


ReMaking Teacher Learning: Designing Objects-to-Teach-With To Promote Mathematics Education Reform



FAB**LEARN**
CONFERENCE

NEW YORK
2020

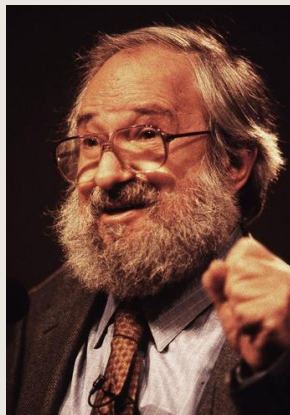
THE TEAM



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DENISH AKUOM



BACKGROUND



The role of the teacher is to create the conditions for invention rather than provide ready-made knowledge.

— Seymour Papert —

We set out to incorporate a **Making experience** into a content course offered to prospective and practicing elementary mathematics teachers (PMTs).

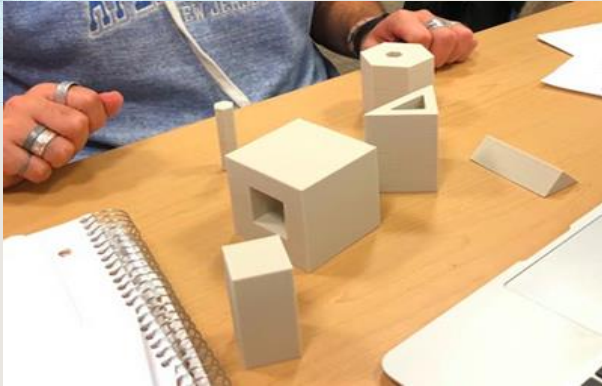
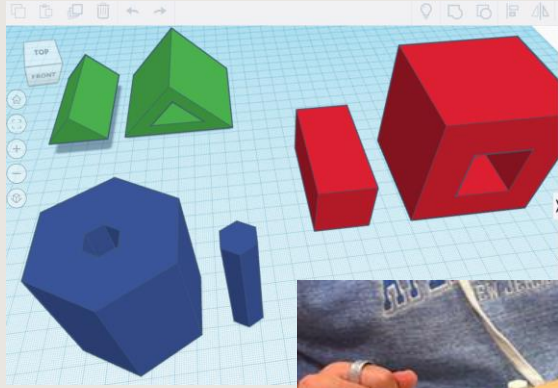
We asked...

“What learning opportunities can we offer to reform teachers’ thinking?”



THE TASK

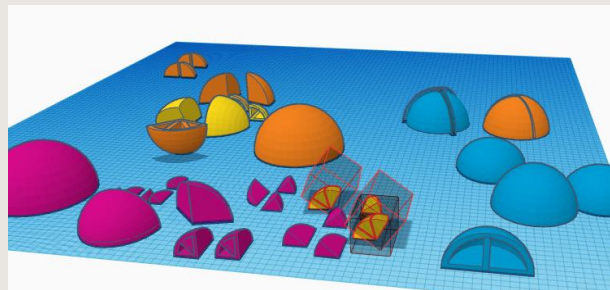
The PMTs were tasked with digitally designing, 3D printing, and sharing an original manipulative with a child to support their learning of mathematics.



OUR STORIES

*What was it about **the culture** of the Maker environment – and the knowledge and experiences of PMTs who worked within it – that interacted with and informed their designs and pedagogy?*





ERIN'S STORY: The Fraction Orange

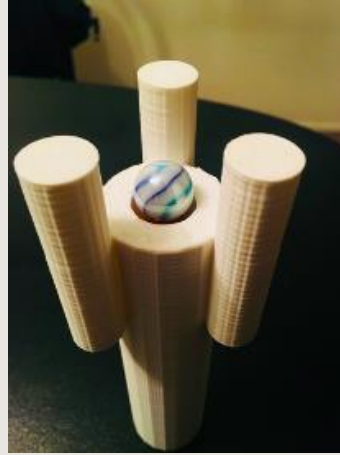
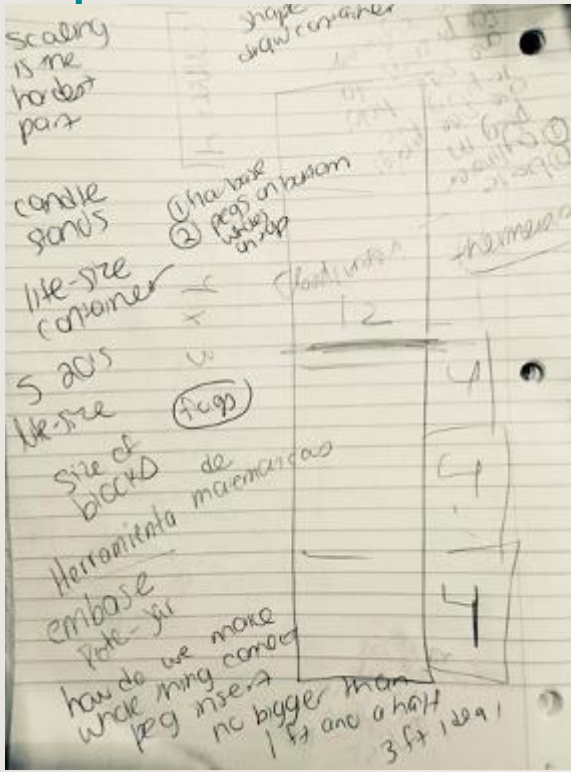


Create opportunities
for:

- Self-expression
- Sharing



JESSICA'S STORY: No Más Caídas



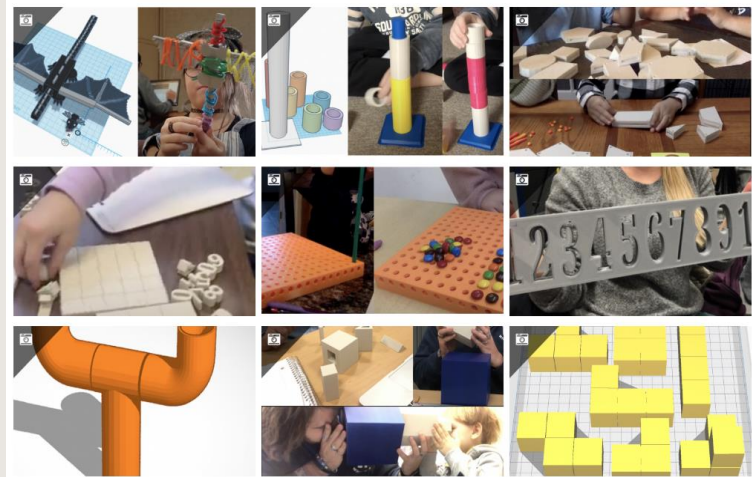
Embrace
Learning as
an Iterative
Process



BEST PRACTICES

- create opportunities for self-expression and sharing
- embrace learning as an iterative process
- ***focus on human/learner-centered design***
- ***support collaborative and participatory practices***
- ***humanize the learning process***





THANK YOU!

Please visit us at our website:

<http://teachermakers.montclair.edu/>

Contact us:

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