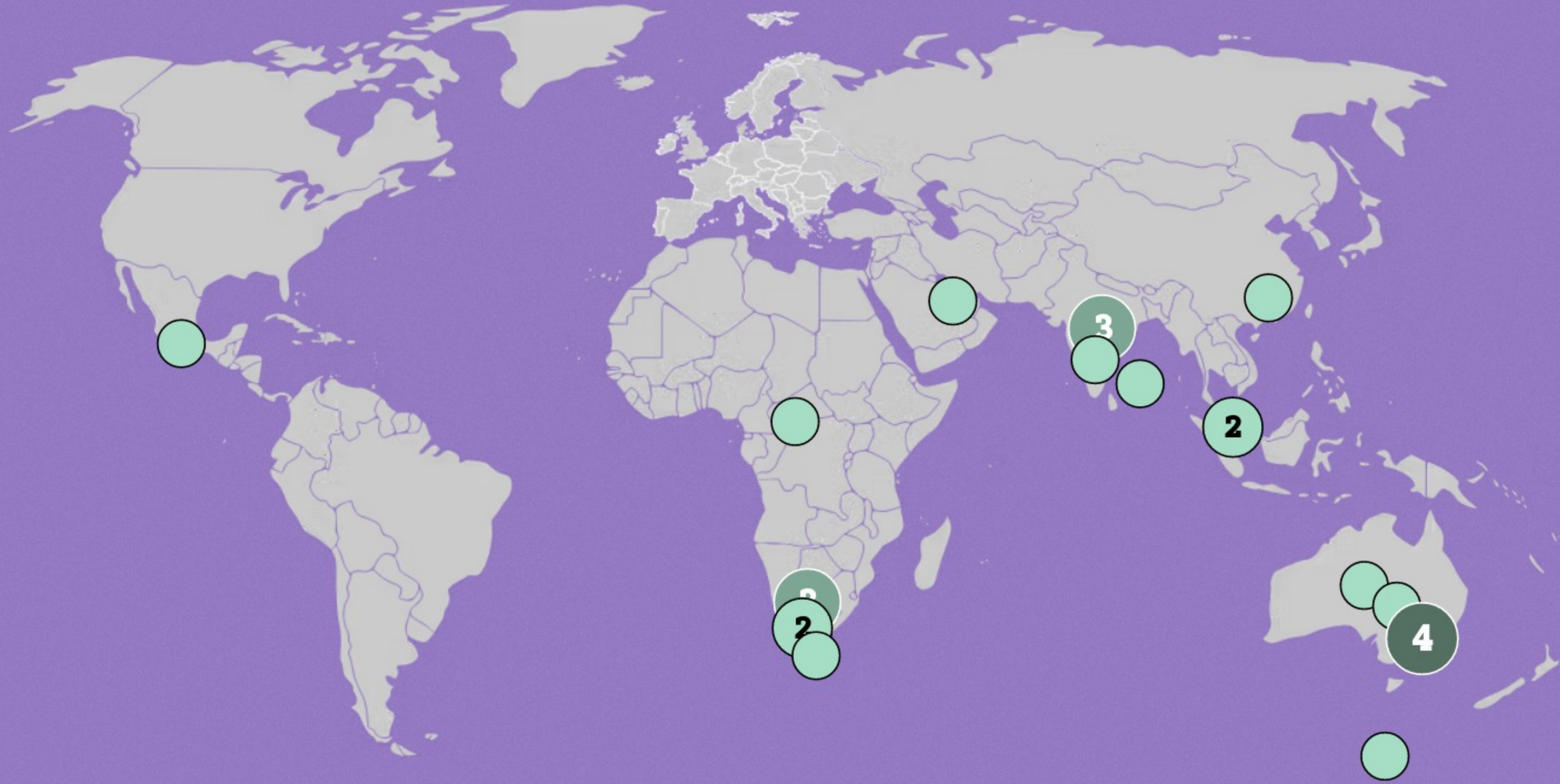


**From Concept  
to  
Completion:  
Writing your  
conference  
paper**

**Engage with us during this workshop!**

# Where are you joining from?



INTERACTION

# Please greet in the language(s) of your choice



# Why are you here today?

24 Responses

How to conduct research in engineering education

Getting started with Engineering Education Research & Publication

To learn about the process of writing full paper

The agenda as stated. Concept to completion and perspectives.

Advice on getting from an idea to a paper

Be able to align the conceptual use to the theoretical framework that applies to my enquiry.

Learning more about an appropriate strategy to write a paper on an interdisciplinary educational initiative.

To learn about EER Conference paper

To validate my approach of writing the paper

# Why are you here today?

24 Responses

I'm here as a pulse check on where the community is at in terms of research writing

I am planning to write my first journal paper as part of my PHD and want to learn more about the process

Learning something new

Starting out in engineering education research

I am currently working on my first engineering education research paper

To learn how to write a good paper in pedagogy and education

Have an idea but will seek guidance how to move forward

Connecting with engineering education researchers

To be able to organise and relate my work to relevant theories and write a scholarly paper

# Why are you here today?

## 24 Responses

To learn how to write a journal paper and submit it.

Understand the process of REEN

Watching for experiences and tips around research

How to do engineering research

All responses for me

Learn more about EER methodologies



## REEN Workshop Team



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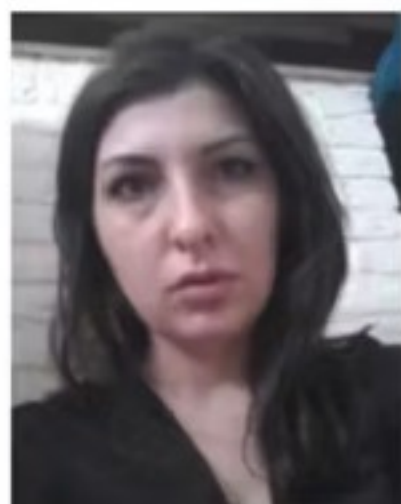
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# From Concept to Completion: Writing your conference paper





Informed

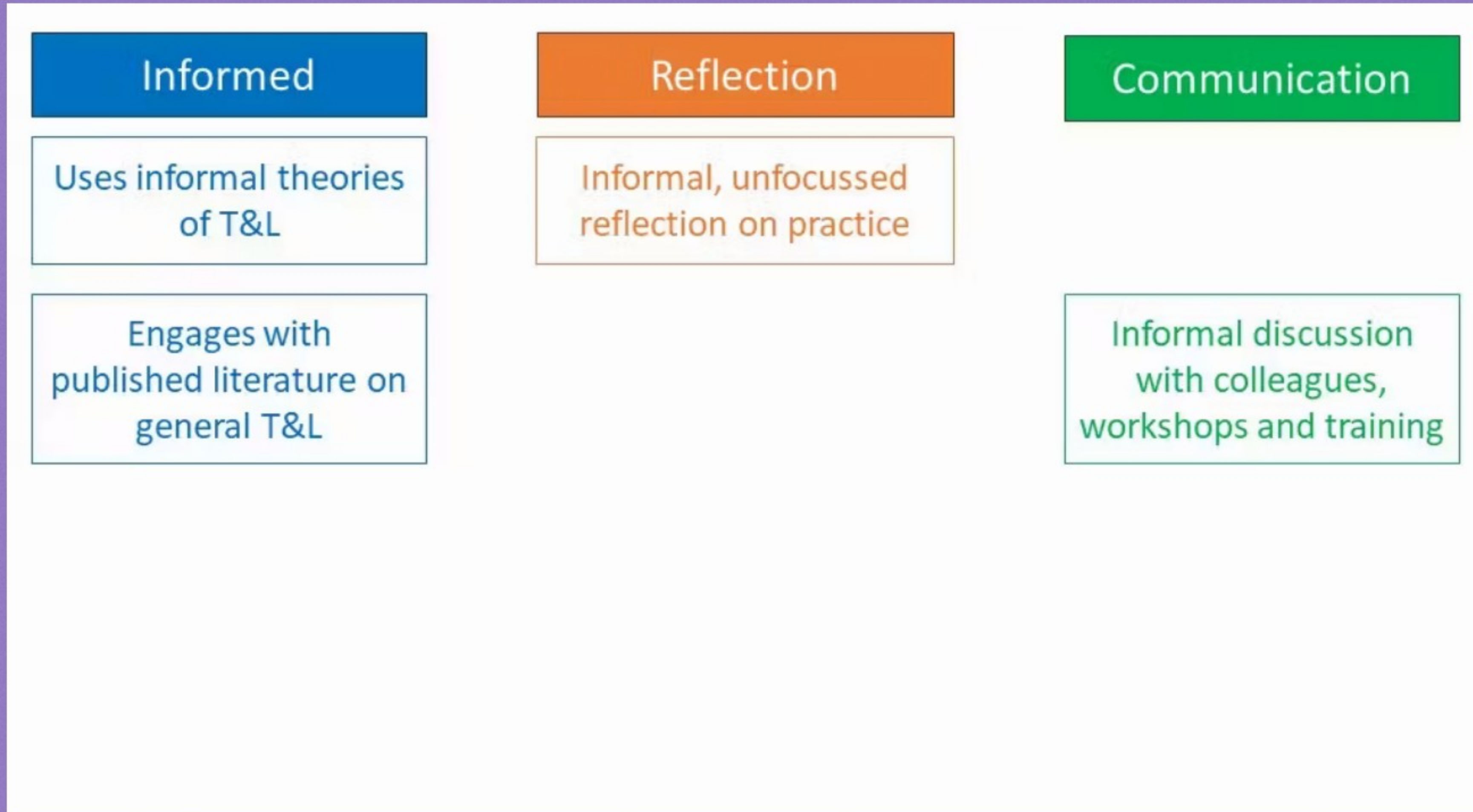
Reflection

Communication

TRIGWELL ET AL (2000) HIGHER ED RES & DEV, 19:2, DOI: 10.1080/072943600445628

**SoTL: The Scholarship of Teaching & Learning: adapted from Trigwell (2000)**

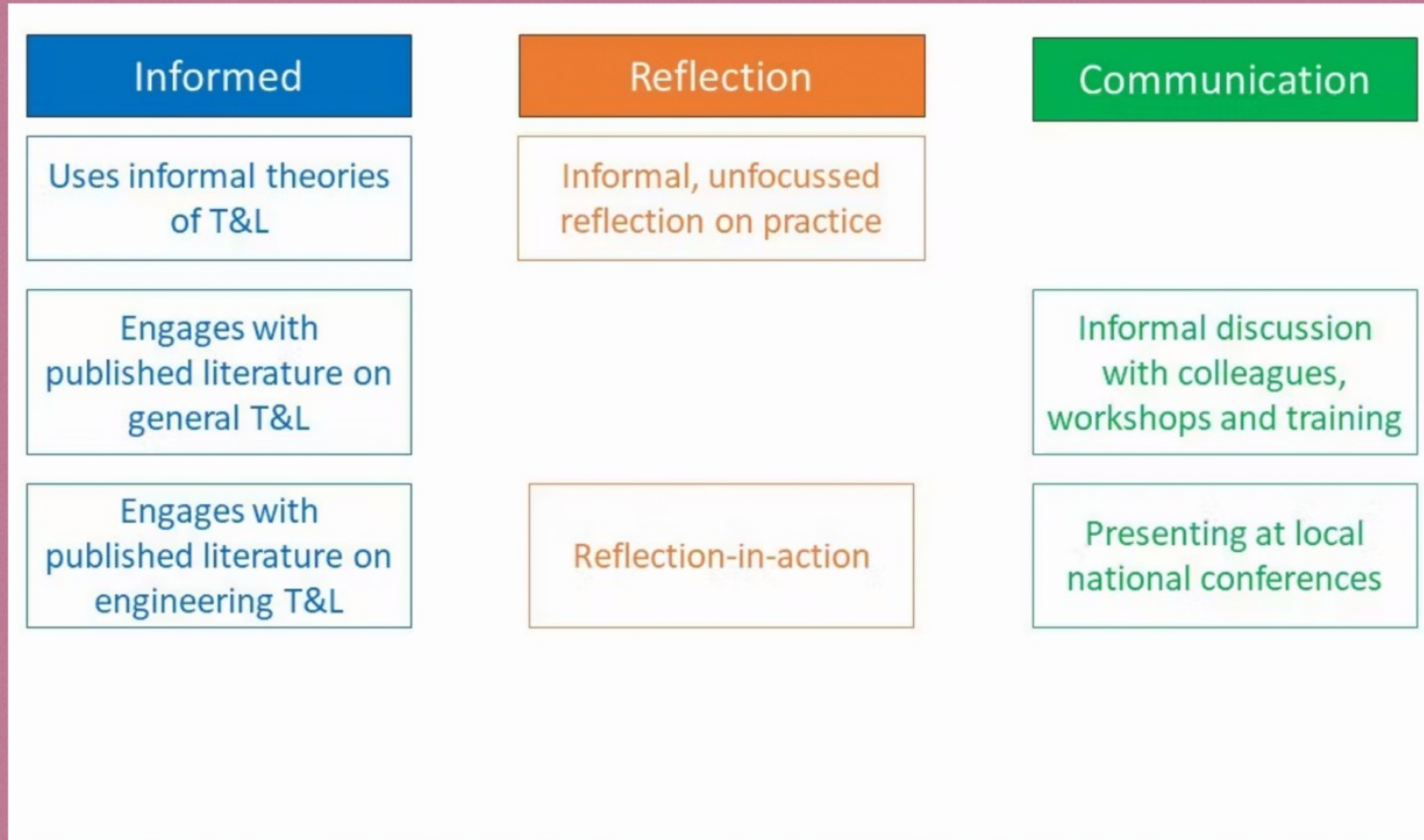




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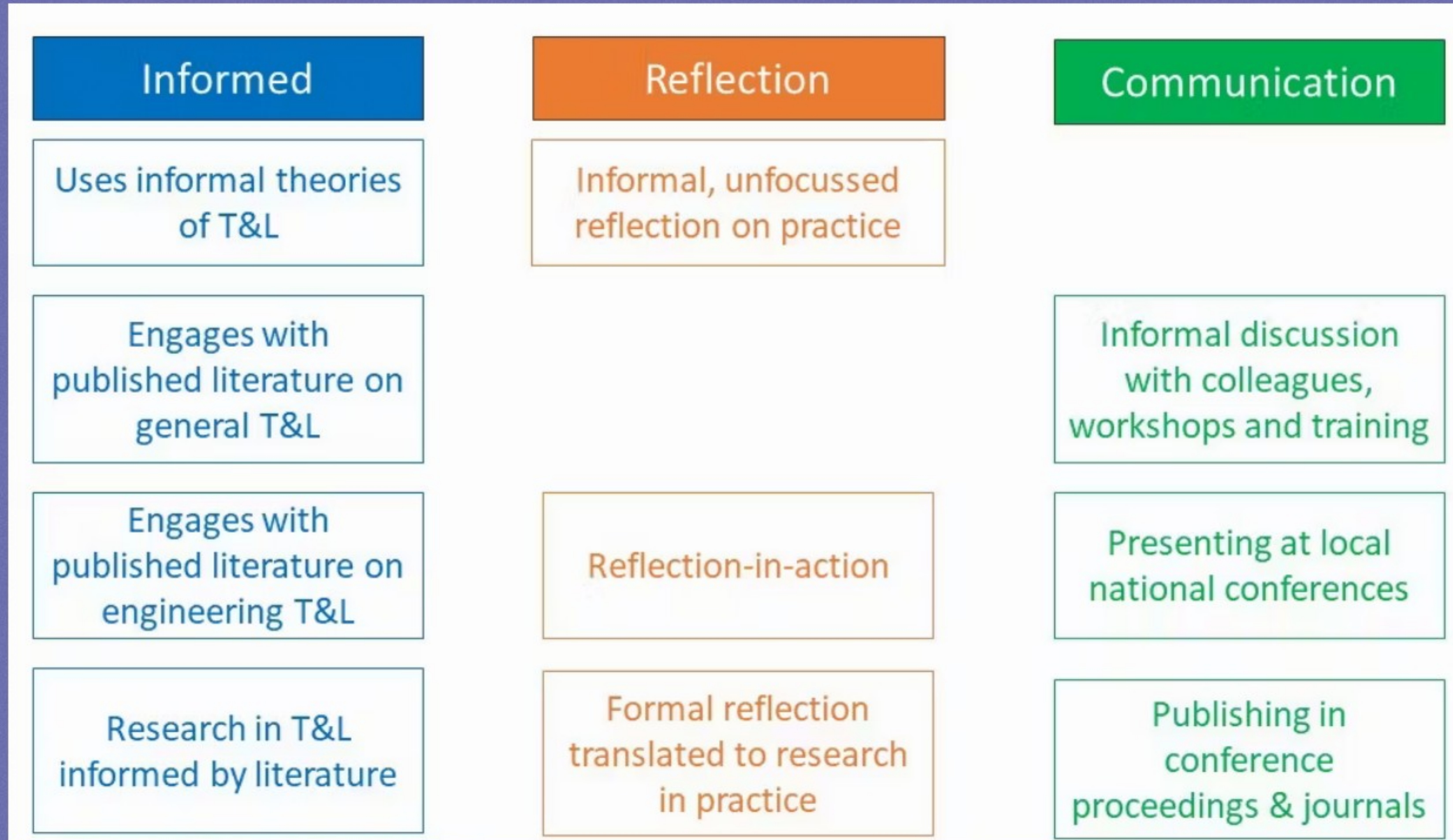
# SoTL: The Scholarship of Teaching & Learning: adapted from Trigwell (2000)





TRIGWELL ET AL (2000) HIGHER ED RES & DEV, 19:2, DOI: 10.1080/072943600445628

**SoTL: The Scholarship of Teaching & Learning: adapted from Trigwell (2000)**



TRIGWELL ET AL (2000) HIGHER ED RES & DEV, 19:2, DOI: 10.1080/072943600445628

**SoTL: The Scholarship of Teaching & Learning: adapted from Trigwell (2000)**



# What questions do you have about the SoTL model?

9 Responses

Theories

No questions or comments.  
Interesting model

How to write formal reflection that translated into action research practice?

How do we validate our own reflection & students' reflection?

Research in T & L

Difference between practice paper and SoTL and action research

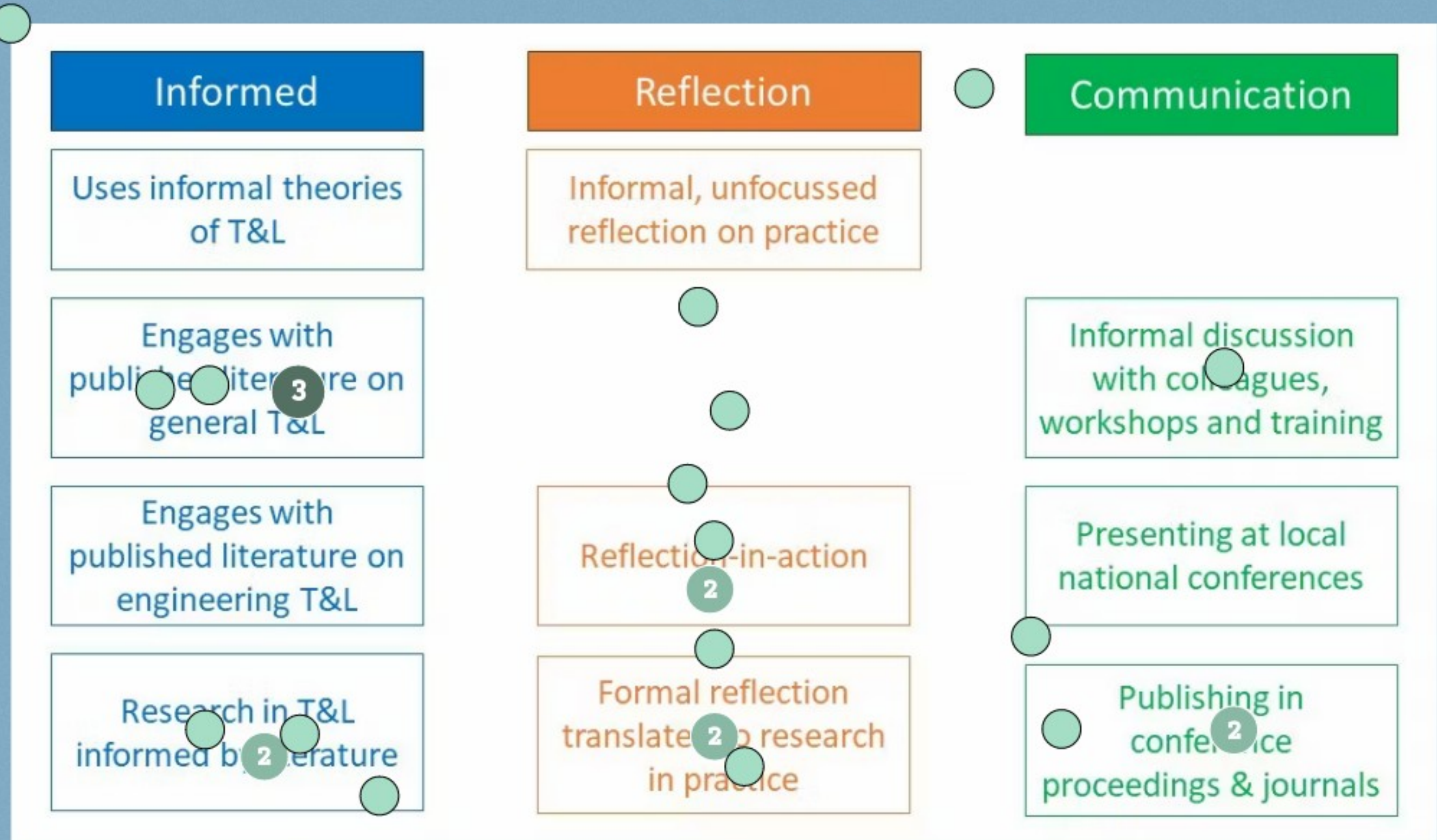
Choice of appropriate theories

Engage with published literature on engineering T&L

Ff

INTERACTION

# Where do you feel you are in the Scholarship of Teaching and Learning space?



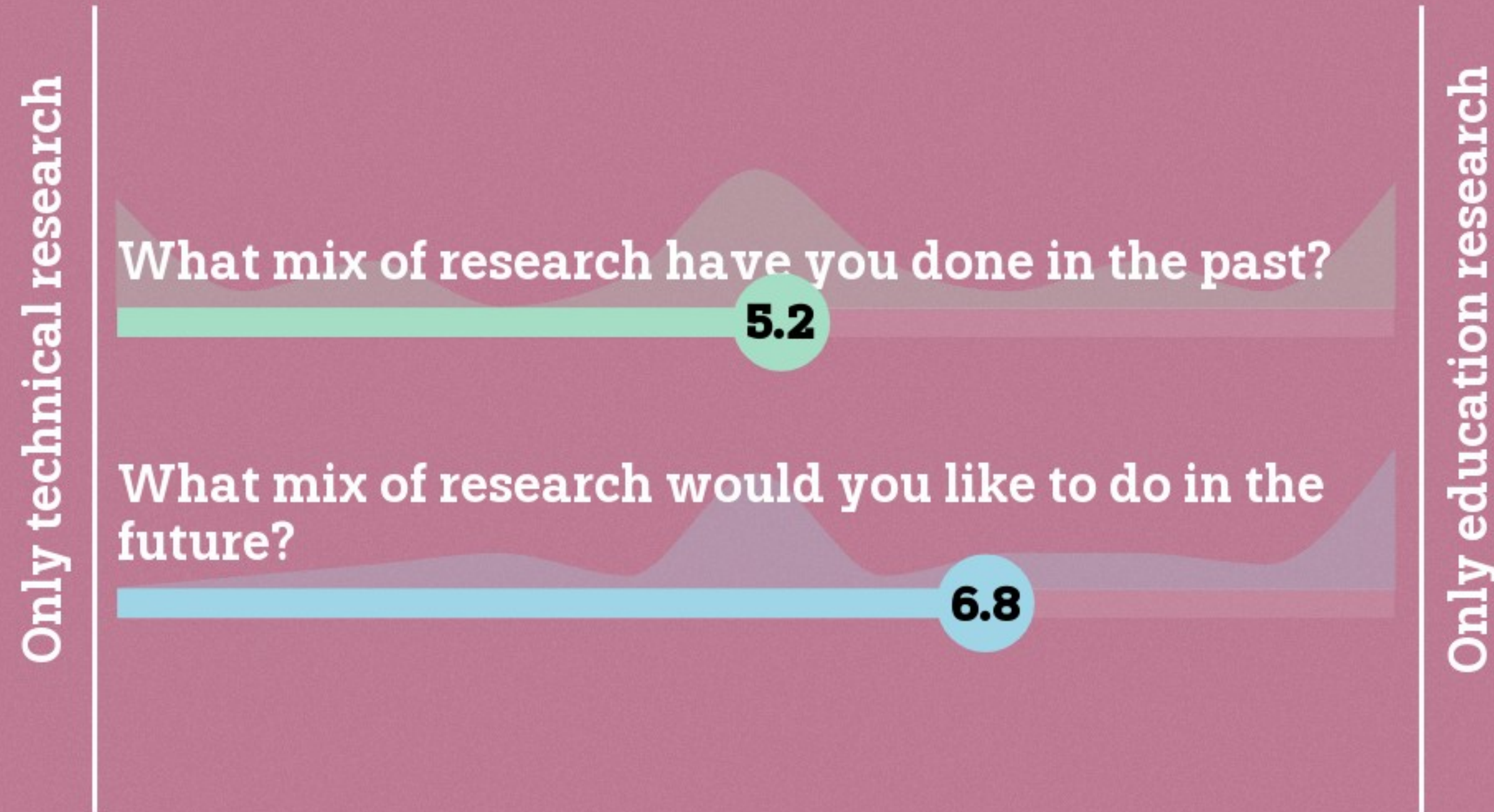


# Section 1: Differences between Technical Research and Educational Research

- What kind of research questions do we ask?
- High or low consensus
- Transferability of results

INTERACTION

# How do you describe your research interests?





# Differences in Research Questions

- “How much?” questions and “Yes/No” questions are what we have been trained to ask
- “Why?” and “How?” questions are about developing deeper understanding, being curious



A photograph of two men in a discussion. The man on the left is wearing a dark grey t-shirt and has a serious expression, gesturing with his right hand. The man on the right is wearing a red patterned shirt and is pointing upwards with his right hand, looking thoughtful. The background is a plain white wall.

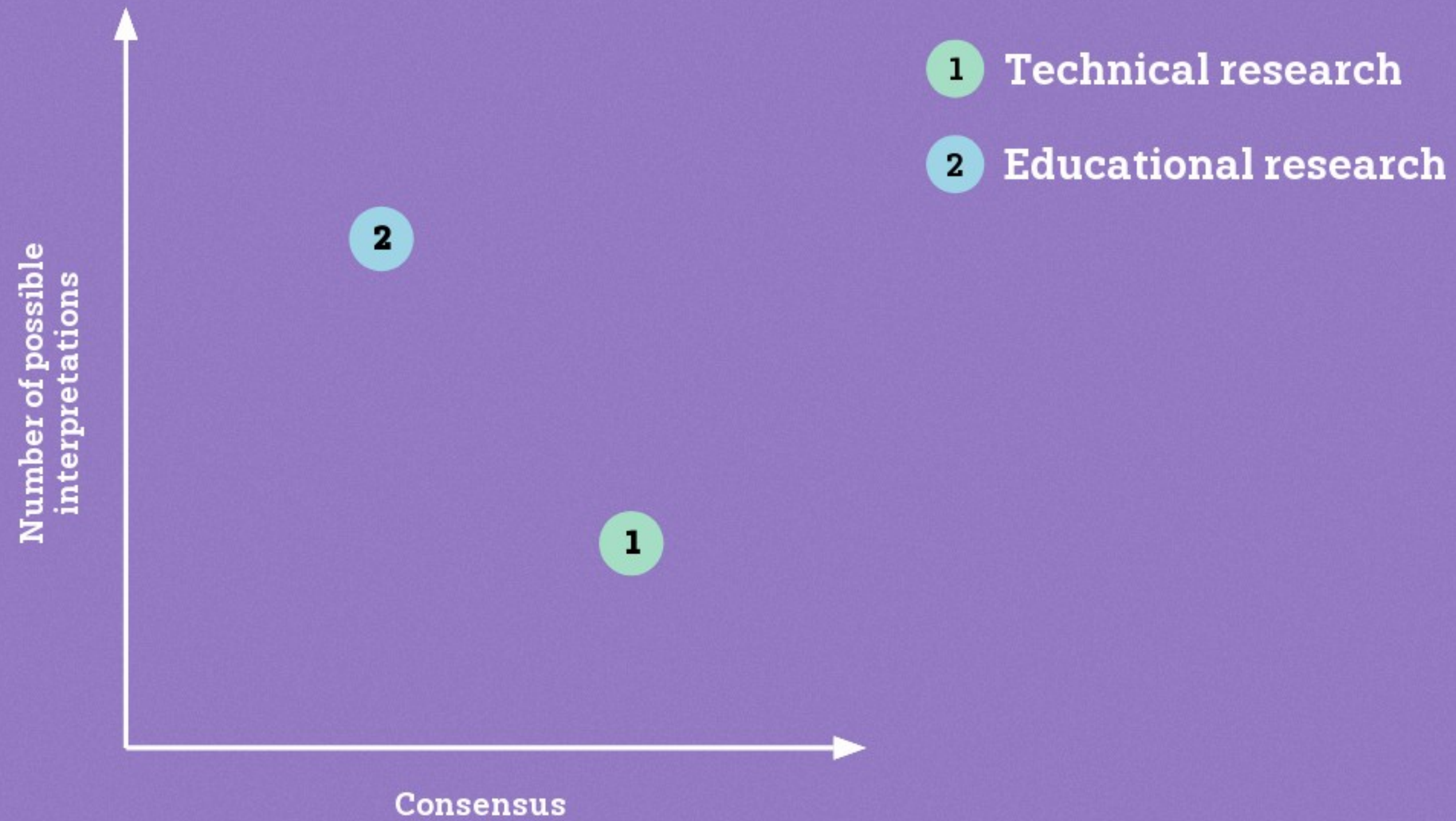
# What kind of field are we in?

- **High consensus field:** Everyone agrees about the core theoretical framing, so we don't have to be explicit about the theories that we are using
- **Low consensus field:** There is a wide diversity of theories, so we must be explicit about the theoretical frameworks that we are relying on

# Transferability

- If I measure the gravitational constant in my lab, and report contextual details, the result is transferable to anywhere else with the same context
- If I apply a teaching method in my class, there is no similar context – even the same module the following year is not the same context
- For education research to be valuable, we must ask broader questions, and demonstrate that the knowledge we generate is transferable.

# Comparing technical and educational research





# Section 2: Responding to reviews

# What reviewer feedback do you need help understanding or implementing?

11 Responses

There is disconnect between the claim and the evidence. Not clear to me.

how do you respond to reviewers who say the sample number is too small when you are doing a qualitative study

I will implement and will be reflect on my paper

No

There's a disconnect between the themes, research objectives

The cycle of action research is not enough. Should be more than 3 cycle.

how to address when two different reviewers want to have their queries answers in the paper

How a 3rd person receives the paper?

Nicely represented quality study of students Internship, need to be clarify why only 10 students internship data collected - self selection was mentioned in paper (qual study).

# What reviewer feedback do you need help understanding or implementing?

11 Responses

if reviewer can share methodologies for particular topic of research paper will be more motivational.

Can my study be on anything? Can it be about students mental health? Will it be an engineering research?

# Common reviewer feedback

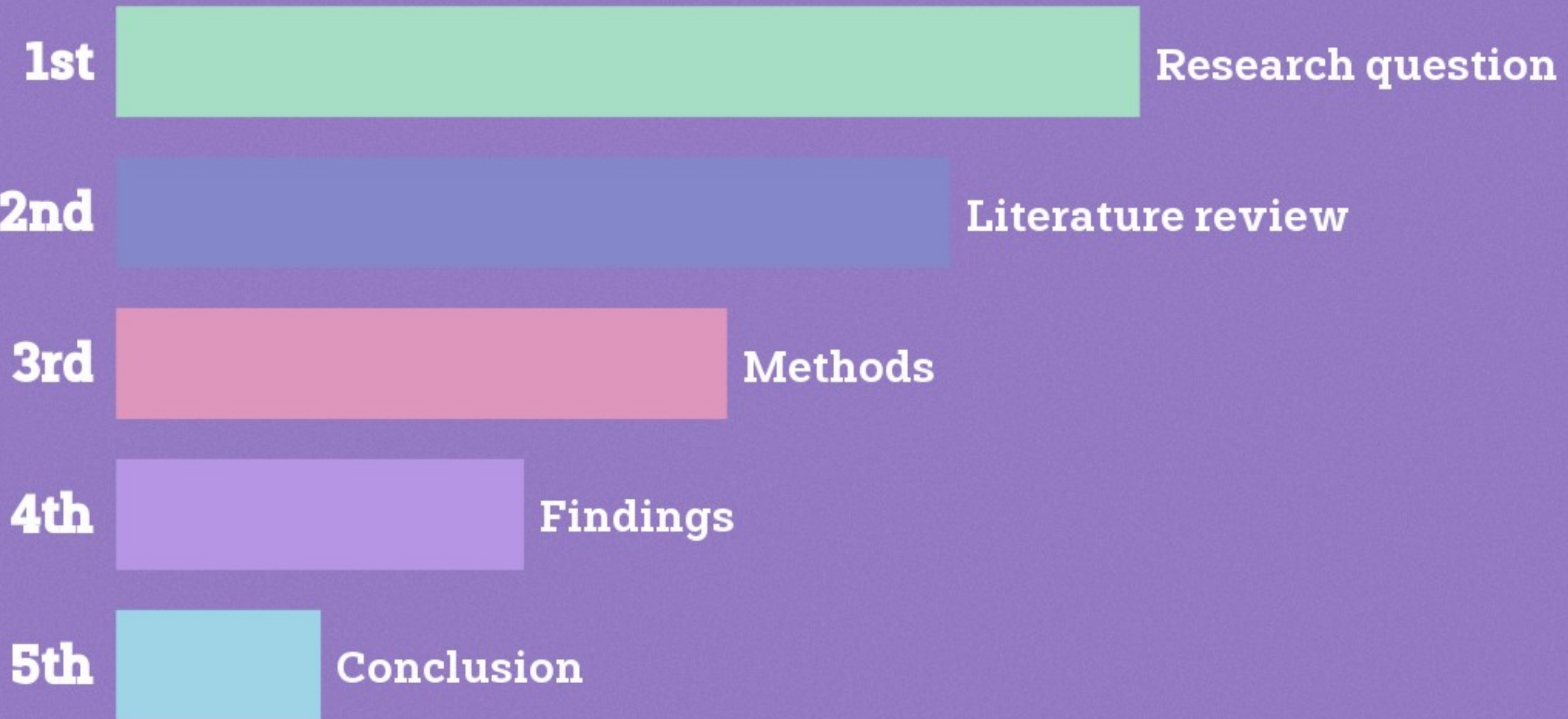
- The scope of the study is too broad without a clear focus
- The study should engage with existing literature
- Make a distinction between the outcomes of the project and the outcomes of this paper
- What research question is the paper asking?
- Insufficient details of how the data was collected and analysed
- Limitations of the study are not acknowledged or discussed
- The conclusions are not supported by the data
- The story is not clear to the reader





# Section 3: Elements of a good practice-based paper

# What order should these elements of a paper be in?



# Elements of a good practice-based paper

- Literature review
- Research Question
- Methods
- Findings
- Conclusions





# How is literature useful?

- A literature review enables you to listen to, understand and then join the ongoing conversations that are taking place.
- It helps you to understand what has already been done and how this can inform your study.
- It can assist with theoretical and analytical lenses and your methodology.
- Where to find literature? <https://reen.co/ee-journals/> or REES, AAEE, WEEF, ASEE, SEFI conferences



# Research Question

- A research question is the guiding question that defines what your study aims to answer
- It assists with scoping your study and ensures that the focus is clear and defined
- The research question is the heart of your study and guides the method and aligns with the conclusions that are drawn
- The research question can also be informed by literature

# Methodology and Methods

- The methodology and method that are chosen should be defined by the research question that you propose
- They should enable you to collect data that can act as evidence for the conclusions that you hope to draw at the end of the study
- The method should be described in sufficient detail to ensure the scientific integrity of the study

# Findings

- The findings that are drawn from the study should align with the research question
- The findings and claims that are made should be based on the evidence (data) that was collected
- It is often useful to discuss the findings in relation to other studies that have already been done in the field



# Conclusions

- The conclusions should tie directly back to the research question
- They should not present new data but should summarise key evidence
- Conclusions should always be based on the evidence or findings that were presented

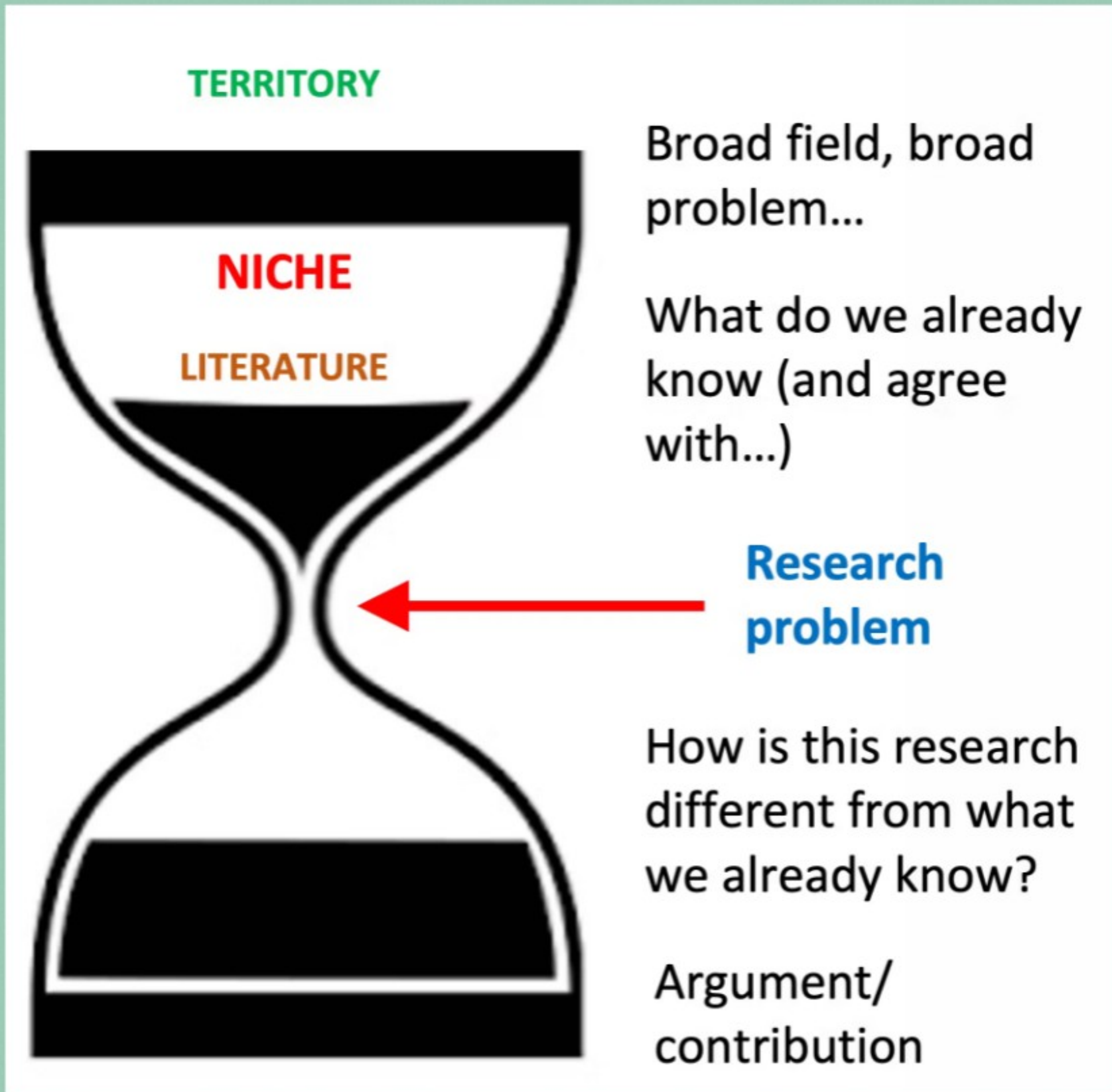
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**Do you have questions about the elements of a paper?**



# Structure of a research paper

- What is the broad field that I'm in?
- What conversation am I in?
- What's the research problem I'm addressing?
- Where am I standing in relation to research on this problem
- What do I offer as an alternative to existing research?
- What is my argument?/contribution?

# Let's look at an abstract

The abstract has been shared in the meeting invite and via email.

Take a few minutes to read through the abstract, thinking about whether it has the key elements, and what should be added.



... on the bank, and of  
having nothing to do: once or twice she had peeped into the book her sister was  
reading, but it had no pictures or conversations in it, 'and what is the use of a  
book,' thought Alice 'without pictures or conversations?'

So she was considering in her own mind (as well as she could, for the hot day  
made her feel very sleepy and stupid), whether the pleasure of making a daisy-  
chain would be worth the trouble of getting up and picking the daisies, when  
suddenly a White Rabbit with pink eyes ran close by her.

There was nothing so very remarkable in that; nor did Alice think it so very  
much out of the way to hear the Rabbit say to itself, 'Oh dear! Oh dear! I shall be  
late!' (when she thought it over afterwards, it occurred to her that she ought to  
have wondered at this, but at the time it all seemed quite natural); but when  
the Rabbit actually took a watch out of its waistcoat-pocket, and looked at it,  
and then hurried on, Alice started to her feet, for it flashed across her mind  
that she had never before seen a rabbit with either a waistcoat-pocket, or a  
watch to take out of it, and burning with curiosity, she ran across the field after  
it, and fortunately was just in time to see it pop down a large rabbit-hole under  
the hedge.

# Reading and thinking about an abstract

05

minutes

00

seconds

# How would you rate the abstract?



# What comments do you have on the abstract? Do you have any suggestions for improvement?

18 Responses

Research Question can be improved

Positioning it in the literature would really help, I think

engaging with literature!! What have other people done on related topics?

Conclusion can be more specific and be related to the research questions

The problem is that there is no Literature review.

There is nothing about previous studies

The research methods used in the study are lacking. As well as literature.

Perhaps look at the concept inventory literature

Yet to see theory related to the research question involved

# What comments do you have on the abstract? Do you have any suggestions for improvement?

18 Responses

Contextualise in terms of the literature; question is too broad

Research problem has to be reframed

very generic conclusion

start with the literature. What else has been discovered in this area? The Sentence with 'if so' in it is quite unclear. The lack of a research question is problematic, as is the lack of methodology

Research question can be explicit. literature review need to be added.

The results do not really measure 'understanding' which is what the purpose is.

Data collection part is not clear

the abstract should provide overview of the paper

How to improve abstract

# What's the most important thing you learned today?

15 Responses

So many new terminologies about how to do engineering research

The value of learning in community (and the skill and the knowledge and empathy of the facilitators)

Difference between writing a technical research paper and engineering education research paper

The structure of a research paper.

Tell a story !!

A structured approach to writing articles is important. The different parts of the article must contribute to the entire paper.

Structure of the paper in engg education research

research question, literature review, and then back to research question again

I love the comment about the whole process being done multiple times in research



# What's the most important thing you learned today?

15 Responses

Building a storyline for the paper

structure and story of paper matter

Difference between traditional and Educational research and the ways to go about doing Educational research

More clarification about difference between technical and educational research

Reviewers have varying opinions. Start writing and use feedback to learn!

What is the procedure to improve the quality of paper

# Next steps

- REES full papers due September 6
- Reviewing workshop September TBC
- ProQual research training - applications close July 31  
<https://bit.ly/45OSjmC>



NEXT WORKSHOP: SEPTEMBER 2023 ON "HOW TO REVIEW A PAPER".

**Thank you for your participation!**

