# **Collages as a research method in mathematics education research?**

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The aim of this workshop is to explore how collages could function as a research method that takes seriously power issues connected to hierarchies, in order to facilitate dialogue between different dominant and non-dominant groups and allow to unfold diverse desires. In small groups, the participants will explore and respond to some collages that teacher educators have created together about their desires for mathematics education in migration contexts. The workshop will focus on the following questions, a) how and what desires can be interpreted in the collages? and b) therefore are collages an ethical research method for co-constructing dialogues?

Earlier small studies have demonstrated that, as part of pedagogical designs, dialogue with students (and community members) about their home cultures, knowledges, (learning) experiences and desires can disrupt mathematics education from being alienating for students from minoritized groups (e.g., Aikenhead, 2020), such as students with migration backgrounds. Other studies report that mathematics educators struggle with recognising students’ language and cultural resources in ways which are respectful (e.g., Yeong et al, 2020). Without such recognition, there may be a mismatch between students’ mathematics learning aspirations and educators’ decision-making when designing and implementing learning activities. We anticipate that students with immigrant backgrounds dialoguing with teachers and teacher educators (from now on educators) about mathematics education could provide necessary knowledge for developing understandings about how to enhance students’ mathematics learning.

However, using dialogues between immigrant students and mathematics educators as a data collection method is not straightforward as it raises ethical issues. Power asymmetries among adults and youth, among educators and students and among hegemonic and non-hegemonic perspectives complexify dialogue between them. Consequently, care and ethical considerations are needed to facilitate dialogue between students with migrant backgrounds and educators. Collages as a research method could perhaps support understanding this complexity whilst maintaining the aims to increase students’ contributions to the dialogues. Collages can be a dynamic way of generating data because they offer multimodal potentials to express ‘unthought knowns’ which cannot easily be spoken or written (de Rijke, 2023).

Therefore, the aim of this workshop is to explore how collages could function as an ethical research method that takes seriously power issues that emerge when people dialogue about desires for mathematics education. As a productive force (Deleuze & Guattari, 1988), *desire* can account for despair, but also for the hope, the visions, the wisdom of lived lives of individuals and communities (Tuck, 2009). The notion of desire brings together emotions, experiences and prospects, relationality, and knowledge/epistemologies in various assemblages of desire.

Dialogues do not need to be verbal. They can take place by means of asynchronous explorations of and responses to “interlocutors’” collages about desires which bridge participants’ contributions. Assemblages of desires will be used as an analytical tool for analysing the collages in the workshop. In this workshop the participants will explore collages created by teacher educators about their desires for mathematics education in migration contexts. The collages were created during an explorative digital workshop where mathematics teacher educators from different universities explored pedagogical ideas about mathematics education in migration contexts.

In the Madif workshop participants will investigate the collages that the teacher educators created and in groups discuss the following questions:

* How and what desires can be interpreted in the collages?
* What are your ideas about collages as an ethical research method for dialoguing?

The workshop will have four parts. First, we introduce the proposed method, desire as a theoretical concept and an operationalization of assemblages of desires as an analytical tool (10 min). Second, in small groups, participants explore and respond to the collages in relation to the two questions mentioned above (15 min). Third, the participants share their experiences and responses to the posed questions in the whole group (12 min). Last the workshop leaders summarize (3 min).

## References

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