Culturally Sensible Digital Place-Making: Design of the Mediated XicanIndio Resolana

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ABSTRACT
Mediated XicanIndio Resolana is an interactive rhetorical space where multiple participants engage in three rounds of verbal discourse surrounding a special topic (Figure 1.1). In this space, discourse is coupled with the manipulation of digital media through cultural interaction protocols and symbolic gestures. Our aim is to use this system to conduct social and cultural work in middle and high school classrooms. As a design team that includes Chicano and Native American designers, we seek to express respectful and appropriate design sensibilities that derive from indigenous epistemologies. To achieve this we have sought critical feedback through our cross-cultural partnerships with members of various indigenous communities.

In this paper, we will present (a) the theoretical foundations and educational needs that govern our design, (b) a design overview of the Mediated XicanIndio Resolana, and (c) the lessons we have learned through community discourse regarding the cultural sensibilities of our work.

Author Keywords
Indigenous media, cultural interface, social interaction, mixed-reality learning, culturally sensible design.

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H.5.2. User Interfaces: Theory and Methods. H.5.m. Information interfaces and presentation (e.g., HCI): Information systems.

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INTRODUCTION
In recent years a growing number of indigenous artists and technologists have been appropriating marketplace technologies to create culturally sensible innovations that express and facilitate community life.

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Our perspective builds from our recent field research in a public high school and our lived experiential cultural knowledge. In these domains we have forged a model for collaboration with teachers and community members where we have witnessed the homogenized culture of schooling for populations that are culturally and intelligently diverse. This motivates us to engage in a collaborative process with teachers and community members to appropriate media for learning practices that can help students of diverse backgrounds overcome their struggles in the classroom. We are responding to the call of these students and their teachers through the creation of culturally sensible experiences that leverage the affordances of mixed reality technologies. We are doing this both in the context of schools and informal learning centers such as museums.

Our need to extend tools for appropriation by indigenous community members and educators is what makes a mixed-reality system called SMALLab (the Situated Multimedia Arts Learning Lab) a viable resource for this activity due to its authoring tools for rapid proto-typing and experiential capabilities. SMALLab provides an environment that affords face-to-face interaction by multiple co-located participants within a mediated space. It also serves as an extensible platform for mixed-reality learning in a semi-immersive setting, meaning that the mediated space is physically open, on all four sides, to the larger environment. SMALLab supports situated and embodied learning by empowering the physical body to function as an expressive interface. Within SMALLab, participants use a set of motion capture rigid body interfaces (and other “smart object” peripherals) to interact in real time with each other and with dynamic visual, textual, physical, and sonic media through full-body 3-D movements and gestures. As such, it establishes a porous relationship between a physical learning context and digitally mediated components.

Physically, SMALLab is a 15’W x 15’W x 12’H freestanding, interactive space. A rectangular trussing structure frames its open architecture and supports the following sensing and feedback equipment: an eleven-element infrared motion capture camera array for interface tracking; a top-mounted video projector for providing real time visual feedback; four audio speakers for surround sound feedback; and several handheld objects that are tracked (e.g., rigid body interfaces). A networked computing cluster with custom software drives the interactive system. In the case of our cultural spaces, we use surround sound and visual display to reflect aesthetic practices inspired by Chicano and Native American roots to promote creative peer-to-peer interaction and collaboration amongst participants.

Mediated XicanIndio Resolana is an interactive space where multiple participants engage in three rounds of community discourse surrounding a special topic. In this space, verbal discourse is coupled with the manipulation of digital media through cultural protocols and symbolic gestures. As a culturally diverse design team, we are currently working on design iterations to prepare a culturally sensible prototype for deployment in classrooms. As part of our design methodology we are using existing indigenous media frameworks, and preparing additional frameworks through community critiques and cultural research. Our goal is to provide architecture that enables the facilitation of cultural work to middle and high school students with diverse cultural backgrounds. We believe this can be accomplished by leveraging interactive techniques with cultural knowledge. This idea is exemplified by cultural practices encoded into the interface of our resolana.

Our Mediated XicanIndio Resolana is a work in progress that can be used by educators to facilitate social change through discourse for social justice awareness across subject areas. It can also be applied to support group counseling led by social workers and school counselors who are working with students to address issues like teen pregnancy and drug abuse and prevention by providing a venue through which cultural knowledge by professional and elder members of communities can be administered to our youth for learning.

In this paper, we will present (a) the theoretical foundations and educational needs that govern our design, (b) a design overview of the Mediated XicanIndio Resolana, and (c) the lessons we have learned through community discourse regarding the cultural sensibilities of our work.

THEORETICAL FOUNDATIONS: INDIGENOUS MEDIA AND PLACE

Our work is theoretically grounded in the cultural resolana practices that exist within Northern New Mexican communities, and through indigenous media frameworks. Resolanas are places within exterior architectural spaces that receive direct sunlight. In New Mexican pueblos, community members gather in these places for warmth. Resolanas are emergent social spaces where people often reflect through community discourse. According to Tomas Atencio, the founder of La Academia de la Nueva Raza, resolana is not only a place but also a process. He describes resolanas as spaces where serious discussion surrounding significant subject matter is encouraged by the community. Atencio has taken this term and used it as a metaphor for awareness in order to create frameworks through which dialogues regarding community and globalization can occur [5]. Under this framework, resolana refers to the physical cultural place, community gathering, and processes of discourse within our Mediated XicanIndio Resolana. Our notion of a resolana is designed to foster and encourage meaningful experiences, and the emergence of community knowledge and awareness through reflection and sharing.

We have attempted to construct our interaction according to indigenous media frameworks along with efforts to advance them. To facilitate the development of our work, we have sustained cross-cultural collaborations with members of
Chicano and Native American communities; this includes members of different tribal, Chicano, and other community affiliations. We have also consulted members of local Arizona cultural centers, Arizona and New Mexico cultural academic departments, and Still Water for Network Art and Culture regarding the cultural sensibility of our work. Our collaborative design objective is to create mediated and embodied experiences where transformative learning can take place through social interaction.

As part of the theoretical grounding for our resolana within Indigenous Media Frameworks, we recognize that it is not our intent to replace or enhance traditions of Chicanos and Native Americans. We intend to carry out appropriate forms of research to better understand the effectiveness of our mediated systems for learning in a cultural context. To do this we are following the expectations of the communities that we work with, along with frameworks provided by Chicano and American Indian studies to ensure that our work supports the decolonization of indigenous peoples. At this stage in our work, there is an agreement between all members of our cross-cultural collaboration that our Mediated XicanIndio Resolana demonstrates people appropriating technology in ways that seek to make cultural sense in a manner deemed appropriate by our communities. In addition to our work in education, the role of our resolana is also to inspire reflection and discourse regarding the role digital technologies will play within our cultures and lives. We believe that in order to create these types of cultural explorations for community discourse, innovations and development frameworks must be directed by community members themselves as opposed to industry. People can most successfully articulate technological innovations and expressions that make cultural sense by applying the knowledge systems of their respective communities. This is the process through which media innovation is privileged to embody and symbolize the values of indigenous cultures.

The following is a quote to clarify the framework that we refer to as indigenous media. This framework is developed by Still Water for Network Art and Culture at the University of Maine.

“To study indigenous media is to study what it means to be and become indigenous, and how and why we would reclaim and protect our ecological “commons,” both bioregional and electronic.”

“Indigenous media practitioners explore new political strategies and tools, especially the power of networking like-minded communities for local/global actions and sharing of resources. Yet they also attempt to learn from the social, cultural and ecological practices of indigenous peoples, especially those in our own regions. Conversely, Indigenous media practitioners are often committed to helping indigenous people regain and protect their sovereign rights [2].”

We have interpreted this framework as a study and practice of media technology to express, address, and support:

- Indigenous life
- Decolonization/social justice
- Cultural preservation
- Environmental sustainability
- Cross cultural partnerships
- Social and health issues

We have used this interpretation as a framework for the construction of our Mediated XicanIndio Resolana.

Parallel with the development of the Mediated XicanIndio Resolana, we have built mixed-reality learning scenarios for a high school science curriculum using SMALLab in the context of a large public high school [6][7]. In addition to the cultural frameworks we have presented, we are also drawing from our successes and experience constructing mixed-reality learning scenarios.

Through our perspective and experience working at an ethnically diverse high school in metropolitan Phoenix, AZ, we have observed that the methods of schooling are largely devoid of pedagogical frameworks to accommodate community knowledge and social justice pedagogy. According to researchers, this holds true for public education in general [8]. This leads us to conclude that the recognition and celebration of culture and diversity in the classroom is in an impoverished state.

Many high schools in metropolitan Phoenix have cultural liaisons whose purpose is to provide a community interface to the school. This interface functions as a reactionary program designed to address social and cultural student issues as they arise. The need for cultural interfaces through liaisons may be systemic of the lack of cultural pedagogy in the classroom. One avenue by which these issues may be addressed proactively is through pedagogical frameworks and architectural venues designed for cultural expression, social justice discourse, and diversity awareness. This may provide opportunities for students to propose social change in education, as they are the primary stakeholders.

The cultural and social issues in education are a large motivating factor in our proactive stance to provide students with a cultural venue that embodies community inspired protocols and the creative power of media for peaceful and constructive discourse. Such a place can be used as a culturally sustainable way to administer support group counseling to address the many forms and topics that social and cultural issues take in education. Perhaps a successful implementation of a design for these types of functions can help guidance counselors move from a reactionary approach to social and cultural work, to a proactive communal mode of operation.

INTERFACE DESIGN
A resolana is a physical social space and emergent process that requires multiple participants to gather for social
discourse. The design of our resolana includes elements of embodiment such as the physical coupling of the mind-body to the architecture of the space, and the participants to each other. Our Mediated XicanIndio Resolana is comprised of tangible, sociocultural, and architectural interfaces unified through Chicano and Native American cultural perspectives. Our holistic approach to combine these interfaces represents our efforts to create a discussion space for communities and education.

The tangible interface design of our indigenous media place is derived from the appropriation and adaptive reuse of marketplace artifacts through rasquache art making traditions. One aspect of these indigenous traditions expresses the resourceful and creative adaptive reuse of foreign artifacts and discarded materials through improvisation by Chicano and indigenous cultures. The purpose of this cultural practice is to create highly functional and culturally sensible objects. Participants of a Mediated XicanIndio Resolana use rasquache practices to create their own tangible interface to interact with media (Figure 3.1), as well as to perform interaction protocols that enable participants to interact with each other.

Figure 3.1 This person is holding an example of our 2nd iteration tangible interface for the Mediated XicanIndio Resolana. This interface was created using Chicano Rasquache traditions.

Inspired by traditional cultural practices for community discourse, we have also approached the functionality of our architectural place through a carefully designed cultural interface. This is done using interaction rules defined through social protocols scaled to encompass three rounds of talks. These protocols and our tangible rasquache interface are encoded with cultural knowledge associated to the Chicano and Native American cultural workers who have collaborated on the construction of the Mediated XicanIndio Resolana.

The use of interaction protocols provides participants with a social framework and meta-language to approach and manipulate media in the resolana. To instantiate this aspect of the interface, participants work with each other to prepare for their gathering. This preparation is lead by a discussion leader who provides participants with instructions and clarity through the rehearsal of interaction protocols. Preparation is comprised of behavioral expectations, the handling and construction of their tangible interface, media creation, and procedures regarding entering and exiting the space.

The design and construction of our resolana includes a script of specific interaction protocols. Indigenous designers who worked on the construction of the Mediated XicanIndio Resolana developed these protocols by pulling inspiration from their Chicano and Native American backgrounds. These protocols provide a framework for social expectations associated to the types of human behaviors required to achieve peaceful, respectful, and productive discourse. The protocols are simple to understand, but may require considerable effort to follow. For example, the most fundamental interaction protocol allows for a person in possession of the tangible interface to speak or stand silent while requiring all other participants to listen and reflect. This can be a difficult task to achieve over a lengthy period of time. All of the interaction protocols serve as a functional interface to the underlying mediated system, while at the same time they provide access to cultural values that have been encoded into the interaction. These values are expressed in the form of symbolic gestures and human behaviors inspired by cultural knowledge and ritual practices that have emerged through communities and their respective cultures. We believe that providing participants with a framework of cultural values promotes a sense of place and social behavior expectations that lead to self-reflection, peer-to-peer respect, and peer-to-peer support for learning.

The Mediated XicanIndio Resolana provides a cultural experience that enables its participants to share and explore each other’s personal narratives and perspectives. The physicality of this space is expressed through a circular floor projection of interactive images that designate participant locations, as well as symbolic representations of diversity and context using graphical symbols (Figure 4.1). In addition to this array of images, a display and interaction space is placed in the center of this circle. This design provides face-to-face social interaction, and equal accessibility to both view and share media with all members of a gathering. The space is graphically composed with culturally inspired uses of design symmetry, proximity, functionality, and minimalist aesthetics to create a quiet and reflective architectural space. As a resolana, its architecture and choreography represent the circularity of a
group of participants. This circularity can be described as the interconnectedness of the participants supported through the sharing of media and oratory with each other. Through the community activities of the interaction, cultural knowledge, community, and identity emerge over time.

Figure 4.1 Circular/interactive floor projection of the Mediated XicanIndio Resolana. Participants stand before a symbol on the outside of the circle while facing towards the center. In the case of this iteration, the symbols represent social justice issues.

Our tangible interface, interaction protocols, and floor space architecture were carefully designed to represent a seamless functional and cultural continuum. Our holistic approach to designing and fusing interfaces provides participants with tools to identify interrelationships and connections that exist between each other’s perspectives surrounding a special topic. The Mediated XicanIndio Resolana is facilitated by the cultural/rule-based mechanics of its tangible interface, interaction protocol, and visual and floor space architecture. All these components come together to facilitate a movement and gesture based choreography that has semiotic value in the contexts of function and culture. The elements of choreography and storytelling are factors that contribute to an architectural sense of place. This is a place built to (a) enable a discussion group to recognize their group identity, (b) help individuals understand and appreciate the complexities of their own identities in the context of diversity, (c) allow students an opportunity to consider how their perspectives feed back into the group, and (d) provide teachers with a tool to strengthen the sense of classroom community through this feedback loop. The design of the Mediated XicanIndio Resolana is based on our cultural beliefs that constructive change can emerge through self-reflection, active listening, and one’s agency to express oneself through oration and storytelling.

The role of tangible and embodied interaction is critical to our design because it is built utilizing indigenous community knowledge systems for indigenous ways of learning. These methods for learning take place through embodied and lived experience. This is the reason why certain aspects of the interface must be tangible as opposed to virtual. It is also the reason why this would not make epistemological sense as a type of advanced video conferencing system. Within indigenous ways of being, local community reflection occurs through a practice of accountability that requires the presence of community members interacting with each other in collocated space within the context of their situated environment.

EMBODIED INTERACTION DESCRIPTION

Prior to using the Mediated XicanIndio Resolana, participants are required to collect and upload images using a web interface called SLink. This allows students to access or contribute media content and meta-data that will sync to all SMALLab installations. Images provided by an individual can consist of content that he or she may find interesting or relevant to a given special topic. In the context of education, this special topic is chosen by an education professional, such as a guidance counselor or a school teacher. In the context of community, the person chosen to lead a discussion or determine the topic is dependant upon the social and cultural sensibilities of a given community or educational context.

A single resolana is comprised of three rounds of talks. Each round is designed to act as a prerequisite to the subsequent round. This is so that interaction protocols can evolve throughout the course of the resolana. In a ritual context, this is to create rites of passage that participants must go through to prepare for self-directed and respectful conversational dialogue. During the first round of talks, culturally inspired interaction protocols are used to determine turns for speaking as well as expectations for listening. In the case of the first round of talks, participants are prescribed by interaction protocols to gather around the outside of a circle while facing inward toward each other. Arranging this part of the choreography gives participants access to a projected floor display that is circular in geometry as well as interactive. This also provides participants with the opportunity to face each other.

To conduct a discussion, all participants are provided with an opportunity to speak by turn taking. To get started, the discussion leader introduces the first round of talks. This person holds the tangible interface as well as the physical position facing east. This way of opening a resolana reflects cultural practices around the globe to face east as the sun rises. When the discussion leader is finished speaking, he or she will then pass it to the person on the left. This method of turn taking will continue in a clockwise direction until the tangible rasquache interface returns back to the leader who then closes the circle and first round of talks.

When it is a participant’s turn to speak, he or she is handed the tangible rasquache interface (Figures 3.1). Participants are able to use this to interface with images on the floor or the discussion ground in all three rounds of talks. Specific to the first round, participants are able to trigger an interactive event that randomly calls and displays a single rotating image of his or her uploaded media (Figure 5.1). This image rotates slowly in the center of the circle.
gathering for upright viewing accessibility to all of the members of the circle. The random call of an image is to encourage the speaker to orate upon an image through improvised as opposed to premeditated thought. Interaction protocol prescribes that those who do not possess the tangible interface must respectfully and intently listen and reflect upon the words of the orator. The function of the first round of talks is to enable participants to build trust and respect amongst each other as a community, to develop agency and abilities to speak publicly and socially, and to practice the art of listening and reflection. Through this, members of the group are able to gain insights and context about a special topic through the diversity of ideas contextualized in relation to each other.

Figure 5.1 Left Image: Floor projection during the first round of talks. The center image represents a topic presented by the stickholder. Figure 5.2 Right Image: Floor projection during the second round of talks. This shows images collaged together in the center.

The second round of talks follows a similar protocol to the first round, but requires media to be manipulated through a larger movement vocabulary of symbolic and functional gestures. Using physical action, the participants step inside and work from within the circle boundary. During a participant's turn to speak, he or she works with the ideas and images presented by the other participants. An orator can now step into the circle and move from within the physical and architectural framework of people and media to highlight images as well as build collages in a ritualistic and embodied manner through the use of locomotive movement and gesture (Figure 5.3). This enables participants to begin to address each other more directly.

The images used during this round of talks are the same ones that were presented during the first round. All of these images are now displayed in a circular array of thumbnails facing inward. During this second round of oration, an interface holder may highlight images that slowly fade after selection, requiring a person to continue to highlight the same images to build focal points during the course of his or her oratory. An orator will make highlights by slowly lowering the rasquache interface over an image. To close an oration or turn, a participant is required through protocol to gather four images into a center area of the circle to symbolically or logically identify connections using the imagery provided by all of the participants (Figure 5.2). We use collage and the performance of its creation in our resolana to take advantage of the cognitive and creative aspects of art making often recognized by art therapy practices.

To gather images for collage, a participant must hold the rasquache interface vertically, and move it in a circular gesture in order to symbolically acknowledge and respectfully recognize all of the members of the circle. Meanwhile gesture recognition of this motion allows the system to recognize a new state that enables collage assembly. Once this state is recognized, audio feedback is provided to the rasquache interface holder. This person may now lower the interface over an image and physically drag it to the center of the circle. To disengage the image, the orator must slowly lift the interface for final placement of the image into his or her collage. When a collage is completed, the person holding the tangible interface can reset the images and prepare the space for the next speaker.

Figure 5.3 Participant uses interface to collage images.

The interaction protocols of the second round of talks require participants to explore stories comprised of each other’s media. This is to encourage peaceful and creative discourse to help participants draw out the underlying ties they feel are exemplified or inspired by the media and oratory they are sharing with each other. This also provides opportunities for participants to share perspectives and frames of discourse they feel compelled to express.

A third round of talks unfolds according to the events and actions that took place during the second round of talks. An algorithm is used throughout the course of the second round to keep track of the number of times different images were used for storytelling through collage. Through this an image map is produced to provide the participants an opportunity to have open dialogues with each other while reflecting upon the course and outcomes of their talks (Figure 5.4). During this round, a talking circle leader is able to guide and challenge participants to think about why some issues are more salient than others. By encouraging participants to explore those issues less salient, a leader is able to symbolically acknowledge that all of the topics exemplified through the media are to be equally respected and reflected.
upon. This gives the leader and/or teacher an opportunity to help members of the circle deal with fears or the lack of knowledge regarding certain issues.

**CULTURAL CRITIQUES AND LESSONS LEARNED**

In order to evaluate the viability of our approach in the formative stages of our design, we hosted a series of dialogs with potential stakeholders including indigenous community members and cultural workers, cultural theorists, and K-12 educators. Each session lasted approximately 2 hours during which we presented the work in progress and solicited verbal feedback in the form of open discussion. Our goals for these sessions were two fold. First, we wanted to gather feedback regarding any cultural issues exemplified by our work that we might not be properly informed of. Second we wanted to gather ideas about potential applications of this work in the community.

Through the process of critique, our design iterative process has been focused upon the cultural presentation, theoretical framing, and interpretation of the work. This has impacted the following aspects of design:

- Theoretical grounding and facilitation of design
- Tangible interface design
- Environmental graphic design of the floor space

Our initial design interpretations were framed through Native American talking circle practices. We chose this cultural context to recognize the cultural practice we were inspired by. However, during critiques we learned that this was problematic because it theoretically frames our work as a Native American Talking Circle. This framing may be considered to be taboo by some members and societies of Native American nations. This is because the talking circle is considered a sacred ceremonial rite. As a result of this critique and our pursuit of a culturally sensible interaction, we decided to rethink our theoretical foundation in the context of indigenous resolana. The resolana framework allowed us the ability to present the fusion of Native American and Chicano cultural perspectives represented by members of the design team. As an addendum to this we decided to understand our work as having originated through XicanIndio roots. XicanIndio is a Mexica and Spanish hybrid term sometimes used in the southwestern United States to describe the synthesis of Chicano and Native American culture, as well as to refer to the mestizo.

The design of our first tangible interface prototype was inspired by the Native American talking stick. The talking stick is a sacred implement used to facilitate a talking circle ceremony. Through critiques we learned that it would be more appropriate to consider the use of Chicano rasquache traditions to construct tangible interfaces that could more equally represent the XicanIndio partnerships involved in the construction of the interaction. We followed this design strategy to solve potential issues of taboo that relate to the appropriateness of context and theoretical grounding. The creative improvisation of objects through appropriation and adaptive re-use of foreign artifacts has been a long-standing practice of rasquache within indigenous culture. This creative practice of culture and sustainability is appropriate for use in the classroom.

The graphic design of the floor projection for our resolana was originally built with icons representing the basic human rights set forth by the United Nations (Figure 4.1). These symbols were chosen to reflect the U.N. recognition of the sovereignty of indigenous peoples around the world. We initially felt this was a culturally sensible way to welcome people to the space. However after critiques and dialogues, we learned that perhaps, since this is an indigenous media place, people should be welcomed by indigenous symbols or glyphs, as opposed to symbols created through western frameworks. It was also suggested by members of our communities that students themselves should be provided with opportunities to create their own symbols, tangible interface, and floor space designs. As a result of this idea, we have adopted this practice as part of the reflective classroom activities designed to prepare students for the resolana. This allows students to use our interaction template to express the aesthetics for their own resolana. Through this process they have the opportunity to encode meanings that are relevant to their lives and community perspective. Our hypothesis is that this practice will help enable students to develop a reverence for each other and their resolana. To address this cultural design issue within the context of demonstrating our interactive space to others, we decided to redesign the graphics of the floor space using...
the traditions of Chicano muralism for place making by using Mayan glyphs that represent cardinal directions to welcome participants from all directions (Figure 6.2).

Figure 6.2 Circular and interactive floor projection for the demonstration of the Mediated XicanIndio Resolana.

In addition to the potentially taboo nature of our original talking circle framework, indigenous community members also noted their concerns that this framework and presentation may be inappropriate for use in schools due to the sacred religious ceremonial aspects of Native American Talking Circles. Because learning is considered a sacred act by indigenous peoples, this issue highlights how education policies adversely affect the indigenous exercise of cultural-sovereignty in education.

A talking circle framework also called into question the authority of who has the right to administer the interaction. The idea of this authority differs between Native American communities. However, it is consistent within indigenous cultures that only those members who embody the appropriate cultural knowledge required are allowed to administer ceremonies. This specialized knowledge requires a lifetime of cultural context and learning. Therefore, this role is not feasible or appropriate for someone like a non-indigenous schoolteacher.

In order to address all of these complex cultural issues, we decided to rethink our cultural framework. As a result, we decided to synthesize cultural protocols through a XicanIndio perspective and cast our interaction as a resolana through Tomas Atencio’s metaphorical interpretation, and its Northern New Mexican cultural practice. Reshaping the theoretical framework was the suggestion of both community members and cultural scholars. Resolana allows us to open the possibilities to serve students through cultural practice while respectfully addressing community concerns revealed through critiques.

The resolana applications suggested to us by community members includes social justice awareness in the classroom, cultural identity and diversity reflection in the English Language Development classroom, and applications for support group counseling to address social work and guidance counseling at middle and high school levels. It has also been recommended to us that the resolana can be applied to drug and alcohol prevention and rehabilitation programs. Our next step is to use our tangible and embodied interaction within these contexts, as well as study the effectiveness of our system to help facilitate education in a culturally sensible and inclusive manner. We plan to do this by applying both western and indigenous academic approaches to the assessment of our work.

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