A photograph of a river flowing through a wooded area, with a waterfall in the foreground. The river is surrounded by dense green trees and a dirt path. The water is clear and reflects the surrounding environment. The waterfall in the foreground is creating white foam and splashing water.

Reclaiming Our
Past, Sustaining
Our Future:

Envisioning a New Mexico Land Grant and Acequia Curriculum

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on behalf of the Center for the
Education and Study of Diverse
Populations at
New Mexico Highlands University
May 16, 2021



Photo by Pilar Trujillo, courtesy of the New Mexico Acequia Association

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Acknowledgements

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Photo courtesy of the New Mexico Acequia Association

Introduction

The Acequia and Land Grant Education (ALGE) project is intended to convene educators, community leaders, and other key stakeholders to develop and **provide recommendations** to the Public Education Department and Higher Education Department on how to reshape New Mexico's educational system to include a culturally relevant curriculum that embraces the topic of acequias and land grants.

Project Belief Statements:

- We believe the ALGE Project serves our communities and future generations by honoring the truths of our past while nurturing a legacy of land and water justice, food sovereignty, and cultural integrity.
- We believe that our educational framework in New Mexico, including how we contextualize land grants and acequias, should be grounded in Indigenous perspectives on history, land and water tenure, and community as well as critical consciousness on colonialism.
- We believe that a transformation of our education system is needed to serve our communities by preparing students to be active change agents in our communities in the areas of land, water, and food.
- We believe that an ALGE curriculum will strengthen cultural identity, elevate public consciousness, and lead to public policy that is inclusive of the voices and knowledge of New Mexico's traditional, land-based communities.



Photo by Victoria Tafoya

For most of the last century, New Mexico youth have had to acquire place-based knowledge informally, outside conventional educational spaces.¹ Knowledge connected to local communities' relationships to land was ignored, if not actively repressed, by individuals and institutions bent on bringing 'progress' to the region. People whose lifeways did not align with the ideal American citizen type (i.e., white, heteronormative, English-speaking, and Protestant) were considered ignorant and uncivilized, their dynamic cultures unworthy of attention in traditional school settings.² That people from land-based communities throughout New Mexico have been able to share with multiple generations knowledges that have been vital to survival, their sense of belonging, and their connection to place despite such attitudes speaks to their tremendous resilience and creativity.

“On one hand, our dilemma calls for new paradigms and innovative technologies. On the other, traditional preindustrial technologies lately considered backward and obsolete now bear another look for what they might teach us about sustainable, resilient adaptive strategies.” Sylvia Rodríguez (2020)

Climate change and increased recognition of the ways in which systemic racism has created inequities across the United States make more evident the importance of place-based youth education. Educators, policy makers, scientists, government officials, business owners, community leaders, and others are having to rethink how to support more sustainable futures, and youth education is vital to this endeavor. Previously marginalized knowledge systems are garnering attention because they appear to offer viable solutions to modern challenges. As Sylvia Rodríguez stated in a recent study about acequia culture in New Mexico, “On one hand, our dilemma calls for new paradigms and innovative technologies. On the other, traditional preindustrial technologies lately considered backward and obsolete now bear another look for what they might teach us about sustainable, resilient adaptive strategies.”³ Many communities in New Mexico value maintaining a

1. I use place-based education to refer to teaching and learning that is informed by place--its history and cultures, social and natural environments.

2. For more on colonialism and hierarchies of knowledge, see Lina Tuhiwai Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*. (1999; repr., Dunedin: University of Otago Press, 2008). For examples specific to New Mexico, see Lynne Marie Getz, *Schools of their Own: The Education of Hispanos in New Mexico, 1850-1940*. (Albuquerque: University of New Mexico Press, 1997).

3. Sylvia Rodríguez, “Key Concepts for a Multidisciplinary Approach to Acequias,” *Acequias of the Southwestern United States: Elements of Resilience in a Coupled Natural and Human System*, Research Report 796, ed. Adrienne Rosenberg (Las Cruces: New Mexico State University, 2020), 4, <https://aces.nmsu.edu/pubs/research/water/RR796.pdf>

balanced relationship with the land and what it provides, so it is unsurprising that their lifeways are being studied as more sustainable alternatives.

The Yazzie/Martinez v. State of New Mexico decision is providing opportunities to reimagine K-12 education in New Mexico.⁴ In 2018, the New Mexico Supreme Court decided that the State of New Mexico has not fulfilled its obligation to provide students, particularly Native students, English language learners, students from low-income families, and students with disabilities, with adequate public education programs and services. Roughly 80% of students in the New Mexico public school system fall under one or more of these categories.⁵ The New Mexico Public Education Department has responded to the decision with a strategy to address deficiencies in public education. The strategy prioritizes “root-cause analysis, equity-focused leadership and continuous improvement, and culturally and linguistically responsive curriculum and pedagogy.”⁶ The state defines culturally and linguistically responsive as that which validates and affirms “an individual’s home culture and language to create connections with other cultures and languages in various social contexts.”⁷

School districts and charter schools throughout New Mexico are now responsible for developing culturally and linguistically responsive curriculum and pedagogy—a tall order in some cases, as such an approach has only recently been championed by state government and educational leaders. Though some New Mexico educators have been validating and affirming their students’ languages and cultures for decades, often of their own volition, the multifaceted mandate created by the NMPED is rather new. The paradigm shift in



Photo by Victoria Tafoya

New Mexico public education might be a welcome one but many might be unfamiliar with how a culturally and linguistically responsive education really looks and feels.

The recent legislative request that acequia and land grant education be part of the contemporary effort to provide New Mexico students with more formal multilingual and multicultural learning opportunities is a step in the right direction.⁸ “Land grants and acequias,” as Senator Ben Ray Luján tweeted in June 2020 after introducing the Land Grant and Acequia Traditional Use Recognition Act, “are integral to our way of life as New Mexicans.”⁹ Land grants and acequia culture are especially significant for multigenerational Spanish-speaking communities of Indigenous, Spanish, and Mexican descent. An acequia and land grant curriculum that is culturally and linguistically responsive

4. Yazzie/Martinez v. State of New Mexico, D-101-CV-2014-00793/D-101-CV-2014-02224, (2018).

5. “State Admits Students Lack a Sufficient Education in Motion to Dismiss Yazzie/Martinez Lawsuit,” NM Center on Law and Poverty, March 17, 2020. <http://nmpovertylaw.org/2020/03/state-admits-students-lack-a-sufficient-education-in-motion-to-dismiss-yazzie-martinez-lawsuit/>.

6. “Martinez and Yazzie Consolidated Lawsuit,” New Mexico Public Education Department. February 2, 2021, <https://webnew.ped.state.nm.us/bureaus/yazzie-martinez-updates>

7. New Mexico Public Education Department, Language and Culture Division, Culturally and Linguistically Responsive Schooling By Design Tool. (Santa Fe: NMPED, 2020): 4. https://webnew.ped.state.nm.us/wp-content/uploads/2020/06/CLR_SbD-Tool-2020.pdf.

8. Include Acequia and Land Grant Learning, New Mexico House Memorial 31. (2020).

9. Ben Ray Luján (@SenatorLujan) “Land grants and acequias are integral to our way of life as New Mexicans.” Twitter post, June 2020, 5:48 p.m., <https://twitter.com/SenatorLujan/status/1273764581916188675>



would allow many K-12 students to build upon knowledge they take to the classroom but has almost never been validated or affirmed.

However, though an acequia and land grant curriculum might be validating and affirming for some, it could potentially alienate or perpetuate a host of “isms,” including racism, classism, and sexism. The particular historical context in which the terms ‘acequia’ and ‘land grant’ are embedded in New Mexico privilege Spanish/Mexican/Hispano settler colonial ways of being and knowing.¹⁰ For a place-based education that is more culturally and linguistically responsive to diverse histories, languages, and cultures, a more expansive land and water curriculum that includes but is not confined to acequias and land grants is necessary. A comprehensive but flexible land grant and acequia curriculum would encourage critical reflection about the histories and cultures of the US Southwest and assist students in making connections to other peoples, places, and ideas. It is crucial that curriculum writers be critical of the ways Spanish/Mexican/Hispano language and culture tied to acequias and land grants might also devalue and delegitimize particular peoples and cultures. The work of some New Mexico grass-roots organizations, activists, and community-minded educators who are already engaged in developing and implementing culturally and linguistically responsive curriculum demonstrate how an acequia and land grant curriculum might be structured in more equitable, inclusive ways.

10. For discussion about how particular Hispano worldviews have perpetuated racialized and gendered hierarchies in New Mexico public schools, see Elena V. Valdez, “Ownership and Order in the Fiesta de Santa Fe.” *Chiricú Journal: Latina/o Literatures, Arts, and Cultures* 3, no. 1 (2018): 120-38. doi:10.2979/chiricu.3.1.08.

Photo by Vicotoria Tafoya

Decolonial Frameworks and Future Possibilities

Frameworks and models for developing a state-supported land and water curriculum already exist. Local institutions and organizations acting as custodians of land-based community culture have developed their own curricula, some of which has been used as part of youth education for years with great success. The Center for Social Sustainable Systems (CESSOS) in Albuquerque, the Indian Pueblo Cultural Center (IPCC), the New Mexico Acequia Association (NMAA), and Tewa Women United (TWU) in Española, are examples of the institutions and grass-roots organizations engaged in the development and implementation of place-based curricula that coalesce around interrelated issues of social justice, sustainability, health and food sovereignty, cultural identity, and self-determination.¹¹ To be sure, among the most well-organized and thorough examples of a contemporary curriculum that might translate well into place-based land and water education for K-12 students in New Mexico is that which has been developed by Indigenous educators through the Kellogg Foundation-funded IPCC Indigenous Wisdom Project.

The existing education models are unique yet overlap in many ways, including, I would argue, their decolonial orientation. Decolonial education responds to settler colonial logics that not only devalue and delegitimize non-Eurocentric bodies of knowledge, but also dehumanize the bodies that carry and create that knowledge. Education scholar Miguel Zavala describes decolonial education as a “process for community self-determination, at moments materializing in spaces of survival and at other times in the spaces of recovery.”¹² The three interrelated strategies of decolonial education are “counter/storytelling, healing, and reclaiming” and may look different given the settler colonial contexts from which they emerge.¹³ Practices tied to these strategies, according to Zavala, include naming

11. Other examples of NM-based organizations engaged in this type of education work include Earth Care in Santa Fe, Environmental Education of New Mexico in Albuquerque, Nuestra Tierra Conservation Project in southern New Mexico, and Pueblo Action Alliance, based in Albuquerque.

12. Miguel Zavala, “Decolonial Methodologies in Education.” *Encyclopedia of Educational Philosophy and Theory*, ed. Michael A. Peters (Singapore: Springer, 2016), 1.

13. *Ibid.*, 2.

Photo by Victoria Tafoya





Photo by Rowan Stanland, courtesy of the New Mexico Acequia Association

and remembering, social/collective and spiritual/psychological healing, and the reclamation of spaces and identities.¹⁴ CESSOS, NMAA, IPCC and TWU each employ strategies of counter-storytelling, healing, and reclaiming to educate youth and to support the social, cultural, psychological and spiritual health of the communities they serve.

The development of a place-based curriculum that focuses on land and water has the potential to meet many of the diverse social, emotional, and cultural needs of New Mexico students. Such a curriculum could also revitalize our local communities and introduce younger generations to traditional lifeways that have helped sustain people living in the region for centuries. It would also present opportunities to engage with people in their communities and the land that surrounds them, while meeting state grade-level standards in various subjects, including math, science, social studies, and language arts. Ideally, such a curriculum would be rooted in local histories and relationships to land and water, but also flexible enough for students to make connections with other cultures and languages across the globe. It would foster critical conversations about issues such as climate change, sustainability, land stewardship, hydrology, food sovereignty, civics, social movements, and settler colonialism.

Institutions of higher education will play an important role in preparing educators to teach students about land and water issues in New Mexico, particularly since educators should develop critical consciousness about local land-based histories and cultures. Though a curriculum can guide educators, it cannot guarantee culturally and linguistically affirming pedagogy, or delivery of material. Teacher education and licensure programs should encourage K-12 educators to take courses in ethnic studies, Black studies, Native studies, Mexican American studies, Southwest studies, etc., so that these educators may not only grow their capacity to recognize previously marginalized epistemologies, but also become better equipped to engage them. Important critical conversations take place within these fields, and they should not be isolated from the critical conversations taking place in the field of education. Educational leadership programs in New Mexico, too, should involve interdisciplinary training that allows individuals to better recognize gaps in knowledge and biases that have become commonplace in the US public education system.

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14. Ibid.

Land Grants and Acequias



Photo by Richard Gutierrez

Spanish settler colonialism contributed to the formation of modern notions of property like the land grant. In the region we now consider New Mexico, land grants became a method of seizing and controlling Indigenous lands. Some lands were granted to individuals while others were made to communities. The building and maintenance of acequias allowed for people living within land grants to engage in agricultural production. Significantly, Pueblo people irrigated in New Mexico before acequias were introduced to the region by Spanish colonizers.¹⁵ Spanish colonizers brought the concept of acequias to New Mexico in the sixteenth century, where it was adapted to suit people in need of sustenance and influenced by the irrigation methods already in use by Pueblo people.

In New Mexico, where water is scarce, acequias have long been signifiers for tradition and innovation, permanence and possibility. Acequias are gravity-fed irrigation ditches, a means of conveying water from one place to another via hand-dug canals. The New Mexico Acequia Association estimates that there are roughly 700 acequias in New Mexico today, an outcome of hundreds of years' worth of labor on lands considered sacred to many communities in the state.¹⁶ An acequia may also refer to a group of people who use and are responsible for maintaining a system of irrigation ditches. Today, there are acequia associations that rely on many of the same rules established in the colonial period. *Parciantes* are people with water rights, and they elect a *mayordomo* and commissioners to manage ditch operations. The amount of labor a *parciantes* must contribute is determined by the amount of land they irrigate.

15. Pre-colonial Pueblo societies were agrarian and relied on communal organization and cooperation to irrigate and resolve conflicts over land and water. To assume that Spanish colonizers introduced irrigation to New Mexico by way of acequias is to ignore and participate in the erasure of Indigenous people. See Roxanne Dunbar-Ortiz, *Roots of Resistance: A History of Land Tenure in New Mexico* (Norman: University of Oklahoma Press, 2007) 23-27.

16. Rodriguez, 10.

There are two key aspects of acequia culture that might provide a pathway for thinking about a broader land and water curriculum: mutualism and *querencia*. Traditionally, many members of acequia communities in New Mexico understood and upheld the notion that individuals must cooperate for the good of the collective. Scholars tend to attribute the prevalence of mutualism to the social, political, and environmental to the settler colonial conditions. José A. Rivera writes, for instance, that “[p]rior to the annexation of New Mexico and Colorado by the United States, many forms of community mutualism coexisted in settlements along the northern Rio Grande, and together they continue to perpetuate a sense of place while maintaining a cultural heritage rooted in the principle of *ayuda mutua* [Rivera’s emphasis], or mutual help for survival.”¹⁷

The annexation of New Mexico marked the beginning of a wave of significant social, economic, and political changes that made it increasingly difficult for people living on communal land grants to continue living as they had before. The loss of their common lands to land speculators, unscrupulous attorneys, and corrupt political officials through an unjust adjudication process dislocated whole communities and destroyed the communal ethic that held merced communities together. Though still an integral part of maintaining acequia and land grant culture today, the concept of mutualism exists in tension with the modern capitalistic emphasis on the individual.

For many, *querencia*, or a profound love of land, is central to acequia and land grant culture. The beloved New Mexican author Rudolfo Anaya defines *querencia* as “a special relationship to *la madre tierra* that produces our food.”¹⁸ Juan Estevan Arellano similarly considered *querencia* “that which gives us a sense of place, that which anchors us to the land, [and] that which makes us a unique people.”¹⁹ For Arellano, *querencia* is a worldview that allows people to feel not only a sense of belonging, but also a sense of obligation. The concept reorients individuals and communities in ways that destabilize common hierarchical relationships between humans and nature. Though a Spanish-language word, the meaning of *querencia* is not unique to Spanish-speaking communities of New Mexico. Learning and knowing *querencia* is a matter of developing a different set of literacy skills.

Querencia: “A special relationship to *la madre tierra* that produces our food.” (2020)

Rudolfo Anaya

Querencia: “That which gives us a sense of place, that which anchors us to the land, and that which makes us a unique people.”

Juan Estevan Arellano

17. José A. Rivera, “The Roots of Community in the Northern Rio Grande: Acequia Mutualism, Cultural Endurance, and Resilience,” *Acequias of the Southwestern United States: Elements of Resilience in a Coupled Natural and Human System*, Research Report 796, ed. Adrienne Rosenburg (Las Cruces: New Mexico State University, 2020), 13-19. <https://aces.nmsu.edu/pubs/research/water/RR796.pdf>.

18. Rudolfo Anaya, “Querencia, Mi patria chica,” *Querencia: Reflections on the New Mexico Homeland*, eds. Vanessa Fonseca-Chávez, Levi Romero & Spencer R. Herrera. (Albuquerque: University of New Mexico, 2020), xvi.

19. Juan Estevan Arellano, “La Cuenca y la Querencia: The Watershed and the Sense of Place in the Merced and Acequia Landscape,” *Thinking Like a Watershed: Voices from the West*, eds. Jack Loeffler and Celestia Loeffler (Albuquerque: University of New Mexico Press, 2012), 158.

Land and Water Literacy



Photo by Victoria Tafoya

In an essay about the importance of land and water education, Patricia Trujillo writes how acequia culture allows us to cultivate multiple literacies. In the essay titled “¿Pala o Pluma? ¡Los Dos! (Shovel or Pen? Both!),” Trujillo, who grew up on an acequia, recalls how her family taught her the value of hard work and the necessity of knowing one’s place in relationship to land and water, as well as to other human and non-human beings. She writes about her upbringing on the acequia as its own kind of education, one that she eventually attempted to replicate for students in a lower division humanities course at Northern New Mexico Community College. For Trujillo, allowing students to step outside of the classroom and read alongside an acequia, speak with elders, exchange first-hand experiences, and collaborate on the creation of a community game, facilitated the development of multiple literacies.²⁰ “We cannot be traditional land-based people and be expected to learn solely in rooms that only give us windows to our culture, our language, our practices,” writes Trujillo. “I want more than a view of things; I want a full sensory perspective--body, mind, and spirit.”²¹

I point to Trujillo’s “¿Pala o Pluma? ¡Los Dos!” because it characterizes well the impetus behind adopting a land and water curriculum--the need to make connections between knowledge and place in ways that fortify our communities and our collective future. Trujillo’s vision of an acequia curriculum also recognizes the importance of attending to the multiple dimensions of student experience.

Several New Mexico-based programs and organizations that have developed and employ their own curricula, sometimes in partnership with schools, to provide youth with similar holistic learning opportunities to develop multiple literacies. Examples, as I mentioned previously, include CESSOS in Albuquerque, as well as NMAA and TWU in northern New Mexico. Though focused on different geographic areas, these organizations use similar theory and practice when it comes to educating youth. These organizations are focused on preserving clean water to sustain traditional relationships to land and maintain healthy communities. Leadership in CESSOS and NMAA is predominantly Hispano, Chicanx, or Latinx. TWU is led by Native women. Each is grassroots and concentrates on cultivating healthy land-based New Mexico communities and environments.

CESSOS, founded in 2011 in response to land and water issues facing the South Valley community (Valle de Atrisco) in Albuquerque, uses education “education in its broadest form, as a tool for empowering and advocating for our communities”²² CESSOS has been working in partnership with schools since 2014 to reconnect students and families with local agricultural traditions and to provide

20. Patricia Trujillo, “¿Pala o Pluma? ¡Los Dos! (Shovel or Pen? Both!),” *Green Fire Times: News and Views from the Sustainable Southwest* 6, no. 1 (January 2014): 21, <http://greenfiretimes.com/wp-content/uploads/2014/01/GFT-V6N1-010114-FINAL.pdf>.

21. *Ibid.*

22. “About Us,” CESSOS: Center for Social Sustainable Systems, accessed May 15, 2021, <https://www.cesos.org/history>.

them with a critical knowledge base for understanding social and environmental justice issues through workshops and hands-on projects like school gardens. To develop future community leaders, CESSOS invites youth to take part in its leadership institute, which bases its content in social justice activism. The institute seeks to develop leaders who are not only familiar with structural racism and related historical challenges, but also to think critically and work alongside others to change present conditions. CESSOS is also reportedly developing a model of K-12 curriculum called Ciclos de La Tierra that braids together concepts of justice, *querencia*, and *mutualismo* that more accurately reflect local traditions and values, which it intends to share with Albuquerque Public Schools and other schools across New Mexico.²³

Similar to CESSOS, NMAA partners with schools to teach New Mexico students, educators, and families about the historical and cultural significance of acequias and the local farming practices.



Photo by Miguel Santistevan, courtesy of the New Mexico Acequia Association

NMAA seeks to shed light on the vital career opportunities that are available to those interested in land-based traditions. NMAA also offers a number of youth workshops, including “‘Acequia 101’: The History, Uses, and Importance of New Mexico’s Acequia System,” “Acequias, Ecology, Environment and Climate Change,” “Acequia Music, Poetry and Art,” and “Acequia Policy, Governance and Leadership.”²⁴ Their Youth Education webpage contains several resources for elementary, middle, and secondary students, such as the “Seeds Are Life!” sheet, which instructs students to match seed names with the corresponding seed images. “Seeds Are Life!” asks questions that help youth reflect and build upon prior knowledge of seeds.²⁵ Though a simple set of activities geared for elementary school-aged children, “Seeds Are Life!” models how a land and water lesson might pair visual and cultural literacy development with science education. Importantly, rather than incorporating pictures and names of just any seeds, the sheet focuses on native plants which have been crucial to land-based diets, like blue corn, squash, pinto beans, and piñon tree seeds.

23. “Community-based Education Projects,” CESSOS: Center for Social Sustainable Systems, accessed May 15, 2021.

<https://www.cesoss.org/school-garden-project-1>.

24. “NMAA Youth and Classroom Education,” New Mexico Acequia Association, accessed May 15, 2021. <https://lasacequias.org/youth-education/>.

25. “Seeds Are Life!,” New Mexico Acequia Association, accessed May 15, 2021. <https://lasacequias.org/wp-content/uploads/2020/04/Seeds-are-Life-Final-version.pdf>.

26. Acequia Youth, Youtube Channel, New Mexico Acequia Association, video, <https://www.youtube.com/user/AcequiaYouth/videos>.

Seed saving and sharing is central to the NMAA's vision, literally and figuratively. Sharing seeds of knowledge about acequia culture with younger generations is critical for its continuance. The Sembrando Semillas Project, part of the NMAA youth education program, focuses on teaching youth about acequia culture and links students with opportunities to participate in hands-on agricultural projects in their communities. The NMAA has generated a small collection of videos through the Sembrando Semillas Project that cover a range of topics, including how to prepare chicos, how to irrigate, and how to plant seeds. The videos were created and narrated by the youth involved in the Sembrando Semillas project more than a decade ago, but demonstrate how a K-12 acequia and land grant curriculum might incorporate technology training and digital literacy alongside the study of social studies, language arts, and science. The videos show how youth have the capacity to not only absorb content but also synthesize, create, and share it, as digital sharing platforms make it easier than ever to share information with others.

TWU differs from CESSOS and NMAA in that it centers Indigenous women and Indigenous ways of knowing. TWU does not use the language of land grant and acequia culture to discuss issues related to land, water, and food sovereignty, but still creates partnerships and programs that push for social and environmental justice for communities across New Mexico. The organization's approach is expressly decolonial.²⁷ In creating community gardens, seed libraries, educating the public about balanced agricultural practices and environmental issues, TWU models how a land and water curriculum might more consciously draw upon Indigenous epistemology to validate and affirm Indigenous communities. Their education programs show how educators might push students to think more critically about historical processes and dominant social and political structures that we tend to perceive as natural and neutral.

Facilitating this kind of thinking work among secondary students in Española, for instance, might be as simple as having students read and discuss the Española Healing Foods Seed Library's Seed Blessing and Ancestral Agreement.²⁸ Some students might be surprised that seed library users are expected to "never sell, commodify, or exploit them in any way," when, in dominant culture, acts of selling and commodifying are celebrated and considered enterprising.²⁹ Asking students questions like, 'What would the world look like if everyone was expected to uphold a system of respect and exchange in everyday life similar to the one seed library users are expected to uphold?' would give students chances to imagine other relationships people are capable of having with each other and the world, relationships important to land-based peoples throughout New Mexico.



Photo by Victoria Tafoya

27. "Environmental Health and Justice Program," Tewa Women United accessed May 15, 2021.

<https://tewawomenunited.org/programs/environmental-health-and-justice-program>.

28. "Española Healing Foods Seed Library," Tewa Women United, accessed May 15, 2021. <https://tewawomenunited.org/espanola-healing-foods-seed-library>.

29. Ibid.

Perhaps the most thorough and well-organized curriculum related to place-based land and water education is the IPCC K-12 Indigenous Wisdom Curriculum Project.³⁰ The Indigenous Wisdom Curriculum Project offers a Pueblo perspective, a counter-narrative to the mainstream representation of history that students encounter in K-12 classrooms across the state.³¹ The project coalesces around several “concepts and core values that have operated as vehicles for resistance, emancipation, and transformation of our Pueblo People as they maintain their cultural identity and exercise sovereignty in the face of colonizing measures taken by Spain (1521-1821), Mexico (1821-1847), and the United States (1847-Present).”³² The core values include love, respect, compassion, faith, balance and service, and inform various language arts, social studies, math, and science lessons that are structured to align with Common Core and New Mexico State Standards.

The Indigenous Wisdom curriculum project exemplifies the kind of self-reflexive, collaborative practice that is necessary for developing a K-12 land and water curriculum. The elementary, middle, and secondary curriculum packets each contain introductions that define the general design and overarching goals of the project, but also describe the process by which the curriculum was created. Every packet contains curriculum advisors biographies, along with lists of educators who contributed to the writing of specific units. The unit plans, divided by grade level, lay out information such as content area, New Mexico state standards and benchmarks, as well as the rationale and goals behind each of the lesson plans provided. And while units provide specific guidance about how to conduct lessons, they are flexible and invite teachers to make adjustments based on time and student needs.

The Indigenous Wisdom Project curriculum provides enough resources so educators may carry out lessons without internet access. For example, “Our Environment and Way of Life,” an Indigenous Wisdom unit on mathematics for the fourth and fifth grades, is structured so that students can practice identifying geometric shapes and calculating area and perimeter by measuring school grounds and/or buildings.³³ A curriculum that focuses more broadly on land and water in New Mexico, or specifically on land grants and acequias, might include similar activities for a geometry unit in which students can apply their knowledge and skills outside the traditional classroom space and in other spaces of cultural importance. Another unit, “Water: Necessity for Life and Cultural Survival,” focuses on seventh-grade science and contains a lesson on riparian ecosystems.” This lesson asks students to communicate the importance of watersheds to all living things through a brochure, cartoon, or poster.

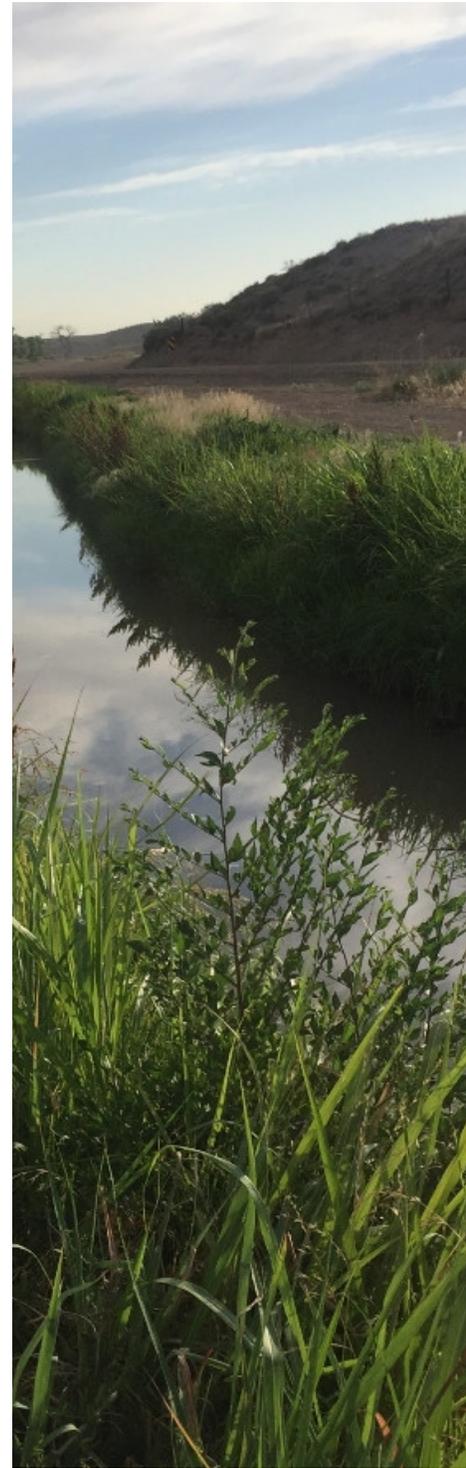


Photo by Victoria Tafoya

30. To my knowledge, no curriculums focusing on acequias and land grants are as comprehensive. One early iteration of a place-based New Mexico curriculum was Roberto Mondragón and Georgia Roybal’s “Amigos: Aspectos Culturales,” an impressive collection of bilingual student newspapers that were published in the 1990s. New Mexico Highlands Professor Eric Romero has also compiled his own place-based curriculum, “Cada Cabeza Es un Mundo,” which focuses on land, water and place. Romero’s curriculum is unpublished.

31. “Introduction - Elementary Curriculum,” Indigenous Wisdom: Centuries of Pueblo Impact in New Mexico, Indian Pueblo Cultural Center, accessed April 15, 2021. <https://indianpueblo.org/indigenous-wisdom-curriculum-project/>.

32. Ibid.

33. “Our Environment and Way of Life,” Indigenous Wisdom: Centuries of Pueblo Impact in New Mexico, Indian Pueblo Cultural Center, accessed April 15, 2021. <https://indianpueblo.org/indigenous-wisdom-curriculum-project/>.

While this unit does not include an experiential learning activity, it provides a framework teachers can adapt for their local contexts. The lesson could function in almost the same way for seventh graders living near riparian areas in southern New Mexico and northern New Mexico, where particular environments might be more habitable for certain species and not others.

While land grants and acequias might be nodes in a more comprehensive land and water curriculum, educators must avoid oversimplifying history and erasing processes that have contributed to the creation of land grant and acequia culture. When a high school social studies curriculum focused on acequias and land grants might use “resistance” as a major organizing theme and therefore include a lesson on the land grant movement, equal effort should be made to discuss the contradictions of Spanish and Mexican settler colonial projects. Though the incorporation of literature like Tobias Leyba’s “My Cow, She Was Almost Arrested” (1972) or the Corrido de Tierra Amarilla might be fundamental to a place-based acequia and land grant curriculum for students attending high school in Tierra Amarilla, New Mexico, so too should there be readings about how Spanish colonization and the parceling of land grants relied on the forced removal of Indigenous people from the area.³⁴ Likewise, there should be ample opportunities for students to learn how diverse groups of people formed alliances (such as in the case of the 1847 Taos Revolt). In other words, a land and water curriculum should be nuanced and take into account how New Mexico has become what it has become, its complicated, ugly, and beautiful parts.

Due to the environmental and social exigencies of our current local and global situation, there seems no better time than the present to begin developing place-based curricula for New Mexico students. In general, a place-based land and water curriculum could facilitate critical conversations about culture and society--how concepts of property and ownership, for instance, are structural and complex, not necessarily natural. Such conversations would correlate to recent calls to integrate social justice pedagogies into the classroom. Collaboration between government officials, educators, parents, students, and the larger communities in which the students live would be crucial to developing a land and water curriculum. Cultural humility, that is, a willingness to embrace a critical consciousness about the lands in which we live and the histories and cultures that have all but been pushed to the margins in mainstream US curriculums, is necessary on the part of stakeholders.

34. Originally published in the newspaper *El Grito del Norte* in 1970, Leyba’s essay discusses some of the social and economic struggles land-based people of northern New Mexico faced during the second part of the twentieth century. The essay would help students develop literacy skills in the areas of English language arts and social studies and speaks to contemporary local and global issues pertaining to social inequities. See Tobias Leyba, “My Cow, She was Almost Arrested,” *Aztlan: An Anthology of Mexican American Literature*, eds. Luis Valdez and Stan Steiner (New York: Vintage Books, 1972): 231-235.

Photo courtesy of the New Mexico Acequia Association





Photo by Victoria Tafoya

To conclude, the addendum section of this whitepaper first offers an overview of the project, as provided in a sample stakeholder convening agenda. The additional two addenda, written by Dr. Joseph Martinez of the Center for Positive Practices, represent the summary of results and recommendations from the various Acequia and Land Grant Education project stakeholder convenings.

The convening process for the Acequia and Land Grant Education project first began with an organizing committee that included representation from northern, central and southern New Mexico. From these initial meetings, four belief statements were generated and an overall project plan was finalized to guide the pending work. Over the spring of 2021, six convenings took place with over 100 participants representing Indigenous, Hispano and Anglo communities connected to the land grant and acequia systems. Input during the convenings focused specifically on youth, community, K-12 educators, and higher education. All meetings were hosted through a virtual platform due to the impact of the COVID pandemic.

Each of the above-mentioned stakeholder meetings were convened in partnership with the Center for the Education and Study of Diverse Populations (CESDP) at New Mexico Highlands University, the New Mexico Acequia Association (NMAA), the UNM Land Grant Studies Program, and the Leadership Institute at Santa Fe Indian School. Each unique event left participants full of energy, enthusiasm, a sense of community, and hope in the continued evolution of our state's educational system in ways that value the agrarian-based narrative and resulting cultures of its people.

Collaboration between government officials, educators, parents, students, and the larger communities in which the students live would be crucial to developing a land and water curriculum.

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Photo courtesy of the New Mexico Acequia Association

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- Earth Care, <https://www.earthcarenm.org/>
- New Mexico Acequia Association (NMAA), <https://lasacequias.org/>
- New Mexico Land Grant Council (NMLGC), <https://lgc.unm.edu/>
- Pueblo Action Alliance, <https://www.puebloactionalliance.org/>
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Addendum A

Sample Agenda (Project Overview)

Acequia Land Grant Education Project: Educator Convening

Project Description: The Acequia and Land Grant Education (ALGE) project is intended to convene educators, community leaders, and other key stakeholders to develop and **provide recommendations** to the Public Education Department and Higher Education Department on how to reshape New Mexico's educational system to include a culturally relevant curriculum that embraces the topic of acequias and land grants.

Project Belief Statements:

- We believe the ALGE Project serves our communities and future generations by honoring the truths of our past while nurturing a legacy of land and water justice, food sovereignty, and cultural integrity.
- We believe that our educational framework in New Mexico, including how we contextualize land grants and acequias, should be grounded in Indigenous perspectives on history, land and water tenure, and community as well as critical consciousness on colonialism.
- We believe that a transformation of our education system is needed to serve our communities by preparing students to be active change agents in our communities in the areas of land, water, and food.
- We believe that an ALGE curriculum will strengthen cultural identity, elevate public consciousness, and lead to public policy that is inclusive of the voices and knowledge of New Mexico's traditional, land-based communities.

Norms: Presume positive intent, Share the airtime, Speak your truth, Offer solutions, Co-create

Agenda:

- I. Welcome
 - Land Acknowledgement
 - Introductions
 - Overview of Project and Belief Statements
- II. Process
 - Process norms for this gathering
 - Description and time limits (Micro vs. Macro view)
 - Group Roles: Facilitator, Timekeeper, Notetaker, Reporter
- III. Breakout Groups/Individual Presentations:
 - What do you feel should be taught about acequias and land grants in schools or community-based programs? How should they be taught?
 - What should our universities and colleges do to support teaching and learning about acequias and land grants (higher education implications)?
- IV. Reports from Breakout Groups to Full Group
- V. Evaluation: Plus/Delta
- VI. Closing Remarks

Addendum B

A Synthesis of Stakeholder and Advisory Member Recommendations

INTRODUCTION

The Center for Positive Practices (CPP) is pleased and honored to provide this addendum to the Acequia and Land Grant Education (ALGE) Curriculum Recommendation Project (the project).

The project began by assembling a lengthy list of advisors, which included local stakeholders in acequia and land grant communities, professional staff involved in related topics from non-profit or non-governmental organizations, middle to high-school and early-college students, pre-K-19 teachers and administrators, and university scholars (such as education, language, culture, and history faculty). Their roles were to meet online and advise the project on all aspects of developing an acequia and land grant educational curriculum. In turn, ALGE would advise the state education agencies on how to get started with developing an Acequia and Land Grant domain-level curriculum, which conceivably could be several curricula by grade level.

CPP was requested in early 2021 by the Center for the Education and Study of Diverse Populations (CESDP), a project collaborator, to make a small contribution by synthesizing some of the salient aspects of the ideas and discussions emanating from a number of recorded online stakeholder focus group videos. We reviewed the videos and also reviewed the participant notes and documents related to the project.

Our role in this ambitious project is minor, but we hope that our work may be supportive, collaborative, and perceived as suggestive, not prescriptive, regarding what may be some opportunities and cautionary indicators that the project should consider when making recommendations toward the development of these curricula to the state education agencies.

Advance Organizer. Although one might expect that Acequia and land grant education itself would be a singular elaborated topic of discussion, it was not. Instead, the major topics synthesized across these discussions extended out widely to include other subjects such as personal and community development, culture, and caring for the environment. We'll explain more about this in just a bit.

Emerging Constructs. The project's focus group discussants generated an extraordinarily long and impressive list of musings, facts, rules, concepts, principles, and critical inquiry questions regarding integrating acequia and land grant topics into public education. The ALGE project organizers foresaw what would happen when many astute thinkers, on-the-ground practitioners, and educational leaders in New Mexico would gather to brainstorm and share facts and ideas related

to these topics. Simply put, they anticipated that we might all be left with an enormous and complex jigsaw puzzle. And that is undoubtedly why they scheduled a synthesis in advance.

Method. The many concepts elicited by focus group participants were grouped together in logical fashion to create and build upon a set of broader, more inclusive categories, or constructs.

Note. For a deeper understanding of this process, one may conduct a browser search on the following key terms, combined with one's own specific domain or subject-matter interests: narrative analysis, storytelling, content analyses (e.g. Wilson, 2008; Beeman-Cadwallader, et al, 2012) and the grounded theory, or open-coding and axial sorting approaches described by Corbin & Strauss (2008).

Additionally, we conducted a basic process of semantic analysis (assessing words and language patterns for deeper meaning). We began with a rudimentary process of quantifying key terms and phrases used in the notes by the whole-group and breakout-group focus group moderators and then extended these concepts to formulate some key principles based on perceived levels of interest, enthusiasm, and agreement apparent in the focus group discussion videos.

Note. To keep this synthesis more succinct and readable, we are providing the some of the raw data analysis in a supplemental addendum.

FINDINGS

1. Content for a Curricula. From this process, we learned that the fundamental content of the project discussions centered on numerous topics, and several categorical constructs such as those listed below.

- Acequia and land grant history, purposes, and structural systems. Toward an acequia and land grant educational curriculum that includes cultural history, land and water management, sustaining community viability, harmony, and self-reliance.

- Education: Pre-K-12 and higher education, student academic engagement, place-based education, expeditionary learning, anchoring the teaching-learning pedagogy and process with topics and subjects of more interest to students, interdisciplinary (across subjects) possibilities, and even vertical alignment (with each grade focusing on its own level of related topics, in follow-up with the previous grades and preparation for the next grade up).
- The Physical Environment. Training students with the skills to become stewards and protectors of the earth's land and water resources. Teaching students to understand the physical sciences related to ecology, environmental sustainability, climate, and geography.
- Equity and Social Justice: Providing youth and local communities with a sense of cultural and demographic fairness and inclusiveness in the educational curriculum.
- Personal Growth and Wellness. Emphasizing youth social psychological development, personal empowerment, reducing risk factors and promoting developmental assets.

2. Superordinate Principles. When synthesized together in the context of education, the various categorical constructs above appear to be subsumable under two superordinate principles, as listed below.

- **Personal and Social Growth and Wellness.** When enacted strategically as educational activity, various groupings of the constructs above could be integrated into the goals of improving educational outcomes, such as academic achievement, as well as personal and social development.
- **Community.** When enacted strategically as social and community activities, many of the land grant and acequia-related constructs above could serve as anchors for teaching and learning, as well for as preserving or sustaining of the historical systems of community-tribal water and land sharing implementation and management. Additionally, learning about the many facets of the land grants and acequia-ditch and irrigation systems of New Mexico can exemplify and foster the universal principles of community cohesiveness, self-reliance, sustainability, and social fairness.

3. Expert Advice and Shared Understandings. It was also obvious from reviewing the focus groups that often times participants were developing and experiencing a level of shared understanding.

Note. At some level, we might see this as a natural phenomenon of distributed cognition (Norman, 2014) which for the purpose of brevity is just a shorthand way of stating how individual contributions to a discussion may gradually evolve into a collective and collaborative group narrative, belief, or understanding.

These understandings are also subsumable under the principles of Personal and Social Growth and Wellness, and Community. Some might suggest, quite logically and acceptably for their purposes, that environmental issues could stand alone as a principle and/or shared understanding.

However, if we imagine Acequia Education as a holistic domain within the greater domain of academic education, it seems appropriate that the environmental concerns of a local community would include the social organization and actions required to address their environmental concerns.

Some of the more common understandings that seem to cut across participants and even separate focus groups include the following:

- **An Acequia Curriculum.** Practically all project participants appeared to see the majority of constructs as logically subsumable under the heading of Acequia Education. Many who spoke about it, especially students, also agreed that without acequia as the basis for classroom topics, New Mexico youth would not be exposed to the state's many cultures and locally-relevant place-based land and water topics.
- **Personal and Social Development.** All participants appeared to agree that activities related to the constructs could improve the quality of life for all affected persons and places.
- **Educational Improvement.** Practically all project participants, especially educators, voiced that many concepts discussed would be effective for improving education, especially as a way of making education more relevant, interesting, and engaging for students.

Throughout these conversations, involving many diverse individuals and groups of participants, there appeared to be no real pushback or disagreement on the principles and beliefs about the value, capacity, and power for educational effectiveness of Acequia and Land Grant Education. It is rare to witness such a high-level of consensus building and agreement on important community-improvement topics.

RECOMMENDATIONS

Developing an acequia and land grant domain curriculum may produce a massive amount of related academic content and strategies. Therefore, we recommend that the process consider the following cautions and recommendations from the outset and along the way.

Cautionary Indicators

Too much to think about all at once. The curriculum development teams should conduct at least an improvised, if not systematic, front-end analysis to simplify and settle on what they are wishing to accomplish, and why.

Note. Analysis paralysis (Albert Bandura, 1986) as the term implies advises us that if we focus on too much information early on, we may end up getting stuck in the analysis stage, and that makes it difficult to move from the discussion and planning stages to the more important stage of action and implementation.

It is best to get started as soon as possible after the analysis and planning stages and let the process evolve quickly and naturally.

Over-complicating the structure of the task. We can also get bogged down by making the content or task too complicated, such as unnecessarily or unproductively adding layers of complexity (adding too many topics to a subject, or too many subjects to a grade-level domain). Obviously, it would be more manageable and elegant for collaborating grade-level Professional Learning Communities (PLCs) to start with one grade level topic or subject instead of moving quickly to all grade levels and domains at the same time.

Note. Reductive bias (Feltovich et al, 1996) suggests that when there is too much complexity (or also over-simplification) in the amount of information and/or structure of the knowledge that we are likely to struggle when we try to transfer complex knowledge from one domain to another.

Not distributing the work. If support groups or the State Education Agencies (K-12 and Higher Education) try to produce a curriculum in its entirety for the schools, then the endeavor runs the risk of failure for some fairly obvious reasons. However, these high-level agencies and supportive organizations or stakeholder committees do have a very critical role to play in a statewide curriculum initiative that we will touch on in the summary below.

Starting Points

Initial Questions. From synthesizing the ideas and suggestions from the project's panel of advisors, we can begin to imagine the starting points for planning solutions to real problems in education by addressing in advance some initial questions.

1. What is the novel educational situation (problem or opportunity) we wish to address?
2. How and why are land grants, acequias, and land and water and other related issues appropriate to this situation?
3. How are we going to implement and manage the content and activities?
4. How are we going to know if we are successful regarding what we wish to do — and accomplish — and who are "we"?

These kinds of questions are typical of what we might see in a school that practices varying levels of critical inquiry, or action research. The first two questions may be asked and answered by any number of stakeholders and persons associated with a school; however, questions three and four should probably be asked and answered by the experts; and they are the teaching-learning practitioners in a given educational environment (preferably certified instructional staff and

education assistants in pre-K-12, and faculty and research or teaching assistants in higher education, and, most importantly, in both cases, the students themselves).

Local Expertise. The teaching-learning experts in an on-the-ground educational environment should be the practitioners who work there. They are the ones who know each other, as well as the students and stakeholders, and the assets and needs of the local community.

Interest, motivation, engagement, and persistence. In modern day education, the evidence of what works rests with the educational philosophies of constructivism, authentic collaborative learning environments and assessments, as well as personal agency (a growth mindset and being an active agent in one's own learning, motivation, and sense of efficacy).

Involve and engage participants as designers and developers of their own learning. Students and teachers perform at greater levels when they are not just passive recipients trying to implement someone else's pre-packaged instructional design. For lifelong learners, it is important to go beyond trying to memorize pre-packaged content and instead develop the problem-solving and critical thinking skills to be able to solve the many novel problems in life that constantly arise for us all. In fact, it is time that we let students gain experience designing and developing some of the lessons, the websites, the media, and the assessments in their own learning; that is, to start becoming the experts themselves.

SUMMARY

Problem statement. Some years back, CPP conducted an in-depth analysis of research on the educational achievement of Chicano/Latino and Native American students in New Mexico (Martínez, 2017). The sum of that analysis suggested that the solutions for raising educational achievement in New Mexico could not be found externally. Therefore, we asserted that we need to look internally for preparing the present and next generation of educational experts including New Mexico researchers, professors, analysts, strategists, designers, developers, and evaluators. We also need to enable our communities, including schools, stakeholders, teachers, and students to become the day-to-day experts in their roles as well. They, more than anyone, know what is relevant, important, and meaningful to them and their communities. The Acequia and Land Grant Education project consulted with these experts to generate the findings and recommendations presented here.

Teachers and educational assistants typically have a fast-paced daily routine of preparing lessons, classroom teaching, participating in professional learning communities, correcting student behavior, meeting with parents, administering and grading assessments, attending professional development and schoolwide events and — when time allows — eating lunch or going for a walk. It is probably obvious that handing instructional staff multiple black and white binders of prescriptive instruction could be both over- and underwhelming. Instead, we need to rethink how we perceive what education should be and work to make that happen.

Students and other stakeholders would also need support with relief time, professional development, transportation for more frequent and elaborate field trips, and logistics for continuous educational gatherings with parents/families and other stakeholder groups.

Universities could also be more supportive by offering more courses in land grants and acequias and by producing publicly accessible related supplemental instructional media. Taken together, many of the needs expressed by several participants across groups suggest that an accessible acequia and land grant information clearinghouse would also be supportive toward the implementation of acequia and land grant instructional practice in the classroom.

The statewide agencies, school and district administrators, and supportive groups need to find a way to help teachers to implement an acequia and land grant curriculum without trying to do the specific lesson-planning for them. The things that teachers may need include supplemental and relevant instructional materials, like lesson ideas, show-and-tell-and-feel cultural objects, reflective and engaging graphical worksheets, games, and puzzles, songs and dances, as well as a variety of easily accessible online media (photos, maps, and audio-visual artifacts). One easy example would be to republish and distribute to schools the seminal photographic-history book *500 años del pueblo Chicano = 500 years of Chicano history in pictures* (Martínez, 1991), and one focus group participant even suggested that he would like to produce an acequia topics comic book.

In general, the state and local education agencies would be most helpful in using their power to fund or otherwise make these kinds of supports readily available, while letting schools, teachers, local communities and students design and implement the place-based specifics at their respective levels.

Structural Change. The Higher Education advisory panel ended their group discussion focused on how the statewide governmental and supporting entities could be more helpful to education, in general, by establishing a regional acequia and land grant curriculum and development center and an instructional training and mentoring technical assistance center, both at the same location.

As observers of the focus groups, we could sense the evolution in thinking and excitement as participants collaborated on ideas, strategies, and possibilities. In many cases, there was also a sense of relief and gratitude that the higher-level system is possibly showing an interest in making education more relevant, and therefore more effective and practical, for both students and communities.

Acequia and Land Grant Education. The participants we observed in this synthesis strongly believe that acequia and land grant education could be more engaging and effective than many of the innovations and strategies that the greater education systems routinely recycle and, so far at least, are not producing desired results, especially for systemic change for improving educational performance and achievement compared to the national level.

An Acequia and Land Grant Curriculum. An acequia and land grant curriculum, or curricula across many subject-matter domains, should be rigorous and engaging for teachers and students, but it should not be debilitating in complexity. It should also be routinely fun and exciting, such as starting the school year or harvest season with a schoolwide acequia-day celebration, followed by numerous and frequent activities involving acequia education constructs and principles, all anchored to the beauty and relevance of acequias as a driving force.

Acequia and Land Grant Education is a powerful idea. If designed and implemented well and locally, it could for at least some schools and students, prove to be a transformative innovation.

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Addendum C

Conceptual Notes and Quotes

"When those who have the power to name and to socially construct reality choose not to see you or hear you...when someone with the authority of a teacher, say, describes the world and you are not in it, there is a moment of psychic disequilibrium, as if you looked in the mirror and saw nothing. It takes some strength of soul--and not just individual strength, but collective understanding--to resist this void, this non-being, into which you are thrust, and to stand up, demanding to be seen and heard." -- Adrienne Rich, 1994

This section provides some conceptual examples, data reduction, and paraphrased quotes from the focus groups and panels conducted by the project in middle- to late-Spring 2021.

YOUTH FOCUS GROUP

In spring 2021, middle school, high school, and early college students participated in an acequia curriculum related focus group with ALGE and CESDP moderators. The group discussed a variety of topics including acequias, learning about acequias and land grants in school, ancestral history, teachers, their perceived value of education, and local communities. They also discussed tradition and culture, rural education topics, and experiential education. Below are some key points and paraphrased quotes for this convening.

- I don't know what land grant I represent, but I work the land with my dad every day and I own 10 cows.
- I've been home-schooled and surrounded by books in my home, and I've read most of them, and not one really mentions anything about acequias. Acequias and land grants are more oral traditions..
- Regarding acequias in education. From the individual teachers or a textbook there was never really anything at all. We would learn about New Mexico but it wouldn't be like our history. It would be like they came from the east and they took over New Mexico, but it was never like our point of view or our history, or anything. It was just their side of the story.
- New Mexico history books don't really talk about water, or how the indigenous people used water.

COMMUNITY STAKEHOLDERS

This group was comprised of a state legislator, a land grant attorney, non-profit community and tribal organizers, former and current schoolteachers and administrators, college program staff, and various acequia and land grant official representatives. The most common topics discussed by community stakeholders include community, history, education, acequias, the Martinez-Yazzie litigation, land grants, teachers and teaching, and including knowledge provided by elders in the community. Other topics included health, Chicano/Spanish, and Native American traditions, experiential education, storytelling, racism and social justice, agricultural and rural/place-based education, water and eco systems, grant funding, career paths, and colleges opportunities.

- If we're going to give ourselves the political leadership and power, then it's necessary for tribal leaders to embrace and lend their political support and create the kind of capacity in ways that we define for transferring indigenous and cultural knowledge.
- The formal settings of learning are not really about community. You learn about your citizenship, national history, world history, but we don't get the local community context.
 - I want to link to the idea of tarea, on acequias, which in conventional Spanish, tarea means 'homework' but in New Mexico Spanish tarea has a very deep meaning. It's what you're entrusted to do as part of a contribution to your community.
 - There's no greater honor than to be working alongside the people in your community when you're given a tarea.
- Education had the role historically of assimilating us to an economy, not to build our communities, but to build someone else's community.
- Higher education should adopt statewide acequia education.
- How do we move forward with a rebellious spirit?
- Is there a way that universities can set up a portal with multimedia that teachers can search for different topics related to stories and acequias?
- It's not easy to be a farmer.
- Science, and technology, and mathematics need to have an underlying understanding of history and culture.
- Students are craving stories and humans telling stories; the stories and the imagination are more important than the information.
- The Tewa word for acequia is cuionu (cueee-oh-nu); in Santa Clara it's quijo (cui-jo), which is also the same word for mother.
- The universities need to integrate land grants and acequias into their courses.
- There are a lot of career paths that can come out of this, from farming to forestry to hydrology to environmental sciences to languages.
- These are things that are not provided to our young people in schools or are marginalized and we need to create our own systems and structures if this kind of knowledge is going to be transferred.
- We are facing a danger of the adjudication, which is allowing the state engineer to restrict our water. If we can't fully understand these laws and how it affects us, then we are in deep water, I mean NO water.

- We as educators need to develop ways of communicating and solving problems related to community issues; like when families are separated by an acequia and do not wish to talk to each other.
- We need curriculum development centers at universities for Acequia education.
- We need to align education more with local traditions and seasonal calendars.
- We need to create our own media.
- We need to talk more about our songs and the traditions that we have and the culture and the land that we live on. Everybody should experience this.
- We need to teach people that in the Southwest, the land grants, the pueblos, the acequias were the first forms of government. We need to inform them that we are a community-based society, and not so much just about the individual.
- We're moving forward and we need to redefine community-based programs, and summer programs by community members so we're focused on own history, and art and music and foods, and water resources.
- You don't need to sacrifice culture for progress.

K-12 EDUCATORS

The most common topics elaborated on by the K-12 advisory group pertained to the sense of community, the education system, acequias, curriculum, language, indigenous education, culture, youth, school, and teachers and various education subjects. There was also significant discussion on various agricultural topics, traditional life, the arts, and narrative storytelling.

- Colleges could step up and create media about acequias.
- External curricula doesn't work here because it was designed for another population.
- I am a parciante, schools need to bring in their community so they can bring in their resources.
- I think that everyone should design their own curriculum because everyone is different, every district is different.
- I wonder why New Mexico doesn't develop a New Mexico curriculum?
- Acequia education provides ties back to historical practices for sustainability.
- Land grants are like treaties.
- NM is trying to follow somebody else's drumbeat, we give tons of money to McGraw-Hill and McGregor, and we don't have money for curriculum adoption.
- Students need to learn about other cultures.
- There are cultural teachings around water, water connects us all; we need to protect and steward water.
- This could strengthen our sense of community.
- We are culturally rich in New Mexico but the education system doesn't not mirror that.
- We need coordination and compensation for field trips; instead of just 'chunking' through reading material.
- Acequia education can be about...
 - Chicano studies
 - Culinary arts
 - Ditch cleaning

- Earning dual credit
- Experiential education
- Food storage
- Hands-on experience
- Seeds, bugs
- Service-learning
- Summer programs and internships
- Team building

HIGHER EDUCATION PANEL

This focus group was attended by representatives of different colleges and universities and included various faculty and staff. Like the other focus groups, they gave considerable attention to the topic of community, including history, culture, place-based education, ways of learning, the role of institutions of higher education, an acequia-based curriculum, students, and New Mexico culture, oral history, storytelling, empowering youth, music, and art. They also discussed rural and tribal education topics.

- (Our breakout group) emphasized the matriarchal responsibility to community; recognizing the matriarchal lineages in our history.
- (Our group) also talked about the role of a culturally-responsive curriculum, practical and applied knowledge, and about the role of interdisciplinary and cross-college (departments), research centers and technical assistance centers.
- Our first (recommendation) is Acequia and Land Grants 101, which emphasizes traditional uses of the earth, like the herbs used in remedios.
 - Where the land grants are at and how we can support each other.
 - Treaty of Guadalupe Hidalgo.
- Our group focused on pedagogies, non-negotiables, and content:
 - Non-negotiables. For us, this includes respect, compadrazco (reciprocal relationships and working together). The responsibility you have to the place where you live. Civic engagement. Convivencia (communal practice, resource sharing, and local governance) is incredibly important. They (students) should understand that the values in land grants are about health and wellness, and sustaining our communities.
 - Pedagogies. Innovative and place-based education. How do we create curriculum that is relevant in Farmington, and Artesia, and Rio Rancho? We need more project-based learning, service learning, civic engagement for students to understand that there's a great role for them to play.
 - Content. We need historical knowledge of the past, as well as approaches toward reconciliation. The roles of language and preserving glossaries gives people a sense of the cultural aspect of acequias that can enrich the educational experience.
- Cultural humility. Oftentimes our communities are deeply affected by who speaks for us, and who am I to say 'us'? What are the communities grounding rules for speaking (on behalf of a community)? We want our elders to be in these spaces with us, but it's important to know that not all of these spaces have the same rules.

- Water uses, acknowledging that water is sacred.
- I enjoy being outside and learning from elders.
- I think it's important for students to learn about water communities.
- We need to bring in fields of knowledge from different places.
- How do we build knowledge bases so we can have a space to engage in dialogue on these topics.
- I think we can have a space for sequencing the high school experience into the college curriculum.
- We want to deal with a scaffolding approach, a kindergartener, a second grader and an eighth grader aren't going to be able to deal with the same level of content.
- We have to look at establishing an empowerment curriculum that empowers both the teachers and the students.
- We should be looking at strong partnerships with our K-12 and higher ed through dual-credit.
- We can actually infuse some of this content in with a very strong curriculum of emotional and social learning.
- Students should experience, in a hands-on way, what it is like to work with seeds.
- The opportunities that Martinez-Yazzie presents is only limited to our creativity.
- Land and water and our foods are all intertwined into something that is important to our culture and our way of life.
- We should establish a memorandum of understanding to share ethnic studies courses and also land and water courses across regional universities.
- This panel concluded with captivating remarks by a policymaker and scholar who suggested that the state education system should consider establishing a regional acequia curriculum and materials development center, alongside an instructional training and mentoring technical assistance center.