

# Stories of Practice

## *Tinkering Together* Workshops

To support adults learning how to incorporate tinkering into their education practice, the Tinkering Studio has long offered in-person workshops and professional development events. Due to the pandemic, the team pivoted to offering tinkering experiences online. Given the museum’s nascent engagement with early childhood educators, these professional development events were experimental in multiple ways: they were virtual with a relatively new audience.

**For *Tinkering Together***, the team used the opportunity to better understand how to make virtual, synchronous workshops positive and effective learning environments when the participants were participating over Zoom and with people they had not previously met or worked with.

In particular, the following questions were explored to inform future work:

**How might distinct communities of educators be brought together online and be introduced to tinkering through a hands-on experience?**

**How can language and cultural differences of adult learners be supported in online, synchronous professional development?**

The team organized two workshops—one with spinning tops and one with balance—and invited a total of four distinct groups to participate, with two in each. The workshops were hosted via Zoom. The groups included a school-based team of teachers, an already established Portuguese speaking group of early educators interested in creativity and based in Brazil, and a bilingual Cantonese-English professional development cohort based in San Francisco.

In addition, *Tinkering Together* participants were invited to view the live (or recorded) workshops. While the primary focus remained the groups participating synchronously over Zoom, the livestream and the recording allowed for a broader audience than could be accommodated in the Zoom sessions.



## SPINNING TOPS WORKSHOP

**The Spinning Tops workshop** engaged early childhood educators from the Transbay Child Development Center in San Francisco with a mixed-aged group of educators from the Brazilian Learning Network to use common household materials to make spinning tops. In order to prepare for the workshop participants were given a description of the activity and a list of materials to collect prior to the activity. This information was also made available to the general public through the festival website.

This workshop was both bi-cultural and bilingual. A globally common toy was selected as the focus, and the workshop was conducted in English with

simultaneous Portuguese translation. A primary focus for the Tinkering Studio team was to explore how a group of early learning educators who work together (but do not regularly participate in online professional development) would interact with an already established online learning cohort from another country (Brazilian Creative Learning Network, Brazil). With these divergent groups, the Tinkering Studio considered how to support them to come together to tinker as adult learners online. The team observed that the educators grappled with phenomena of spinning tops in similar ways: initial attempts with materials led to experimentation, theory testing, and insights into process. After a period of time

making tops, the educators debriefed the experience, shared reflections on both their successes and failures, and considered implications for their work with children.

The Tinkering Studio's most significant insight from the workshop centered around the complexity of facilitating the Portuguese-only speaking group through a translator during the live Zoom session. In particular, the selection of an appropriate translator is critical: someone who is at least somewhat familiar with the practice of making and tinkering can be beneficial to the Portuguese participants, while not hindering any learning opportunities for the English-speaking educators.

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## BALANCE WORKSHOP

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**The Balance workshop** involved early childhood educators from an established online, bilingual Cantonese-English community of practice in San Francisco. The workshop invited participants to tinker with balance by arranging everyday objects and ordinary materials to create structures that balanced on a point and moved when poked. In order to prepare for the workshop participants were given a description of the activity and a list of materials to collect prior to the activity in both English and Cantonese. This information was also made available to the general public through the festival website.

For the Tinkering Studio facilitators, this online workshop provided an opportunity to consider how best to engage an already established online community of practice accustomed to their own facilitators and types of activities.

As with the Spinning Tops workshop, the Tinkering Studio team saw evidence of workshop participants engaging with phenomena in predictable ways: by formulating a plan, testing different types of materials, developing hypotheses, and

considering questions to build their balance sculptures.

Like the Spinning Top workshop, the Balance workshop was translated to allow participants to engage with the language they were most comfortable using for thinking and discussion. In contrast, however, this workshop made use of consecutive (rather than simultaneous) translation so that the audience watching the livestream online could hear participants speaking in their own voices and participate whether they spoke English or Cantonese. The team postulated that, even though consecutive translation took time, it would signal valuing of participants' ideas and encourage greater sharing across languages. The additional time also gave participants greater opportunity to look closely at examples and consider material choices as different elements were pointed out in both English and Cantonese.

Through this workshop, the Tinkering Studio facilitators observed participants share ideas, take creative risks, and incorporate materials in unfamiliar ways. There were some moments of challenge. One moment, in particular, stood out when a facilitator who did

not have a prior relationship with participants noticed that one person was engaging in a craft activity that did not explore the phenomenon of balance. The facilitator gently redirected the participant's making so that they would consider how to turn their creation into a balancing sculpture.

Participants experienced a range of emotions throughout the workshops. They voiced moments of frustration with their explorations, indicating a level of comfort, in addition to expressing enthusiasm and demonstrating discovery. The ending debrief led naturally into a conversation of how educators could apply this activity and mindset to their own settings, indicating that this already formed group is accustomed to applying learning to their practice as teachers. The Tinkering Studio facilitator who led the activity but did not have prior relationship with the participants reflected on the value of including two additional facilitators who were familiar with the group, one of whom was a skilled translator. The familiarity and technical skill of this facilitator helped to achieve a conversational, low-stakes environment for exploration across language differences.