

**Agency and Community:  
Supporting Creative Learning in a Global Online Course**

by  
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Submitted to the Program in Media Arts and Sciences, School of Architecture and Planning, in  
partial fulfillment of the requirements for the degree of

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## **Abstract:**

Learning Creative Learning (LCL) is an online course and global educator community which has engaged thousands of people interested in exploring creative learning approaches through projects, passion, peers, and play. LCL has been designed in pursuit of learner agency and global community — that is, enabling the pursuit of meaningful, personal learning journeys while also engaging with peers from around the world. This thesis investigates participants' experiences in the Learning Creative Learning course and community, with an emphasis on understanding participants' experiences of agency and community, as well as considerations of their own professional contexts and development, and explores design recommendations based on these findings.

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# Contents

Acknowledgements 5

Introduction 7

The Invitation 10

Focus of Exploration 15

Methodology 17

Participant Findings 20

Case Studies 24

Exploring Agency 43

Exploring Community 48

Recommendations and Looking Ahead 58

Conclusion 63

References 64

# Acknowledgements

I'll be using “we” frequently in this document — as Learning Creative Learning is a deeply collaborative effort. So many people have had an impact on the ideas that come up in this writing, and we design, facilitate, and research LCL as a team.

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## Introduction

It's the spring of 2020 and I'm rearranging all my furniture for a video-call. I've got a blank wall and dragged a table-as-desk in front of it. Two laptops, mine and one borrowed. Tabs for everything that could go wrong. Hotspot phone if the internet fails. Quite a bit of cereal.

It's Monday morning in Massachusetts, and I'm about to meet ninety educators from around the world. We are coming together as part of Learning Creative Learning, a free online course and community for people interested in project-based, interest-driven, collaborative, and playful learning approaches. About four thousand people are signed up at the time; they cycle in and out of resource pages, activity ideas, forum threads, and events for seven weeks, at their own choosing. Some take the plunge and come to this session, LCL Chat, a multi-lingual, sometimes hectic gathering for meeting each other and talking about course ideas.

I see the platform fill up with new and familiar faces. People say hello in different languages in the chat, from Mexico, India, Canada, Brazil, Turkey, Japan. My colleague Carmelo, who has even more open tabs, is finangling the video stream and gets some music going. *this music is so uplifting <3* someone types in the chat.

As it gets closer to the top of the hour, I join my co-hosts in the event livestream to welcome the participants to Week 3 of the course. We immediately have some noise feedback issues, but co-organizer Carolina recovers and opens the session: "Welcome to LCL Chat! My name's Carolina, and I'm joining from the south of Brazil, so I'm going to say, Oi pessoal!, in Portuguese, too." "Ciao a tutti!" says Carmelo. "So happy to be with you all." "Shubh prabhat, good morning," says facilitator Mohona, who is back for her third round of supporting LCL.

We share the plan for the day: reflecting back on the previous Projects themed week, and joining breakout rooms to share projects in progress, and to talk about how to support project-based learning in the classroom and beyond. Facilitator Vero translates what we are saying into Spanish in the chat. "Happy chatting!" says Carolina, inviting everyone to join the breakout rooms.

I can see people's icons popping up in the different rooms, which are labeled by language. The global facilitation team — which comprises almost 30 people in total, a subgroup of whom might join a given event — divide themselves into the rooms, writing in our backchannel if they notice rooms that need more support. I jump into an English room, where I meet five participants from several countries, who share projects they've been working on. While some talk, the group is also typing on a notepad; someone's microphone isn't working; someone else says they are just listening for now. A participant who is a parent notes the challenges and inequities of online learning, to which their local schools have recently transitioned.

Forty minutes in, it's time to return to the large room. Participants share shoutouts to their rooms and facilitators in the chat, and the topics of their discussion. A facilitator from a Portuguese room shares that the discussion centered on the challenges of supporting project-based learning during this onset of the pandemic. A facilitator from a Spanish room mentions that they sang to one of their peers. Someone says they hope we can stay in touch afterwards; a facilitator writes back inviting them to connect on the course forum.

As the hour closes, the chat fills up with thanks and goodbyes. The facilitators immediately jump into another call to debrief and debug, sharing moments of joy and confusion. I get up to stretch my legs. The week is just getting started: we'll do it all again in five hours.

✱

What does it take, to foster a meaningful online learning community? As organizers of Learning Creative Learning (LCL), we have tried to engender certain values in our work: community and collaboration, learner agency, an inclusive and welcoming environment, and a playful approach. There is a complex interplay of relationships and logistics at work to create a learning experience for thousands of people, educators joining from around the world. This makes it somewhat challenging to study.

Since I joined the project in 2017, we organizers have collaborated to offer six rounds of LCL, throughout which over 30,000 people signed up. I wish I could have met them all. I've felt fortunate to learn from the participants I have met, reading their ideas in the course forum, chatting about their teaching experiences in live events, and sharing projects in workshops. We invite people to share their feedback in surveys, and learn from their end-of-course reflections, for those who make it that far. Some participants subsequently become facilitators, and we get to know them even better, engaging them as collaborators in facilitating the experience for others.

But I would like to take the opportunity of this thesis to further investigate how the LCL experience, and its design choices, are playing out for participants. As I write in 2021, we are now in a moment of transition in the course. After six rounds of this edition, we are considering a larger re-design, taking a step back to evaluate goals and design priorities. Around us, the landscape of online learning has shifted significantly, particularly due to the pandemic, and platforms and tools may change. In the past year, education systems worldwide have faced significant challenges and constant adjustments, with a future still up in the air, and our educator participants are thus facing new challenges and schedules. Internally, our team has shifted and grown, with more facilitators joining, but some time limitations for the leading organizers. The broader creative learning network continues to grow, and LCL has formed strong connections with some local organizations.

It feels like a good time to re-design — and to be working closely from participant outcomes thus far. For this study, I'll be sharing what I learned from asking participants about their experiences in LCL — both from feedback through surveys, and from in-depth explorations with twelve participants about their learning experiences — their motivations, engagement, memories, outcomes, challenges, and suggestions. My hope is that these stories can help inform us in our future work — and be useful to others who are working in the field during these changing times.

# The Invitation

Learning Creative Learning (LCL) is a free, open, online course, and an engaged educator community. First run online in 2013-2014 (Schmidt, Resnick, and Rusk, 2014), the most recent edition of the course was re-started in 2017 and has now been organized for six rounds. An organized round is six or seven weeks, during which participants are invited to engage as they wish with a set of materials, resources, activities, events, and discussion forums. The course is organized by the Lifelong Kindergarten group at MIT, and supported by a global facilitation team.

The course content focuses on the 4P's of Creative Learning Framework, which aims to support learners in “working on projects based on their passions, in collaboration with peers, and in a playful spirit” (Resnick, 2017). It is designed for experiential learning: for example, educator participants explore project-based learning by making projects themselves, reflect on the experience with peers, and discuss strategies for implementation, as well as sharing their practical experiences with such work.

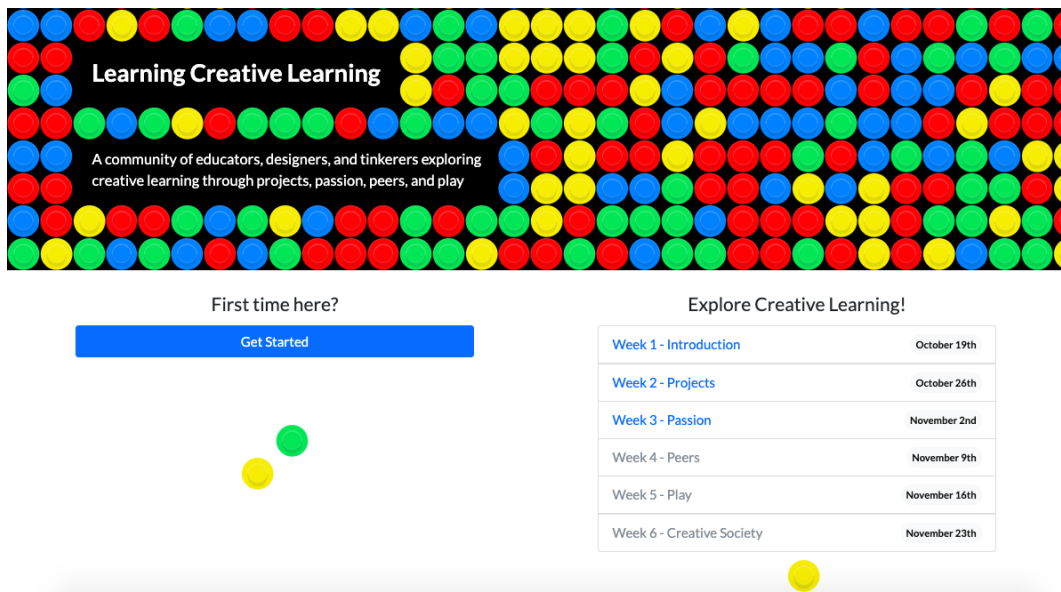


Figure 1. The Learning Creative Learning course website.

Every week, there are new resources, such as videos and readings, available on the course website (Figure 1), themed around one of the core topics of the course (e.g., Peers). The site also suggests themed-but-open-ended activities, such as creating a remix of something you found inspiring, like a recipe or poem. In one of the weeks, participants are invited to try the Scratch programming language, which is a tool developed by the same research group (Figure 2). Following the weekly activity, the site features a reflection prompt.

## ● Make & Share ●

This week we invite you to explore Scratch by making a project about something or someone you care about. For example, it can be an animation about one of your favorite hobbies, books, or places, a video game featuring your pet, or a greeting card for someone you love!

When you feel ready, share your project and your reflections: What motivated you in creating your project? Can you describe a moment of joy or frustration? What helped you persist in face of challenges?

Start the Activity

Figure 2. Section of the course website, introducing one of the weekly activities.

The course website is available in Arabic, English, Chinese, French, Italian, Japanese, Portuguese, Spanish, and Turkish, though not all of the linked resources are translated into all languages (Figure 3).

The screenshot shows the LCL logo in the top left corner. In the top right, there is a 'Foro' button and a dropdown menu showing '3 - Pasión'. The main content area features a red section header '● Reflexionar & Discutir ●'. Below it, there is a paragraph in Spanish: 'En los videos y lecturas de esta semana, Mitch introduce la idea de "muros anchos" (wide walls): diseñar experiencias de aprendizaje en las que la gente pueda crear una amplia variedad de proyectos distintos y de diversas maneras, a partir de sus intereses y estilos.' Below this paragraph is a question in Spanish: '¿Qué aspecto tienen estos muros anchos en su práctica? ¿Cuáles son algunas de las decisiones de diseño o estrategias de facilitación que usa, o planea usar, para ensanchar los muros?'. A blue button labeled 'Compartan en el foro' is positioned below the question. At the bottom of the page, there is a green section header '● ¿Quieren explorar más? ●' and a line of text: 'Pueden disfrutar estos materiales adicionales'. On the left side, there is a vertical language menu with options: English, العربية, 中文 (傳統), Français, Italiano, 日本語, Português (...), Español, and Türkçe. The 'Español' option is currently selected and highlighted.

Figure 3. Users can toggle between languages on the course site, with a menu at the lower left.

Participants are invited to introduce themselves and share questions, projects, and reflections in the discussion forum (Figure 4). The forum is hosted on Discourse, and it is open for browsing, but you need to make an account to log in if you want to post, like, comment, or direct message someone in the community. There is typically one thread for each activity or reflection, plus a section for open topics and discussions.










<b>Introduce Yourself</b> Let's get to know each other!	1	 [Activity 4] Remix something! ■ Week 4 - Peers	34 43m
<b>Week 1 - Introduction to Creative Learning</b> This week includes an introduction to the creative learning framework, and an opportunity to share a childhood object.	4	 [Activity 4] Meet someone! ■ Week 4 - Peers	26 1h
<b>Week 2 - Projects</b> This week we focus on learning through making, and reflect on the creative process	3 / week	 [4. Haftanın Etkinliği] Birileriyle Tanışın! ■ Türkçe (Turkish)	3 1h
<b>Week 3 - Passion</b> This week we explore motivation in learning, along with strategies to engage people in meaningful experiences.	2 / week	 [4. Haftanın Aktivitesi] Bir şeylere katkı yapın! ■ Türkçe (Turkish)	9 2h
<b>Week 4 - Peers</b> This week we focus on learning as a social activity. We explore remixing and support people connecting to each other.	2 / week	 [Atividade 4] Encontre alguém! ■ Português BR (Portuguese)	3 3h
<b>Open Topics</b> Ask questions, suggest resources, find collaborators, and talk about anything else ■ Scratch	1 / week	 [Atividade 3] Faça algo com o Scratch ■ Português BR (Portuguese)	32 3h
<b>Language Groups</b> Explore LCL in other languages ■ Español (Spanish) ■ Italiano (Italian) ■ Português BR (Portuguese) ■ Türkçe (Turkish) ■ 日本語 (Japanese) ■ العربية (Arabic) ■ Français (French)	18 / week	 Apresente-se para a comunidade! ■ Português BR (Portuguese)	189 3h
		 [Atividade 4] Remixe algo! ■ Português BR (Portuguese)	4 3h
		 Presentiamoci! ■ Italiano (Italian)	45 5h

Figure 4. LCL discussion forum, as of week 4 in the course.

Participants are welcome to write in the main threads in any language, though they are titled in English. An organizer starts the main threads, posing the question or project idea, and responses are threaded underneath (Figure 5). If available, the post also links to the same topic within language groups (Figure 6).

## [Week 4 Activity] Remix Something!

■ Week 4 - Peers



adlogi

2 Nov '20

[Italiano](#) - [Português BR](#) - [Español](#) - [日本語](#) - [العربية](#) - [Türkçe](#)

Peers collaborate in many different ways, for example building on each other's ideas. That's why this week we invite you to create a remix!

Choose one of the projects shared on LCL in the past few weeks (or any other project that inspires you) and create your own version of it. You can remix anything: it can be something physical, a poem, a recipe, or a Scratch project!

Post your remix here and thank the author of the original project.

What inspired you about the original project? What did you change and why? If one of your projects was remixed, how did it feel?

Figure 5. An organizer posts a prompt for the week in the forum, in the main Week 4 section.

## [Attività 4] Remixa Qualcosa!

Language Groups Italiano (Italian)



tarmelop LCL Team

1 Nov '20

Ci sono molti modi di collaborare, per esempio si può costruire sulle idee di qualcun altro. Ecco perchè questa settimana vi invitiamo a creare un remix!

Scegliete uno dei progetti condivisi su LCL nelle scorse settimane (o qualunque altro progetto che vi ispira) e create la vostra versione. Potete remixare qualunque cosa: per esempio può essere un oggetto fisico, una poesia, una ricetta, o un progetto Scratch!

Condividete il vostro remix qui e ringraziate l'autore del progetto originale.

Che cosa vi ha ispirato del progetto originale? Che cosa avete cambiato e perchè? Se uno dei vostri progetti è stato remixato, come è stato per voi?

Figure 6. Another organizer posts the same prompt in the Italian language group.

Participants are also invited, by email and on the course website, to join live events every week. LCL Chat, as described in the opening of this thesis, is a one-hour gathering to discuss course ideas with peers, typically on Mondays, and offered at two different times because of timezones. The chat includes an opening interactive broadcast by facilitators, during which participants write in the chat, followed by 30-40 minutes of discussion in small breakout rooms, typically six persons each. Rooms are organized by language, and supported by the LCL facilitation team.

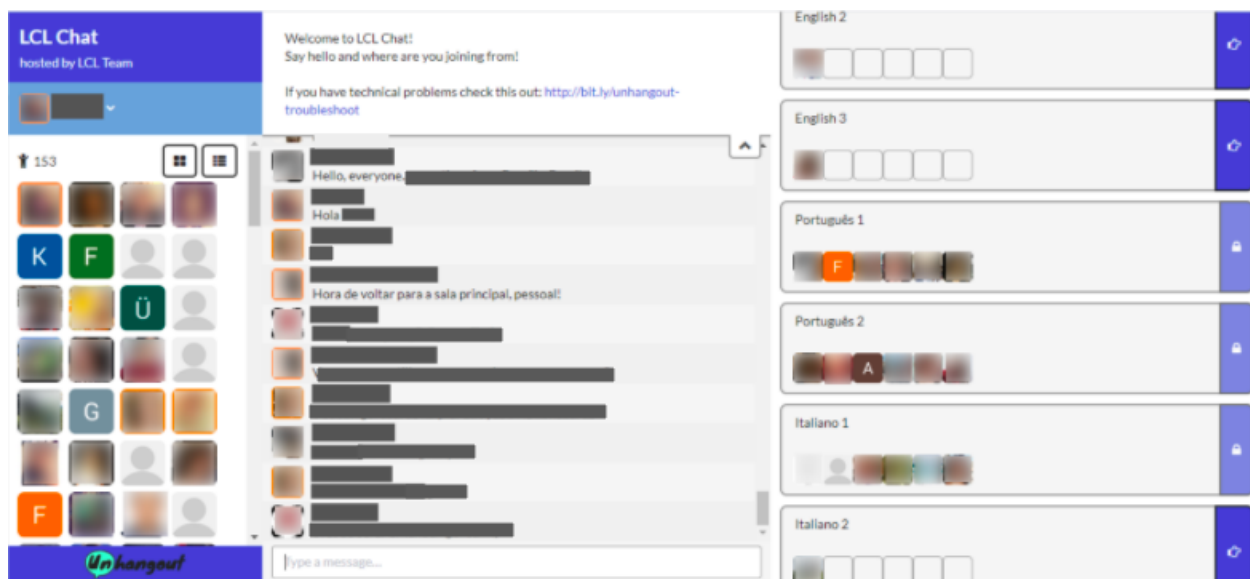
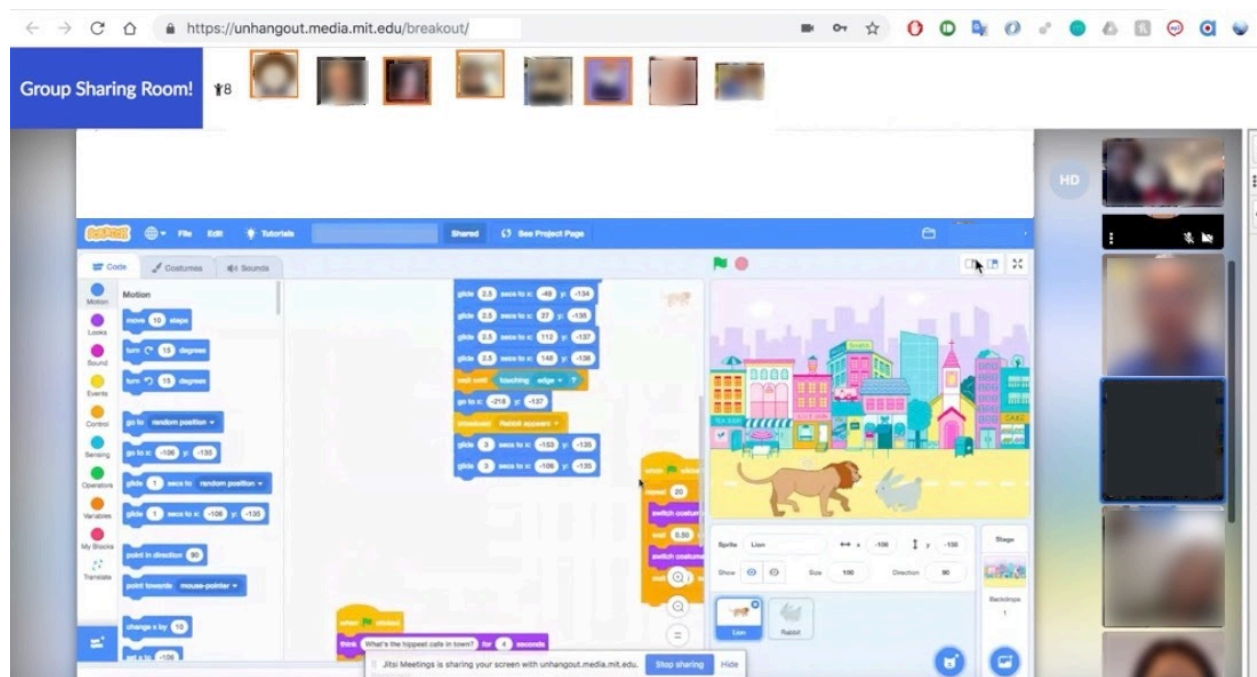


Figure 7. LCL Chat main lobby, in Unhangout, including participant chat (center) and breakout rooms (right).

An additional live offering is WeScratch, a series of online coding workshops, where educator peers make Scratch projects and share their screens in breakout rooms (Presicce et al.,

2020; see Figure 8). WeScratch also runs as standalone workshops, but in recent years has also been integrated within the LCL rounds on Wednesdays.



*Figure 8. Inside a breakout room at a WeScratch workshop.*

Thus, within a given week in LCL, participants are invited to two LCL Chat sessions, one WeScratch workshop, and to engage with course readings, videos, activities, reflections, and discussion forums. The offerings are emailed at the start of the week to language-specific mailing lists. Some participants also have the opportunity to connect with local networks in their home countries.

In emails, forum posts, and on the course website, participants are repeatedly invited to engage as they wish: free to select the aspects of interest to them, to move at their own pace, and to start joining anytime. Facilitators might comment on someone's forum post, and are part of live event peer discussions, but there is no grading of learners' work. The facilitators are typically former participants themselves; they are encouraged to find aspects of LCL that are most interesting for them to engage with, and so some facilitators may spend time in the forum, others supporting live events, and yet others organizing events for their local and language communities (Murai et al., 2020).

Now that I've overviewed the structure of the course, I'd like to elaborate on my study exploration: how these structures, and particular design goals, are manifesting in participant experience.

## Focus of Exploration

Because LCL is a large, long-term, and multi-faceted project, there are several dimensions along which one might study it. In this master's thesis study, in pursuit of depth and manageability, I decided to scope my work to two particular aspects of participant experience and engagement: learner agency, and connection to the peer community.

We have tried to design LCL so that each learner can find a meaningful path within the course — pursuing a learning experience that works for them. This goal involves enabling learner agency — sometimes defined as the ability to drive your own learning, pursue goals, or colloquially “voice and choice.” Mercer (2011, 2012) parses the concept into both the *sense* of agency that a student feels in a given learning experience, and their related *behavior*, such as choosing to participate or not in a certain way. Bandura (2001) proposes that enacting agency supports self-development. Brennan (2013) details strategies for enabling agency through structures in the learning environment, such as facilitating access to resources and opportunities for reflection. I see design choices in pursuit of learner agency as key structures in LCL: the invitation to engage in whatever forms you wish, at your own pace; the invitation to work on projects based on your interests; the open access to resources and peers; the consistent structures for sharing and reflection. These design choices have roots in the creative learning framework, elements of which include project-based learning, building on learners' passions, opportunities to learn from peers, and creating an environment that enables playful experimentation (Resnick, 2017). They are also connected to constructionist (Papert, 1980) and constructivist (Piaget, 1976) ideas of constructing your knowledge through experience. I am curious to learn more about how participants experienced and acted upon these invitations, and if these design choices had any negative or unfulfilled consequences (such as people feeling lost, unsupported, or disconnected). What design choices can enable learners to pursue a meaningful path within the online course experience?

My second line of exploration is participants' sense of connection to the peer community. Many of the course design choices and structures aim to cultivate a connected course community, including sharing personally relevant activities, participatory facilitation, and strategies for a language-inclusive environment (Gabaree et al., 2020). There are multiple contexts for peer engagement: both synchronous, like LCL Chat and WeScratch, and asynchronous, like the forum, plus local networks. Given the social nature of learning (Immordino Yang et al., 2019), we want to provide learners with opportunities to connect to each other. Furthermore, peer learning is one of the topics of the course, so providing opportunities for direct experience is key to experiencing and reflecting upon the approach. In his book *Lifelong Kindergarten* (2017), which serves as a core text in LCL, Mitch Resnick writes about the “make-it-together” mindset being fundamental to the creative learning approach. Fostering a sense of community may also mitigate issues of low retention and learning in online education programs (Rovai, 2002).

In these explorations, I take inspiration from all of the above, and many others who have explored the rich integration of these concepts, and how learning emerges from a complex system of relationships, opportunities, and interests. The inquiry is related to the Connected Learning Research Network's (Ito et al., 2020) conception of “connected learning” — bringing together “personal interests, supportive relationships, and academic, civic, and career opportunity.” I am also inspired by the work of Ricarose Roque and Family Creative Learning project, which “created a context that allowed families to build projects and relationships” in an inclusive, creative, and social environment (2016). In LCL, we are also trying to enable participants to build their work, while developing relationships with others — and the two are deeply connected.

In drawing on this scholarship, I am not setting out to determine a new framework. But I am interested to understand (and if appropriate, improve) these elements in the context of this particular project, Learning Creative Learning, which is a project that myself and colleagues have the opportunity to impact — so many of my explorations are somewhat nitty-gritty and specific. The course has its particular considerations, including its multilingual globality, large size, pedagogical recursiveness, and multi-faceted format. Many of the large, free, online courses (often called Massive Open Online Courses, or MOOCs) have a more highly structured, less social model. For example, the popular “xMOOC” format brings a lecture course online, sometimes with a linear track and quiz checkpoints (Smith and Eng, 2013). Once envisioned as the future of learning, MOOCs have become less popular in recent years and criticized due to low retention rates, and low return on the promise of democratizing education (Koller, 2013; Reich, 2014; Hansen and Reich, 2015; Reich and Ruipérez-Valiente, 2019).

I also hope that these explorations might be of use to others supporting online learning communities, and facilitating for educators. The online learning landscape is currently changing rapidly due to the pandemic, and it is difficult to anticipate what directions will arise next. LCL has been a multi-year experiment, spanning before and during the pandemic conditions, and I hope that some of our experiences may be informative to our peers in this space.

# Methodology

My goal in this study was to learn deeply from participants' experiences. I endeavoured to learn directly from participant feedback and conversations together. My approach was primarily qualitative research, incorporating semi-structured interviews, open-ended survey responses, and evidence of learners' participation in course events, the forum, activities and reflections. This qualitative data was supplemented by mixed-methods and quantitative analysis of survey findings, as well as site analytics data. Much of the research took the form of case studies: in-depth explorations of individual participants' experiences in Learning Creative Learning. I would like to thank everyone who contributed for their openness and generosity in sharing their experiences and ideas.

Participants were invited to reply to surveys via email during the course, and the surveys were offered in Arabic, English, French, Italian, Japanese, Spanish, Portuguese, and Turkish. I compiled and analyzed the surveys across languages, and analyzed by question and theme. The findings draw on survey data for overall participation information and to provide context and support for highlighted themes, primarily the mid-course survey, which was emailed to all participants and to which 73 people responded, as well as a survey in the first week of the course that went to participants who joined the LCL chat live events, which received 39 responses.

For the case studies, recent course participants were invited to indicate potential interest in participating in a participant study, and of those submissions, learners were invited to join based on my goals to learn from a range of participants who:

- participated in a variety of ways (such as forums, live events, local networks)
- joined from many countries and language backgrounds
- were educators, whose work is impacting youth

The twelve participants who ultimately participated engaged in many forms, as will be described throughout the document. They are from Brazil, Canada, France, Japan, Italy, Kenya, Spain, South Africa, and the United States, and their languages include English, Portuguese, Spanish, French, Italian, Swati, Zulu, and Japanese. They are all educators in some capacity, working with youth aged preschool through high school, university students, and training other educators.

I asked participants for their languages, and study materials (such as invitation emails, consent forms, learning trajectory documents, written interview templates, and ongoing communications) have been translated when appropriate; some of my LCL collaborators have generously offered their time and skill in this work, and I have also employed paid translators, and Google Translate.

For the twelve interview participants, I endeavoured to work together to deeply explore their LCL experiences. Our conversations were to take place after the course round had ended, so I wanted to find ways that we could reflect back upon and understand their experiences together, and also consider ideas for improvements. In this work, I am in a multi-faceted position: learner, course co-organizer, facilitator, designer, researcher, peer discussant. This brings up a variety of power dynamics, and the social sciences have historically involved asymmetrical power dynamics between researcher and participant (Greenwood and Levin, 2007). It also raises social sensitivities — would participants be ready to critique something they knew I was working on? They are educators, and in addition to their first-person experiences as learners in the course, they are expert learning designers and bring that eye to the project. I tried to emphasize that participants were welcome to share or not share whatever they felt like, and that they should feel free to be honest with issues if they felt comfortable doing so; I also shared the resulting data back with them, with some of my own thoughts, and invited them to comment, edit, or redact. There are potential advantages to my closeness to the work: I've been able to build upon my experiences within the community, knowledge of the context, and relationships, and participants expressed a sense of trust in me. My role as an organizer also means that I can directly share potential challenges and changes with my teammates, so the participants' input can affect future iterations in the project.

First, I compiled a “LCL Learning Trajectory” document for each participant, based on evidence of engagement and learning I could find as a facilitator, such as reflections or project documentations shared. I invited the participants to add to these documents if they'd like, and some supplemented with other recollections from their time in the course. My hope was that this document would also be useful to the participant, providing a way to look back on their experience in one place, and a way to recall experiences before the interview.

Subsequently, I arranged interviews for each participant, offering a choice of verbal or written formats based on their preferences and needs, including language. Ten of the participants met with me for a conversation in English in a video-call, either in Zoom or Google Meet; one participated in a written format in Portuguese; and one met with my colleague and LCL co-organizer, Carmelo Presicce, so he could conduct the interview in Italian. I shared transcriptions of the interviews with the participant, and invited them to make comments, edits, or redactions if they wished, inspired both by an approach described by Laura Pulido (2008) in her efforts to address “the power imbalance inherent in contemporary social science research,” and by a request of a participant of a past study. Participants received a gift for their interview participation.

Some participants' experiences are written about in this thesis narrative-style, as a case study section, with their permission. I first assigned pseudonyms to participants (indicated with an asterisk\*), but invited them to indicate if they would like to use a different name, or their own, to represent participants as they wish. Pseudonyms can protect participants from potential harms — which may be difficult to fully anticipate, for both researcher and participant. But they may also

obscure participants' contributions, redacting credit for their insights or discussed work (Bruckman et al., 2015).<sup>1</sup> Some participants wished to use their names, and I have chosen to honor this request.

Interviewed participants' experiences have been analyzed for themes and incorporated throughout the findings, in addition to qualitative data from survey responses of other participants, and public contributions of course members within community spaces. Finally, participants offered direct feedback and suggestions on many course aspects, some of which are discussed in this thesis, and some of which are not present in the document, but will be shared and incorporated internally.

As a final note on methods, I want to acknowledge that it is probable that these participants — both in the surveys, the interviews, and those sharing in public spaces — are likely to be more highly engaged than many other people in the course, and may collectively be those who had more positive experiences. Participants who struggle, or who find the course lacking in some regard, would presumably be more likely to drop the course early on in a round, and those who had negative experiences might not want to share them. So my method of inviting feedback over email — rather than, for example, randomly selecting a set of emails and asking them in particular to let me know how it went and if they dropped — has ramifications for who would be likely to participate and the quality of their experiences. That being said, I think it is valuable to learn from those who are highly engaged, to learn what is working for them, and for whom it is working; and amongst these participants, many challenges and suggestions were raised, which I think will be fruitful in our efforts to improve.

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<sup>1</sup> Thanks to Ricarose Roque and LLK colleagues for thinking through this with me.

## Participant Findings

The rest of this work will describe my findings from the study, including participation and engagement trends, learners’ experiences of agency and community, and individual stories. I’d like to start from the participants themselves: who they are, what they are working on, and what brought them to LCL. In this first section, I’ll primarily draw on aggregated information from a course survey and site analytics to get a sense of overall participation.

Since 2017, over 30,000 people have signed up for LCL — that is, registered on the course website to receive emails for a given round. A typical round might have five thousand registrants, who may choose to engage (or not) in varied ways, durations, and amounts. The course website is always live with some materials, so someone could also move through materials “off season” when a round is not in session. In this study, I was particularly looking at the most recent round — October-December of 2020 — but learned from some participants who had been joining for multiple rounds over the years.

Who are these participants? The majority who introduce themselves identify as educators: classroom teachers, informal and out-of-school facilitators, university staff, teacher trainers. There are also participants who identify as students, including those who are preparing for careers in education.



*Figure 9. Word cloud of roles of survey respondents willing to share them, made with Databasic.io*

There is also a substantial amount of people who join for their own personal development, and many who join as parents or other family members, interested in supporting the learning of young people in their lives. Additionally, there are participants with a range of other professions and motivations: some who are involved in the education field in other ways, like governance, administrative leadership, education technology design, researchers, etc.

The educator participants teach many subjects, though many are teaching STEM, including activities involving technology. The course is offered by MIT, which is known for its technical expertise, and organized by Lifelong Kindergarten group, which is known for creating the children's programming language Scratch, so credibility and content relevance are likely factors attracting STEM educators (and participants in general). It's also the case that Learning Creative Learning, Lifelong Kindergarten, and Scratch are three highly interconnected entities that are situated within (and attempt to support) a broader network of educators and technologists worldwide, which has been fostered over the years by many organizations (such as the Creative Computing Lab at Harvard). The LCL course also offers to introduce participants to new technologies, and Scratch is one of the main mediums within which participants create.

In a mid-course survey (n=73), respondents who teach indicated they worked with learners of many ages, especially youth aged 7 to 13 years old (see Figure 10).

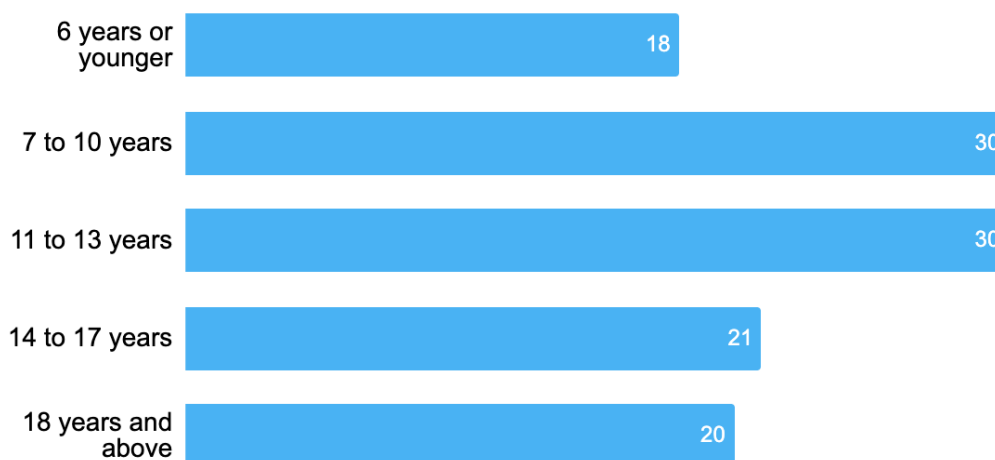


Figure 10. Count of respondents working with youth of a given age range (n=73; some reporting multiple ranges)

Based on web analytics, participants hail from over 100 countries around the world. In course events and in the forum, people are sharing their experiences from a number of countries. Some participants choose to add themselves to the course map for a given round (Figure 11).



*Figure 11: Participants who have added themselves to the course map since the start of the recent round.*

Google web analytics for the full period of this version of the course — September 2017-December 2020, for this analysis — show traffic on the course website over the years was most often from Brazil (24% of sessions), followed by the United States (17%), Italy (10%), Turkey (7%), and Japan (4%). LCL organizers and facilitators live in these countries, and local organizations, meetups, partnerships, and initiatives have also supported the work in some of these regions. For example, the Brazilian Creative Learning Network (Rede Brasileira de Aprendizagem Criativa), which was co-founded by the Lifelong Kindergarten group, has engaged thousands of educators in local, regional, and national groups and events around creative learning in their own work (Brazilian Creative Learning Network, 2021) — and BCLN organizers and facilitators have connected their Brazilian community to the LCL course and community, through outreach, relationships, and shared work. Though I do not currently have the data to investigate broader trends in how participants learn about LCL, personal relationship-building and partnerships in local contexts appears to be related to local participation, and builds on the interests, work, and networks of organizers themselves — Carolina, who is Brazilian, is a co-organizer of both LCL and the BCLN; Carmelo, who is Italian, co-organizes LCL and engages LCL Italia, an informal network of educators who are joining from across Italy. Later in this analysis, I'll further explore how we might learn from the work of these and other local initiatives and partnerships, such as in South Africa, Latin America, Turkey, and Japan.

Why do participants join? In the first week of the course last fall, I asked participants in a post-LCL chat survey why they'd joined LCL (n=39), inviting open-ended written responses, which I analyzed for themes. The most common reason, cited by sixteen people, was to learn new approaches: to “teach differently,” to “make learning more exciting and meaningful for kids,” to “learn new teaching techniques.” Ten people cited peers: wanting to learn from others, share with others, collaborate and network. One person said, “It is fun to connect with people from all over the

world — this is my third time and it's always fun.” Someone wrote that the community helped to “ignite” and “grow” thinking about creative learning.

Other reasons included alignment with the approach (n=7), and opportunities to learn new tools and technologies (n=3). Two people mentioned an interest in MIT’s work, and four people mentioned Scratch. One person said it was recommended by a friend; someone else wrote they wanted to “improve personally and professionally.”

This is a small sample of those who participate in LCL, but the two most common reasons — to learn new approaches about learning, and to connect with peers — have been prominent answers throughout the time that we’ve run the course. (Of course, these replies are somewhat self-evident: LCL promises to be a course and a community!). In the next sections, I’ll share some more in-depth pictures of participants’ experiences, and discuss how agency and community figured into their time in LCL.

## Case Studies

As previously discussed, I interviewed twelve participants in-depth for this study. All twelve cases were richly informative, raising challenges and opportunities. In this section, I'll share a subset of these case studies, detailing experiences of six participants in LCL, in order to substantively illustrate the wide range of experiences people had in the course, including forms of participation, local context, and challenges. Subsequently, I'll draw on their stories and the other cases to examine the core questions of this study and propose potential considerations for re-design.

For brevity and privacy, I haven't included all aspects of the participants' experiences shared, but am particularly focusing on the nature of their participation in LCL, experiences of agency and community, and elements that supported or impeded their engagement and learning — especially challenges and barriers that we might address. I've also tried to provide context for their participation, such as their motivations for joining, goals, and the setting within which they are using these ideas.

First I'll share the experience of a South African educator who joined LCL recently, for the first time, and who engaged in a variety of the offered forms (events, the forum, the resources), while balancing her course participation with teaching responsibilities. She raises important considerations of language, local context, and implementation practices. Subsequently, I'll discuss the experiences of educators from France, Brazil, and Kenya, who engaged in a variety of forms; and finally the experiences of educators from Canada and Italy, who participated multiple times and changed their participation approach across rounds.

### **Lesedi\*<sup>2</sup> (South Africa): Balancing creative learning and teaching**

Lesedi is a natural sciences teacher in South Africa. She works with students in grades six and seven in a primary school. She first learned about LCL from educator and researcher Linford Molaodi of the University of Johannesburg, who coordinates a Scratch program there, and is also a facilitator within the LCL community. She was interested in learning more about how other schools are dealing with challenges and supporting students in learning new skills, and joined in the fall of 2020.

She introduced herself in the forum, went through the resources, and joined some of the LCL chats. It was difficult for her to participate as much as she'd hoped: it was a "very hectic" time for her, during which she was teaching online, and some of the live events conflicted with her work. Sometimes she had problems with her internet network. And October (when the round began) is the end of the school year in South Africa: "it's when learners are starting to write, prepare for

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<sup>2</sup> \*Asterisks indicate pseudonyms.

exams, there's just too much workload.” March through July would be better months for her teaching calendar, and Fridays (rather than Mondays and Wednesdays) would be easier days for her to join live events.

Lesedi approached the live events with some trepidation, but ultimately had a positive experience. She considers herself shy, and so it was “a little scary” to be joining a call with people from around the world. But she found her peers in the events to be “respectful” and sharing space in the conversations. When I asked her how it was to join a global course, she replied:

“It was a little scary at first, you know...I'm a very shy person, I don't like talking when there's a group of people and I don't know them. I'm just going to be quiet. That's just me. But because of the number of people in a certain [breakout] group that you've selected, it was like six or seven. So it was not much, so it was easier to engage...I talk when I'm comfortable with people and if there's too many, I don't talk at all. But because they were like only six, seven, it was not a lot. So it was easy to communicate and share your ideas, wherever possible.”

She also liked the flexibility to move between breakout groups in the events, and admired the availability of specific language rooms. She would have appreciated the opportunity to join rooms in Swati or Zulu if they had been available, noting that “when people speak in their languages, they become more comfortable.” If they were offered, she would likely alternate between those rooms and the English rooms, in order to have the chance to both speak with other South African teachers, and people from other countries.

“Because even if it's only from South Africa, there are people from other provinces that I don't know...That would be nice also, because you'll be more comfortable because... you're not worried about pronouncing certain words wrong, saying something wrong. And sometimes you don't know how to say something, you know, because English is not your language.”

Lesedi enjoyed learning from the other participants in the course, appreciating their ideas and their positivity. She said, “They had good ideas, the peers, they had brilliant ideas.” She learned about different types of play, and how people were trying to integrate it in the classroom, and dealing with time constraints. They discussed the challenges of implementing such strategies, like supporting students in moving between playful approaches and other focused aspects of class. She had a nice discussion with a student teacher who was also from South Africa.

These themes connected to Lesedi's own teaching, as she works to support students in having fun, experimental learning opportunities in science class. She noted that time and curriculum constraints could be in tension with the implementation of these approaches; there's a risk of getting “left behind” if time is diverted from the curricular goals set. The education system prioritizes

particular targets being reached on schedule, which puts pressure on administrators, teachers, and students in a “cycle that goes on all the time.” Some of her colleagues are reluctant to try the playful approaches, given these constraints.

Still, Lesedi has endeavoured to integrate fun into her class, so that she can both support a playful process and get the curricular results. She encourages learners to bring in things from home for experiments, to taste foods to understand pH. She spoke of the importance of fun for her subject, natural sciences.

“...once in a while it should be tried, especially with content subjects. Those subjects are very difficult. And when you are stressed yourself, those learners do. They just become stressed. They feel like the subject is difficult because you are stressed and you want, [claps hands] “Now, now,” ...and you don't even allow them to make those mistakes. And for me, science is about making mistakes, and then re-doing again, make another mistake and do until you get the correct thing. So at the end of the day, fun is about allowing mistakes, and with us, it's difficult for us to allow those mistakes, because if you allow that mistake, you're going back, you're not going to finish on time...That is the main challenge.”

One of the valuable aspects of LCL for Lesedi was the positive approach she saw amongst her peers, in the face of challenges. In both the live events and the forum (which she read, but didn't post much in), she saw people coming up with solutions for their classrooms.

“[Reading people's forum posts] was nice because people would say their views and you learn one or two things from that also, it was a good forum to see proposed views. And also sometimes it changes your way of thinking, you know...I know we sometimes have complained a lot...but when you hear other people being so positive, you're like, you know what, I can do this. You become positive yourself...”

This positive mindset was one of her main takeaways, which she saw as making it easier to be “open minded to solutions.” She said, “The first line of our work is those learners. We must find a way to make them feel comfortable, make them understand...it is always important to be positive regardless of the challenges we have.”

Lesedi's experience seemed a balancing act: as a participant, managing to participate when possible in the course while very busy with teaching responsibilities; as a teacher, navigating the implementation of playful approaches with curricular needs. She took a positive, persistent, open minded approach, bolstered by the positivity of her peers in the LCL community. Structurally, the design of LCL seemed to facilitate her flexible engagement — she joined when she could, felt open to switch breakout rooms, and learned from browsing forum posts.

However, there are changes that could improve the experience for her, and perhaps for others from South Africa. She notes the timing as a significant limiting factor: earlier in the calendar year, with events later in the week, would better suit her school calendar. Offering breakout rooms in Swati and Zulu would facilitate more comfortable conversation amongst peers. And she also mentioned network issues, which is a theme we've heard from other participants from South Africa as well. Given the data limits, figuring out ways to reduce the bandwidth of events would make the course, especially its social aspects, accessible to more participants.

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### **\* (France): taking the course solo and at her own pace**

Elise is an informal educator in France. She works as a ludothécaire: a specialist educator who supports free play-based learning in public spaces, such as libraries. The ludothèque [“toy library”] approach she uses follows the ESAR system (Garon et al., 1982 / 2002), a framework partially inspired by Piaget (1945). Elise explained that ESAR stands for four classifications of play: *exercice*, where you “move your body...like a bicycle”; *symbolique*, which is pretend play and storytelling; *assemblage*, for building (such as with LEGO bricks); and *règles*, or games with rules, such as Monopoly and other board games. The ludothèque operates as a kind of pop-up space within a public environment, with four areas for each of these types of play. Elise has all the materials in her car, and drives to a given city to set up the space, and engage participating families for the day.

But at the beginning of the pandemic in 2020, quarantine meant that Elise was unable to go to work. She started looking online for MOOCs about learning, and took one offered by Harvard; that course pointed to a video about MIT's work with Scratch as an additional resource. Elise was impressed by Mitch Resnick's enthusiasm for the subject, and she was glad to see a research group of MIT's stature working on creative learning, which connects with her interest in “free play.” She had spent time in Canada, and with homeschooling families, where she had seen related pedagogical approaches, and she has worked to create a playful context in her practice as a ludothécaire. But she has found limited interest in such approaches in her experiences in France, noting that “free play, free learning and creative learning” are “not very popular.” In France, she has found, “it's very traditional” — with many people thinking about learning as “very hard work.” So she was “very enthusiastic to see a group of researchers” with this other approach.

Elise engaged with the course twice during the pandemic, in both the spring and fall 2020 rounds. She watched the videos, read the resources, and explored Scratch with her child. In the first round, she introduced herself in the forum, but otherwise she didn't get to engage with the community during her time in the course.

“But I didn't speak with others... because I am not very fluent in English and it's difficult. And sometimes...it's difficult for me to understand...the way of the forum and things like

that. It's not very clear sometimes. So I just took this information, but I didn't...mix with other people.”

Elise shared several factors inhibiting her participation in the community. Language was one: she didn't feel fully comfortable with English, and she thinks she might not have seen many French people in the forum — an observation in keeping with what we as organizers have seen over the years, with relatively few participants joining from French-speaking countries, despite French being one of the supported languages in the course (in terms of translations for materials, a designated forum section, and sometimes designated breakout rooms, when we had participant need and facilitator capacity).

Another factor was confusion with the forum, both in terms of format and pacing. She said, “It was difficult for me to communicate in the forum,” noting that she also was unsure if it was “too late” to write in a given section, because she was moving at her own pace through the materials, and sometimes the bulk of participants may have moved onto another topic as the weeks passed. “I was lost,” she said. She noticed that we facilitators were “very encouraging” that people participate, but “it was quite confusing for me.”

I asked if it would have been preferable for her to be able to meet people in other ways, like videoconference meetings or Facebook, and she affirmed that for her personally, it might be easier to follow along with a creative learning group that way — though she noted many people don't want to use Facebook. She didn't join live events, such as LCL chat or WeScratch — “it was complicated” time-wise since she has children — and she also wasn't clear on what some of the live events were about. Thus, Elise's learning experience in LCL was mostly a solo one — though she shared aspects of it with her family, such as learning Scratch with her child, and talking about her technology explorations with her husband.

Elise was also trying to get a sense of the core ideas of the class, and that was a priority for her before trying to engage in the community aspects. She said that “...the first time, I didn't know, I didn't have any idea about this class, so I needed to learn more. Right now I have a more clear idea.” Now that she's spent the time, she wants to “exchange with people” to learn about how they are developing creative learning activities in their practices. She said, “So maybe right now, I would like to...search or to look...in the forum. But in the beginning...I just needed to know more about creative learning.”

Now that she's had more time to explore the concepts, Elise is interested in learning more about how others apply these ideas in their work — particularly “concrete examples,” to clarify how it could be put into practice. She is also interested in discussing evaluation approaches for this work. From our conversation, it seemed possible that if she were to participate again, she might be ready to join discussions — as she is already considering spending more time in the forum, now that she feels situated and has specific questions she is pursuing. But the relative lack of French-speaking

participants and the forum format may continue to be barriers to her experience, without changes; we could also provide participants with more information and guidance about peer opportunities, such as the live events and the forum.

Given that her experience was more “course” than “community,” I was curious to learn about what aspects of participating were most valuable to her. She shared, “For me, the principal thing I learned is about technology, about coding, about informatique [computer science].” She had previously been considering incorporating videogames into the ludothèque, but she wasn’t sure how to approach it. LCL introduced other ideas — not just about technologies themselves, but also how they can connect to creative learning approaches.

“But with this class, I started to think that maybe instead of introducing video games, maybe I could introduce coding, activities, Scratch, but not only Scratch....

And I was very happy to see the connection [between] new technologies and a very innovative way of seeing, you know, education and learning....I am reading the book of Mitchel [Resnick] about Lifelong Kindergarten. And when I read this book, I told [myself], ‘But it’s like in ludothèque!’ ....when they start to climb or to build a tower, it’s a project, a little one...”

Elise saw strong connections between the creative learning approaches in LCL, such as the 4Ps framework, and her existing practices with free play and the ESAR approach in the ludothèque. Like some other educators I’ve spoken with, she seemed to find it exciting and validating to discover that MIT was encouraging approaches she uses herself — and this credibility could also be useful for those supporting her work. Again, she had found that such approaches were not commonplace in France, and noted that evaluation is also a barrier to trying this different approach:

“I think if you want to live a creative learning life...you have to be confident. You have to, because it’s quite difficult to evaluate really.”

She is interested in continuing to explore how she might evaluate creative learning in her context, and is seeking chances to engage with other practitioners and learn from their examples. She’s also hoping that by introducing new activities and technologies, such as coding, robotics, and construction activities, that she might be able to attract a wider age range of participants: right now typically children over age eight or nine might be less inclined to engage with the ludothèque materials, but she thinks it could “be more attractive for them” if new technologies were incorporated, and that this could also support families who don’t have access to those technologies at home.

Elise’s experience in LCL stands out from the other conversations I had, in that the community did not play a significant role for her — instead, she collaborated and discussed the course with her family. In some ways, her experience illustrates a tension between agentic “directing

your own path” and the community “shared experience” — she was primarily focused on engaging with the materials themselves, and moving at her own pace, and worried it was too late to post in the forum if others had moved onto the following week’s topics. Furthermore, she engaged in this way twice — moving through the materials, and trying out Scratch with her son. Now that she is grounded in these concepts and technologies, she is interested in looking into the course community in the future, to learn more about others’ approaches. In this way, her experience also shows the value of a long-term environment: that someone like Elise could take her time (in this case, a year) to get to know materials and check out a situation before potentially trying to engage socially.

Her experience also emphasizes the importance of language in participants’ experiences. Elise and I had our conversation for this research in English, but she didn’t really feel comfortable engaging in the course spaces in English, and didn’t remember seeing others participating in French. The translated course materials website provided her with resources, but when it came to a social experience, the language aspect was a big barrier. To better support French-speaking participants, we would need to do more outreach work — because a critical mass of people are really needed to sustain a language space, whether in a forum subsection, or in live event breakouts. Building on her experience, and others who have shared language barriers, we can continue our work to sustain language communities in the course. Translation can provide access to materials and ideas, but language access to the full LCL experience requires peers, too.

Elise’s work creating richly playful contexts for youth and families in public spaces has strong connections to the topics of the course — and her explorations of evaluation and technology integration and access would be relevant to many in the community. There are many people who sign up for LCL but who don’t engage in community spaces — and her experience highlights some of the reasons that could contribute to that, though she still had a fruitful learning experience. I hope that we can create a context that works well for her potential future engagement — and for others who have been exploring the course on their own.



### **Ariadne (Brazil): Excited about social, local, and synchronous learning**

Ariadne is a public school teacher in Brazil. She first encountered the creative learning pedagogy through a local, in-person course, organized by the Brazilian Creative Learning Network (BCLN) in 2019. Since 2015, the BCLN has engaged thousands of Brazilian educators in creative learning practices, by designing activities, technologies, materials, events, and professional development initiatives for public schools, afterschool centers, and families. We started our conversation by talking about Ariadne’s first experience with the creative learning approach, in person with the BCLN; later in this section, I’ll discuss how that led to (and compared with) the LCL global experience.

In the BCLN event, participants spent two days exploring the 4P's of creative learning framework, and engaging in hands-on activities, including making representations of a “creative village” with low-cost materials, and exploring ideas of civic life, in an introductory workshop.



*Figure 12. A “Creative Village” workshop for educators, organized by the BCLN in 2019 (photo by Brazilian Creative Learning Network, used with permission, all rights reserved to BCLN)*



*Figure 13. The creative village built by students at EEEM Santa Rita (photo by Ariadne, used with permission, all rights reserved to her)*

Ariadne was greatly affected by the workshop experience. She told me, “I think the theory is perfect because it's learning while you're playing with the things, and while you are doing the thing... It was so simple.” She went back to her school and immediately started advocating for a space to do a similar village activity with her ninth-grade students.

“I got so excited...I said, well, I have to do this with my students, they're going to get crazy about it, it was so cheap to do it. We just needed a place. The school provided us a place...a very big room...and we started to build some villages, but I put in some other things that I didn't learn in the course...We did Google sites for each village, with a whole story, politics, economy...”

“They started to discuss a lot of social things and economic details, and they realized lots of things. But it took the whole year to do it.”

She told me, “Because of this course [with BCLN] and all the theory, I went to my school and did the creative village there...I started doing something, instead of just, going to my classroom, between the book and the things I was doing.”

Because of the pandemic, Ariadne and her students now haven't accessed their creative village in a year — she has been teaching online with Google classroom instead. She herself has become an online learner, too — and in her Internet searches for more opportunities around creative learning, found Learning Creative Learning.

In comparison to the two-day in-person event, the six-week online Learning Creative Learning course was “nice” but a “bit difficult” for Ariadne. She appreciated the chance to get to know “lots of different people,” but she was unfamiliar with the discussion forum platform used; the course website listed “so many tasks”; and she was very busy with online teaching. Given that she was already familiar with (and incorporating) the learning theory, she decided not to prioritize the online materials: “I thought, I had seen that before.” The course-like aspects of LCL — such as the website readings about the learning theory — felt too familiar to capture her curiosity, and the length and bulk of the course too much to take on.

What did captivate her was the online events — particularly the WeScratch workshops. Her son uses Scratch, and she wanted to get involved more herself.

“Then I went to the online — it's not a course, it's a production. It was amazing because the platform is wonderful. You go to a room and you do your own Scratch... When we came back [to the main room], [the facilitators] chose mine, and they showed everybody. I was — “Oh! It was me! I did that.”

"I always call my son, "Come to see, I did something on Scratch!" Scratch was unbelievable. I want to do something with Scratch [with students], but it's difficult. We...don't have [so many] computers at my school."

Despite the limited computers at her school, Ariadne wished that young people were invited to WeScratch workshops, too, feeling that they would benefit from the excitement of the experience. She also enjoyed connecting with the global community through it.

"I love to meet other people through these meetings, because you know people and you know why...those persons are there, and you have something in common with them. Everybody is there to learn something, to share something...I get out from a meeting like this learning much more than I got in."

She did encounter some challenges with language in the events:

"I love it. But I'm not that fluent in English.. So sometimes there is something that I don't understand, and people don't understand me. And sometimes I have a word that I really want to say it, but I don't know how, and sometimes we use Google [translation] tools later, but you don't have the time [and others keep talking] and you lost the time, but it's okay."

She couldn't remember if she was sometimes in the English-speaking rooms (versus the Portuguese-speaking rooms) on purpose:

"I don't remember if I chose something with English to challenge myself...I don't remember. I just got there. It was a whole new world, you know, so I was [thinking], "What's this? Oh, this one!"

Ariadne's recollections reflect the lively and convivial nature of the events — people from all over chatting, sharing, jumping into rooms, making and talking and sharing.

Ariadne's experiences with creative learning shows the power of social and synchronous learning experiences, online and off — both the in-person BCLN workshop, and the online WeScratch workshops, gave her a glimpse into an exciting world, something new to create, and opportunities to learn from educators with shared interests. She decided not to prioritize the six weeks of materials on the LCL website, given her online teaching constraints, and her own priorities as a learner and educator — exercising her agency to pursue opportunities that she saw as particularly rich for her and her students. Her encounter with the creative learning approach appears to have possibly further sparked her agency in the classroom — she "started doing something" beyond her previous methods of teaching.

When she had those powerful experiences, she also immediately moved to replicate them for her own students: creating villages with her ninth graders; and advocating to me for WeScratch to be opened up to youth. One way she puts ideas into practice is to bring students into a space she herself is excited about — discovering and participating in “a whole new world,” an engaging atmosphere and experience.



### **Njeri\* (Kenya): Highly engaged as a peripheral participant**

Njeri is an afterschool educator in Kenya, who teaches her students Scratch. She learned about the LCL course from another Scratch educator in Kenya, who is active in developing the local Scratch community and emailed her suggesting she take the course. She said, “I was curious to know what other people are doing,” and that it wasn’t always easy to get such experiences, so it made sense to take advantage of the opportunity.

Throughout the course, Njeri pursued her goal of learning about other educators’ work. She participated in a regular schedule: joining LCL chats on Mondays, and reading the forum threads on Thursdays, though she got too busy to participate in the final weeks. In both the chats and the forum, her primary role was as an observer. In the live events, she would watch the facilitators on the livestream, and sometimes join the breakout rooms, but just to watch and listen. Her approach made me think of Lave and Wenger’s (1991) concept of “legitimate peripheral participation” — that in a community of practice, a person can learn through the process of “mov[ing] toward full participation” — a “growing involvement” in a social context (pgs. 29, 37).

She attributed her peripheral participation to both personal preference and time: she wanted a chance to check out the situation before engaging more. Joining the sessions as a listener gave her a chance to understand the course environment first, and fulfilled her main goal of learning about other educators’ work.

“If I had attended the last two classes, I guess I would have interacted. You know, some of us, we try to observe first before now we get into it and start interacting. I’m that kind of person... But for the last two classes, I was busy and I couldn’t do that.”

In regards to using the forum, on which all posts are public, she similarly stated that she was a more “introverted person,” and “prefer[s] reading to writing.” But she kept up with learning from posts by others: “I used to go back on Thursdays and see if there’s anything.” Njeri considered her peripheral participation to be fruitful: “I learned a lot, I guess just from listening to other people and how they do it.” She said, “My main goal was to learn something...every day...and that was really achieved.”

Despite the limited time to acclimate and her introversion, Njeri actually did engage as an active participant eventually — when she saw that someone else from her country, Kenya, had joined the event.

“I joined just every Monday and watched you guys teach it and try to do it. But I never — I was just a participant. I was just a listener until the third week. That's when I really signed in.”

“...It was just because I saw a fellow Kenyan who was like, "I'm here," And I'm like, "Yeah, we're in this together!" And so I decided, [laughs] let me just sign in and then let me participate in this one.”

Njeri's experience shows the power of peripheral participation — and also highlights the range of factors that may affect someone's readiness to engage. In her case, she identifies as introverted and prefers to be able to get a sense of the situation first — making the flexible, open course structures useful, as a participant has agency to observe and check out others' interactions first. The open forum makes it easy to read about peers' work, and learn who else is joining the course. The live event format enables you to engage more gradually over time: you can first sign on and watch the livestream and read the chat, and then choose to write in the chat or join a breakout room when you feel comfortable. Finally, even when joining a breakout room, the structure affords varied forms and levels of participation: the interface prominently features the notepad, so one is free to just write, not talk, if they wish; and people can mute or turn off their video screens, which are already a relatively small part of the interface compared to other video-chat platforms. Between personal preferences, work and home contexts, internet bandwidth, technical issues, and language comfort, it is typical for a breakout room to have people engaging in such varied ways.

In Njeri's case, time was a critical factor mediating engagement: she wanted to take time to observe and understand the context before engaging further — and she was too busy to join at all towards the end of the course. Her participation pattern mirrors that of many others, as we frequently see a drop-off in engagement in the final two weeks. The length of the course — six to seven weeks — may be too long for some to sustain a commitment given teaching responsibilities. And yet, having enough time is important for building community, and in Njeri's case, getting a sense of the structures, environment, and social context.

But notably, her desire to take more time to acclimate was alleviated when she saw someone from Kenya join a breakout room. Her excitement to see a peer she felt connected to highlights the importance of identity and personal connection, as factors mediating someone's readiness to engage in a space. Njeri attempted to engage a larger local cohort, inviting colleagues to join, but they said they were too busy this time. She shared her desire for more local community engagement in general around creative learning ideas and teaching with Scratch.

The extent to which personal preference, time, and identity of those in the room affected Njeri's participation also illuminates the limits of our understanding, as course facilitators, of what might be affecting any given participant in their engagement. The course design prioritizes participants' agency to engage as they wish — but does the open, flexible structure risk masking variables at play? Is a person quiet because they are feeling disengaged, shy, uncomfortable with the language, not ready yet? Do they not feel a sense of belonging in the group? Do they want more time? What changes would help them feel ready to engage? Better understanding these factors at play can help us design a more engaging and inclusive experience.

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### **Andrew (Canada): Dropping in, connecting, and having fun**

Andrew is a Canadian technology educator. He runs science, engineering, and maker workshops for students in different settings, and teaches teachers how to use technologies in their classrooms, including Scratch. On a given day, he might be bringing bins of laptops, tablets, and programmable technologies to a school or library to teach a workshop to youth; working with a teacher to support them in being more comfortable with a new technology; designing engineering challenges for a high school class; or running an afterschool club.

Andrew has returned over multiple rounds of LCL: he first started in the fall of 2019, and participated in the two subsequent rounds in 2020. He initially joined in hopes of connecting and networking with others, including “learning more about what people are doing with Scratch, or how I can support them.” He'd hoped at the time that there would be more Canadian participants — but he enjoyed meeting others from around the world, and kept coming back. During the 2020 pandemic, LCL became a “chance to connect with people” during the era of working from home.

Over the course of these rounds, Andrew's participation style varied. In 2019, his teaching schedule made it difficult for him to participate in live events, so he engaged more in the forum: sharing project ideas he was working on, such as experiments with circuits and lights; asking questions about Scratch; and reflecting on considerations for integrating these ideas with curriculum goals. He found the forum experience — in which a given thread might have hundreds of participants — somewhat overwhelming.

“If I remember correctly... there's a lot of people that participate on the forums, right, versus coming to the [live] sessions. And so I think when I would post, it would be pretty early in the week. So I would be one of the first to post, and then I would not look at it again, type of thing. And if I did go back, it was like, “Oh my gosh.” Like — it was a lot to go through. And if I wanted to engage with it, I would've had to spend a lot of time reading... I want to engage in it. But it was like overwhelming the amount of opportunities to engage with it or the time commitment that I would have had to engage with it.”

The forum felt like a big time commitment, even though it was a self-directed environment. But it was the participation format that best worked for him schedule-wise at the time. Andrew said, “I know that it's hard to participate in this for teachers because it's during the day,” in reference to the live offerings.

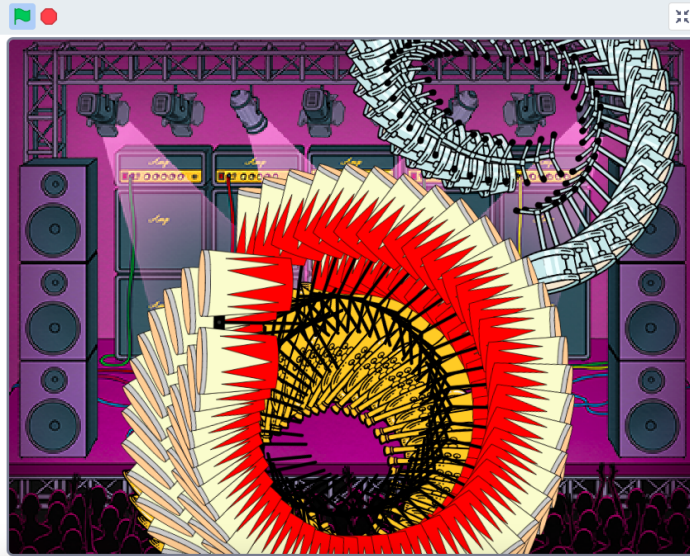
“The way that I interacted with [LCL] over the three times sort of changed. Like the first time I think I only attended one or two of the chats, because being in the forum is a self paced, asynchronous...type of thing. And so I was able to do that. Whereas...attending the live action stuff I needed to not have a workshop, or be out in the field type of thing, to be able to attend.”

The pandemic limited in-person workshops and changed his schedule, so Andrew had more flexibility during work hours (during which the LCL events fall, in his time zone). He found ways to fit live aspects of LCL, such as LCL Chat and WeScratch, into his workday, so he could benefit from “connectedness and to see familiar faces.” Schedule permitting, these live events actually felt like a lighter lift than participating in the forum: “The live stuff was just like an hour here, an hour and a half there, for six weeks, type of thing.” He felt free to participate how he wished, and left the forum for the 2020 rounds:

“I'll participate how I want to participate this time, and it'll just be in the chats and and even then, the chat, sometimes I didn't attend all of them. I tried to go to the WeScratch, because...I found it was fun. Like you get in there and you build or build with people or, you know, just have discussions about building.”

Thus Andrew's participation approach in LCL evolved from a somewhat structured, asynchronous model following the modules, to a more fluid engagement with a live, synchronous community environment. He was dropping in to the live events when available, seizing the opportunity for connection — and fun.

Having fun was a clear theme in Andrew's LCL experience — he said it was “just fun to explore and share.” He enjoyed meeting people from around the world: “It was really cool to work on a project or share and learn from people from South Africa or India or the US.” He liked working on projects, especially in Scratch. And he valued the opportunity to be sharing work with others, especially during the end of the WeScratch workshops, where the facilitators would showcase people's work — he remembered the excitement of the time they chose a musical project of his to highlight.



*Figure 14. Andrew's musical Scratch project, made during WeScratch, which was shared by the facilitators*

For Andrew, LCL seems to be serving as an ongoing space for connecting with others, exchanging ideas, and having fun creating together. Though in the beginning he went through the modules, he perceives it as “more of a community than a course” because he doesn’t feel obligated to submit anything in particular, and engages as he wishes. And rather than specific learning goals, he shows up in pursuit of conversations, and sees what happens: “I would just, you know, chat with people and if someone showed a cool way of doing things and be like, Hey, that's pretty cool. I never thought about that.” He seemed to feel casual, comfortable, and like he was having a good time.

His experience illustrates LCL functioning as an environment: a place where a network of people are connecting, sharing ideas, and working on projects together. Andrew melds his expertise teaching Scratch with his personal enthusiasm for the tool, and in LCL (particularly WeScratch) he can share as both an educator and a creator. In some ways, his experience sounded to me almost like a social co-working environment, following the more structured learning experience in his first round — which he didn’t want to fully revisit, given that the prompts hadn’t changed and it was a greater time commitment. A returning participant like Andrew might benefit from more varied learning opportunities across rounds, in order to maintain a robust learning experience.

His experience also highlights some concerns for educators around the time commitment of the course, and how to make it as manageable as possible. The amount of posts in the forum was overwhelming, contributing to him leaving it in subsequent rounds. The live events were a more manageable time commitment, but only fit into his teaching schedule in the virtual era. Because of the global nature of the course, the events fall at different times of day for different participants, but a varied calendar could allow more teachers to join — and adjustments to the asynchronous platforms could facilitate more manageable ongoing engagement.

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### **Teresa\* (Italy): Connecting colleagues to the community**

Teresa is a long-time educator in Italy. She worked for twenty-two years as an elementary school teacher, and now is part of a group of expert educators working for the government to support schools in the challenges of innovation. She first joined LCL in the fall of 2017, and then returned in the fall of 2020. The course was recommended to her by another Italian participant, and she'd also known one of the organizers on social media.

She joined because she was excited to be part of a community of educators who were pursuing similar approaches. In conversation with my colleague Carmelo Presicce, she spoke about how LCL offered something missing elsewhere in her teaching experience [all quotes translated from Italian]:

Teresa: I just wanted to feel part of something, of someone who shared a particular look, certain values, which maybe in the school, I don't know, it seems absurd, but you are a bit in the minority at times, I don't know...a little in the minority. So...this essentially. To feel "part of" and not feel so different [...]

Carmelo: So, in short, the fact of being part of a community ...

Teresa: To be part, exactly. To feel not in the minority, but to feel normal. To feel normal.

During her first round of the course, Teresa shared projects and reflections in both the Italian and English sections of the course forum. She particularly interacted with other Italian participants, sometimes tagging them in her posts, and exchanging messages. She met others in live events, including a fellow educator whom she befriended and stayed in touch with — eventually even connecting with their classroom for an online project.

In 2020, she decided to revisit LCL with a new perspective. She said, “Now this time I needed inspiration, to relive what I remembered perfectly, it had been a wonderful experience — to dive back into this thing with a different look.” *[all quotes translated from Italian]* She had “strongly decided to participate, because maybe the course was the same, but it was I who changed, or in any case my point of view changed. And so I was interested in participating as a team, as a trainer.” The first time, she'd been participating as an educator seeking a community; this second time, she was joining from her new perspective as someone who supports other educators — and someone bringing those educators into the community. She invited her colleagues to join and participate together, observing and reflecting on it as facilitators themselves.

[Socially] the perspective was different, because the first time I wanted to join a group, a community, to be inspired, this time I tried to bring someone with me... I shared with my colleagues from [location] specifically saying, “I’m about to enroll in this course, who wants to come? I’ve already attended it, but this year it could be interesting to understand how it is organized. For example: This week is on play, have you watched the material? This is the activity.”... The first time it was I who entered a community, but now it was: “I let you enter my community.”

In this second round, Teresa revisited the course materials again, reading the chapter excerpts, and watching the course videos, though she didn’t repeat the activities — she compared her desire to “replay” the course as when “reading a book you loved.” As a learner, she was primarily focused on the design and structure of the course: noticing facilitation moves, the organization, the platforms used, etc. As an organizer herself, she was focused on helping herself and her colleagues collectively change their teaching practices — and she felt there was “movement” indicating the “experience worked.”

One of the shifts for her was getting into an experimental mindset: she noted the live events created a “space of freedom” — for example, the WeScratch workshops involved creating with Scratch on the spot, in a social setting, sometimes in rooms with others who spoke different languages. She was used to being in the teacher’s role, and now she was feeling some resistance to “letting go” of her usual approach in favor of play.

This year I was really sweating. At the beginning it was hard to let myself go [but then] I realized it was instead a point of reflection [...] Because of that emptiness and possibility of movement it was beautiful, at the end of the hour and half, to see that I could pull a thread and say: "Well, actually it was nice to proceed this way. If it had been too structured, this wouldn't have happened." So, the difference was just putting myself on the line. *[all quotes translated from Italian]*

She suggested acknowledging this challenge upfront: “That is, putting it right among the assumptions, the sense of discomfort [...] is normal, it has happened to everyone, even those who thought they were immune, like me... So [facilitators could] just state it.”

In addition to the importance of stating these challenges upfront, Teresa also learned from observing the facilitators in general. She said, “I started to enjoy it a bit and observe...It seemed to me there was a certain style in the [facilitation] approach.” She characterized the facilitation as “a very delicate style, not incisive, never mandatory”; less control and detail-oriented than her typical approach. She noticed a tolerance for silence. Observations throughout the experience impacted how she and her colleagues thought about facilitation: she said, “It has changed, not revolutionized, but it confirmed and then changed some practices in my actions.”

The LCL experience also influenced how Teresa and her colleagues approached distance learning, which they were actively working on strengthening during the pandemic. They started hosting meetings on the same live event platform (Unhangout) and noticed a difference with a collaborative peer format versus webinars: “that tool was revealing.”

Looking back on her effort to bring her colleagues into the community, she concluded it was a success. Her approach reflects the axiom “the medium is the message”: she and her colleagues dove into LCL, and observed themselves as learners, and the organizers as facilitators — seeing how ideas played out in action. They approach work differently now, for example choosing themed workshops for peer teaching amongst educators, and using more collaborative web platforms for events, inspired by the approaches and tools they experienced as learners in LCL. These ideas and approaches were thus further transmitted to other colleagues. She said, “I see signs that there was a change in me and in my colleagues, even if they have not attended, but somehow, second hand, they got something. So, it was very effective.”

Teresa’s experience illuminates the power of getting to experience a learning experience with one’s own peers: together, they were able to consider ideas and put them into practice collaboratively in their home context. She has moved from feeling some sense of isolation in her approach, to finding an online community, to sharing that community with her local colleagues — and thus achieving movement between these two pedagogical worlds, and movement within themselves as facilitators. She is potentially interested in growing this movement even more, and involving more colleagues, and possibly collaborating with an entire school. Regardless of her future role in LCL, she continues to feel an alignment with its community: “This sense of belonging, even as it comes and goes from round to round, is real.”

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## **Reflecting on case studies**

These six stories were amongst twelve in-depth participant explorations — a tiny sample amongst a sea of learners. Under the circumstances, no such sample could be considered “representative” — but I would mention that I think this particular set contains more live event-attendees than a random sample would, based on survey engagement and analytics data.

But I think there is much to be learned from each of their experiences, perspectives, and suggestions. One notable aspect is the significant variance in the nature of their experience, including their interactions with the community. Lesedi, Njeri, and Teresa participated in several aspects, including the materials, events, and forums. Ariadne and Andrew are most engaged in live peer events; Elise moved through the materials on her own, twice. Teresa and Andrew have joined multiple times, and use LCL as a larger network.

There is also considerable variance in how people are engaging with the course ideas and materials. Some see the materials as repeatable — as Elise has, and Lesedi wishes too — while Ariadne felt the ideas were familiar enough following her in-person workshop, and Andrew decided not to revisit much of the modules after his first round. I would argue all of them exercised agency in their choices to engage as they wished — but Elise seemed to hit barriers to engaging in ways that might have been useful to her, such as learning about examples of others' practices in the forum.

They all raise challenges, barriers, and aspects for possible revision that I will subsequently dive into more. Next I'd like to examine directly the central themes of this study, agency and community, and what I've noticed from both these cases, the other participant conversations, course survey findings, and feedback we've received throughout the course.

# Exploring Agency

## Finding personal paths in LCL

Directing your own learning involves identifying personal goals — and having the agency and affordances to pursue them. From my explorations, it seemed that many educators' overall goals within LCL were broad — as described earlier, they wanted to learn new teaching approaches and connect with others. One person I spoke with described her primary motivation as curiosity — learning what others were doing in their practices. Another said, “My primary goal was one, to learn new tricks of the trade, like what are other people doing that I could incorporate into my work. And then really honestly just wanted to be able to connect with people, so I didn't feel so alone in this.” A third educator said, “I guess it's just wanting to immerse yourself in things that you know have positive potential and then see what feels like it can stick or take you forward or something. That's probably the best I can do to explain.”

Thus the participants were in pursuit of new ideas, practices, and peers — and saw LCL as a space they could enter to find them. Rather than pursuing a concrete product at the end, they were approaching the experience with openness to possibilities, and a certain sense of ambiguity — one person wrote their motivation was, “I don't know, what I don't know.” In the context of these goals, enacting agency meant being able to pursue opportunities for these valuable interactions — having chances to find something that sticks.

The scale and multi-faceted nature of LCL meant that it provided a social and pedagogical context which participants could dip into, immerse themselves in, or observe and browse, in pursuit of these ideas, practices, and peers. Within this context, most participants seemed to have a high sense of agency, and to be displaying agentic behavior by choosing their own engagement styles and paths within the larger course experience. In surveys, a majority agreed with statements like “I can direct my own learning in LCL” (77%) and “I can express myself in LCL” (76%) (the second largest proportions responding neutrally to these prompts; 5.7% disagreed with the self-direction statement, and 2.8% disagreed with the self-expression statement). The self-directed nature of their experience was particularly visible in their engagement styles — people participated in different aspects of LCL, at different paces and frequencies, choosing variably when to watch, read, comment, question, create, share, or talk.

When I asked about how LCL compared to other professional development experiences, one interviewed teacher cited the flexible structures as something that set it apart:

“...it's also got that very much, create your own reality kind of a feel to it, both in terms of how many of the readings do you want to do, what do you have time for opting in and

opting out on every week.... Open-ended, free-flowing... those might just be some words that I would use.”

When I asked her about her sense of agency in the course, another educator similarly cited these elements of choice:

“Very much so, because I got to...pick like, which forums did I read all the way to the bottom? Which ones did I reply to? Which projects did I do?...There were deadlines, but it wasn't graded. So if I needed to skip something, yeah, I definitely felt there was a really good sense of agency.”

Participants described deciding what weeks to join based on personal and professional schedules, and joining the events for which they felt most available, interested, or prepared. One educator said, “It is amazing how the course, even global, is so personalized.” *[translated from Portuguese]* Another participant said, “Maybe you're only interested in learning about play. And so you just want to go to that one lesson maybe...and then [if] you don't, it's fine.” In surveys, participants indicated engaging in a variety of formats — some who were just reading materials, some who joined every aspect they could find. Some people repeated the same elements every week; some people tried different formats here and there, or not at all. Here you can see the results of a survey from the most recent round, where the most common form of engagement was reading and watching the course website materials:

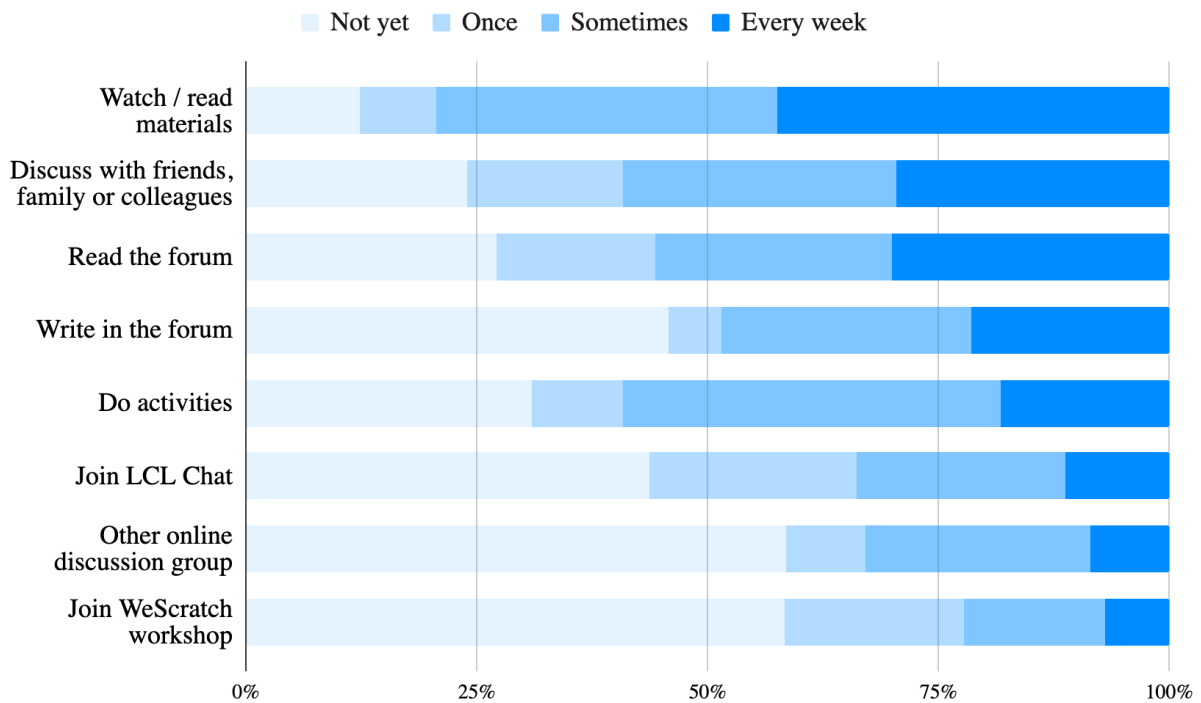


Figure 15. Frequency of forms of participation, from survey, n=73, in descending order by weekly engagement

Amongst these categories, respondents averaged around five different forms of engagement — that is, ways they indicated participating at least once (mean = 4.86, median = 5, range = 0-8, standard deviation: 2.17). Out of the 73 respondents, two people indicated they hadn't participated in any of these formats yet; nine people reported engaging in all of them at some time.

Another way that participants displayed agentic behavior was in their project work. Participants created projects in response to the weekly activities that connected to their personal and professional lives, using materials from their classrooms and their homes, sharing things from that week and months previous. It was clear that participants were choosing to work on something they wanted to work on — whether that was due to personal interest, or professional applicability. One educator specified that he wanted his activity work to “serve more than one audience,” and chose to work on a project that could support his own students, as well as be something to share with others in LCL. Another chose to forgo making something for the activities, but shared related work that her children were creating at home, and reflected on their experiences instead.

### **Predictable, open structures enables selective participation**

As described, the availability of choices supported many learners in feeling a sense of agency, and they directed their paths within LCL. These choices are rendered both structurally and via communications. LCL provides a variety of means of engagement — synchronous and social events, and asynchronous social and self-directed elements such as the forums, activities, and resources. The platforms are open for browsing. Activities are designed to be open-ended and can involve your choice of materials. The course emails repeatedly invite participants to engage with whatever they wish, at their own pace, and that it's never too late to join. People are welcome to write in forum threads regardless of if they wrote previously, and in live events, newcomers are invited every week.

The course design can enable newcomers and sporadic attendees — each module can stand alone, as they focus on different aspects of the framework (introductions, projects, passion, peers, play, and creative society), but they all have the same organizing structure. The forum and events have a mix of first-timers and familiar faces; in the forum, one can browse to sense the scene before posting. In live events, the structure is the same every time, and it's explained fresh every time, for newcomers joining. One teacher observed that these “predictable” design elements created a structure that made it easier to “opt in and out” of aspects of the course.

“I think there's some nice beauty to the fact that, you know, there are four elements, the four Ps, that is an organizational structure right there, and then structure the course around them, and then having a somewhat predictable... And again, I can't speak to how predictable it was because I didn't read them all. But like, the prompting structure of, okay, this week, your assignment is to think about this and to post this. And that's an organizational structure, and the organizational structure of the weekly thing where the facilitators talk and there's chat on the side and then you choose a breakout room and then you come back and debrief. That's

an organizational structure. So all of that, I think, especially if you're only coming once in a while, being predictable makes it possible to opt in and out and not feel like you're behind or missed some key thing...I think that's really a nice [aspect]."

This predictability can help participants learn and navigate the existing structures — getting a sense of the scene, structurally and socially — so they can gauge which elements will be of most use to them.

### **Lack of external evaluation may render flexibility, or limits, to engagement**

One aspect I've described — the sense of having choices in LCL — is also related to the absence of other typical course structures that might dictate behavior. As one participant said earlier, "it wasn't graded," there were no checkpoints, quizzes, or badges, and no one is keeping track of individuals' participation (besides those who consented to joining this in-depth study, in which case we shared the aforementioned learning trajectory documents). Participants are invited to reflect with peers every week in the forum and live events, and to share how their thinking has changed at the end of the course through an "I used to think...and now I think" exercise. Thus, it is up to the learner to decide to participate in personal and collective evaluation and reflective practices, potentially further developing their agency in the course — they are directing their own learning, and their own evaluation.

The lack of tracking and requirements connects also to the absence of a certification process, which another educator raised as a factor in how he approached engagement. In some professional development (PD) courses, participants who complete requirements receive a certificate at the end, which teachers may count towards PD credit hour requirements for maintaining licensure in their education system. He said, "There was no, like you fulfilled 20 hours of personal PD... so it was, you just play how you want to play." The absence of these certification benefits may influence teachers in selectively choosing what they most want to engage with — what interests them, what's enjoyable, what relates to their problems of practice. It may remove some pressure and lower the commitment, so an educator can jump in and out within their limited time availability. It also could mean that some educators, particularly public school classroom teachers, are more limited in how much they can engage, or wouldn't sign up in the first place — for some, earning PD credits would allow them to dedicate those hours, which otherwise they need to fulfill elsewhere.

### **The biggest obstacle is time**

The time constraints teachers face could mean that some aspects that I've described as agentic behavior, especially as seen in the diverse patterns of engagement, is a behavior of both opportunity and necessity. In the years of the course, we've repeatedly heard teachers cite time as their biggest challenge, and main barrier to participation; some of our flexible design choices are influenced by this barrier, in hopes that it will facilitate teachers participating whenever they can. For

some teachers, this time crunch has been exacerbated by the pandemic, professionally and personally. Multiple educators mentioned trying to recruit colleagues to join LCL, but they declined for time reasons.

“I keep coming back to time and I hate to use that as an excuse, but it's definitely a huge part of my reality and other people's ... I think COVID has everybody so overwhelmed that you have to cut back rather than add to...unless you knew from the past that it worked for you.”

Given these time constraints, and the lack of dedicated PD hours, educators in LCL are usually navigating constrained schedules. For some the pandemic meant more flexibility, while for others, more work. The flexible nature of LCL and time constraints seems to have meant that many educators both could, and had to, be judicious in determining their participation, figuring out what to prioritize and when to join.

Time issues appeared to be contributing to feelings of disengagement and disconnection for some, and inability to fully pursue their goals — rendering it the main barrier for both dimensions studied, agency and community. In comments of those who felt disconnected or disengaged, it came up repeatedly: schedule constraints, timezone clashes, and broader seasonal incompatibility. Someone wrote, “I’m trying, but sometimes there’s no time.” Another participant said, “I felt part of a community sort of, but I feel like I would have felt more part of it, if I was more participatory, like if I had done the projects and if I had commented more...I would've felt embraced.” Several people said they hoped to do more next time, anticipating further ways they’d like to engage — spending more time in the forum, learning from others, or making it further through the weekly modules.

## Exploring Community

In our conversations, I frequently heard two desires from participants: to learn from other educators' work, and to connect with a community of people with shared interests. These interactions happened amongst both global and local peers — in a course of this scale, “local” usually meaning peers in the same country. In this section, I’ll explore elements that facilitated and inhibited peer connections and sense of community, again drawing on and quoting case study participants, interviews, and survey responses.

### Feeling connected and inspired

LCL seemed to function as a space of commonalities and inspiration. Several of the educators interviewed spoke of a kind of isolation in their own contexts — a feeling that their creative approaches were not popular or valued in their own school district, or in their country at large. Lesedi spoke about the challenges of balancing these strategies with the results-driven framework of the South African education system. Teresa joined because of her desire “to feel ‘part of’ and not feel so different” — feeling like her approach seemed to be “in the minority” in her context in Italy, while she felt a “sense of belonging” in LCL. A US-based participant shared, “My primary goal was one, to learn new tricks of the trade, like what are other people doing that I could incorporate into my work. And then really honestly just wanted to be able to connect with people, so I didn't feel so alone in this... people kind of stare at you, like you have two heads or something because it's just so not what is done.” Another US participant said, “There's also a little alternative-ness to [LCL], I think, that I find — inspiring or relieving or something like that.”

Inspiration, belonging, relief — these feelings buffeted some participants in their explorations of shared questions and challenges. Their experiences with the community appeared to potentially help them enact their agency as educators, in their practices beyond the course — learning open mindsets, approaches, and possibilities for their teaching contexts. Lesedi talked about how her LCL peers' positive mindset helped her be open to finding new solutions in the classroom. Another participant talked about feeling truly different as an educator because of LCL, and wanting creativity to be “reborn in me and not let it be erased in my students!” Njeri said, “It's a place where you broaden your thinking capacity, and learn from others, [and] also you share what you've learned... you get a lot of ideas, through sharing ideas.” Ariadne said,

“I love to meet other people through these meetings because you know people and you know why...those persons are there, and you have something in common with them. Everybody is there to learn something, to share something.”

A teacher from Spain said, “This course allows you to realize that people are not isolated... So it's very, very important, *now*.” He particularly enjoyed connecting with others from different local

contexts, “because you can think about what you are doing in your class. You can see that it's possible to do different things.” His reference to its importance *now* points to a sense of heightened need for a connected community during the pandemic.

The global nature of the course, particularly the multilingual facilitation and participation structures, makes it accessible to more learners — and it provides a way for educators to feel connected to peers and develop their practices, especially if they are feeling isolated in their own education systems. Elise spoke of the unpopularity of play-based approaches in France. A Japanese participant similarly shared that “few people are interested in creative learning” in Japan. A Brazilian educator shared, “I believe that the global aspect was important for us to get to know other cultures throughout the presentations and also to make us feel a sense of belonging” *[translated from Portuguese]*.

It also provides a diversity of perspectives and practices, with opportunities to learn from how other places are putting ideas into practice. Another educator shared, “Connecting and hearing about educational experiences in other parts of the world helps my growth as a teacher.” *[translated from Spanish]* Another participant said, “This exchange with people from areas totally different from ours, adds so much to our backpacks!” *[translated from Portuguese]*

### **An open door to ideas, practices, and peers**

What supports this peer learning and connectedness? The sense of commonalities and shared interests comes up repeatedly — in their role as educators, but in particular educators who are broadly interested in a pedagogical approach. Educators around the world are constantly developing their practices, and exploring effective ways of motivating, engaging, and supporting their learners. For some, the 4Ps of Creative Learning framework feels like a discovery, a new approach that can improve their teaching. For others, the framework and course are a source of validation for methods they are already practicing. And for yet others, the ideas are simply aligned enough with their pedagogy that it makes sense for them to engage with the related community. The framework has alignment with many other project-based, collaborative, interest-driven, play-based, STEM and arts teaching practices.

One educator, who joined the course because she felt she was “missing something that could motivate students to want to learn,” described her learning in LCL as “an open door, a hope of being able to apply what I learned there with my students.” *[translated from Portuguese]* The course can serve as an open door to the ideas and practices, and also to a community of people with similar interests and work.

## Facilitating peer exchange

Upon bringing together people with common interests and work, the learning environment then facilitates peer exchange amongst participants. The forum and live events are both structured for peer sharing and reflecting. The activity and reflection prompts themselves are personal: inviting participants to share their own interests, opinions, experiences, and implementation approaches, as opposed to, for example, analyzing and synthesizing the core texts. The learner themselves is core to the discussion.

When I asked her what she thought about the “course and community” framing versus a traditional class, Njeri spoke about how the peer dynamics and agency to choose your breakout groups supported a sense of community:

“It actually didn't feel like a class most of the time, because in a class you expect a teacher-student relation, and it was more of like, ‘We are discussing this.’  
... the way you guys grouped us into the languages was more of a community. You understand this better, so you'd rather go to [that language room]. Rather than a class where you are told, “You have to stick to English, you have to stick to Spanish.” So that actually ensured it was more of a community rather than a class. And actually taking ideas from everyone —that's more of a community than a class.”

Njeri pointed to “how to handle online classes, how to socialize with people, how to behave in a community” as some of the most valuable takeaways for her participation. This learner-centered orientation also manifested in the asynchronous forums for participants. One shared, “It is enriching to read about everyone's experience.” Another said that the forums “helped to feel support[ed].” Someone else said of their peers, “I get to see from them what they have tried, and learn from their experiences.”

## Language and local communities

Though many valued the global aspects of the course, participants from around the world often spoke of a desire for stronger local networks within it. In the context of LCL, “local” typically means at the country level — someone who shares the same overall education system and broader context. There are particularly strong localized networks for Brazilian and Italian participants. There is also a sense of community amongst Spanish-speaking participants, supported by a global network of facilitators with strong roots in Latin America. As previously described, Ariadne first encountered these pedagogical ideas through a workshop hosted by the Brazilian Creative Learning Network, which also works closely with the Learning Creative Learning team, and has a related pedagogical approach, after which she joined LCL and got involved with the WeScratch workshops. Another participant I spoke with had the opposite trajectory: finding LCL online, and then through it meeting Brazilian facilitators who were also involved in the BCLN — and now she is involved with

their local network. She said, “Meeting people from my city on a global course was amazing!” *[translated from Portuguese]* Both of these participants seemed to benefit from the richly supported and social networks in their local context.

Learning with local peers has many obvious benefits. Learning with others who share an education context can strengthen the applicability of their approaches to your own work. A given education system may have its particular challenges, affordances, and constraints, and you can discuss strategies together. You may even be able to *implement* strategies together: Teresa brought her Italian colleagues into the LCL community, and they are now collaboratively putting some of these ideas into practice in their local work.

Another critical aspect is language. Participants speak many languages, but aspects of the course design center English. Based on Google analytics for the course website, which indicates 31% of sessions had the browser set to English in the last four years, I believe that English is not the first language of a majority of participants (though many also speak it as a second language).

The course organizers are based primarily at MIT in the United States, and design together in English (though it is a second language for many of them). The course website supports many languages, as set by your browser preference or toggled by the user, for a hopefully comprehensive experience. However, the social platforms themselves — Unhangout (for live events) and Discourse (for the forum) — are both designed primarily in English, including website URLs, page headings, and parts of the navigation tools — though sections and rooms can be labeled appropriately by language. The primary module threads in the forum are labeled in English, with links to the analogous threads in other languages within the language community sections — though participants respond in many languages in the main threads. And in the live events, the opening live-stream introduction is primarily in English, though facilitators often offer greetings in their own primary languages, and other facilitators live translate aspects in the chat.

Language inclusion is a core design goal of LCL, and has been somewhat successful in that participants speaking many languages have participated and valued their experience. But language barriers always come up in course feedback, including in this study, and can contribute to people feeling more hesitant to engage in community aspects of LCL, and to confusion when navigating the forum and live events. One participant wrote, “For me, language is a barrier: I am not an expert in English and the live broadcasts put me in some difficulty (being in English), but they are also a stimulus to improve my knowledge.” *[translated from Italian]* Elise cited difficulties with English as a factor inhibiting her engagement with the peer aspects of the course — though there is French translation, we haven’t had a substantial sub-community of French-speaking participants. As quoted earlier, Ariadne, who often participated in her primary language of Portuguese, described her experience sometimes joining English-speaking rooms in live events, and meeting people from other countries:

“I love it. But I'm not that fluent in English to do so. So sometimes there [is] something that I don't understand and people don't understand me. And sometimes I have a word that I really want to say it, but I don't know how, and sometimes we use Google [translation] tools later, but you don't have the time, and some other persons go there and, said something else and you lost the time, but it's okay. I love to meet other people through these meetings...”

In addition to language, issues of timing can limit participants' engagement. From a localization perspective, time-zones and school calendars can both be factors that clash with the current course schedule. Lesedi indicated that the fall course schedule fell during a particularly busy time of the South African school year, and earlier in the calendar year would be preferable. Another participant shared,

“LCL is a great initiative. But I wish the timings were more accessible for people across the globe. For example, summer (May June) would be more suitable as it is Holiday time in India and there is more time to engage with the community.”

I spoke with an educator in Japan who has participated for three rounds. When he first joined, there was a localized Japanese online meetup available, organized by former co-organizer Yumiko Murai at a convenient time in the Japanese time zone. In recent rounds, without the meetup, the LCL events have been occurring in the middle of the night for Japan, making it extremely difficult to join, so subsequently he had mostly been moving through the materials on his own. Someone else wrote, “Thanks so much [for] your hard work from HK [Hong Kong]. Time zone difference is my obstacle to join...” They chose to watch the course videos instead; another person requested recordings of the live sessions so they could watch.

These factors — local context, education systems, language, time zones and calendars — all contribute to accessibility and applicability of LCL to potential participants' needs, and render localized sub-community networks particularly valuable. Multiple participants expressed a desire for learning from peer examples within their local contexts. As discussed earlier, Lesedi said she would like to have the option to switch between global English discussions and local discussions in Swati or Zulu. She noted, “And remember sometimes when you speak, when people speak in their languages, they become more comfortable.” If she were to speak with African teachers who understood those languages, it would be “easier for us to communicate and share ideas,” and provide her an opportunity to connect and share with people from other provinces of South Africa whom she hadn't met.

When I asked her for suggestions on aspects that were challenging or she wished were different, Njeri also brought up local communities:

“I guess we can try and make some communities within the local like countries, for example, in Kenya, it would be really nice to know my fellow Scratch coders and all that, at least plan

for one conference a year. We don't have to be waiting for when Scratch Africa will be there and we have Scratch Kenya. We can actually just meet up.”

The Scratch Africa conference was hosted by local organizers in Kenya in 2019, and served as a gathering point for many educators including Njeri, who later reconnected with some conference attendees in LCL. She would be excited to have more ongoing community engagement of educators interested in these ideas, in her country.

Njeri’s experience also highlights the importance of identity and personal connection in participant experience. As previously discussed, she had been joining calls mainly as a listener, but was excited to engage when she saw someone else from Kenya in a breakout room — “Yeah, we're in this together!” Seeing a peer whom she felt a connection to made her feel more ready to participate. Stronger localized networks within the course can make it more likely that someone will meet community peers who share aspects of their identities, and with whom they can feel a sense of togetherness.

Thus, for creating a connected, inclusive, meaningful environment, local networks can improve the participant experience — and focusing design choices on particular local and language needs could improve the experience for some facing barriers.

### **Seeking individual connections**

Within the overall global community, I noticed some variance in terms of the level of individual connectedness amongst participants: that is, if they had made strong connections with peers in the course, such as certain people with whom they felt they were having more ongoing discussions, were giving or receiving mentorship and feedback, or with whom they might keep in touch with afterwards. Most of the people I spoke with mentioned someone in particular with whom they were connected in LCL, but I had the impression that individual interactions figured more strongly into some people’s experiences versus others.

The issue of how to support individual peer connections is particularly challenging within a course of this size. How do you help people navigate hundreds or thousands of peers, and find someone else with whom you particularly resonate or complement as a learner? Local networks are one aspect that can support stronger connectedness — but what other features can enable connections given the global structure of the course design?

This structural challenge is especially noticeable in the forum, where a given weekly thread — such as an activity share — might have hundreds of posts in early weeks, often very thoughtful and detailed, with photo documentation. People can “like” or reply to posts, but there is no sorting or following mechanisms — just a lot of chronological scrolling. Within these streams, many participants have reported feeling “lost” like Elise, or “overwhelmed” like Andrew. For some, the

large number of posts may even inhibit the desire to post, for lack of visibility and response — someone said, “...scrolling through 90 things, everyone's contribution can start to get lost to where they might feel like, why did I even post this?” (As a side note, there are many forum readers-not-writers — so actually, those posters are probably getting more eyes on their work than they realize).

For participants moving at their own pace through course materials and activities, it can be particularly hard to feel engaged in the forum. There is a weekly structure, with new material each week, during which new threads are posted. One interviewed participant enjoyed the “freedom” of reading and posting at any time, especially since it was a hectic period for her, but felt that was sometimes in tension with her desire for peer engagement: if she hadn't posted about something during its focused week, she felt like “the conversation really trailed off and moved on” and it was “now too late” to write. The bulk of the posters were writing in a given activity or reflection thread during the corresponding week (for example, Week 4 had threads about Peers), and those who wrote later were less likely to receive a response — so she thought about the weeks as deadlines.

“[I noticed it] because I posted some stuff after the deadline....And then you don't get any responses and then it's just like, Oh, like what's the point, right? Like I could just do this on my own, if nobody's going to have a conversation, why even put it in the forum. ...the purpose of putting it online is to interact with other people....not that like I missed a deadline and I'm in trouble, but like I missed my chance to engage with the community on this topic.”

As organizers of LCL, we've shared in the past our efforts to navigate the design tension between “multiple pathways” and a “shared experience”: enabling participant agency to go at their own pace and style, while also learning with the group (Gabaree et al. 2018, Presicce et al. 2018). But functionally, the collective group pace forms a strong time structure, if a participant is hoping to have dialogue with and feedback from the group.

These pacing issues are less pronounced in the live events, where participants are able to join small group discussions, and no preparations are required. Some participants got to know peers and facilitators in the calls, including having one-on-one in-depth conversations, and chatting with course peers from their local communities who they are still in touch with. But for some, individual connections still were elusive, because the groups change every week, as different participants show up and everyone chooses their breakout rooms. My sample is too small to draw this conclusion firmly, but it seemed like this might have been particularly the case in English-speaking breakouts — maybe because they served a larger and more diffuse community. One participant in English breakouts, who described herself as “a little bit shy,” said that meeting groups of strangers every week was “overwhelming”: “I think it would have been more helpful for me to just be like, this is your group of, you know, 10, 15, 20 people that you're having this discussion with, so that I could have gotten to know them better.” She raised the idea of cohorts, which an early version of LCL (in

the 2013-2014 iteration) attempted to implement for all registrants with limited success, perhaps in part because of shifting participation — but the possibility of supporting small groups remains compelling.

What is helping those who do manage to strongly connect in LCL? Again, I think that local networks are one powerful source of strong connections: for example, the participant who met someone from her own city in Brazil in the course, and is now locally involved with the BCLN; or another participant who joined the separate Japanese meetup; or Teresa, who was able to connect her Italian colleagues to the LCL Italia community. Not only do these networks support participants in all the previous ways described (language, contextual application, identity, etc.) but they also sometimes provide more consistent groups within LCL, and there is a stronger possibility that you might actually meet later — as they are within your own country.

Another major support to individual connectedness is the LCL facilitation team. Several of the people that participants specifically mentioned were facilitators — facilitators who had made thoughtful comments on their work in the forum, welcomed people in the chat of events, and gotten to know people in breakout rooms. When I asked if he felt like he was getting to know others in LCL over time, one educator said:

“I would say yes. But probably more with facilitators than with general participants, because they tend to change more frequently. And I think the facilitators go further out of their way. Like there's that element of when the whole group thing is happening and the chat is happening on the left. And then when people take the time to say, greet you by name and say something to you, that's really a community building kind of move, and friendship — something kind of a move, and it feels good, and it makes you want to reciprocate...”

And of course, facilitators are also key to the aforementioned local networks, as they support discussions by language, some organize localized meetups, and build relationships between LCL and other organizations and networks they are part of (such as the BCLN, and the LCL Latam and Edukreativos organizations in Mexico). So they are also supporting more focused contexts for connections amongst others.

Individual connections — or lack thereof — is one of the more difficult aspects for us to understand as organizers, as we are not privy to them. Participants can directly message each other in the forum, which we don't see, and some people end up meeting separately as a result. Some people try to join certain breakout rooms based on who they see there — one person said, “I'd scan for my friends.” Like anywhere else, friendship seems a complex alchemy of proximity, chemistry, commonalities, and opportunities to bond. But I think that designing for stronger individual connections could be a valuable goal, to strengthen and sustain the community, and to provide a rich social learning context.

## Learning and community takes time

LCL may be an “open door” — but it takes time to explore its world. Over the past four years in LCL, we have noticed that many participants return for multiple rounds. The invitation is open to engage as you wish, and learners come back, revisiting materials and activities, participating in new ways, developing their practices, or even taking on the role of a community facilitator. If this was a conference or a concert series, you might say that some people keep dropping in to mingle and listen; some eventually end up on the stage.

Jean Lave and Etienne Wenger see learning as a process of becoming a community of practice (Lave and Wenger, 1991, Lave, 1991). As previously mentioned, they talk about learning over time as “legitimate peripheral participation in communities of practice,” where learners are moving from peripheral to full participation. In the process of developing skills and understanding, you are also developing your identity as a community member. I see much resonance between this framework and Learning Creative Learning. It is noticeable that many participants are getting more or differently engaged over time, and that for some — especially facilitators — participation bears with it a sense of identity with and within LCL. But this engagement takes time.

Participants’ engagement changes over the course of a given round: some fade away, as life gets hectic; others get more comfortable and more engaged. Njeri is an example of someone who took a few weeks before the circumstances felt right for her to fully participate in a live event, first joining as a listener. Another participant I spoke to talked about her evolution in comfort over the course of a single live event — that it usually wasn’t until late in a call that she felt ready to speak. Elise didn’t engage in the community aspects yet, but now that she’s spent time with the materials, she feels ready to try the forum in the next round. I spoke with some people who had been somewhat aware of, and perhaps lightly engaged with, the pedagogical approach for years before they became more highly involved in a recent round of the course. People spoke of how they would like to engage next time, asking when it would be. Some would like to get more deeply involved, find sub-communities, facilitate.

Teresa spoke of a shift from newcomer walking through the door, to person welcoming and bringing others in: “The first time it was I who entered a community, but now it was: ‘Let you enter my community.’” Her words indicate a kind of identity shift, from a person engaging with a community, to a person who feels a part of it.

And of course, learning takes time. The work of an educator is long-term: trying and refining practices, supporting learners as they develop, in hopes they will benefit for the rest of their lives. And as educator-students, participants have shared changes they have tried because of LCL, or hope to try in the future; ideas and frustrations and questions for their peers. One participant shared with me the significant shift in his facilitation, from directive step-by-steps to thematic activities and peer remixing. A math teacher said he felt that LCL helps teachers to “improve very, very much,” and that

“for the first time in my class” students were able to change groups and exchange materials, and that students were excited to be working on projects. Another educator said “I am no longer the same [name] that I was before LCL.”

Sustaining a community for learning takes a lot of effort — including a growing facilitation team, ongoing iteration, and the collective energy of many individuals and networks. But that community is serving as a site of growth for many educators around the world, including some that we may not see much of — yet.

## Recommendations and Looking Ahead

The space of possibility for re-designing LCL is wide. Already, we have iterated over the years, growing the facilitation team and structures, improving language supports, and developing relationships with individuals and local networks. These design changes take time, and the input and work of many. So in this section, I am not going to presume to know exactly what we should or would do — but will raise some considerations in response to suggestions, challenges, and the nature of the experience shared by participants, in hopes that they may be fruitful areas of discussion in the months and years of collective conversations to come. I'd also like to acknowledge that these ideas are born out of conversations with many people — participants, facilitators, co-organizers.

### **Starting with a local community**

It is clear that LCL is currently serving many purposes for many people. The open structure, welcoming environment, and multilingual facilitation has allowed people from around the world to engage in many different ways, and to find something meaningful within this world of ideas, people, and practices.

But there are challenges and barriers affecting different participants — and it appears that well-supporting and responding to all of their needs at once is sometimes simply not possible (for example, conflicting timing needs). And given the large and sometimes diffuse nature of the community, some people feel overwhelmed and lost, and are inhibited from participating as fully as they might like. These challenges appear to be somewhat mitigated for those who have strong local networks to participate within — and amplified for those who have incompatible time-zones or few local and language peers.

I suggest that we consider starting our design process with a local sub-community within LCL. We could work with facilitators, participants, and local organizations from that sub-community (such as a particular country) to identify the needs and barriers most applicable to their context, and to co-design changes to LCL that would better serve them. Of course, this form of work has already been done by many LCL members, such as Yumiko Murai in her work to design the Japanese Creative Learning meetup and subsequently blended teacher professional development based on it, (Murai and Muramatsu, 2020), the work of LCL Latam and Edukreativos to support the Spanish-speaking and Latin American community, the work of Carmelo Presicce and colleagues to support LCL Italia, relationship-building work by Lifelong Kindergarten and Turkish facilitators to support educators in Turkey, the work of Linford Moloadi, Rupal Jain, and the University of Johannesburg to support South African participants, and the collaborative work with Carolina Rodeghiero and members of the Brazilian Creative Learning Network. These designers have built relationships, organized separate meetups, created Whatsapp groups, distributed offline materials, and many other efforts to best support their participants' needs.

Drawing on their work as inspiration, we could focus on working closely with a given sub-community in a co-hosting capacity: having that community be central to a particular round of the course. This approach also draws inspiration from the global Scratch Conference organizers — a conference that usually alternates between hosting at MIT, and hosted by institutions and local communities worldwide (such as the 2019 conference in Kenya that Njeri referenced). Of course, the pre-pandemic Scratch Conference was an in-person event. But I think we could incorporate a similar approach online — having each round be co-hosted with a different sub-community, highlighting their knowledge and well-supporting their needs.

For example, if we were co-hosting with our collaborators in South Africa, we could learn from participants like Lesedi and others about their particular interests and needs for the course, and about applications to their context. The round could be hosted during a convenient time of year, sometime from March through July, with events that worked well given time-zones and typical school schedules (e.g., late afternoons on Fridays, South African Standard Time). Breakout rooms could include languages of South Africa. The course could particularly highlight the work of South African educators, sharing examples of putting the ideas into practice in their context — such as how Lesedi is navigating incorporating fun, experimental approaches in her science classroom, while also meeting curricular and evaluative needs of the education system. When designing platforms, formats, and communication methods, we would want to work with South African organizers to figure out ways to reduce the network data needed for participation. South African educators and researchers have used Whatsapp effectively to support student engagement (Molaodi and Batchelor, 2019; Rambe and Chipunza, 2013). Other considerations — such as preferable length of the experience, and if certification would enable more access — could be explored and refined for the given round. We could learn from the University of Johannesburg team, who worked to develop a certification pathway for their LCL student participants in the spring of 2020. There could be an opportunity to draw further inspiration from community-based research, and participatory and equity-centered community design approaches, in working together to identify and address community needs (Badiee, Wang, and Creswell, 2012; Creative Reaction Lab, 2018).

I think that such an approach could more effectively support the needs of participants from a given local community, supporting greater access to the course experience and peers. Local languages could be incorporated throughout the course. Also, sharing more examples of educators' work could be an enriching learning experience for participants joining world-wide, who can learn from a deeper exploration of how educators are putting these ideas into practice in that context. Given the time-zone of a particular sub-community, it may also benefit near neighbors — for example, co-hosting with a team in India would likely involve event timings that worked better for Japan than the current situation. And particular design choices (e.g., certification or low-data changes) would potentially increase access for many. This variety across rounds could provide circumstances that, over the years, made it possible for more people to join.

Of course, this approach would require more work on the part of local organizers, so should only be approached if there are people from a given sub-community who are interested in the effort, and capacity and funding needs would need to be explored. It also requires more work of the MIT organizers and global facilitation team to make changes to the course content and platforms — and even when keeping almost everything constant, running a round is a huge amount of work. So I am raising it as a provocation or possibility to consider, while recognizing there are many constraints at play.

### **Participatory knowledge: bringing the community into the course**

Participants described learning from peers as one of the most valuable aspects of their LCL experience. These exchanges are happening in the community spaces, like the forum, live events, and sometimes local meetups or chat groups. Educators in the course have tremendous individual and collective expertise, drawing on years of experience in the classroom and other contexts. I propose that we do more to highlight and build from their expertise within the course content itself — such as in the resource modules, discussion prompts, and introductions to live events. We could also revisit practices of sharing participants’ course activities and reflections across community spaces and communication channels — for example, we used to highlight projects shared in the forum, in the weekly email.

One participant suggested that, though the course is useful and provides the “basics mindset,” the local issues can be “more complex or difficult,” and so it would be “more important and interesting” for the course to share more examples from particular countries, and have “people talk about their experience and share their experience” in these contexts. Another participant in a survey suggested case studies featuring educators’ work. In the past, we’ve heard repeatedly from participants seeking more concrete examples of what the work looks like when implemented, such as videos — comments that have since contributed to design choices in other Lifelong Kindergarten projects, like *Scratch in Practice*, but haven’t come back around to the LCL syllabus.

The complexities and difficulties that participants alluded to could also be incorporated more in these examples: though most participants appreciated the pervasive positivity of LCL, and some talked about how that positive mindset helped them find solutions, I spoke with someone who wished she’d seen more sharing of failures, so she could feel comfortable doing so herself, and so she could find peers with whom to tackle difficult elements, and someone in the survey also felt like they weren’t collectively getting to solutions on the tough problems. In the interviews, participants also raised challenges and barriers affecting their implementation of these ideas and practices, from technology limitations to administrative pressures.

Integrating community expertise into the course content could provide a richer learning experience, with more in-depth, concrete, and contextual applications of the work. It could also support featured educators in feeling a stronger role within the community, as a new form of

mentorship besides our typical facilitation structure. Illuminating the expertise of participants can also support people in connecting with others who could be relevant to their learning and work, and who are tackling similar challenges.

### **Seeking more: strong connections, new learnings, and deep explorations**

Participants keep coming back to LCL, wanting to reconnect with the community, revisit the ideas, and continue their learning process. In my conversations, I sometimes heard a desire for *more*: to be able to connect with others even more regularly, to explore problems more deeply, to stay in touch and keep going. As previously discussed, I also noticed that some people were struggling to get feedback or feel deeply connected with others within the vast space of the course.

One participant said that he was really seeking deep individual connections — that those were the ones he'd remember. Some worried they wouldn't get enough feedback or responses in the “overwhelming” forum. Another participant wished for a small cohort, so she could get to know people better, and connect to mentors — or even a post-course community, that would carry on afterwards exploring implementation in-depth. It seemed like some felt like the material was too familiar to keep engaging with, and that additional learning opportunities would be beneficial. As discussed, several wished for stronger local networks and ongoing events. Many wished they had more time, or could meet at different times more convenient for them.

One approach to this feedback is to zero in on the need for stronger individual connections and personal empowerment within the course community. To build a strong and sustainable global community that meets the needs of many, the work needs to be carried by the energy of many people, by local leaders and collective groups. Ideally, we could create the conditions where community members would feel empowered to start their own meetups, reach out to people to meet one-on-one, and “create-your-own-reality” as one participant felt capable of pursuing.

I am wondering if a stronger net of individual connections (paired with strong local networks, when possible), would make it easier for people to take the initiative in spearheading their own initiatives, such as local meetups and deeper learning groups.

We have continued to strive for this over the years, creating open spaces in the forums for people to suggest events and meetups, inviting people to connect directly with peers, explicitly suggesting people host their own events and including them on the course calendar. Some participants have taken us up on it, making book clubs, localized Scratch workshops, having separate calls with others. But clearly lots of people still feel inhibited from doing so — understandably, as it takes some initiative to write to someone on the internet and ask if they want to videochat with you, and it's a lot of work to organize an event or group.

I suggest we keep trying these strategies, but also focus on the course platforms as an area for re-design. The forum, we have heard repeatedly, is overwhelming — too many posts, not enough sorting or structure; it feels “vintage”; and it is also relatively inconvenient to access, requiring a separate log-in from the events platform. One participant I spoke with compared it to trying to shop local instead of going to Costco: she’d like to support it, but it’s a lot easier and cheaper to get everything at once at the big-box store (e.g., Facebook). The forum serves many important purposes — it has lots of readers, and people mentioned it as a space where they were learning from peers, and also getting a sense of the course. Plus, not everyone is able to join live events, so an asynchronous and lower-data element is important for time and access. But it seems to be a hard place to make strong connections — and having those one-to-one connections, individual feedback, and a sense of being heard, is all important to a strong social learning experience.

Changing the forum is not a new idea — as course organizers, we’ve been considering it for years. We have recently been experimenting with Discord as a potential alternative platform, which could collapse async and synchronous elements into one space, with both the capacity for video calls, and ongoing channels for chatting. This would also reduce the need for multiple LCL log-ins. Other platforms, such as those designed for online conferences, could also be solutions to this problem — and sometimes have more social network-style features, such as following or friending people, and creating personal profiles. All of these elements might be more efficient (and perhaps familiar) for our participants, and could potentially facilitate more communication between people, making it easier for them to get to know each other, and also to collaborate on organizing separately.

## Conclusion: Painting a picture of LCL

I feel tremendously grateful to the LCL participants who joined this study — I have learned so much from their expertise, their experiences, perspectives, challenges, and suggestions. I'd like to thank them for inviting me virtually into their workplaces and homes, for explaining their local contexts, and for their generosity with their time and ideas.

From their varied experiences, a bigger picture is emerging — of a network of people connected by ideas and practices, for whom LCL is a gathering place, both an entry point and a platform for leaping further. The “open door” of LCL has attracted educators from around the world who share a sense of interests and purpose. The open structure affords diverse methods of engagement, and people find their personal paths within it, navigating preferences and constraints. Functionally, LCL is sometimes less like a course, and more like a scene: bringing together ideas, people and practices, through events, networks, communication platforms, and relationships.

I look forward to seeing what's next for LCL, as we collectively consider the space of possibilities in future design work. Though LCL is providing a valuable experience for many, there are challenges, barriers, and opportunities we could further explore, particularly building on the expertise within the community, in the ongoing pursuit of a connected, accessible, inclusive, and meaningful experience.

In these recent times of isolation, I am moved by the sense of purpose, connection, and joy of the educators in LCL. I want to thank all of them for bringing their energy, and to the many organizers and facilitators for all that they bring: expertise and innovation, logistics and love.

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