

CONSTRUCTING VIGNETTES TO STIMULATE THE PROFESSIONAL KNOWLEDGE OF PRE-SERVICE TEACHERS

Karen Skilling¹, Marita Friesen², Sebastian Kuntze³, Jens Krummenauer³, Ceneida Fernández⁴, Pere Ivars⁴, Salvador Llinares⁴, Libuše Samková⁵ & Lulu Healy⁶

¹University of Oxford, ²University of Education Freiburg, ³Ludwigsburg University of Education, ⁴University of Alicante, ⁵University of South Bohemia in České Budějovice, ⁶King's College London

Theoretical Background

- ❖ Vignette activities act to prompt critical examination and reflection as pre-service teachers develop their professional knowledge for becoming a mathematics teacher.
- ❖ Vignettes, as representations of teaching contexts are highly suitable as an activity for pre-service training because they can be constructed to connect theoretical elements to practical contexts.
- ❖ Questions asked about the vignettes, can focus on pre-service teachers subject matter and pedagogic knowledge and elicit their beliefs about approaches to instruction (see example below).
- ❖ Rigor is added when vignettes are carefully constructed to reflect underlying theories.
- ❖ For research purposes, using vignette methods for eliciting teacher beliefs and beliefs about practice, can be assisted by adhering to a **vignette framework**: observing construction characteristics and adding credibility to the vignette method (Skilling & Stylianides, 2020).

A vignette-based approach for building up professional knowledge for inquiry learning & conceptual understanding

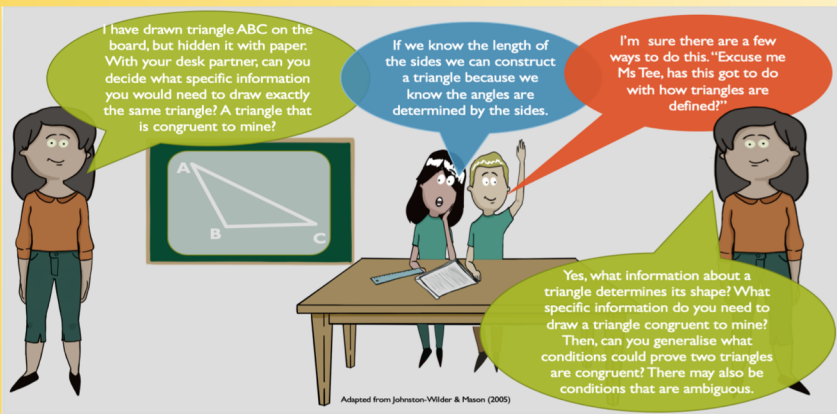
The **core idea**: using vignettes to facilitate access to classroom situations, which have a potential of fostering students' conceptual understanding for pre-service teachers' analysis.

- ❖ The congruent triangle vignette aims to challenge pre service teachers' beliefs about:
 - developing tasks that are inquiry orientated
 - using tasks that require students to reason mathematically and lead to generalisations

Sample Vignette

Congruent triangle vignette

This teacher vignette sketches Ms Tee's approach to introducing congruence for the case of triangles. Please read through it and then answer the following questions.



1. What specific information might the students need to draw Ms Tee's triangle?
2. What conditions do you think the students might establish first... then second and so on? Please explain why you think this.
3. What ambiguous condition might the students identify and how would you explain this if it was raised in a lesson you were teaching?
4. Rather than start the lesson by stating the conditions for establishing congruent triangles, Ms Tee asked the students to identify what information they needed about triangles and to prove congruence.
By taking this approach what type of thinking processes do you think Ms Tee was aiming to promote which are important in the context of geometry?
5. How you might you extend Ms Tee's approach to quadrilaterals? Provide an example.

References

Skilling, K. & Stylianides, G.J. (2020) Using vignettes in educational research: a framework for vignette construction, *International Journal of Research & Method in Education*, 43:5, 541-556, DOI: [10.1080/1743727X.2019.1704243](https://doi.org/10.1080/1743727X.2019.1704243)



Digital Support for Teachers' Collaborative Reflection on Mathematics Classroom Situations

Project coReflect@maths

Erasmus+ Strategic Partnership of six partner universities from four countries

Project Goals

- Bringing together and exchanging the practice of vignette-based professional learning established by the project partners
- Developing vignette-based course concepts for teacher students and teacher educators
- Development of a digital tool which facilitates creating vignettes and collaborative reflection on vignettes

www.coreflect.eu

Activity

How do you see this classroom situation? We would like to invite you to analyse this vignette and to share your analysis with us in an anonymised online survey. Scan the QR-code or follow the link and take part in the activity!



<https://ww3.unipark.de/uc/coreflect6/>