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FERMENTING IDEAS:
INTERCULTURAL COLLABORATION AS A PEDAGOGICAL TOOL FOR TEACHING EXPERIMENTAL ANIMATION

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Abstract

Inspiration for animation can arise from the most unexpected places. You might draw motivation from a story you've heard, a personal experience, or even a process that seems unrelated to the everyday practice of animation. In this paper, I present the intercultural collaboration developed as a pedagogical tool to teach animation and increase student commitment and accountability. As part of a Collaborative Online International Learning (COIL)/Virtual Exchange (VE), my students from experimental animation in the United States were encouraged to discover connections that might not be immediately obvious when collaborating with students from food technology in Brazil. They were challenged to find visual solutions that invited them to reinterpret food fermentation processes as animations.

Some of the thought-provoking questions posed for this exchange included: How does fermentation contribute to preservation? How can ideas "ferment" over time? If fermentation transforms microorganisms into something entirely new, how can we discuss the process of fermentation in relation to animation? The collaboration among these international peers aimed to inspire animation students to create unique experiments using various materials and hands-on techniques that effectively communicate the fermentation process they chose to explore.

To facilitate the understanding of this collaborative journey, in this paper, I will first provide a brief literature review covering the history, definition, and goals of COIL/VE. Next, I will discuss the collaborative project, including how the partnership was established and the expectations set. I will then outline the course structure and describe the assignment process, showcasing examples from student animations and sharing their experiences and feedback. Finally, I will highlight articles on the pedagogical impact of COIL/VE as an educational tool, along with texts focusing on animation practice and hands-on teaching, such as those by Corrie Francis Parks (2016) and Dan and Lienors Torre (2019).

Keywords: experimental animation, teaching animation, fermentation, virtual exchange, international collaboration.

FERMENTING IDEAS: INTERCULTURAL COLLABORATION AS A PEDAGOGICAL TOOL FOR TEACHING EXPERIMENTAL ANIMATION

The inspiration for animation may come from the most unusual places. You may be inspired by a story you have heard, an experience, or a process, seemingly unrelated to the daily practice of animation. In this paper, I will present the experimental animation assignment created for my students as a virtual collaboration project, a Collaborative Online International Learning (COIL) project. In the fall of 2021, 16 students from my experimental animation course based in Dallas, Texas (USA) were invited to collaborate in an international virtual exchange with 20 students from agronomical sciences studying food technology and fermentation in Botucatu, São Paulo (Brazil). Animation transforms still images into moving images, and its creation directly parallels another transformative process in fermentation. The participants were invited to find associations where they were not necessarily obvious. Although the students in Brazil were studying fermentation in the biological sense, my students in the US were encouraged to find other connections for the process through culture, social engagement, and art. These connections helped my students find visual associations to explain microorganisms' metabolic activity from different fermentation processes.

The questions that inspired my students' exchange with those in Brazil were: If fermentation transforms microorganisms into something new, how can the fermentation process be discussed in terms of animation? How can ideas start to ferment? The exchange among international peers inspired my students to create unique animations, exploring various materials and hands-on techniques to best communicate the fermentation process of their choice with their peers.

Before diving into our project, it is important to understand that collaboration is at the core of everything I do as an educator, artist, and researcher. Therefore, instilling this collaborative spirit in my students is a key component in my practical course on experimental animation. The term 'experimental animation' has been used as an umbrella term as, in my course, we approach it through experiments with various hands-on techniques, including sand animation, paper cut-outs, silhouette animation, as well as clay, objects, and other mixed materials. This exposure to different techniques helps the students discover and understand animation through a tactile material process. The limitations and advantages of each process lead them to choose the most suitable one for their creative projects. When animating this way, the students develop a new set of problem-solving skills and solutions.

The course is project-based, and the students develop two collaborative projects before focusing on their personal projects. The collaborations can be international or local. In both cases, having external collaborators helps raise the stakes and increase student commitment. As experiential learning, this process of learning by doing also allows students to develop creative and technical skills, overcome challenges, and learn how to collaborate with others.

In this paper, I will start by briefly revisiting the history of COIL, its definition, and its goals. Then, I will move on to the collaborative project, establishing the partnership and expectations. Next, I will present my course's structure and the assignment's fermentation process, offering examples from my students' animations and sharing some experiences and testimonies to conclude the essay. In terms of methodology, articles about the pedagogical impact of COIL/VE as an educational tool will be highlighted, as well as animation practice texts that embrace materiality and the hands-on approach to teaching animation, as is the case of Corrie Francis Parks (2016), and Dan and Lienors Torre (2019).

Understanding COIL/VE

With the growth of the internet in the 1990s, long-distance collaborations between peers and researchers have been attempted and were somewhat facilitated (Rubin, 2017, p. 28). As the years passed and technological advances increased, different initiatives under different names but with the same goal led to the development of Collaborative Online International Learning (COIL) in 2006 and Virtual Exchange (VE) (Rubin, 2017, p. 29). COIL is a form of VE, and the terms sometimes are used interchangeably. Both can be considered pedagogical approaches that prioritize intercultural skills among students and, in many ways, enable them to engage effectively and appropriately with individuals from diverse cultural backgrounds. It is a form of collaboration and learning experience that aims to benefit both sides of the collaboration.

The State University of New York (SUNY) is an institution pioneering COIL initiatives through its COIL Center, helping educate, connect, and gather a large network of collaborators. They define COIL as "connecting across difference"[1] and offer examples, workshops, and templates to help educators develop collaborative projects for students to work together despite geographical distances. These projects can be from the same discipline or interdisciplinary, aiming to complement each other, facilitating international experiences and cultural exchange. In many ways these projects help to prepare students for globalized work exchanges.

Normally, the COIL/VE project requires students to work in international teams, emphasizing cross-cultural interactions. The assignment is a graded activity for both classes, and a variety of technologies can be used to complement the learning experience and help achieve the learning goals.[2]

In the context of 21st-century higher education, where our interconnected world is increasingly mediated by technology, this type of collaboration becomes very important. Considering its association with technology, particularly the internet, COIL initiatives were reinvigorated during the lockdown of the COVID-19 pandemic, when the world had to adapt to remote work and learning. That is how I started planning to add a virtual exchange component to my experimental animation classes. In addition, the new VE initiatives on our campus, also associated with COIL, offered a safe and exciting way for them to collaborate internationally as we started to come out of lockdown.

In 2021, as we returned to in-person classes during the COVID-19 pandemic, I wanted to offer my students the possibility of collaborating with international students to be able to learn and exchange experiences, particularly after the challenges of the prior year. That also facilitated their re-engagement with a broader physical experience through material processes not limited to the mediation of screens.

Animation as a Transdisciplinary Artistic Practice

Animation, as an art form and a medium, offers the possibility of expressing ideas in various ways. That is even more true for traditional processes of experimental animation. My students, coming from a primarily computer graphics training environment, were eager to work with hands-on animation processes. In this first iteration of my experimental animation course, students worked on three different projects: one featuring an international collaboration, another focused on a local collaboration with another discipline within our school and, in the last one, working on their personal independent project. They did a series of in-class exercises on various

1 For more information visit the SUNY COIL Center: https://online.suny.edu/introtocoil/

2 For more information on the structure of a COIL module access: https://online.suny.edu/introtocoil/suny-coil-what-is/

hands-on techniques to familiarize themselves with the process. That helped to prepare them for the projects where they could choose the technique and materials of their preference.

Experimental animation is a field of animation practice that explores techniques and processes beyond traditional 2D animation and 3D computer-generated animation. In an attempt to define the term, the scholars and animators Dan and Lienors Torre state: "As the term suggests, 'experimental animation' normally involves some form of experimentation—of testing and trying out new alternative ways of animating" (Torre & Torre, 2019: 85). It was in this welcoming environment of discovery and experimentation that the students were invited to collaborate.

Some techniques used in this field include, but are not limited to, sand animation, painting on glass, pixilation (frame-by-frame animation of human subjects), stop-motion (objects and puppets), pinscreen, cutouts, and clay. These diverse techniques help to reconnect animation to material processes, giving students a tangible, physical opportunity to "get their hands dirty." According to the animator Corey Francis Parks: "Sand, paint, and clay are materials that have both fluidity and dimension—working with them is like drawing and sculpting simultaneously. Because of their similar physical qualities, a similar working method applies to all three. These materials are animated under the camera, usually on a glass surface" (Parks, 2016: 4). This practical course is where students experiment with different animation techniques and create unique work inspired by class discussions, insightful assignments, and collaborations. The animations created are *straight-ahead*, which means there are no *keyframes*, and movement is captured in a sequence, one after another. In some cases, depending on the technique and material used, creating a new frame means destroying the previous one, which leads to a more intuitive, artistic process. That is the case of painting on glass, clay on glass, and sand. In the course, students learn and practice different techniques before getting to the point where they are ready to collaborate.

Finding an International Partner

In preparation for my fall 2021 class, I searched for international VE/COIL partners in the spring of 2021. As someone who teaches animation, I was surprised I could not find partners in the same field. However, due to the interdisciplinary characteristics of animation, I was open to finding a partner from a different area of expertise. After checking a list of available partners, I found the Brazilian professor Pricila Veiga dos Santos, who teaches at UNESP (São Paulo State University). She posted her interest in international collaboration on the COIL website, offering collaborations in the fields of Food Technology and Biotechnology. Although her field of expertise was completely different to mine, as a fellow Brazilian, I thought working with her would offer a smooth start for my first virtual exchange. We were both interested in enriching the students' cultural exchange and creating a project for them to work together. We met several times during the summer to prepare our collaborative project and exchanged many emails. It is important to consider that, to offer an international experience to our students, as faculty, leaders, and facilitators, we also need to be open to such exchange. Finding partners that are committed and engaged makes a difference in the experience. We matched deadlines, coordinated *icebreakers* to help the students start their conversation, selected readings, and set the goals for our project.

In many ways, our partnership was unique because the Brazilian students knew nothing about experimental animation, and my students, in exchange, were not necessarily knowledgeable in food technology. The Brazilian students were extremely excited to see how their fields of expertise would be translated visually, while my students were eager to learn more about fermentation processes and cultural

aspects that would ensure an accurate and fair portrayal of their international peers' fields. Navigating language barriers was part of the process, and the students were challenged to find ways to communicate and effectively convey their ideas to one another. Many resourced online translation tools, videos, and the internet to clarify their points.

The Assignment

The instructions of the assignment for my students stated the objective of the assignment as "To create a short animation inspired by the conversation and cultural exchange with international students from UNESP." Besides language barriers, different institutions use different learning management systems (LMSs) that are exclusive to their students. To facilitate our project exchange, we chose to document the steps of this collaboration through Padlet,[3] a real-time collaborative cloud-based web platform accessible to students from Brazil and the US. This platform allowed both partners to access and share information at every step of the collaboration. Each faculty involved in the collaboration grades their own students. The use of Padlet facilitated their exchange and their sharing of project updates.

As part of the assignment, Pricila and I established that our students would read the introduction of Sandor Ellix Katz's book *Wild Fermentation: The Flavor, Nutrition, and Craft of Live-Culture Foods* published in 2016. That would allow them a common ground and reference to build upon. Katz titles his introduction as *cultural context, The Making of a Fermentation Fetish.* For me, finding the book was a pivotal moment in the collaboration as I did not want my students to simply illustrate fermentation but to see animation itself as a catalyzer and transformative process. As Katz states: "The focus of this book is the basic processes of transformation, which mostly involve creating conditions in which naturally occurring wild organisms thrive and proliferate. Fermentation can be low-tech. These are ancient rituals that humans have been performing for many generations" (Katz, kindle location 295). The connection with animation, the hands-on process, and its materiality was exciting. In animation, the concept of metamorphosis as a transformation or change in form has become ubiquitous. Characters bounce, twist, shape, and reshape to help animators to get their message across. In the type of experimental animation proposed in this course, students also connect with low-tech processes to craft and transform still images/objects into moving ones.

The instructions of the assignment for my students established:

"In this first project, you are invited to push boundaries and find connections where they are not necessarily obvious, finding visual solutions that will allow you to experiment with the transformative process of animation. Another transformative process happens in fermentation, which is at the core of this exchange; as in this assignment, you will connect with international students in another country through virtual exchange. These students are from the agronomic sciences, and they are studying food technology and fermentation. According to the Oxford English Dictionary, one of the definitions of fermentation includes, in its figurative sense, 'a state of agitation tending to bring about a purer, more wholesome, or more stable condition of things.' Although they are studying fermentation in the biological sense, you are encouraged to find other connections for the process through culture, social engagement, and art. How can ideas start to ferment? If fermentation transforms microorganisms into something new, in what ways can the fermentation process be discussed in terms of animation? The exchange with your international peers should inspire you to create unique experimentation using animation."

3 For more details visit https://padlet.com/

A step-by-step process with deadlines followed these instructions to help keep students on track as follows:

- Step 1: Introduce yourself on the Padlet website.
- Step 2: Read the text "Introduction: Cultural Context, The Making of a Fermentation Fetish" by Sandor Ellix Katz.
- Step 3: Sketch and write down any visual ideas inspired by the text.
- Step 4: Email and schedule a meeting with your assigned international partner outside scheduled class time (before Sept/16). In that conversation, you will try to find commonalities and differences in your experience as a student and among your disciplines. Share the highlights of your meeting in Padlet.
- Step 5: Put your ideas into practice. Experiment and test the concepts that inspired you from the text and the conversation.
- Step 6: Meet again (before Sept/23) with your international partner and share your ideas.
- Step 7: Submit your 10 to 30-second animation file in UTD BOX, following the naming convention "Lastname_Firstname_Project1VE.mp4" by 11:59 pm, CDT, on September 29.
- Step 8: Share your animation with your international partner in Padlet.
- Step 9: Present your animation in class and demonstrate your process and inspiration for the project.
- Step 10: In Padlet, reflect on and personalize your overall experience in this collaboration.

It was reinforced to the students that, besides their submissions for class, all the documentation and participation in the Padlet platform were extremely important as it is the main form of exchange among international students. On her side, my Brazilian partner established the rules for her students. I had 16 students, and she had 20. Some of the Brazilian students were reluctant to interact in the English language. To help with that, four groups had a ratio of two Brazilian students to one American student. Pricila carefully chose those students by having a more proficient student in English paired with one that was more at the beginner's level of English so that one could help the other. The remaining groups collaborated on a one-on-one basis.

We created a simple icebreaker on the Padlet platform by having students upload their photos, introduce themselves, including their name, school, and area of focus, and share something they like to do. Of course, not all students were comfortable sharing their photos, and although the Padlet platform is exclusive for this exchange, they could post a picture of something they like, add their pets, or not have a photo at all. As the Brazilian students jumped to the task and were eager to connect, my students responded well and started posting and sharing their hobbies and setting expectations for the exchange.

Aside from the introductions, students had to meet for the first time after reading Katz's introduction. Pricila and I prepared a list, selected the groups, and distributed the participants' emails so they could meet. That first meeting, scheduled at their own convenience and using any platform they preferred, had the following as a goal: "Try to find the commonalities and differences between your experience as a student and your disciplines." Each student would then post on Padlet the highlights of their first meeting. One example of insights on their first meeting was shared by my student Kirstin Stevens Schmidt, saying:

> I got to meet with Letícia and João. Both of our experiences as a student were greatly affected by COVID-19. They didn't have many opportunities to use practical lab equipment during the peak of the pandemic, so many of the projects they've done were done at home using materials that are easily available. One of Letícia's projects that interested me was creating wine from pineapples. Like most fermented drinks it required a fruit, water, yeast, and sugar. I was quite

> surprised to hear that the fermentation process takes three months. The process reminded me of a practice that college students do to make "hooch" by turning grape juice into a very crude wine, letting it ferment in their dorm rooms in secret. In some regard both fermentation and animation are very time-consuming practices. With fermentation, you have to wait a very long time to see the fruits of your labor (pun intended). With animation, you have to be patient working one frame at a time to produce any work of significant length. In both disciplines there can be a lot of trial and error too. Both of them agreed that they prefer working with fermentation in terms of food, rather than medicine, because it's a lot easier, and they also showed an interest in working primarily with fermentation to produce alcoholic drinks. Padlet, VE, 2021)

On the Brazilian students' side, Letícia and João shared about their first meeting with Kirstin:

> Our first meeting took place on 9/15 and was very satisfying. Kirstin, our partner, asked about our course, future career prospects, contact with fermentation, which fermentation areas we liked best. In addition, she explained about the animation process that she likes, and introduced us a little about the subject. Finally, we chose the topic, which Kirstin was very interested in, which was the production of homemade pineapple "wine," a product of a work done in Professor Pricila's Fermentative Processes course. So, we explained basically how the production process of this fermented wine was and the results obtained such as flavor, aroma, acidity. (Padlet, VE, 2021)

For their second meeting, my students had to sketch ideas and bring those ideas to the meeting, asking for feedback and input from their international counterparts. As the ideas developed, Kirstin Stevens Schmidt shared:

> Letícia gave me a wonderful presentation explaining her pineapple wine project in more detail! She explained how her project results were affected because of the pandemic, mostly because of how much the materials she had available to her differed from standard industrial equipment, and that there was no control group for her to compare her results to. All her materials had to be locally sourced too. There were also some new details that I found very interesting, like the addition of a spice to the wine- Letícia chose mint. All of this really helped me get an idea of what to include in my animation, since I want to reflect the unique nature of this project in my work. Because I was in our animation lab at the time of our meeting, I showed her our equipment and what we get to finally use now that we can attend classes in person! (Padlet, VE, 2021)

Kirstin's partners shared about their second meeting:

> […] On our side, more curiosities were presented about the product created by Leticia last semester, the wine made from pineapple, which in this case had a differential, the addition of mint, which is usually seen in Brazil, at least, however, in juices. Kirstin seemed surprised and excited with the presentation, showing she understood the difficulty there was in production, since at the time, we had our laboratories 100% closed. (Padlet, VE, 2021)

These exchanges provided glimpses into their communication, and we could see that their ideas started to ferment.

Fermenting Ideas

The experimental animation lab is a research lab and a teaching space. It has a limited capacity of 12 individual stations

equipped with a down shooter setting using DSLR cameras, MAC minis, and Dragonframe software. Two stations are reserved for research and special projects, while the remaining 10 are used by students registered on the course. Students have access to the lab for as long as the school building is open, including weekends, and that flexibility allows students to work on the projects at their own pace and time.

This laboratory space invites experimentation and welcomes students interested in exploring hands-on processes to create animation. Students engaged in such processes have demonstrated a high level of concentration and dedication to the projects. The collaborative projects we work on in the course also help to enhance student commitment and accountability. They want to honor the exchange with their peers and deliver a final animation demonstrating the concepts and cultural elements they discussed in their meetings.

In the lab, the ideas start to ferment even before the cultural exchange happens. The international collaboration took place only after the third week of classes to give students time to practice and get acquainted with the software and equipment. At every piece of paper cut and placed under the camera, students get hooked on the laborious but rewarding process of animating frame-by-frame. There is an embedded reward in these material processes. The painstaking composition assembled, frame-by-frame, allows the animator to focus and, in return, to have a sense of accomplishment. It is an indescribable feeling to see your animation coming to life for the first time. This excitement justifies the hours of laborious preparation and focus, particularly because the project allowed for freedom of interpretation and the sharing of personal ideas.

Animated Results and Testimonies

Among the 16 animations created during this Virtual Exchange, I have selected three to be showcased here, together with the students' testimonies. The chosen works are from my students Donte Castillo, Ana Villarreal, and Kirstin Stevens Schmidt. These three were selected because they were the most complete examples demonstrating different animation techniques among the sixteen animations produced in this assignment. They also had consistent documentation of their entire process, which made their work easier to showcase here. Some of the works created by the students involved different types of or even a mix of techniques that they chose due to their familiarity or the need to challenge themselves. Due to the short nature of these animations—up to 30 seconds—not all had titles, and sometimes their titles referred to the fermentation process they aimed to demonstrate. It is important to note that the language used by the students in describing their work was not corrected to fit academic standards as these were informal reflections given in the context of reflection blog posts in Padlet. The first one is Donte Castillo's animation.

Donte embraced experimentation and used geometric shapes and forms to simulate and demonstrate fermentation through a series of transformations. The technique used was paper cutouts. Based on the conversation he had with his collaborator, Donte planned out the process as shown in the sketch of his storyboard (Figure 1).

The full animation is available on the lab's YouTube channel[4] as an example of an abstract interpretation of fermentation (Figures 2 and 3). Here are Donte's words about the experience:

4 Donte Castillo's animation available on YouTube: https://www.youtube.com/watch?v=B4YinglAL8c

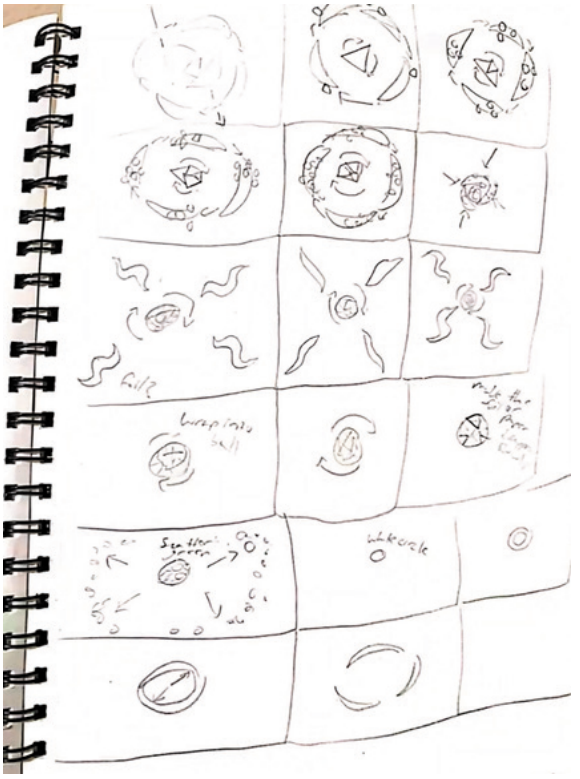

Fig 1 Donte Castillo's storyboard sketch indicates the fermentation process phases as abstract shapes, 2021.

> Honestly, I enjoyed the exchange. I didn't know much about fermentation beyond its involvement in the making of alcohol. Now I feel I understand what it is a lot better and how it is more largely involved in the many parts of everyday life. [...] The assignment was quite fun because even the bit I learned was helpful in making an abstract stop motion. The activity fits pretty well with my enjoyment of inspiration through distant or loose connections. It was also interesting learning a bit about how things are in another nation and even another field of study. (Donte Castillo - USA)

Donte's Brazilian collaborator shared about their experience:

> I liked that Donte asked several questions about schools in Brazil, the difference between the concepts of fermentation taught at school and college and the reason for me to participate in Professor Pricila's project. I was able to answer all these questions in general and explained a little about the raw material for fermentation and the organisms involved. [...] Donte told me that he had an idea to animate the fermentation process in general and showed me a part of the animation he had already done. I really enjoyed meeting Donte. He seems to be a very funny person and a good friend. (Maria Gabriela - Brazil)

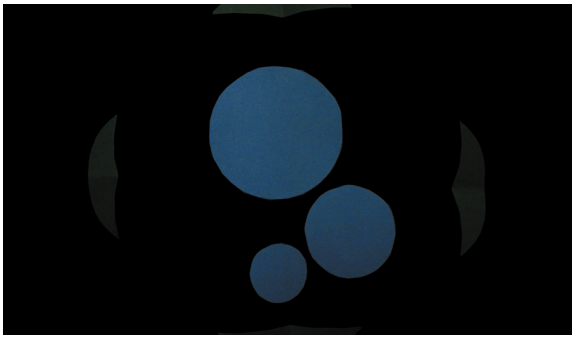

Fig 2 and 3 Screenshots from Donte Castillo's animation, 2021.

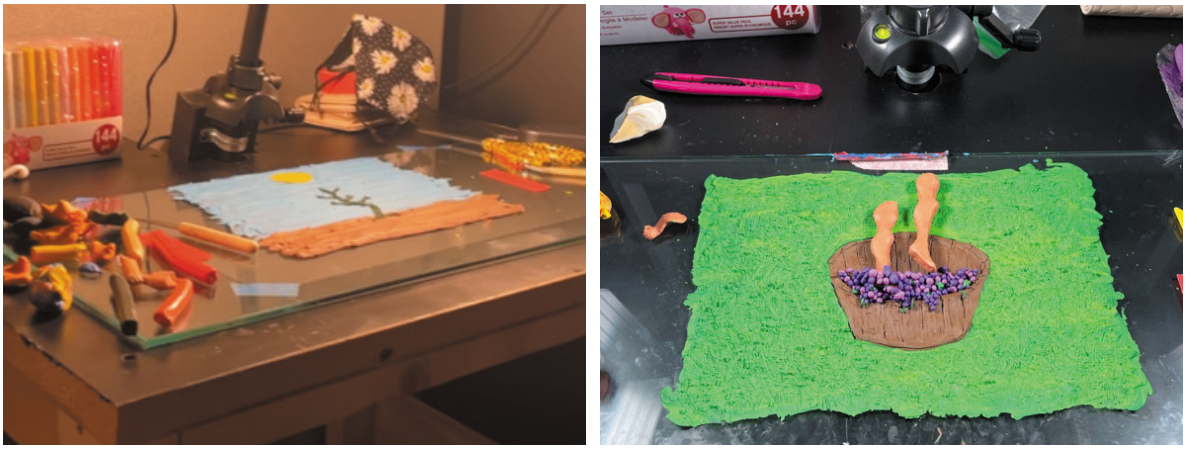

Fig. 4 and 5 Work-in-progress shots of Ana Villarreal's animation using the clay-on-glass technique, 2021.

The next animation was created by Ana Villarreal. Ana chose to use a completely different technique called clay on glass. In this technique, the animator uses clay almost as if they are using paint, distributed flat over a glass and moving the clay elements over it (Figures 4 and 5). The work from animator Lynn Tomlinson was the inspiration for it.

This was the first time that Ana had worked with the clay-on-glass technique. Everything looks very bright and colorful. The work was edited in Adobe Premiere. Some screenshots of her animation are shown below (Figures 6 and 7), and her film is also available on YouTube.[5]

Here is Ana's testimony about the virtual exchange experience:

> I came back with the knowledge that most winemakers believe the sun has a great part in how the wine will taste; the more sun the grapes get, the sweeter the final product will be, which is why the grapes are usually harvested during the middle to end of summer. […] In addition to specific comments about the animation, we also got to talk about the animation process, and I got to share and explain the process of clay animation on glass. We talked a little bit about the daily life here as a UTD student and how we (in different countries) are handling COVID. It was very interesting and almost comforting to hear that people in a completely different part of the world, let alone a different hemisphere, had similar struggles and experiences in life. (Ana Villarreal - USA)

Commenting on Ana's process, her collaborators in Brazil shared:

> Her ideas were about showing the whole process of wine fermentation with clay animation, giving a lot of attention to the textures with many resourceful ideas. And we loved it! (Gustavo and Maria Clara - Brazil)

Also, on the Brazilian side, they shared similar feelings as Ana's about this type of exchange:

> Collaborating on this project with someone from a different place and culture was very ennobling since I could see that even though we live different

5 Ana Villarreal's animation: https://www.youtube.com/watch?v=cm6Xy8snWJw

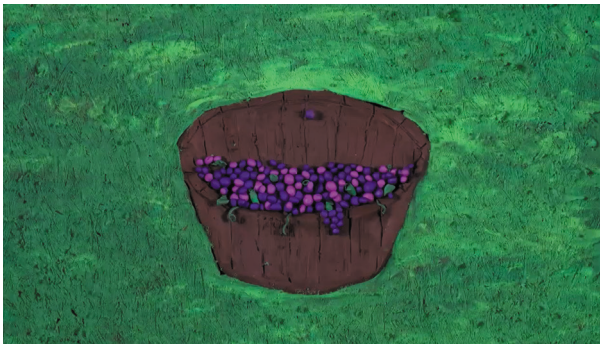

Fig. 6 and 7 Screenshots from Ana Villarreal's animation, 2021.

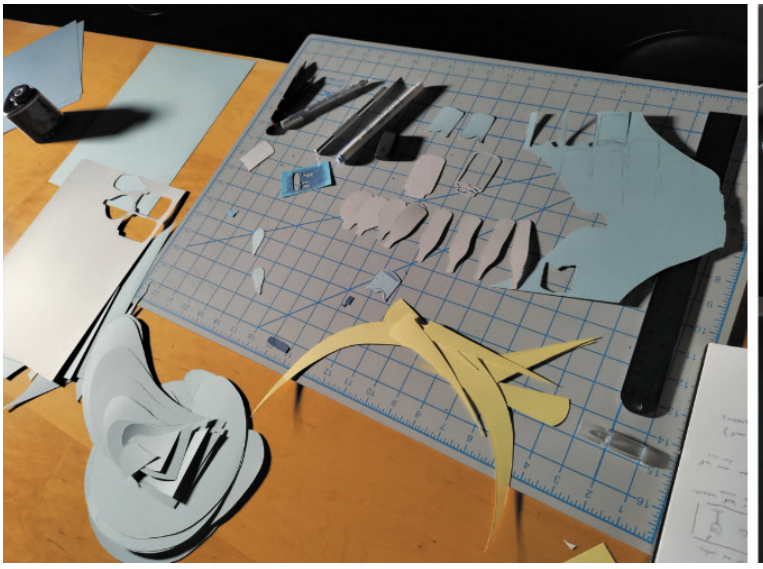

Fig. 8 and 9 Kirstin Stevens Schmidt's work in progress, 2021.

'realities' we go through the same difficulties (especially in college) and even consume the same kind of content (it was visible the similarity between our musical tastes, movies and even the famous people we follow). At the same time, we could see the differences between our countries and realize the points we need to improve in both places. (Maria Eduarda - Brazil)

The last example I will showcase is Kirstin Stevens Schmidt's animation. Kirstin had a very well-planned project mixing paper cutouts with sculpted clay props. She chose to demonstrate the chemical reaction in the fermentation process of pineapple wine.

The detailed sequential process of Kirstin's animation becomes evident in the numerous frames of the bottle

Fig. 10 and 11 Screenshots from Kirstin Stevens Schmidt's animation, 2021.

animation sequence (see Figures 8 and 9). More images are shown above to help illustrate her animation (Figures 10 and 11), which is available on the lab's YouTube page.[6]

When sharing about the process, Kirstin reflects on the challenges and solutions that she had to work around:

> I really enjoyed this project, more so than I thought I would.
> Trying to teach one another about our respective fields whilst dealing with language and distance barriers was a bit of a challenge, but I still learned a lot!
> I liked the idea of putting someone else's knowledge and experience through my own artistic lens.
> I would have definitely allowed myself more time to work on this, and to work out the technical kinks had I'd known what I wanted to create earlier. (Kirstin Stevens Schmidt - USA)

Her Brazilian counterpart shared about their collaboration:

> I really enjoyed the experience of the project and the interaction with another culture.
> Besides the language difficulties, we had good conversations and were able to find a subject of interest for everyone and get to know each other a little better.
> My exchange partner was attentive, patient with my English, and very interested in the subject we approached, and she showed us a little about her area of work. In general, I liked it a lot. (Letícia - Brazil)

Overall, as shared here through the participants' testimonies, the assignment enabled the process and invited students to demonstrate their perspective and interpretation on the subject of fermentation guided by the exchange with their international peers. Once the collaboration was complete, the students were invited to reflect upon it as an important step in their learning journey; one that invited the students to become active learners of their creative process.

Conclusion

Being able to offer my students an international experience without leaving home was a useful solution in a time of uncertainty. Discovering an entire support network through the COIL System offered tools to formalize that collaboration. As mentioned before, collaboration is significant in my animation practice and teaching. As an international learner and professional, I know the power of such exchanges and how they help you see the world through someone else's lens. Of course, not all

6 Kirstin Stevens Schmidt's animation: https://www.youtube.com/watch?v=PsvpHTrojPc

the 16 animations were as successful as the examples chosen here. Some lack step-by-step documentation of their process; some are incomplete or rushed. Even in those cases, the students immensely benefited from this international exchange. In a way, they seemed more eager to collaborate because we were coming out of lockdown. Also, in terms of feedback, it was interesting to notice that the Brazilian students, not being animators, were very excited to see their work showcased as animation and, despite technical corrections to clarify the fermentation process, had little to add or change but were extremely excited to see the results.

The values of international exchange, particularly during the pandemic, helped my students safely experience another culture, exchanging and welcoming new perspectives. Among the exchanges, the students learned through their differences, which helped to humanize and demystify the geographical distances, finding commonality through our shared humanity. The students' engagement with the project grew, and they felt directly responsible for the results and their commitment to their international counterparts, who so generously shared their knowledge.

As technology's role in our lives increases, I believe the need for facilitating experiences that allow students to test and discover material processes to create animation also increases. Reconnection with crafts and hands-on techniques inspires the artist and invites viewers to engage more senses when experiencing their animated results. The artistic ability to synthesize and interpret human experiences makes hands-on work more valuable, and labor-intensive practices become increasingly appreciated, notably when increasingly ubiquitous technology offers easy but questionable alternatives. In the case of animation, when the magic is revealed, it enhances the viewer's interest and helps to grow cultivation for the arts, making it accessible and hopefully inspiring others in the process.

In the educational sense, what started as a class assignment fermented into a unique collaborative experience. The transformation helped students reinforce their knowledge of animation while holding them accountable to a fair depiction of the knowledge they gained from their international counterparts. This flipped classroom structure, where students teach each other, allowed for a more meaningful and transformative experience. This exchange and the fermentation of ideas it provoked led to the invigorating process of creating something new through their collaborative efforts.

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