

"Wrong, but still right"

Teachers reflecting on MKT items

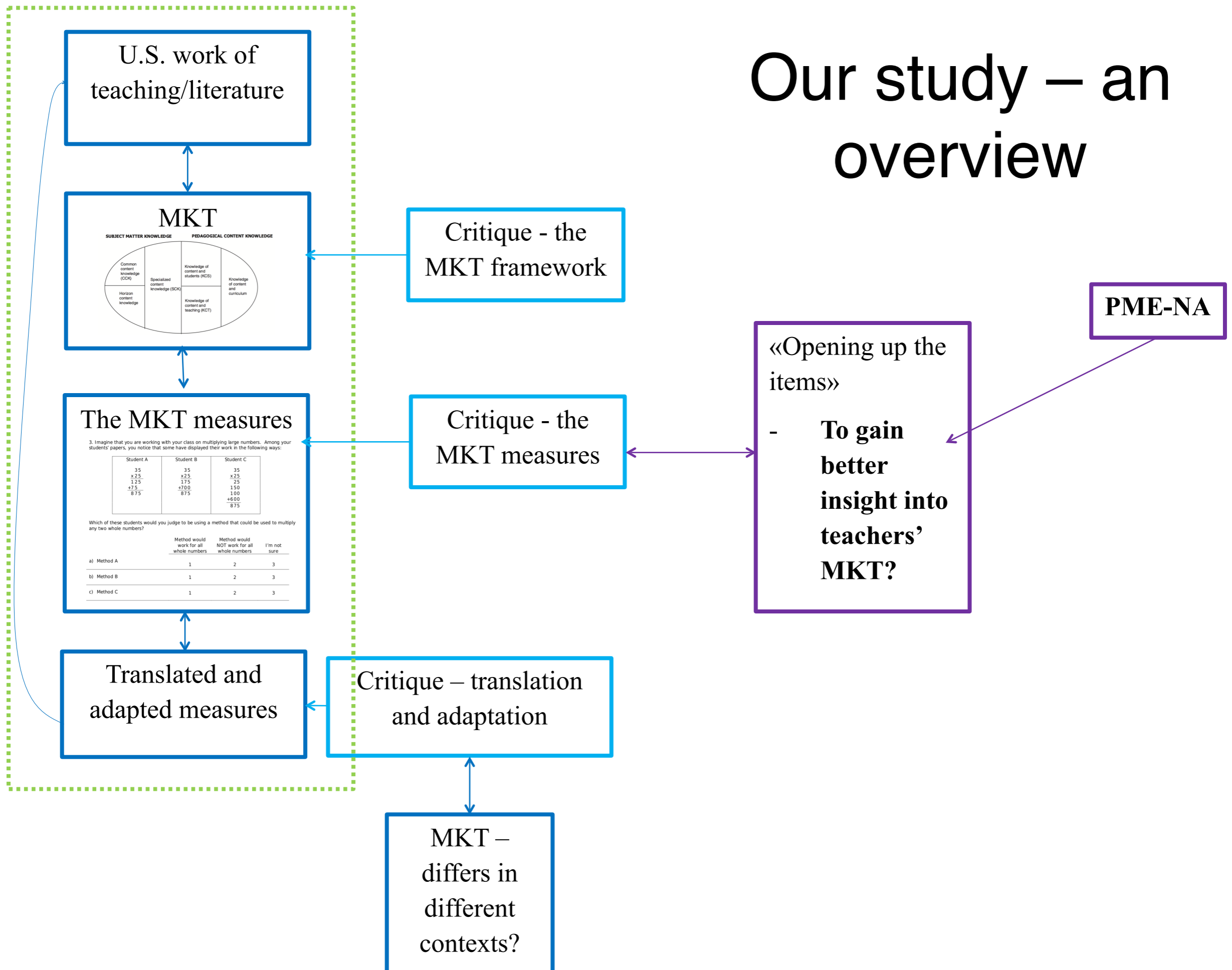
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Our study – an overview



Aim and RQ

- **Aim:** explore other ways of using MKT items by opening up the items (in this study by including written reflections)
- **RQ:** What is the connection between teachers' responses to MKT items and their written reflections concerning the content of the items?

Methods and data collection

- Six FGIs (n=30)
- Written reflections on ten MKT items (n=30)
- Six FGIs (n=26)
- For the purpose of this paper we focus on the written reflections on one single MKT item only!

About the item

- **Decomposition of 456:**
- 4 hundreds + 50 tens + 6 ones
- 3 hundreds + 15 tens + 6 ones
- 4 hundreds + 5 tens + 60 tenths
- 45 tens + 6 ones

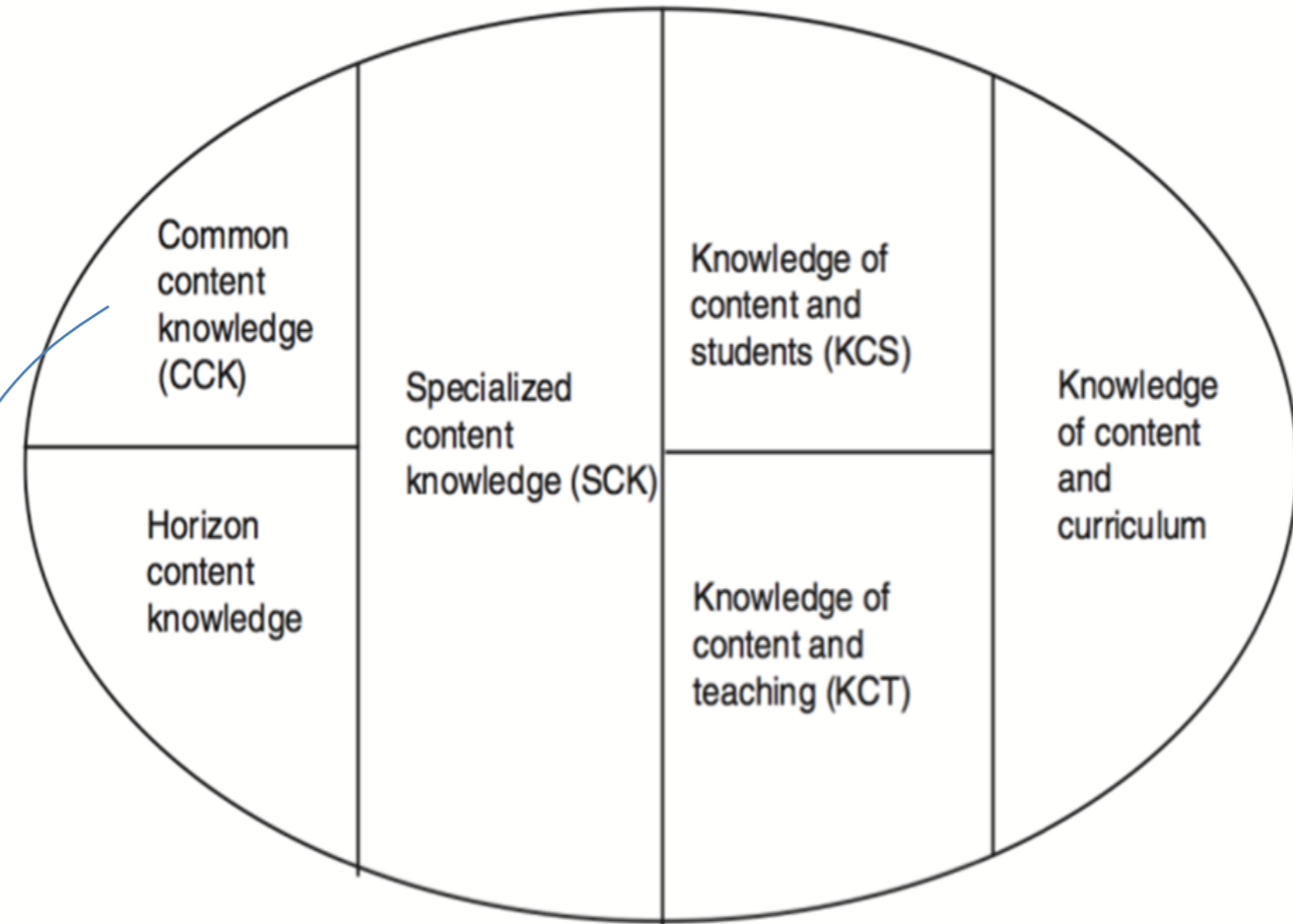
Questions for reflection

- What do the students responding as in a) to d) know?
- What, if anything, do they need to learn more about?
- Do the items in this testlet reflect a content that is relevant for the grade(s) you teach? (Why/Why not? Please provide an illustrating example from your classroom!)

Framework

SUBJECT MATTER KNOWLEDGE

PEDAGOGICAL CONTENT KNOWLEDGE



+ e.g., MER literature related to each item's content – in this paper: place value

Table 1: Teachers' reflections regarding multiple decompositions

	Think multiple decompositions are correct (1)	Think multiple decompositions are incorrect (2)
All correct (a)	7	13
At least one incorrect (b)	1	9

Data analysis

- Correct responses with supporting reflections (group 1a)
- Correct responses with non-supporting reflections (group 2a)
- Incorrect responses with "correct" reflections (group 1b)
- Incorrect responses with supporting reflections (group 2b)

Table 1: Teachers' reflections regarding multiple decompositions

	Think multiple decompositions are correct (1)	Think multiple decompositions are incorrect (2)
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Reflections from group 1a

- "I think we have before us an advanced solution in relation to the place value system (in this item). This student has a well-developed number concept and is able to use his fantasy when replacing the one with tenths. In this way, his knowledge about tenths is displayed" (Reflecting on item 1c: 4 hundreds, 5 tens and 60 tenths)

Table 1: Teachers' reflections regarding multiple decompositions

	Think multiple decompositions are correct (1)	Think multiple decompositions are incorrect (2)
All correct (a)	7	13
At least one incorrect (b)	1	9

Reflections from group 2a

- "The students need to learn more about exchange, learn to fill up the ones, tens, hundreds, etc. Know that each position has its (distinct) value. When the value exceeds 9, they should shift position."

Table 1: Teachers' reflections regarding multiple decompositions

	Think multiple decompositions are correct (1)	Think multiple decompositions are incorrect (2)
All correct (a)	7	13
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Reflections from group 1b

- "Item a) is wrong by all means. Items b), c) and d) are wrong if it (the problem presented in the stem) is a closed problem, but they are correct if it is an open problem."

Table 1: Teachers' reflections regarding multiple decompositions

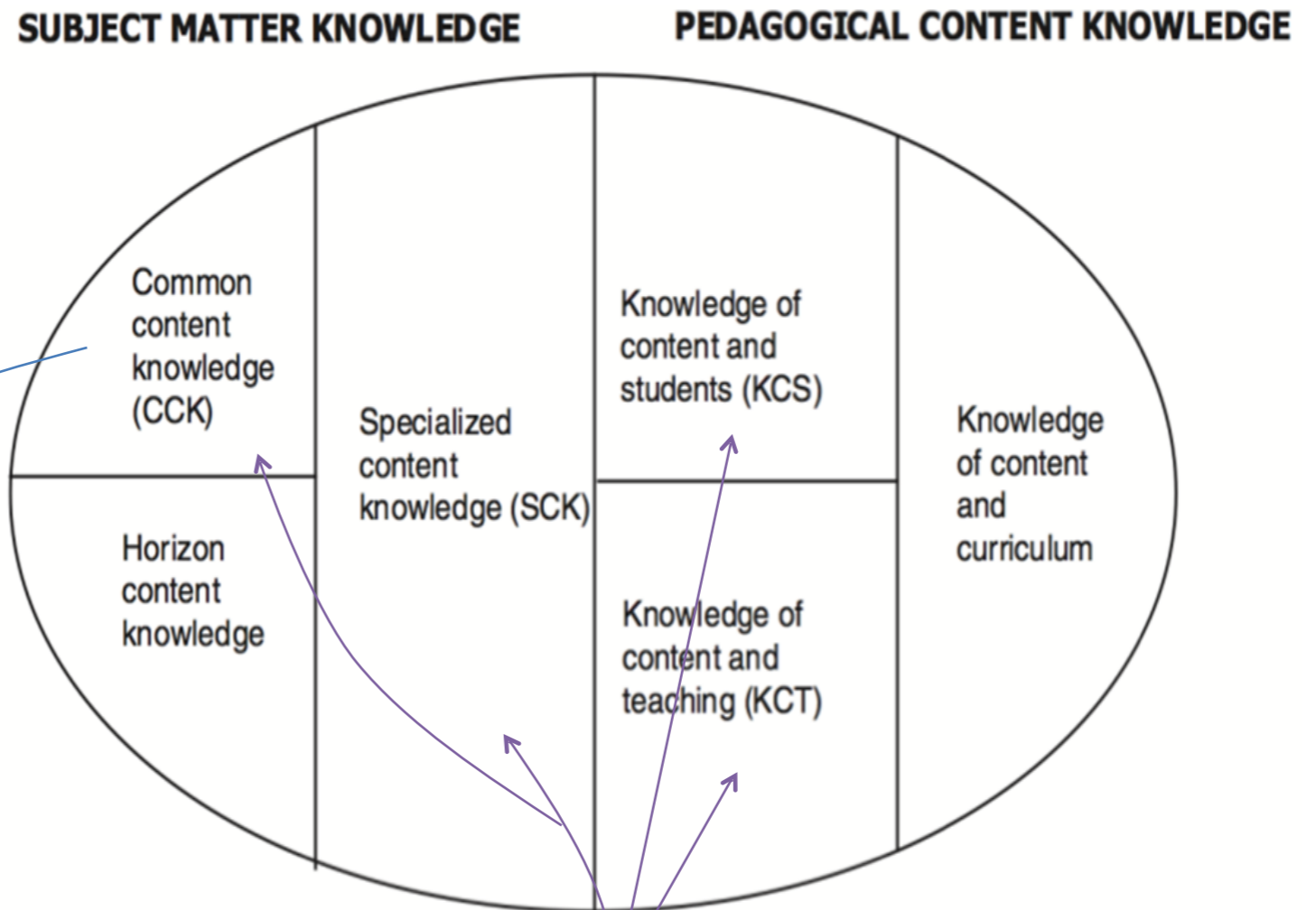
	Think multiple decompositions are correct (1)	Think multiple decompositions are incorrect (2)
All correct (a)	7	13
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Why such a mismatch?

- Incidental?
- Related to this particular topic?
- Cultural differences?
- Related to the format?

Framework revisited

+ e.g., MER literature related to each item's content – in this paper: place value



e.g., learn more about teachers' MKT than the item was supposed to measure?

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Questions or comments?

- This is where you come in :-)



The end...

- Thanks a lot for listening!
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