a unitary concept (Messick, 1989)

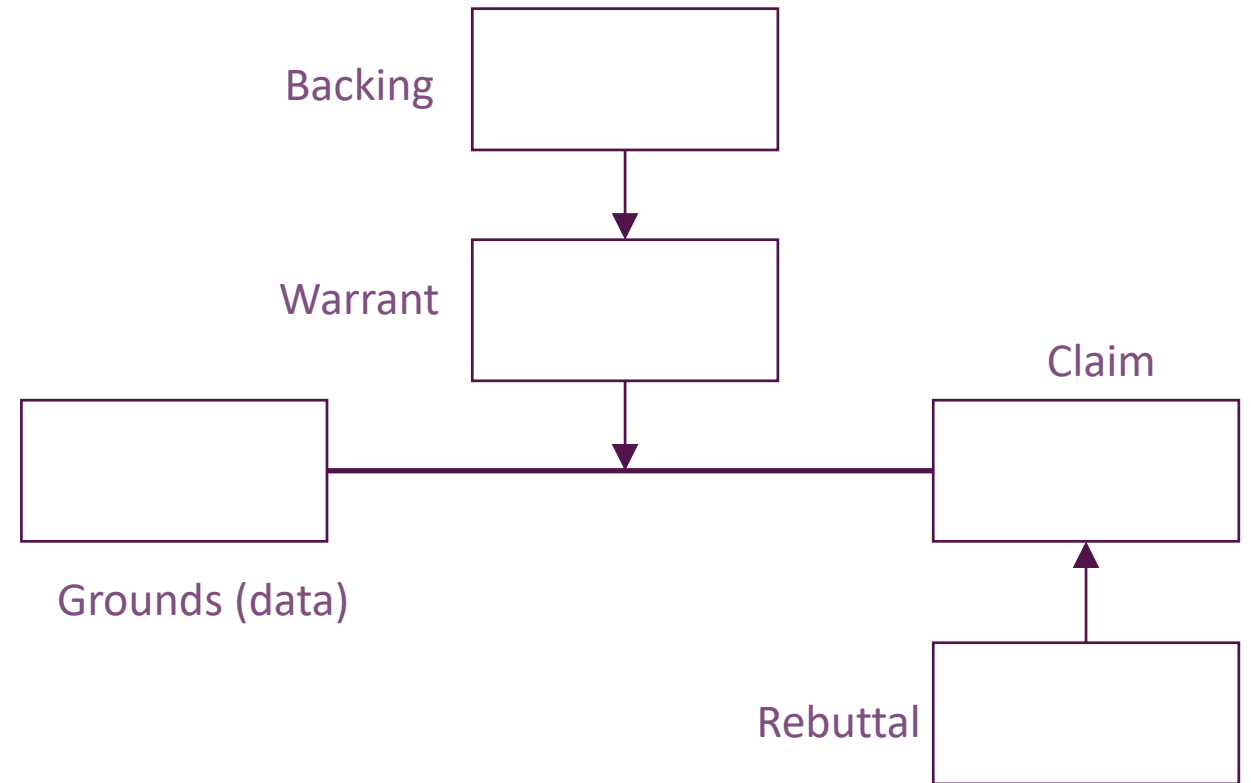
Validity as an argument (Kane, 2001)

Construct Validity

“...construct validity is the integrating force that unifies validity issues into a unitary concept...”

...the evidence and rationales supporting the trustworthiness of score meaning is what is meant by construct validity,...

(Messick, 1989 p.10)



(Toulmin, 1958;
2003)

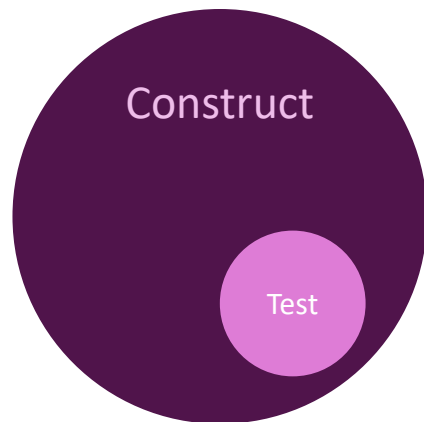
Defining the construct

“The two major threats to construct validity are **construct underrepresentation** – that is, the test is too narrow and fails to include important dimensions or facets of the construct –

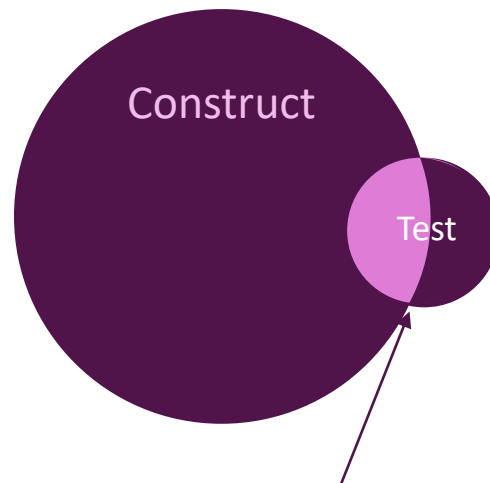
and **construct-irrelevant variances** – that is, the test contains excess reliable variance, making items or task easier or harder for some respondents in a manner irrelevant to the interpreted construct.”

(Messick, 1989 p.7)

Given these two major concerns, we need to be sure to define the construct we intend to assess.



Construct underrepresentation



Construct-irrelevant variances



Construct representation

The challenge

- 
- The TESOL construct is diverse because communities of practice are localised
 - The TESOL construct is changing as new practices are developed locally through social constructivism
 - The uses of technology continue to rapidly change around us
 - The testing community needs to ensure their qualifications reflect what takes place in the domain

Background



Developing the CertOT rating scale



Assessment validity



Defining a construct

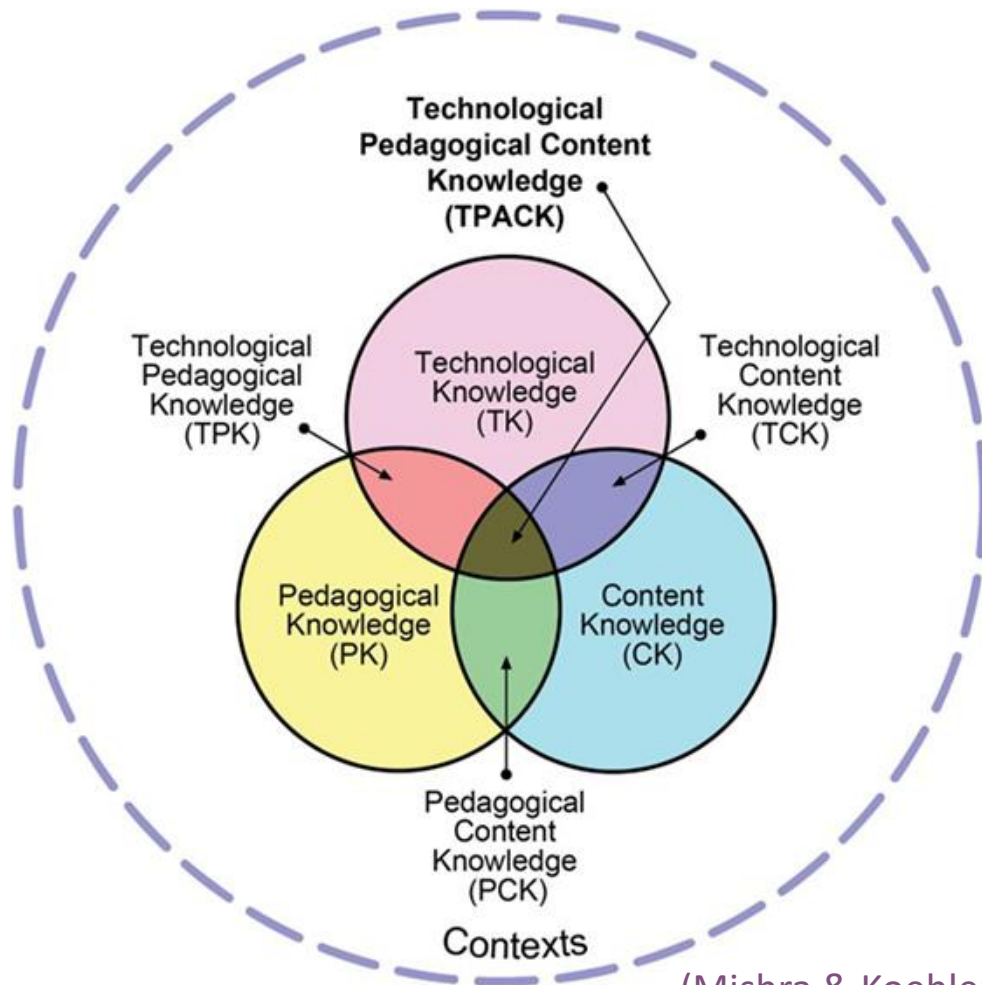


Balancing the requirements

Measurement-driven
approach

Performance-data driven
approach

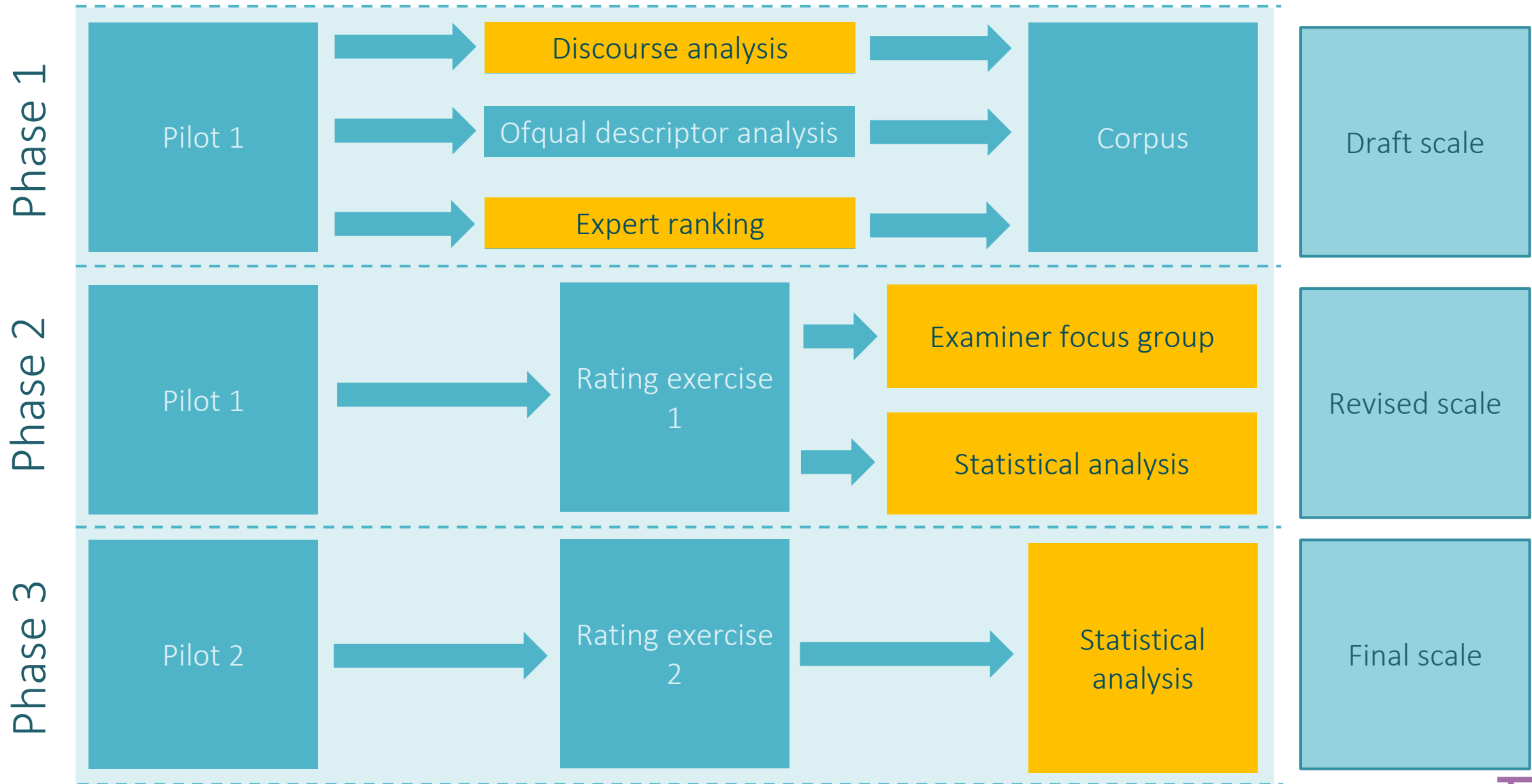
Technological Pedagogical Content



(Mishra & Koehler, 2006)

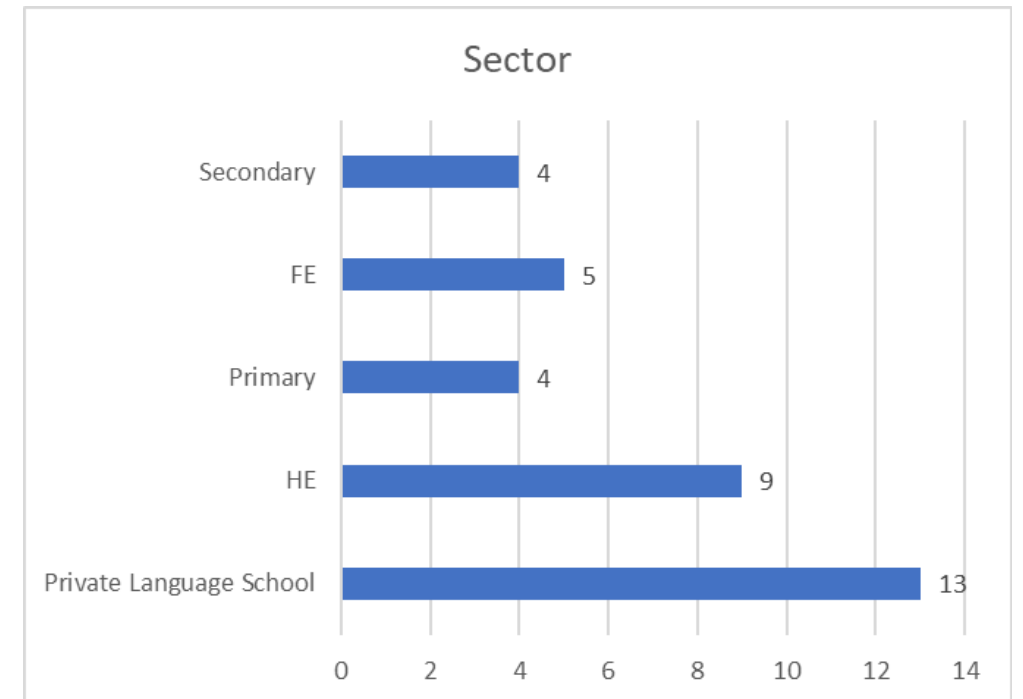
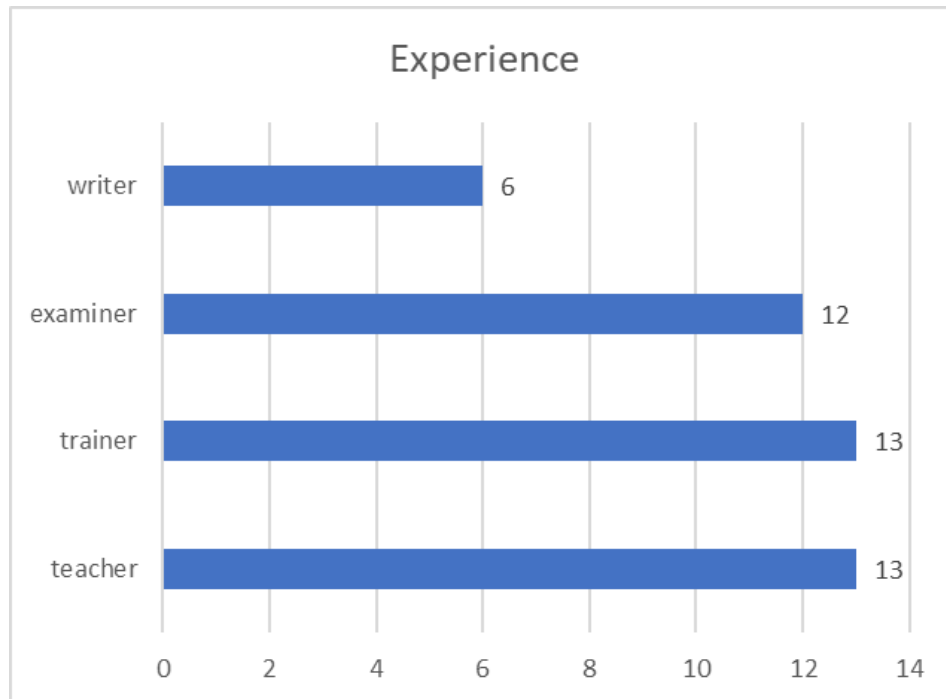
- The TPACK model enables a focus on how the technology is used, rather than on what teachers need to know
- TEO and the CertOT use this model to underpin the qualification
- The CertOT focusses on assessing TK, TCK, TPK and TPACK

CertOT scale development



Expert experience

13 subject experts formed panels we used
A range of genders and first languages



Expert ranking

		Task 1	Task 2	Task 3	
Rater 5	Response B	A good range of solutions, taking the mechanics of online learning into account realistically. Online writing work can be an issue, so good to have a positive way of addressing this	A nice, simple vocab presentation stage. Nice use of a range of engaging online tools.	This solution is informed by student needs, though defined somewhat vaguely. The justifications in these areas are quite strong	
	Response G	Very underdeveloped responses, and some questionable techniques, and some solutions not well thought-out.	A very limited plan, and not really looped effectively - no feedback. Mixed timings and question sources could be confusing.	A very underdeveloped rationale for the use of very general system. No other functionality is discussed in terms of learners and learning.	<div>Weighted Percentage (%)</div> <div>2.18</div> <div>0.86</div> <div>0.76</div> <div>0.61</div> <div>0.51</div> <div>0.51</div> <div>0.51</div> <div>0.41</div> <div>0.41</div>

Expert ranking

		Task 1	Task 2	Word	Length	Count	Weighted Percentage (%)
Rater 5	Response B	A good range of solutions, taking the mechanics of online learning into account realistically. Online writing work can be an issue, so good to have a positive way of addressing this	A nice, present use of a engagin	good	4	43	2.18
				clear	5	17	0.86
				well	4	15	0.76
	Response G	Very underdeveloped responses, and some questionable techniques, and some solutions not well thought-out.	A very I not real effectiv Mixed t questio be conf	specific	8	12	0.61
				excellent	9	10	0.51
				quite	5	10	0.51
				vague	5	10	0.51
				little	6	8	0.41
				practical	9	8	0.41

Discourse analysis

Describes procedure	Outlines context	Identifies means of achie...	Identifies goal
Justification	Identifies online resource	Describes context	Addresses problem
		Links resource to context	Evaluation
		ILO	Defines a problem

Discourse analysis

Describes procedure

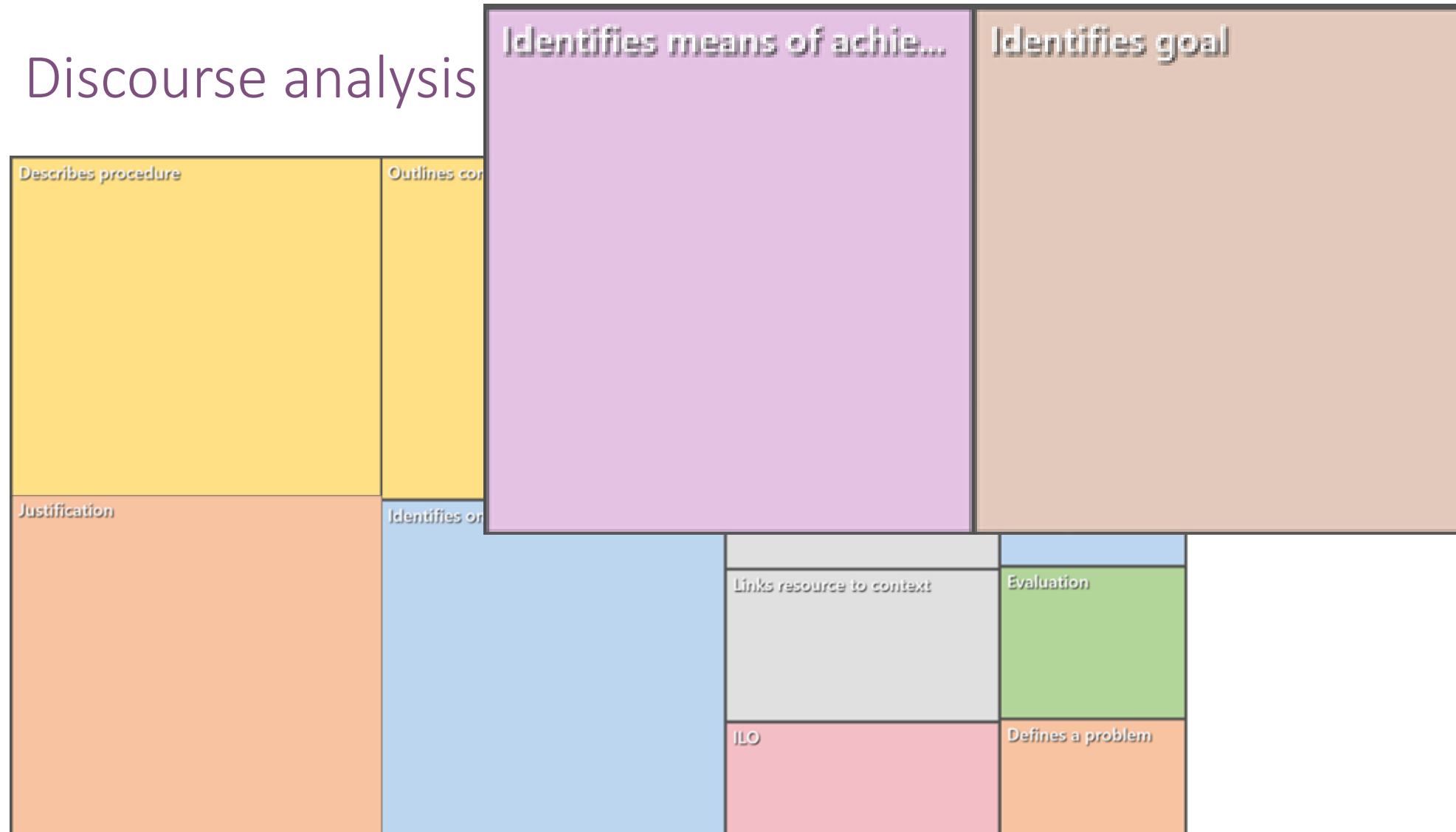
s of achie...	Identifies goal
ext	Addresses problem
to context	Evaluation
	Defines a problem

Discourse analysis

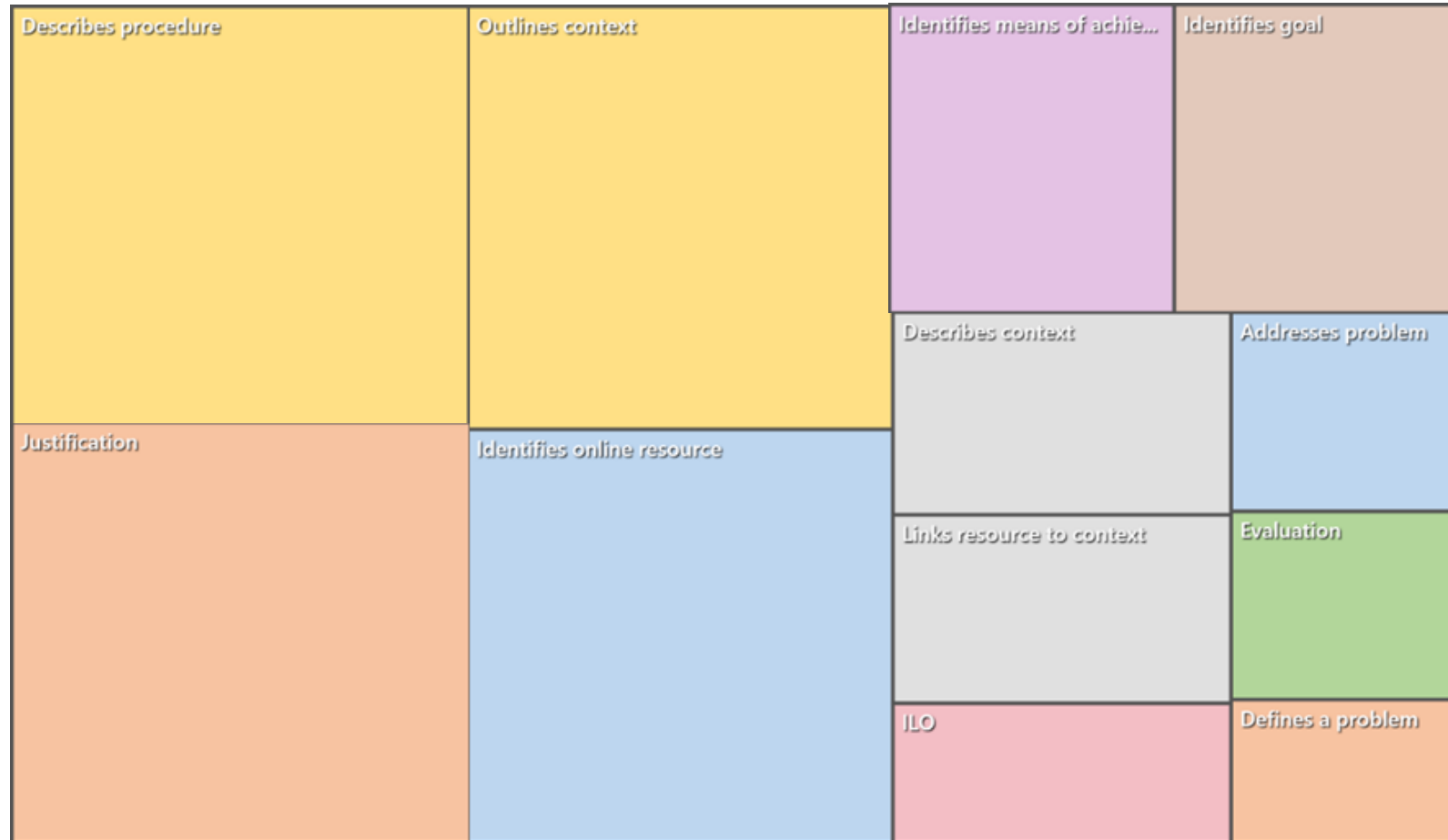
Justification

es means of achie...	Identifies goal
es context	Addresses problem
source to context	Evaluation
	Defines a problem

Discourse analysis



Discourse analysis



Discourse analysis

Case	Node	Pearson correlation coefficient (ρ)
Task2	Describes procedure	.74
Task4	Identifies goal	.62
Task4	Identifies means of achievement	.61
Task3	Justification	.57
Task2	Justification	.57
Task1	Justification	.54

CertOT scale development

Reliability measures Phase 2

	Cronbach's Alpha	ICC (Single measures)	
Task 1	.85	.52	Extremely high overall reliability
Task 2	.78	.45	
Task 3	.95	.73	High exact agreement
Task 4	.91	.78	
Total Mark	.95	.83	

Rasch statistics for raters Phase 3

Statistic	Value	
Rasch Kappa	$K = .057$	Near optimal
Single rater – rest of raters	SR/ROR = .52	High reliability and good differentiation
Fair average difference	.95	
H-Strata	$H = 3.59$	

Focus group

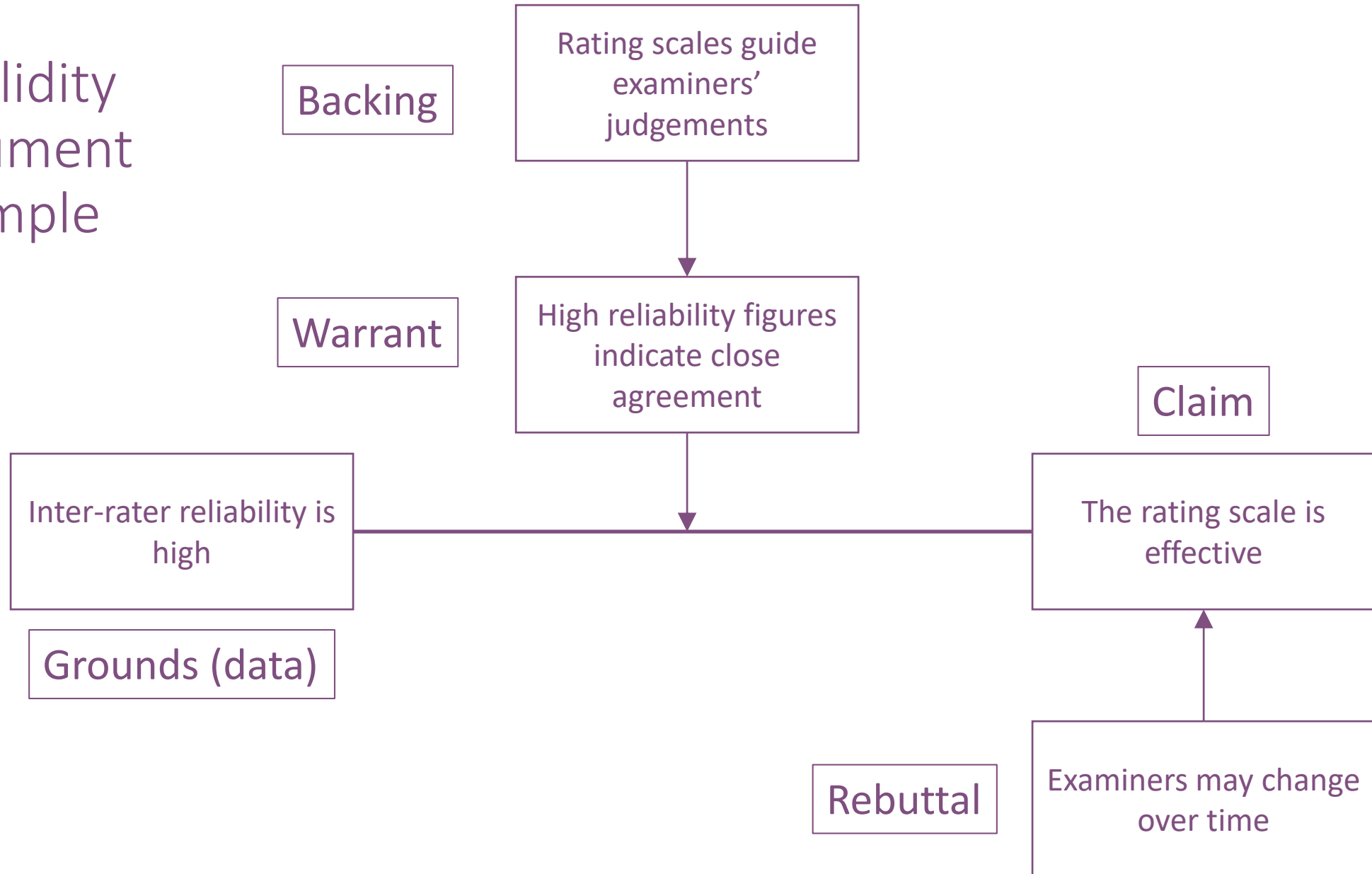
“So the best, you know, if you're looking to avoid subjectivity, despite all the training you're going to provide, you just need to have very clear criteria, you know, rather than ‘some’, ‘may’, ‘could’, you know, because on a bad day, they might not pass.”

“Yes, I agree, I think it has to be quantified.”

“I mean, sophistication for me in a learning context is about developing those higher order thinking skills, isn't it? And that needs to be clear.”

“Any clear definitions and supporting documentation for the markers is a good thing.”

A validity argument example



Conclusion – “compromise and a thoughtful approach”

Empirical approach

- Find out what candidate's are doing

- Find out how examiners interact with what candidates are doing

- Find out how examiners interact with the scale

Iterative approach

- Be open to feedback

- Test the reliability of each iteration to assess improvement



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Q and A

richard.harris@trinitycollege.com
john.begley@trinitycollege.com

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