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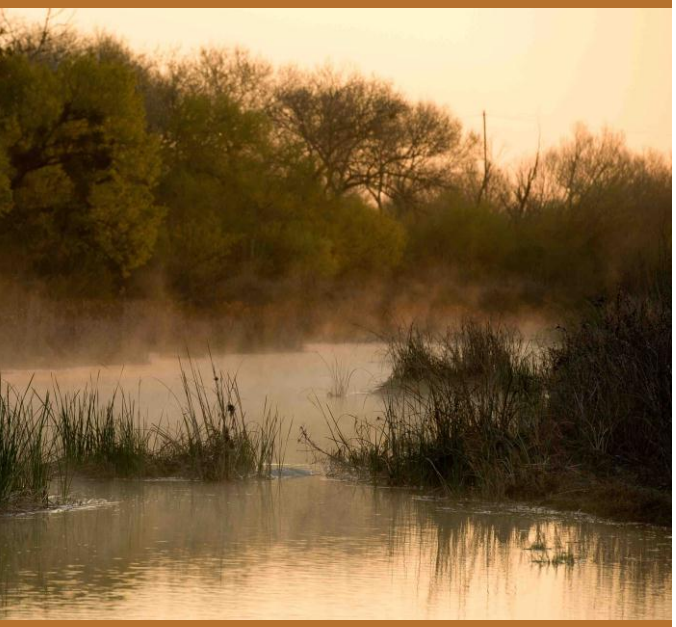

Project Report
May 2012

MAKING COLLABORATIVE PUBLIC HISTORY

The Restore/Restory Project

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MAKING COLLABORATIVE PUBLIC HISTORY

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EXECUTIVE SUMMARY

INTRODUCTION

In 2010, the UC Davis Art of Regional Change initiated a project in collaboration with the Cache Creek Conservancy (CCC), to document the public history of the Cache Creek Nature Preserve through digital media. This report focuses on the outcomes of *Restore/Restory*, particularly for UC Davis students.

Restore/Restory is a community media project that documents the changing cultural, economic, and physical landscape of Cache Creek Preserve in rural Yolo County, California. While the ecological transformation of the Preserve is well-documented in county reports; its historical, political, and cultural stories remain unrepresented. *Restore/Restory* fills this gap by working with diverse stakeholders to tell the public history of the site. The project brought UC Davis students, scholars, and artists together with a broad cross-section of Yolo County residents (including tribal leaders, miners, environmental activists, conservancy staff, farmers and ranchers, local historians, and policymakers), to tell the story of the Preserve. The project will produce an interactive public history website and site-based audio tour of the Preserve, featuring distinct voices and experiences at different places on the grounds.

Restore/Restory illustrates key themes and patterns in California history through the microcosm of the Cache Creek region. As with many riparian zones throughout the state, the various interests of Cache Creek residents, businesses, planners, and environmentalists often conflicted. On Cache Creek, however, these conflicts are being addressed through local collaboration. As visitors carry Cache Creek's stories home, *Restore/Restory* may become a model for other communities grappling with how to care for local watersheds, safeguard the local economy, preserve indigenous lifeways, and protect the environment. In addition, *Restore/Restory* is a model of the type of engaged education advocated in the UC Davis Vision Plan.

The *Restore/Restory* project exemplifies the value that the Art of Regional Change brings to the university, particularly in terms of student engagement across departments. Nearly 70 students have been involved in the project; 45 through an environmental writing class taught by Dr. Laurie Glover with the University Writing Program, 15 through Media Artist jesikah maria ross' intensive Technocultural Studies seminar, and four as an American Studies independent study course with Professor Michael Smith[1]. In addition, two social science graduate students and two Master of Fine Arts students worked with jesikah in coordinating and producing art and research for the project. Each group of students contributed something to the final product and, in the process, engaged in experiential learning.

[1] In this report UC Davis Faculty, staff, and graduate students are identified by their real names while participating undergraduate students are community members' names have been changed in keeping with Institutional Review Board Policy. People in photographs gave written permission to use their images in project related publications.

This report focuses on how the *Restore/Restory* project fulfills the objectives originally created by the partnership, as well as the broader university commitments outlined in the UC Davis Vision Plan. This report also examines how *Restore/Restory* conforms to the best practices outlined in educational research. This report draws on interviews, surveys, and observations, and covers the first year of the project, from Fall 2010 – Fall 2011.

UC DAVIS VISION

In the most recent UC Davis Vision Plan (2010), Chancellor Linda Katehi made six commitments to guide the university toward excellence in research, teaching and service. This report focuses on four.[2]

1. *Inspire and support excellence, **and the success and engagement of our students, faculty, staff** and alumni to **learn**, experiment and **achieve to their full individual and collective potential.***

Restore/Restory provided an opportunity for students, staff, faculty, and alumni to participate in engaged learning as part of a collaborative community project. This is particularly evidenced by demonstrated gains in students' media, interview, writing, and project coordination skills, increased student motivation, and in experiences and relationships relevant to their future careers.

2. *Foster a bold and innovative spirit in our teaching, research and **public service**. We shall set a standard of excellence in all of our endeavors and reward creativity, risk-taking, **collaboration, and entrepreneurial partnership,** as optimal ways to encourage learning and pursue break-through discoveries and **transformative ideas.***

As a collaborative partnership between the University and Community, *Restore/Restory* facilitated new roles, interests, and connections among students, staff, faculty, and community members, as well as fulfilling the university's mission of community service. Not only are the website and audio tour products a public service, but the emerging community partnerships may generate support for university endeavors for some time to come.

*3. Affirm our abiding commitment to diversity, as **represented in our community and in our perspectives**, as foundational elements of our excellence. We **shall celebrate our cultural and intellectual richness** and be resolute in advancing inclusion and equity in our community.*

The cultural and intellectual resources available to the University include those of the surrounding community, and *Restore/Restory* taps and celebrates this richness through creating media outlets for diverse community knowledge. In addition, a wide range of students engaged

[2] http://vision.ucdavis.edu/plan.html retrieved on September 2011

in what was for many a capstone senior project, which brought together previous skills and new skills that greatly enhanced career opportunities according to students themselves.

4. *Promote a community characterized by respect, integrity, openness and responsiveness, and **by consultation and collaboration**, in which we are invested in our collective welfare and the **responsible, sustainable stewardship of our resources.***

Students who participated in *Restore/Restory* obtained a more complex and realistic understanding of sustainable stewardship through engagement with the very collaborative processes that led to the founding of the Cache Creek Preserve.

IMPLICATIONS AND RECOMMENDATIONS

The UC Davis Vision Plan sets forth the goal of "provid[ing] access to a socially relevant, world class education" known for "collaborative research endeavors" and leadership in "social responsibility and a sustainable global environment.[3] The four commitments highlighted in this report were exemplified in the *Restore/Restory* program, which enabled students, graduate students, staff, and faculty to participate in collaborative, engaged learning and research, with potential for contributing to both future careers and a sustainable environment. In addition, the commitments and the program closely corresponded with best practices for research in the fields of educational psychology and place-based education.

First, *Restore/Restory* created a context for the application of book and classroom learning, as advocated by Brown, Collins, and Newman (1989). As one student noted in his survey, *"I feel that projects like these provide the most direct, real world learning experiences a student can have, and are important for students to gain a better understanding and knowledge of the world beyond just textbook academia."* (Marcelo) This context was not manufactured for the sake of educational experience, but was a "real" project and intended for public consumption.

Second, this contextualized learning took place within and across communities. The student community was strongly developed and characterized by shared expertise; their community was both guided by and integrated with graduate students, faculty, and mentors, and this university

[3] http://vision.ucdavis.edu

community was interactive with an external community, members of which were treated as sources of expertise and historical knowledge.

Third, the process set up by project director jesikah maria ross incorporated student prior knowledge (Moll, 1992; Flavel, 1996), and drew upon student expertise, all while continuing to support students to build new skills. Finally, Collins et al (1989, p 477) describe strategic knowledge as the "tacit knowledge that underlies an expert's ability to make use of concepts, facts, and procedures as necessary to solve problems and carry out tasks." *Restore/Restory* takes a step in the direction of providing such strategic knowledge. For example, student conversation indicates complex decision-making drawing on multiple knowledge domains, including the technology, landscape, and human interaction. Moreover, those decisions were often made in a distributed way, among a small group of students working together.

Experiences such as *Restore/Restory* thus prepare students for the complex problem solving, technologies, and interactions of a workplace. In addition, students emerged with relationships with both community and faculty mentors, and with other students, which may serve as pathways to various goals outside of college. The learning process closely follows the latest research on cognition; it is no surprise that many students felt the experience to be the most important of the year, or of their college career.

Equally important is how closely the Restore/Restory project is aligned to "best practices" in applied education research. In a 2007 publication, the American Association of Colleges and Universities summarized research on high impact educational practices, resulting in ten suggestions. Out of those ten, the *Restore/Restory* project fulfills five, including Collaborative Assignments and Projects, Learning Communities, Undergraduate research, Service and Community Based Learning, and Capstone courses. These are university practices which have been shown to reduce drop-out rates, support and enrich the educational lives of all college students, include the diverse ranks of entering student populations, and increase community engagement and responsibility. In addition, **they prepare students for participation in an evolving economy where analytical skills and interdependent approaches are as valued as content knowledge**.

Although a project such as *Restore/Restory* incurs costs outside of traditional curriculum, the extent to which it accomplishes both UC Davis' stated goals and accepted excellent educational practices indicates a need to maintain investment in such projects. *Restore/Restory* involved at least 80 students and 4 faculty members[4]. For student participants, Restore/Restory provided a range of opportunities from engagement with the community, to project-based and service learning, to a capstone course. Such opportunities always require additional resources, planning, and pedagogical skill. A university committed to such a Vision Plan would be well-served to seek out and retain committed faculty and directors with the skills to teach such complex courses. In addition to teaching goals, the project provided research opportunities, and at least two graduate students and two faculty members will be producing publications from the research. In terms of service, the projects accomplishments are clear: in addition to the actual product which benefits both the community and the university, the university has, through this project, forged a stronger relationship with local constituents. In sum, the manner in which projects such as *Restore/Restory* effectively "close the gap between knowing and doing" should be carefully considered, even in lean budgetary times.

[4] Since jesikah maria ross taught two courses for this project we include here as "faculty" although her appointment is as an Academic Coordinator. In addition, in the months since we have analyzed and produced this report we have been able to involve many more students. At present, we have involved 100 students and 6 faculty members.

PROJECT REPORT

INTRODUCTION

In fall of 2010, the UC Davis Art of Regional Change initiated a two-year project in collaboration with the Cache Creek Conservancy (CCC) to document the public history of the Cache Creek Nature Preserve (The Preserve) through digital media. This report focuses on the outcomes of *Restore/Restory* during the project's first year, particularly for UC Davis students.

Restore/Restory is a community media project that documents the changing cultural, economic, and physical landscape of the lower Cache Creek in rural Yolo County, California. A collaboration between the UC Davis Art of Regional Change[5] and the Cache Creek Conservancy, the project tells the complex story of the Cache Creek Nature Preserve. The 130-acre parcel that makes up the Preserve has been home to Native Americans, farmers and ranchers, gravel miners and—most recently— environmental educators. Agriculture, mining, groundwater extraction, damming, and other infrastructure development seriously degraded the ecological and cultural landscape. The Conservancy was created to restore the lower Cache Creek watershed. To date, restoration efforts have focused on enhancing the stream and surrounding habitat; the crowning jewel of that effort being the Cache Creek Nature Preserve.[6] While the ecological transformation of the Preserve is well-documented in county reports; its historical, political, and cultural stories remain unrepresented. *Restore/Restory* fills this gap by working with diverse stakeholders to tell the public history of the site.

The *Restore/Restory* project brought UC Davis students, scholars, and artists together with a broad cross-section of Yolo County residents (including tribal leaders, miners, environmental activists, farmers, local historians, and policymakers), to tell the story of the Preserve from multiple perspectives. The project will produce an interactive public history website and a site-based audio tour of the Preserve, featuring distinct voices and experiences at different places on the grounds. The tour can be taken at the Preserve using iPods and smartphones, or experienced via the project website, which will also include archival documents, audio slideshows, maps, interviews, and essays—all collaboratively researched and produced by students, scholars, artists and residents.

[5] The Art of Regional Change (ARC) is a joint initiative of Davis Humanities Institute and Center for Regional Change. ARC's mission is to bring together scholars, students, artists, and community groups to collaborate on media arts projects that strengthen communities, generate engaged scholarship and inform regional decision-making.
[6] The Jan T. Lowry Cache Creek Nature Preserve is owned by Yolo County and managed by the Cache Creek Conservancy.

Restore/Restory illustrates key themes in California history through the microcosm of the Cache Creek Nature Preserve. As visitors experience stories about the Preserve—from Native communities to European explorers, from Mexican land grant owners to gold rush settlers, from gravel miners to environmental activists—*Restore/Restory* will shed light on the realities of California's peoples, environments, and conflicts. In this way, *Restore/Restory* will inspire the conversations that still need to happen among residents, educators, and policymakers throughout California on how we can care for local watersheds, safeguard the local economy, preserve indigenous lifeways, and protect the environment.

UC DAVIS VISION

In the most recent UC Davis Vision Plan (2010), Chancellor Linda Katehi focuses on six commitments to guide the university toward excellence in research, teaching, and service.[7] The *Restore/Restory* project particularly exemplifies the type of learning, teaching, and research experience called for by four of the commitments.

1. Inspire and support excellence, and the **success and engagement of our students, faculty, staff** and alumni to **learn**, experiment and **achieve to their full individual and collective potential**.

Restore/Restory provided an important opportunity for students, staff, faculty, and alumni to participate in engaged learning. This is particularly evidenced by demonstrated gains in students' skills, student motivation, and in experiences and relationships relevant to their future careers.

Restore/Restory strives to be a model of university-community collaboration. The desired outcomes, summarized from a Memorandum of Agreement developed by the Art of Regional Change and the Cache Creek Conservancy, reflect the needs of both parties:

- Increase awareness of the Cache Creek Nature Preserve, broadening public support for ongoing restoration efforts.
- Curate a collection of stories that document different histories on the land in a way that is aesthetic and grounded in academic research and community expertise.
- Generate media that spark conversations on public history and land use, informing restoration and resource management.
- Involve university and community members to produce stories of the Preserve in a way that is beneficial to a diverse range of stakeholders.
- Demonstrate the value of doing university-community projects.
- Establish ARC as a successful model for doing campus-community media projects.

[7] http://vision.ucdavis.edu/plan.html retrieved on September 2011

2. Foster a bold and innovative spirit in our teaching, research and **public service**. We shall set a standard of excellence in all of our endeavors and reward creativity, risk-taking, **collaboration, and entrepreneurial partnership,** as optimal ways to encourage learning and pursue break-through discoveries and **transformative ideas**.

As a collaborative partnership between the University and Community, *Restore/Restory* enabled transformative discoveries about local history, conflict resolution, and the power of place-based learning among students, staff, faculty, and alumni, as well as fulfilling the university's mission of community service.

3. Affirm our abiding commitment to diversity, as **represented in our community and in our perspectives**, as foundational elements of our excellence. We **shall celebrate our cultural and intellectual richness** and be resolute in advancing inclusion and equity in our community

The cultural and intellectual resources available to the University include those of the surrounding community, and *Restore/Restory* taps and celebrates this richness through creating media outlets for diverse community knowledge.

4. Promote a community characterized by respect, integrity, openness and responsiveness, and **by consultation and collaboration**, in which we are invested in our collective welfare and the **responsible, sustainable stewardship of our resources**

Students who participated in *Restore/Restory* obtained a more complex and realistic understanding of sustainable stewardship through engagement with the very collaborative processes that led to the founding of the Cache Creek Preserve.

FOCUS

This report focuses on how the *Restore/Restory* project fulfills the objectives originally created by the partnership between the Art of Regional Change and the Cache Creek Conservancy, as well as the broader university commitments outlined in the UC Davis Vision Plan. This report

also examines how *Restore/Restory* conforms to the best practices outlined in educational research. The final section attends to some of the challenges encountered in the process of creating university-community partnerships. This report covers the first year of the project, from Fall 2010 – Fall 2011. Additional project outcomes and the increase in project participants will be included in a final report generated at the end of the project in Fall 2012.

Table 1 shows the student, faculty, and community participants in the *Restore/Restory* project. Students in a Technocultural Studies seminar participated for two quarters, recording and editing audio interviews. University Writing Program students participated for one quarter through an environmental writing class, transcribing the interviews and creating written storyteller profiles. American Studies students took an independent study course and created photo essays, and graduate students were involved in a variety of research activities as well as video art production. Student involvement will be explained in more detail in later sections. Community members working on the project include six on the project advisory group, five Cache Creek Conservancy (CCC) staff and board members, and 48 storytellers who participated in the audio interviews.

Table 1: Participants in the Restore/Restory project

GROUP	NUMBER OF UCD PARTICIPANTS	NUMBER OF COMMUNITY MEMBERS
UC DAVIS		
Technocultural Studies Course	15, Winter and Spring 2011	
Environmental Writing Course	20 Spring 2011; 25 Fall 2011	
American Studies Course	4, Spring 2011	
Graduate Students	4, Fall 2010 – Fall 2011	
Faculty and Director	4 Fall 2010 – Fall 2011	
COMMUNITY		
Advisory Group		6, Winter - Fall 2011
CCC Staff		5, Winter - Fall 2011
Storytellers		48, Winter - Fall 2011
TOTAL	**72**	**59**

METHODS

The analysis of *Restore/Restory* outcomes is derived from a largely qualitative data set collected by Graduate Student Researcher Kathryn Hayes, (PhD Student in the School of Education) and and ARC Director jesikah maria ross, with supervision by ross and Project Faculty Advisor Beth Rose Middleton (Dept. of Native American Studies). Data sources are listed in Table 2.

Table 2: Source of data and type, including hours

SOURCE OF DATA	TYPE OF DATA GENERATED
CCC EDUCATION COMMITTEE MEETINGS	
6 meetings, August-November 2010	Minutes & observational notes, total 7 hours
ADVISORY GROUP MEETINGS	
Retreat, four full meetings, and two smaller meetings, January to June, 2011	Observational notes and minutes, total 13 hours
Pre-survey of advisory group	4 surveys
PROJECT DIRECTION MEETINGS	Observational notes, 4.5 hours
Bi-monthly, 2010-2011	
TECHNOCULTURAL STUDIES CLASS	
Observations	
Class debrief, March 3, 2011	Recorded and transcribed, 35 minutes
Notes on class meetings, generated by instructor, 2 meetings, March-June 2011	Observation notes, post-event
Community Story Day, April 4, 2011	Observational notes, 6 hours
Community Story Presentation, Spring 2011	Recorded, 1.5 hours
Surveys	
Pre survey of students	11 surveys
Post-survey all students	10 surveys
Student work	
Introduction of Community Story Presentation	Notes
Student reflections	7 reflection essays
Interviews	
Interview of Ms. ross re: project, May	Recorded and transcribed, 23 minutes
Interview of Amber re: reflections, June	Recorded and transcribed, 35 minutes
ENVIRONMENTAL WRITING COURSE	
Post-Survey of all students, Spring 2011	17 surveys
Student reflection papers, Spring 2011	19
Personal notes	
Self interviews and notes on progress, 5	
Documents	
Memo of Agreement, November 2010	Collaborative document
Official project description, September 2010	Collaborative document
Collected Stories	
Community Story Day, February 26, 2011	12 collected, transcribed by students
Community Story Day, March 4, 2011	5 collected, transcribed by students
Community Story Day, March 18, 2011	3 collected, transcribed by students
Community Story Day, April 8, 2011	10 collected, transcribed by students
Community Story Day, April 15, 2011	12 collected, transcribed by students

The following analysis focuses primarily on data sources connected to undergraduate student experience and learning, starting with a description of the project and course pedagogies and continuing with an accounting of outcomes. These sources include the surveys, interviews, and essays generated through the Technocultural Studies and University Writing Program courses, respectively.

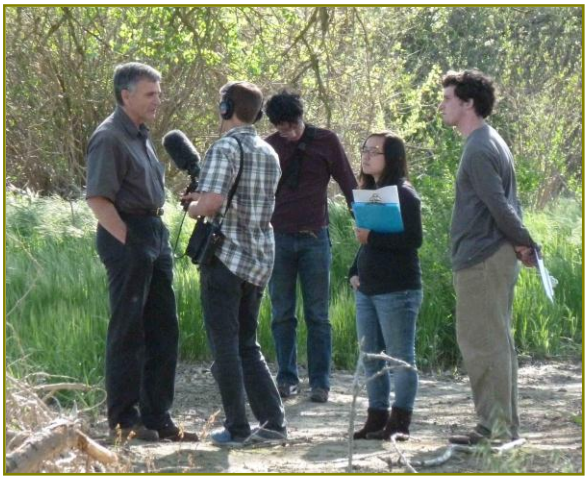
ENGAGED LEARNING: THE NATURE OF THE PROJECT AND COURSES

The UC Davis Vision calls to *"Inspire and support excellence, and the success and engagement of our students, faculty, staff and alumni to learn, experiment and achieve to their full individual and collective potential*." The following section provides a description of how, through the R*estore/Restory* project, the Art of Regional Change has provided a unique opportunity for students to achieve excellence through engaging in multifaceted, experiential learning.

The *Restore/Restory* project exemplifies the value that the Art of Regional Change brings to the university, particularly in terms of student engagement across departments. Nearly 70 students have been involved in the project, 45 through an environmental writing class taught by Laurie Glover with the University Writing Program, 15 through jesikah maria ross' intensive Technocultural Studies seminar, and four as an American Studies independent study course with Michael Smith. In addition, two social science graduate students and two Master of Fine Arts students worked with Ms. ross in coordinating and producing art and research for the project. Each group of students contributed something to the final product and, in the process, engaged in experiential learning.

Technocultural Studies Seminar

In the Technocultural Studies Seminar, entitled "Creating Community Media: Collecting and Curating Public Histories,[8]" students were intimately involved in the project. They spent one quarter examining the theory and practice of public history through written case studies, reviewing historical documents regarding the Cache Creek Nature Preserve, and giving presentations on digital history projects. During the second quarter they focused on media production. After training with Ms. ross on audio equipment, they were responsible for recording community interviews out at the Nature Preserve, documenting storyteller information, interviewing storytellers, and editing the final stories to become part of the website. They became in some



[8] This course will simply be referred to as the Technocultural Studies Seminar

ways "experts"; advising one another about microphone placement, background noise, and interview technique. By the fifth story collection day, they were confident and enthusiastic interviewers. Community members often remarked on how delighted they were with the students, referring to them during Community Story Days as "so professional," and "really wonderful to work with" (personal communication, April 11, 2011).

Environmental Writing Course

The environmental writing students, taught by Laurie Glover, were not as closely involved in the project as the students in the Technocultural studies course. However, to illustrate the course theme, "Understanding Place," Glover used interviews from the *Restore/Restory* project.

Students each transcribed one of the community interviews, then used the material to write profiles on the storytellers. Their experiences helped them acquire skills in narrative production as well as demonstrating increased understanding of a "sense of place." Students also took a field trip to the Cache Creek Nature Preserve.

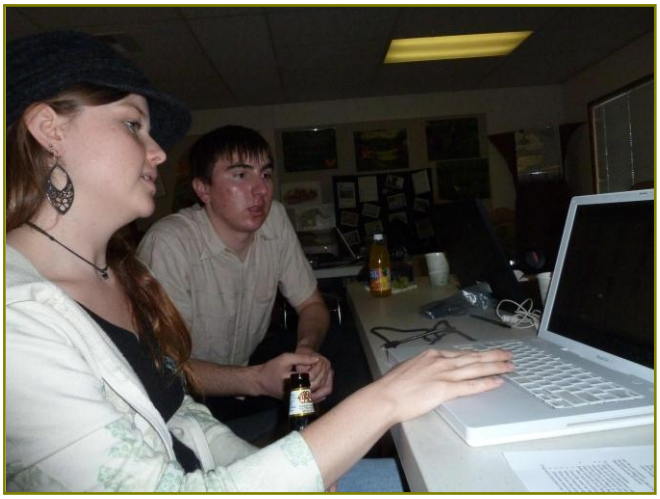
Because course procedures contributed heavily to the outcomes, the following section attends to ways in which the project exemplified several interrelated arenas of educational research, with examples from interviews and case study observations.

Applying a Cognitive Apprenticeship Model

A description of the learning environment within the Technocultural Studies seminar provides a foundation for understanding the outcomes experienced by students and community members, including skill acquisition, a deeper understanding of collaborative relationships, and a sense of commitment to place. The collaborative process of teaching described in this report was corroborated through several sources of data (interviews, observations, and surveys).

Instructor jesikah maria ross' describes how she taught technology skills within the course:

I followed a process by which I would teach someone, and they would teach another person, and they would teach another person… and also I would often bring in a coach or someone to observe. I teach Amber, and Amber's now going to teach Dane, and then Dane teaches Amy and I ask Amber to back him up. Usually the students pick up on what's being conveyed, or what's not being done properly, [such as] mic placement, 45 degree angle…



During an interview, one student also described the ways in which the teaching and learning process helped to cement her learning and confidence. In addition, she described how experiential learning and modeling enabled mastery of even quite challenging skills, such as the conversational exchanges required for interviewing.

*I always find that teaching helps me learn skills better, and I enjoy teaching, and explaining new things to people. For example, the first day of the second quarter, the new class; it was all a skills share of the audio equipment that we [the students involved since the first quarter of the course] had been using already. So I was teaching [the new students] to use this equipment, which is very expensive and very advanced…**And so it showed me how much I've learned in this whole process, being able to teach people** not only how to run audio equipment, how to mic people professionally, but also the skills that go into interviewing a person and really getting onto their level without overshadowing what it is that they're there to share with you.*

When we agreed that such skills were difficult ones to teach, the student responded with the following reflections:

*Yeah. **A lot of that sort of teaching was led by example**. That method worked out really well…people seeing the way that the interview process went, non-verbal communication, verbal communication, feedback while still being silent 'cuz you're being recorded, thinking on your feet, listening to what's being said and trying to conceptualize the next question that needs to be asked, in order to get the information that you're hoping to find.*

The class followed a cognitive apprenticeship model (Collins, et al., 1989) whereby students taught one another what they learned from the teacher (Ms. ross) and from their own previous knowledge. A well-designed cognitive apprenticeship program involves modeling, coaching, scaffolding, and reflection in both classroom and field experience (Collins, et al., 1989), much like the process described by both Ms. ross and Amber. According to Collins et al., problem-solving strategies remain inert, or "textbook" unless accessed in the context of use. Cognitive apprenticeship aims to teach the processes experts use to problem solve in addition to the necessary conceptual and factual knowledge. For example, holistic skills which can be applied in multiple career contexts require integration of experiences with classroom learning in order to "activate" the inert knowledge acquired from textbook and lecture. Lectures and reading have a place in this framework, but a cognitive apprenticeship approach forces students past a passive acceptance of knowledge to develop a concept of how the knowledge is used in context.

The teaching and learning process of *Restore/Restory*, which consciously worked to activate the "inert" knowledge referred to by Collins, et al., was also discussed by students in their surveys. Ten out of ten students reported learning the basics from jesikah, but almost all also reported learning skills from another student, or from peers in general. Four also reported that practice applying the skills was particularly helpful in achieving mastery of them.

The environmental writing course followed a model which involved some aspects of situated cognition, but more closely related to constructivism, in which student learning emerged as the project developed, without a pre-conceived end goal. Often attributed originally to the works of Piaget, the tenets of constructivism are that students learn best by constructing their knowledge, piece-by-piece, based on a foundation of their own original experience. Cognitive development is a process of building upon previous mental structures which must be accessed through students' prior knowledge (Moll, 1992; Flavell, 1996; Hatano and Inagaki, 1986, p 262). This echoes closely the concept of situated cognition, in which real world contexts provide the structure through which complex problem solving techniques are built.

In the environmental writing course, student writing on place continuously evolved as they read both broad writings on place and historical documents specific to the Preserve; transcribed, edited and pieced together interviews about the Preserve; and visited the Preserve itself. Although the students did not collect the stories, they met the advisory group members (many of whom were storytellers) at an exposé, or showcase of student work held at the end of Spring quarter, 2010.

Case Study: Community Story Day 5

Observations of the final, four-hour Community Story Day illustrate the process of the cognitive apprenticeship learning model for the Technocultural Studies course. At each of the five Community Story Days students recorded stories of the Cache Creek Nature Preserve as told by various community members who were involved in farming, gravel mining, and environmental restoration.

At the outset, students had set up an equipment room in the Cache Creek Preserve Visitor Center. This room served as both a home base and a place for storytellers to sign in. After signing in, teams of students and storytellers would walk somewhere on the Preserve to conduct the recording. About half the students were "old-timers" (Wenger 1998), entering their second quarter of the class. The other half had just begun the course, and needed training. Most of this training was conducted by other students, both formally and informally.

Formally, Ms. ross organized teams of newcomers and old timers. She described this process in interview:

I'm setting it up so two people with the process dialed in are with two people learning the process. Discuss who is going to do the recording, the engineering, the logging; if there are possibilities to switch that up.

This process of students in rotational teams, teaching and learning from one another, remained consistent throughout the day. Whether in the equipment room or out with storytellers, students took turns at the various recording roles, with one in the lead. The others would quietly teach newcomers how to work equipment. Newcomers to the class were given both advice and increasing roles. As Ms. ross asked one new student, "*How does it feel to be your first day? Did you have a chance to either engineer or record?"* [Student:] *"No, not today. I'll be doing camera."* [Ms. ross:] *"Would you prefer to be in camera mode, or do other things? At whatever point you want to try something, just ask."*

Informal teaching occurred throughout the story collection process. For example, at the beginning of the first story recording of the day, John explained the layout of the Preserve to new students, including where they could take storytellers for the best interview sites. Students asked one another which role they should take (note taking, recording, etc.,) and how to perform those roles. Once the story recording process got underway, students advised one another on how to proceed. For example, on one of the student teams, a student noticed that the wind was too loud, creating interference with the sound. The other student suggested that the two of them use another angle, and demonstrated the new layout with her pencil. The other student agreed, moved to the other side, and the two resumed the interview.

Communities of Practice

According to one school of educational thought, people learn best when incorporated into "communities of practice," characterized by the "old timer"/ "newcomer" teams described above. These groups of students form a community characterized by evaluating and reflecting on the experience of their field; and they are also peripherally part of a larger community (Lave and Wenger, 2003; Wenger, 1998). If Lave and Wenger are correct, intrinsic expertise is made possible through apprenticeship in a community of practice.

Ms. ross referred to the student teams as creating a "learning community." She emphasized the importance of the skills brought by different members, including students. Her comment that even she benefits from the reminders and skills of students was borne out in observations of her teaching and in her interview. According to Ms. ross:

The learning community teaches each other, supports each other, course corrects each other, and it kind of models the idea that we all have different experience and knowledge and abilities and are tapped into different things, so if we're all focused on the same goal we can each add our ideas in a way that benefits the project. I would see that repeatedly—things that I'm not focused on so I might forget but someone else is focused on so they'll bring it up.

By the final Community Story Day, students were solely responsible for teaching one another equipment use, downloading, and other aspects of the technology, whether out interviewing or in the equipment room. For example, four hours of Community Story Day observations revealed 19 instances of students teaching one another, from long conversations about the nature of the project to determining collaboratively how to download photos. In contrast, there were only a few instances of jesikah reminding students of particular aspects of equipment use; students made sure themselves that all interviews were downloaded, photographs were organized, and the interview recording proceeded smoothly.

Student partnerships and co-teaching continued into the editing process. Amber remarked on how students collaborated in learning about and using technology:

[Amber]: *For the editing process, jesikah was pretty strategic as to who she partnered up in these editing teams. For every single group, at least one person had background in Final Cut Pro or some sort of editing background, and at least one person had been on the project from its inception… I was able to conceptualize what the final product should feel like; and he was able to make the technical moves that got us there quicker.*

[Interviewer]*: Did you learn the technical stuff?*

[Amber]: *Yea, I did, all of it. By the end I could do everything that he and I had done together by myself; and I really value having those skills in my repertoire set. And I also think he was able to take a lot of the background info and prior knowledge from me as well.*

In addition to acting as a showcase, the final exposé of student work functioned as a method of integrating the environmental writing students into the learning community established in the Technocultural Studies course. Environmental writing students expressed a range of reactions to this involvement in their final reflection papers, including appreciation for feedback, pleasure at learning from the other students, and a positive sense of shared experience. For example, at the exposé, one environmental writing student described how she finally understood how her work contributed to the larger project:

As I stepped into the room, I could see the profiles hanging on the walls, showcased for everyone to see. ***I felt that I made a valuable contribution to the Restore/Restory project****. During this event, I heard people from the Technocultural Studies program thanking us for providing transcripts from the interviews. Hearing that our work was greatly appreciated ensured me that the few hours spent transcribing it was worth it.*

Another expressed ways in which she learned from attempting the task, then seeing how others approached the work:

When I heard the audio profile I was very impressed that they could mold the words they heard so effectively and in such a way as to keep the personality of the individual they had based their profile on while ensuring that the words they said were clear and understandable. This is what kind of editing I had attempted to do on my profile, but now I realize I should have further edited her sentences.

Others felt it was exciting to talk to their peers in the other course, and to share experiences and thoughts:

"It was here, seeing my work alongside my peers, when I truly felt proud of the work I had done. Moreover, this feeling of pride was not just limited to my work but the work everyone else had also done."

The exposé functioned as a microcosm of how the *Restore/Restory* project functioned to pull people together, creating collaborations and communities of practice. Students from all courses presented their work, including MFA's and a composition student, with Director jesikah maria ross and Graduate Student Researcher Kathryn Hayes co-facilitating. Community members reviewed the work, providing real context and realistic feedback. Students had an opportunity to learn from one another across courses and disciplines. The exposé also functioned as a

microcosm of the UC Davis Vision Plan: participating students were **engaged** in a **collaborative** project in pursuit of **academic excellence**. As shown in the next section, many of them felt they had not reached the full potential of that excellence until encountering this rare educational opportunity to make their work public.

Distributed Leadership

A long tradition of research into distributed leadership in the educational research community attends to how leadership is "decentered," in such a way that the "focus of action" centers on different people depending on the context, timing, and possession of knowledge (Woods, 2004, pp. 5-6; Maxcy, 2006; Spillane, et al., 2001). In the *Restore/Restory* project, the locus of leadership demonstrated similar fluidity based on student story collection teams, student prior knowledge, and student investment in the process. In addition, research into distributed leadership reveals strong relationships between distributed leadership and coherent communities of practice (Parrenas and Parrenas, 1993), which may explain the presence of both in the *Restore/Restory* project.

During the observed story recording sessions, students in the Technocultural Studies course clearly took a leadership role in recording the storytellers. They guided the storytellers to an interview spot, confidently explained the interview process to them, and stopped the interview if necessary due to an external noise of it they needed to direct others among their team. They even occasionally corrected or made suggestions to their instructor, jesikah. For example, as storytellers were arriving, Amber suggested that jesikah create a place to keep their consent forms, thereby contributing to the organization of the process.

Coding of observational notes from the final Community Story Day revealed an additional 20 instances in which students took charge, remembered something, or corrected jesikah during community story day. From the start, jesikah needed to stay in Davis to organize late students, and she asked Amber to direct until she arrived. This transition happened smoothly, and Amber seemed to be comfortable in the role. Every student who had been involved for some time took on a leadership role, whether in small group interviews, taking responsibility for downloading data, or by teaching others. Amber contributed the following about her opportunities for leadership:

The more that jesikah's given me, the more I've delivered, and the more she's entrusted me and the bigger the responsibility is. I'm invested. But for me personally it's more than units. I'm invested into this summer and I'm invested into the next school year. The major from which I'm graduating on Sunday is Nature and Culture[9]*. And this project in Restore/Restory and the mission statement of the ARC is exactly what I want to do with my life.*

As Dr. Michael Smith, a UC Davis Senior Lecturer in American Studies observed during the final Community Story Day, *"I am amazed at the care with which the students were trained. They are co-initiators of the project. They make people feel so comfortable."*

Despite the positive aspects of relying on student leadership and instruction for skill development, this created some tension in the production process. The fact that this was a "real" project was an incredibly important part of the project for students, but it also meant that the community was reliant on the project group to create an excellent final product. At times, the students simply did not have the requisite skills to edit a well-crafted story; or they were late in uploading a piece. This was partially addressed by engaging the leadership of a student, Amber, who worked with other students on the process of uploading. According to students, however, the biggest tension came from trying to balance the work on *Restore/Restory* with other required classes for graduation. Tensions in community-university partnership projects will be discussed more closely in a latter section on challenges.

Contextualized Learning

The projects' "real" final product profoundly contributed to skill acquisition in both technical and personal arenas. *Restore/Restory* was not just a "scenario" for students to work though. The ultimate product was intended for public viewing, with community partners, artists, and university faculty and administrators all interested in the quality of the final product.

[9] The Nature and Culture major "is a coherent interdisciplinary set of studies that offers exploration of the complex relationships existing between human cultures and the natural world," and has been discontinued as of 2011 (http://registrar.ucdavis.edu/ucdwebcatalog/programs/NAC/NACprog.html.

Recent research on cognition points to the contextual nature of learning—that is, people acquire meaning through both the social and procedural context of an activity (Rose, 2004; Rogoff, 2003; Lave, et. al., 1984; Scribner, 1984; Lave and Wenger, 2003). Education systems such as typical classroom learning in the university setting tend to treat knowledge as independent of the situation in which it is used. For example, the context of schooling is characterized by well-defined problems, laws, and symbols, such as exercises in textbooks and exams (Brown, et. al., 1989). In contrast, most workplace settings are characterized by ill-defined problems, the resolutions of which are situated in the activity itself. When classroom tasks are extracted without recognizing the contextual features of the tasks, a gap is created between "conceptual knowledge and problem-solving activity," or a gap between knowing and doing (Brown, et. al., 1989, p 38).

Schooling often focuses almost explicitly on domain knowledge; the conceptual knowledge identified with subject matter (Collins, et. al., 1989). It is as if in school students learn how to describe a hammer, and may even look at a hammer, but they never use it. In contrast, learning in context (also referred to as situated learning), such as that exemplified in the *Restore/Restory* project, builds strategic knowledge, or "the usually tacit knowledge that underlies an expert's ability to make use of concepts, facts, and procedures as necessary to solve problems and carry out tasks" (Collins, et. al, 1989, p 477). Thus, education which hopes to impart useable knowledge may want to attend to how knowledge is situated in use, that is, the use of the hammer in the context it was meant to be used. In *Restore/Restory*, because the stories which students recorded, transcribed, and edited were intended for viewing as part of a public history project, their work was authentically situated in context. Scholars in the field suggest that learning in context will legitimate students' implicit and prior knowledge and allow the employment of feeling, imagery, and experience in memory recall and problem solving (Rose, 2004). Learning in context also gives students the ability to choose solutions depending on the particular problems (i.e. to be able to evaluate), and the ability to be members of a creative problem solving culture (Lampert, 1986). Such learning was observed in the students' approach to recording and interviewing challenges they encountered during the community story days.

Although students may not use the terminology of educational research, they valued the real-world context of the project. When asked why they would recommend the class to others, Marcelo wrote: "*I feel that projects like these provide the most direct, real world learning experiences a student can have, and are important for students to gain a better understanding and knowledge of the world beyond just textbook academia*." Fifty percent of the students commented on the importance of this aspect in their final surveys. As another student wrote, "*[a real-world project] yields work which you find truly rewarding*." In addition, two students wrote that the product itself was an important aspect of their commitment. "*I produced something I am proud of*," and this is "*a finished product we can show off*."

Others focused on how their university education should include such an applied project, which, in Jamie's words, "added purpose" to the educational experience. Moreover, this project ended in a product which was valuable, "fruitful," or "amazing." Along these lines, several students felt that there should be more projects like this established between universities and communities, ostensibly for the participation of students.

In the environmental writing final reflections, when asked to discuss what it was like for them to think about their writing appearing in a public context, many students also noted the importance of the "real" nature of the product to their experiences as writers. As student Rommel wrote: "*I wasn't just writing for a grade,* ***I was writing for a real "thing" …A new level of meaning was placed on my work***. *I knew that other people would be seeing it, reading it, judging it – forever. The transcript and the profile are public record and if that doesn't make you think twice about how you write your paper or the respect and time that you put into writing it, then I don't know what will!"* Several also wrote that the contextualized nature of the project gave their work a sense of worth. As Rommel continued, "*It kind of made the work I put into my writing worthwhile…more than just a professor or a TA would be seeing my work, so I guess I put a bit more pride into my work."* According to another student, "*The profile I had written really did something, and that people will read it when searching for the area on Google. I had given the place a face. I had affected its reputation, thus affecting it."*

As noted in surveys and in casual comments, students also appreciated working outside of the classroom. As one student from the environmental writing course offered, "*I think visiting and seeing a place in person reinforces what you have learned about the place. It's one thing to read about a place from newspaper articles and another to go see it."*

Student Commitment and Motivation

An oft-cited feature of experiential or project-based courses such as this one is student motivation and buy-in (e.g. Blumenfeld, 1991). As the learning experience moves closer to a real world context, students consider the relevance to their lives, and the space of learning comes closer to bridging the personal life of students and school spaces (Moll, 1992). Over the course of the five Community Story Days, several student comments indicated an attitude that this was more than an assignment. Students voluntarily poured over interview questions, asked for advice, and introduced themselves to community members. In a sense, the

> *"When a person's work is put up for the public to see, it inspires the worker to do the best they can do."*
> Angel, Environmental Writing Student

interaction with community members reinforced the reality of the work—this was not a performance or a presentation in a class. On one hand, there were real social consequences to "messing up;" on the other hand there was joy to be derived from a community member who reacted well to the students' work.

Students cared about the quality of the product; they advised one another on how to conduct interviews and operate the recording equipment, and they taught each other how to properly take notes and how to download recordings. Students also continually showed excitement and enthusiasm for being at the Preserve and participating in the project. As students said at different points in the day: *"This is the best way to spend the afternoon!" (Derric); "What a great day!" (Dane); and "I felt so productive." (Thao).* In an interview, Amber summed up the student's enthusiasm: *"If you asked any of us, is this just a class to you? I highly doubt anybody would say yes, because it's become so much more than that."*

Environmental writing students also reflected on their commitment to the project: *"This was not just an ordinary assignment," one student said…* Another student wrote: "*When I first started the project all I wanted was to finish it quickly and receive a good grade. However, as the process of listening to the audio, transcribing and then writing wore on, my feeling changed.* ***I started to really care about portraying my storyteller in an honest and positive way.*** *I also found myself enjoying the process of writing and formatting the profile."* The UC Davis Vision Plan calls for "*the success and engagement of our students;"* in these comments and observations, students aptly demonstrate engagement through their enthusiasm and commitment to outcomes.

ENGAGED LEARNING: THE OUTCOMES OF THE PROJECT AND COURSES

The course descriptions provided above establish evidence for the type of engaged learning described in the UC Davis Vision Plan; the next section describes what students learned from participation in the project, and how participation allowed a space for students to, as the plan pledges, *"achieve to their full individual and collective potential*."

In order to be able to address student outcomes, pre-surveys distributed at the outset of the courses invited students to explain what they hoped to gain through work on this project. In answering this question, several students mentioned integrating across departments, such as using media to integrate nature and culture, or to "create a magical blend" between design and art. Others were seeking something beyond the boundaries of the university, such as seeing how such a partnership could help the community, gaining understanding of place, and building contacts in the community. Still others were looking for specific skills, such as the ability to tell stories; media skills; working with people; production experience; and audio recording.

According to post-surveys and reflective essays, what students reported gaining from the project fulfilled their hopes and more, and fell into four categories (N=27):

1. Gained experience and skills in technology through a hands-on, public project
    - This was described as an "invaluable experience in field recording" and in writing experience, due to the importance of an "applied," "tangible" project as part of their university experience (5)

2. Gained a sense of personal and community efficacy
    - Job experience (3)
    - Commitment to future similar projects (3); a "rekindling of my passion for working with technology to create pertinent and informative pieces that I honestly believe can bring about social change."
    - Increased sense of efficacy and the possibility for positive change (3). For example, according to student Amber, "…this project…provided me with living proof that, not only can positive change take place, but I can have a direct role in that manifestation."

> *"Contributing to the Restore/Restory project was an honor."*
> John, Environmental Writing student

3. Increased networks, essential for future career growth
    - Increased connections with other students over the course of the project, situated in a professional learning context. (3)
    - Collaborating across different cultures and backgrounds; for example, according to one student, "Working with the different storytellers and fellow classmates taught me a lot about working in groups and with people of different perspectives." (1)

4. Increased connection to or understanding of place
    - Appreciation of nature, and of the Preserve in particular (11).
    - Learning about the often hidden challenges and complexity of preserving a piece of land (6)

This section will detail what students learned in each area, starting with specific technological and writing skills, and moving into career and other aspects of students' future, community partnerships, and connection to place.

Technology, Media, and Contextualized Learning

Since the Technocultural Studies course was focused on the use of technology and media tools in interaction with the community, in surveys many students discussed increased technology skills. Out of 10 post-surveys, 9 students noted learning editing techniques, including the use of Final

Cut Pro; four students felt they gained skills in audio recording; three noted skill improvement in interview techniques; and two mentioned gaining skills in narrative creation.

Differences between what skills students hoped to gain and what they reported gaining revealed to some extent an exposure to the language of a profession. Before, students simply did not know what set of skills would be required, nor did they understand the context. A few, like Tyrone and John, were already familiar with the professional culture associated with audio media, and they knew the language in which to wrap what they wanted to learn, such as "*precision audio recording*" (a technical approach to audio sampling). Others, like Amy, could only hint at what she wanted to learn (editing a video); by the end of the course, she could more fully discuss editing and interviewing skills. Similarly, in an answer to the survey question, "what did you gain," Derric wrote that he learned to "*build a narrative arc*," which contrasts with his similar but non-specific pre-survey statement of wanting to improve his "*…ability to create stories…"*

This area of increased expertise is also reflected in the de-brief the class participated in after one of the community story days. Students reflected on their realizations after a day of being responsible for all recording and editing, noting that interviewees as well as interviewers have to "warm up," as certain questions work better than others when asked first. In this regard, students agreed that asking about a particular moment works well both to warm up and get vibrant stories. They also recalled that switching off between interviewers seemed to ensure that everything was covered and the momentum of the interview stayed constant.

By the final Community Story Day, students were demonstrating a wide range of skills with competence and confidence. Student teams conducted all of the interviewing, without instructors. The students rotated roles, with whoever had the most experience in a given role instructing the others. Interviewers confidently led their storytellers to the places on the Preserve site which would work best for the technology, and explained the process. Those in charge of recording knew the equipment and were able to address sound issues in the field.

Environmental writing students developed similar skills in the arena of writing. In their final reflections, students mentioned gains in writing and editing as a key element of their project experience. The preponderance of comments on the writing process focused on realizations around drafting. As one student wrote, *"From working on the profile and the other analytic essays throughout the quarter, **I now recognize the importance of the drafting process**. My writing at the beginning of the course was wordy and ineffective. Subsequent drafts strengthened my sentences. My writing became more interesting to read. Drafting is a process that I will use heavily in future coursework.*" It was the public purpose of the work which inspired writing development for these students. In the words of another student, *"It made it more evident that before publishing something that is going to be read for years to come by potentially thousands of people, thorough proofreads and revisions must be done."* Students also wrote of a future commitment to professional writing: *"In the future, I plan to be more thorough and professional when it comes to writing. After all, only a well-crafted piece of writing gives visibility to the writer and to the piece of writing itself.*"

In addition to student descriptions of what they learned, skill acquisition was mentioned in many of the surveys as a reason students would recommend the class to other students. As Janelle wrote in her final reflection, "*Learning how to use recording equipment, though it may seem like a technical detail, was a very important part of this class for me…I listen to a great deal of radio shows and have never envisioned myself creating an audio piece*." Michael wrote, "*I have gained a lot through this process. My technical skills and people skills have improved tremendously. I have not been as excited for a class I as I have this one for a long time.*"

Student Futures and Career Exposure

The skills and experiences gained through applied projects such as *Restore/Restory* cannot be fully measured on a before-and-after assessment; however the students' comments depict a project which allowed for the development of skills that could be directly applied, either as University students, or after graduation. These skills include not only resume-enhancing experience with writing and technology, but also "softer skills" of being able to work as a team, and in a variety of non-academic settings.

> "*I see myself using my profile that I created as a sample work for a job in the field of environmental science. I think it holds validity and is a legitimate project that I can say I was a part of*
> Manny, Environmental Writing Student

Although surveys and reflections did not directly ask students about the usefulness of the project for their future aspirations, students voluntarily reported on the significance of the project in achieving their career and educational goals. According to the survey responses of one environmental writing student: "*I am an environmental science [major, so this project] was pertinent to my future and the work*

that I may be involved in…I gained some more understanding of what people in the environmental field can do for a job." As another student wrote on their final reflection, "*Seeing my writing in a public setting* ***has encouraged me to consider a job that requires writing*** *because the gratification and recognition is rewarding…I see myself using my profile that I created for [advisory committee member] Andy Scalari as a sample work for a job in the field of environmental science. I think it holds validity and is a legitimate project that I can say I was a part of*." Others similarly indicated that they would use the work they did in this project on their resumes.

In her interview, Amber spoke extensively on the value of the project for her college experience and her future career:

"I feel like this project has been integral to my entire college career, which is ironic given that it has only flourished in the last two quarters. … I never encountered a scholastic opportunity in which I had the ability to literally produce something, to come out of the end of the quarter with a living breathing project with a life of its own. So, for me, ***I see this project…as being the keystone to my college career****….here's this abstract idea of nature and culture, but here's an application of it; here's something that is tangible; … I have it on my resume for sure. If I hadn't [taken this course] then I would have just taken these last two quarters…and just have a test at the end and that was that. And instead I have this whole project which I feel like has a life of its own and I'm going to continue working on it throughout this summer!"*

As Amber continued, other students had the similarly positive experiences:

With Ramon being a techno-cultural studies major it's kind of the same story as my major in that it's very abstract and, any people who potentially will hire, they're not going to be interested in what courses did you take, they are going to be interested in what do you have to show for the courses you took. And so he has explicitly mentioned to me that he took this class because he wanted something that is project-based, that he will have something to show for at the end of it, to build on his resume. So I know for sure that ***he has already included it as a resume-builder and as something that he's going to take forward into his career endeavors*** *which will involve technocultural media. The impression I get from the rest of the class is that [the course] has been a valuable experience for everybody…all these people, I definitely see them valuing the project as a tool to build their resume and their career and their future, and not just as a class.*

Collaboration and Relationships

The UC Davis Vision Plan commits to "*Foster a bold and innovative spirit in our teaching, research and public service. We shall set a standard of excellence in all of our endeavors and reward creativity, risk-taking,* ***collaboration, and entrepreneurial partnership****, as optimal ways to encourage learning and pursue break-through discoveries and transformative ideas."* This commitment refers to several aspects of teaching, learning, and research fulfilled by the

Restore/Restory project. From the start, the *Restore/Restory* project was a collaboration, and, as such, encouraged relationships among students as well as between students and community members.

Student Relationships

When asked to explain why they would recommend the class to others, 5 out of 10 students mentioned the collaborative aspects; particularly the ability to collaborate with people from other backgrounds. As one wrote on the survey, the project "*frees us to work with others in order to create something*." Another mentioned specifically that it allowed him to "*connect with people from various backgrounds*." As Michael, another student, wrote in reflections on the Technocultural Studies course, *"Working with everyone in this project at such an interpersonal level has been very beneficial and I will apply it to my future classes in any way I can."*
The students not only gained friendships; they learned that collaboration with others eases the work load and contributes to a better product. For example, in a de-brief meeting following one of the community story days, Derric expressed the following: *"I really liked how, with Dane, one person was recording, but we both asked questions. It gets hard sometimes when you think, 'what am I going to ask them after this?"* As Dane went on to confirm, experiencing the interview process led to realizations about how sharing the workload leads to catching mistakes.

The friendships built in this class may form the foundation for future networks, which, according to a rich body of educational theory, are an essential component of successfully bridging school and future success (Bourdieu, 1977; Coleman, 1987; MacLeod, 2009). According to an interview with Amber: *Even beyond just the motions of it all, we've developed bonds with one another, and friendships with one another, and networking with one another in the class, and beyond the class; with community members, people of the advisory board—I have contact information for nature and culture alumni that I haven't even met yet, because of this program and this project, and the ARC—and so I'm really excited just to see where it will go from here.*

Community Collaborations

As Amber notes in the interview quoted above, students also had the opportunity to work with and create relationships with community members. When asked what they hoped to gain from working with the community, two students hoped for a better understanding of the community outside of what they referred to as the "bubble" of Davis, and two noted the insights and information they might gain from primary sources. In post-surveys, when asked who they worked closely with, most students mentioned only the community member they interviewed. A few students referred to community contacts they might use again, and one or two had significant interactions with community members. We recorded a conversation between a few students as we drove in to the Preserve, in which Thao mentioned a connection with Monter, a storyteller: *"I got a business card from Monter! I'm going to help them make elderberry wine this summer! He got so excited, so stoked talking about oak trees. He taught me about how to count the rings."*

However, aside from a few instances, most students did not refer to close relationships with community members. From the students' comments, it appears the interaction with the community did not create as dense a network as hoped for by the organizers. As Amy noted, "*I don't know if I would describe the interaction as close*." Students seemed to describe building a relationship more to the story told by the community member, or to the history of the place, rather than to any particular person. This may be a shortcoming of this particular program, or simply attributable to course/community relations in general; for example, it is difficult to establish any lasting relationship with community members seen a few times during a two-unit class over a few months.

When asked *"How did your perceptions of working in university/community partnerships change over the course of the project?"* A few students who did not answer the other questions on community addressed this question, providing organizers with more robust information. For example, Janelle commented that "*I realized it is possible for [community-university relationships] to be positive, inclusive, and collaborative.*" Others referred to gaining an appreciation for different perspectives, an increased sense of the community around Davis, and a sense that collaborative projects could succeed. As Derric wrote, "*There really was a sense of collective responsibility among everybody we interviewed, which was a nice contrast to the incessant focus these days on increasing personal responsibility.*" Jamie wrote that getting to know the place and the people "*adds context and purpose to my education*." The community contributed to her university experience.

Community members remarked favorably about students as well. For example, on numerous occasions, Frank, a community advisory group member, noted the pleasure derived from working with the students. Similarly, Anika, the founding Director of the Cache Creek Conservancy (CCC), remarked upon returning with her student interviewers, *"This group is very professional."*

<u>Community Perspectives</u>

We cannot fully describe how the project answers the call for collaboration and partnership in the UC Davis Vision Plan without a discussion of what the community received from the partnership. On the most obvious level, in exchange for a small commitment of staff time and meeting space, the CCC gained the following:

- An archived collection of stories regarding the history of the Nature Preserve
- Archives of photos, articles, and other historical artifacts of the Nature Preserve
- A website detailing the Preserve's history, including story clips and a timeline
- An audio tour of the grounds, created by professionals

They also benefitted from 70+ students and faculty becoming intimately involved in their site, fulfilling one of their original desired outcomes of increasing public awareness of the Preserve.

It is possible there were also more subtle gains on. For example, at the beginning of the project, a few of the community advisors were quite concerned about the level of collaboration and how that corresponded to control over the final product. Several hours of meetings were committed to hammering out a collaborative agreement. Although final data regarding change in attitude toward the university has not been collected, several CCC staff and advisors commented on their enjoyment of working with students, and how professional the project had been, as noted above. Additional data regarding outcomes for the community groups involved will be collected through post surveys and exit interviews at the close of the project.

Sense of Place

The 4th point outlined in the UC Davis Vision Plan entails a commitment to promoting "*a community characterized by respect, integrity, openness and responsiveness, and by consultation and collaboration, in which we are invested in our collective welfare and the responsible, sustainable stewardship of our resources*. Students' writing and commentary on their increased connection to the region exemplify this commitment to increasing understanding of place as a locus of human activity and restoration.

Often conflated with community or service learning, place-based education fundamentally indicates a curriculum tied to local needs and areas of interest (Powers, 2004; Smith 2007). According to Neumann (2000), a combination of intellectual growth and real life experience in the area in which students live and go to school restores "context to [their] lives" (2000: 71) and fosters care for ecosystems. In the theoretical literature, place-based education is closely linked to contextualized learning, such as that which took place in the *Restore/Restory* project, and fosters a truer understanding of cause and effect, process, and relationships. Piaget's concepts of adaptive and conceptual expertise, along with contextualized learning, provide a theoretical foundation for the contextualized nature of place-based environmental education (Flavell, 1996; Collins, et al., 1989). As students encounter more and more complex problem solving situations, they build cognitive structures that extend beyond knowledge into skills and conceptual schema. Thus, education which hopes to impart useable knowledge should situate learning in a particular context; a real-world problem solving situation. Place-based education corresponds closely to the goals of contextualized and situated learning, and should be considered an important component of any efforts to change school practice based on cognitive learning theory, especially in light of Katehi's commitment to sustainable stewardship.

Place-based education includes students' participation in effecting change. When learning has been contextual and experiential, students often generate and participate in potential solutions to the issues affecting their lives. In addition, in relying on collaborative learning, student agency, and service, place-based education resists the current incentives toward rote instruction, teachers as primary information sources, and standardized non-local curriculum (Smith 2007).

Restore/Restory does an exemplary job resisting all three, and, in so doing, additionally fulfills the UC Davis commitment to "*creativity*" and "*intellectual richness*."

In light of the documented importance of place-based education, students involved in the *Restore/Restory* project spent at least several hours at the Preserve. The Technocultural Studies course students visited the Preserve 3-5 times each, for approximately four hours each time. They became familiar with the surrounding farmland, and with the layout and private spaces of the Preserve itself. The environmental writing course students and independent study students visited the Preserve at least once, for three hours; and Graduate and MFA students spent many sessions and numerous hours at the preserve.

Out of the 10 Technocultural Studies students who turned in pre-surveys, none had interacted with the Preserve in any way before the course. After participation in the project, all reported an increased connection to the site, including what they described as "appreciation" and "a personal relationship." Several expressed interest in spending time there outside the project, although only one reported having done so. In the environmental writing course at least 8 out of 17 noted that they knew very little about the Preserve before the project; and several wrote they did not even know it existed.

At the very least, the course gave students the opportunity to get to know a local resource. Many of these students were Ecology, Nature and Culture, and American Studies students who were studying topics related to landscape and environment, and for them to have knowledge of and access to a local preserve may substantially enhance their experience at Davis. As Dane said, *"I'm excited to go…I care a lot about the natural environment and preserving what we have."* At the most, students became fully invested in their own learning and forged a deeper bond with the county in which they live.

Concepts of the preserve

The fourth point of the UC Davis vision plan mentions investment in **collective welfare**, and **in responsible, sustainable stewardship**. Place-based educational research literature clearly specifies the importance of being in and engaging with a particular place as a prerequisite for investment and responsibility (Neuman, 2000). The *Restore/Restory* project was able to provide this opportunity for students in a way not always available in the undergraduate experience. The outcomes of such an experience, as noted by students in surveys and interviews, are explained below.

Janelle sums up the importance of place in student experience in a comment in her pre-survey. *"It is difficult for me to articulate just how important it is. I think that I fell in love with the place, and that Preserve married me to the state of California. It seems like a stretch to say* ***that this place solidified my interest in agriculture****, because it is not really in an agricultural area, but I guess the beauty of the place made it clear just how* ***important it is for me to be involved in some work that protects areas like this****, especially in California, and agriculture has been my choice of this sort of work."* Janelle's writing exemplifies the importance of relationships in our interaction with land (she mentioned several times going there with a tight group of friends) and the significance of a relationship with the land to her course of study and work. This may not be the case for all students and storytellers involved in the project, but we think her writing poses a question as to how people's relationship with a place weds them to other ideas and ideals—Janelle mentioned a greater connection to California as a state, and her desire to work to protect areas like the Preserve.

> *"I personally value and feel connected to Cache Creek because it was embedded in and fundamental to my educational writing experience."*
> Thai, Environmental Writing Student

To answer research questions pertaining to such a relationship to place, students were asked on the survey, "*What comes to mind when you think of the Preserve?"* In answer to this question 60% of the Technocultural Studies students referred to beauty and landscape. "*When I think of the Preserve I immediately envision myself being there. How beautiful the site is*." (Amy) Students also focused on collaboration (3), such as "*the incredible power of a place to bring people together…[and the] power of collaboration among different people.*" (Derric) and "*the positive change that is possible in cooperative collaboration efforts.*" (Amber)

In terms of how their connection to the Preserve changed, on surveys several students in the environmental writing course (3) noted an increased sense of connection, even a responsibility, to the Preserve: "*participating in the project completely changed my connection to the Preserve… I feel more responsible for what happens to CCC because of the research and participation.*" This directly mirrors the Vision Plan's call for responsibility in stewardship. They also wrote extensively of this increased connection in their final reflections, as one student wrote: "*I'm glad I was able to be a part of the Restore/Restory project. I feel now that I am part of this larger Yolo County community forever*."

Collecting and editing the stories was seminal to the students' shifts in connection to and understanding of both human interaction with place in general and of this particular place. Students did mention physical aspects of the preserve (birds chirping, beautiful scenery, etc.), but they also often mentioned the interviews and stories as significant to their connection (6 out of 9). Jamie wrote that learning the history provided a context for appreciating the beauty. This

was echoed by several other students. For example, according to Tyrone: "*The stories I participated in…I can visualize the rich history of the preserve as I mentally walk through the areas where I recorded stories…I feel that the recordings I made and edited directly contributed to the record of the living history of the Preserve, and, through this contribution, I was able to develop my own personal relationship to the place and its history.*" This speaks to the power of story, of historical context, and of other people's connections in helping people establish their own connection to a place. This project gave students a particular access point through other people's stories, which they not only recorded but spent numerous hours processing and editing.

Place Generally

Environmental writing students wrote extensively of their shifting perspectives of place on their final reflections. They indicated increased understanding of the diversity of human connections to place, including "material, aesthetic, or ethical," an oft-cited reference to one of their readings, "The Rhetoric and Reality of Nature Protection: Toward a New Discourse" by Holly Doremus which explored three distinct ways people talk about Nature protection and the values implied in their rhetoric. One student captured the realizations of many of his/her peers in this statement: "*One thing that I did not take into account was the different types of interpretations people have when they use the word 'value.' Value could be seen from the esthetic perspective in which you value a place or something for its beauty or it could be seen from the economic point of view where you look at the place simply as a type of economic resource."* Another student expanded on this notion by explaining that one may receive services from a place, but, without awareness of the value of that place, there is no connection. "*Because it is this type of connection that provokes action."* Connections may even provoke action, as noted by another student: *"Now I know the potential consequences to the Cache Creek preserve if people and students, like myself, do not make a stand. This all starts with a connection."* Others wrote of connections to place which include both change over time and the larger community. "*To be connected to a place is to know it personally and impersonally, to accept that the perceptions of others is part of your own perception, and to know that the connection will change as the land changes."*

> *"I had given the place a face. I had affected its reputation, thus affecting it. But in order for me to write the profile I had to experience someone intimately connected to the creek. So the creek affected me, and in turn I had affected the creek."*
> Manny, Environmental Writing Student

Students in the Technocultural Studies course wrote about the significance of "place" on both a pre- and post-survey. Student experiences for which there is pre- and post- data (7), might be best illustrated through three mini case studies of student responses regarding connection to place.

Amy—Taking Action

In both the pre- and post- surveys, Amy discussed the importance of knowing the culture and people; what happened there, and who uses the space. She also

mentioned the importance of having her own experience to connect to the land—"*being able to spend time on the land and make references to my own experience*." But in the post-suvey she added something significant regarding what it means to be connected to place: "*I think it means to feel involved or have done something for the place(s).*" This idea of the importance of taking action in relationship to place represents a changed relationship; a deeper and more complex place-based ideology.

Derric—Increasing Interaction

Derric: In his first writing, Derric focuses on being grounded in place, using a metaphor of being rooted. This then leads to something meaningful, "*creative and exciting explorations*." In the second response, he again mentions interactions, this time with more detail and including not just creative explorations, but physical activities such as jumping in water and restoration work to create a wetland. His writing shows a shift to contributing, having responsibility, and making positive change. "*Instead of having no impact, it's having a positive impact on a place, engaging in the place*." Like Amy, Derric's second response shows an increasing complexity of relationship with land.

> *"Places are easy to come by, obviously, but valuing a place takes a bit more effort. I put effort into learning about the Creek, therefore I care about it."*
> Rommel, Environmental Writing Student

Tyrone—Gaining Connection

Tyrone showed a strong shift in his language around place. His first writing noted no real connection to a particular place, other than a museum he had worked at for six years. "*I feel connected to the institution through my experiences, but not particularly to the ground or to the building*." His second writing showed a strong sense that story connects a person to the land, and that social ties connect a person to community. "*To be connected to a place is to have a story that ties one to the land*." This is a very different understanding of place and of how one can be connected—his language in the first writing was unsure, in the second it was strong.

To summarize, most students mentioned a few ideas which resonated with their previous comments, but a few showed a more nuanced sense of place marked by an increased understanding of the relationship between people and place. Specifically, they came to have a deeper understanding of the importance of experience, related through stories, and of the importance of acting for and with the land and community.

In a way, these students are expanding and commenting on the UC Davis commitment to sustainable use of resources. Their experiences confirm findings in educational research that valuing a place is a necessary prerequisite to developing a commitment to protecting its resources (Orr, 1992). In most cases, valuing place rests on understanding the services it provides, or on experiencing its aesthetic appeal.

Overall, both the visit and the stories clearly contributed to a greater understanding of the Preserve and the history of its creation—including, for some students, a somewhat increasingly nuanced view of the conflicts behind the setting aside of a "place" for restoration purposes

Complex problem solving and strategic schema

Increased technology or interview skills and concepts of place are relatively easy to document, but student writing and interviews also revealed a more subtle (albeit perhaps more important) form of learning. As based on the work of Piaget (Flavell, 1996) and place-based scholars (Powers, 2004; Smith 2007), it is through participating in such projects that students build a more complex schema which can be applied to problem solving situations. In the case of *Restore/Restory*, the complex schema is related to conflict situations around land preservation and restoration, and was learned through the story collection and editing process.

The Technocultural Studies students reported that the *process* of recording and editing stories seemed to shift their thinking. For many of them, it broadened their understandings of place and of how humans might interact with place, including whether people can live and grow up somewhere ecologically preserved, how an ecological preserve can be valued by a community, and how human relationships can impact the land in long-term ways. For Derric, an Ecology major in the Technocultural Studies class, participation in the project increased his understanding of restoration as a complex and ongoing process without a perfect outcome. He wrote that he learned "*The reiteration of the idea of restoration not being static, or about freezing time in a museum like experience. Restoration is not really discrete, but rather a process.*"

Much of this more subtle learning arose out of engagement with the conflict around the land preservation process. Although the CCC's mission involves restoration, it was partially established by Teichert Mining company, and a few members of the board are connected in some way to mining. Aspects of community conflict and power differentials around mining and environmentalism came to light in the initial meetings, exemplified by delicate negotiations, silences, and hinted-at issues. For example, several CCC board members expressed misgivings at known environmental activists being invited to join the advisory group. However, it was unknown as to whether students would encounter this "multiplicity" of community, and if so, how they would interpret or learn from the conflicts. As we transcribed meetings, interviews, and notes, we found the conflict, or the multiple points of view within the community, to actually be a key aspect of the student's learning process.

For example, Jamie's comment about understanding the perspective of the miners provides an example of contextualized thinking which can be interpreted in multiple ways. "*I loved the stories that brought to light the kindness of the miners, I think often miners and the industry are vilified and it was great to hear their stories and hear environmentalists credit them for the work they had done. It definitely changed my perspective*." This comment is illustrative of complex learning for several reasons; first, it is likely that, in the UC Davis setting, environmentalist viewpoints have greater credence than miner viewpoints, and this exposure to miner viewpoints helped a student to have greater compassion for and understanding of different points of view. It is possible that Jamie has a somewhat simplified view of the conflict due to not having all of the data at hand; nonetheless her viewpoint grew and encompassed more of human experience in relation to the land than it had when she was simply attending classes at UC Davis.

Another example of students grappling with and learning from the community conflict comes from the debrief of the winter quarter Technocultural Studies course. Dane is discussing three storytellers he worked with, two from the mining industry (Bernie and Ryan) and one environmental activist (Kendall).

"For us we had three really perfect people, because each came from a really different background. We had Bernie who was this miner who had been involved in this place, he didn't work for Teichert, we had this miner who had a really deep connection to the land, so much, and then we had Ryan who was this really funny, witty guy, this representative of Teichert—he came from more of a mining background, that mindset. And he still had a deep connection with the earth. And then we had Kendall (other guy laughs), who was Mr. political activist, you know, down with Teichert, you know, I had to fight all of these people off and so, I thought that the synthesis of those three stories, those backgrounds was just a great combination."

The environmental writing students also made comments about what they learned about the conflict between mining and restoration. These comments derived from listening to stories, and were in response to the question *When you think of the Preserve, what comes to your mind*? The person who transcribed the interview with environmental activist Kendall Williams wrote about the "*gravel wars and mayhem of the 1990's*." In contrast the person who transcribed the interview with miner Bernie Adams's wrote, "*Bernie Adams gave a completely different*

perspective than anything I had heard... how even though the corporation may have little care for the environment, people that happen to be a part of the industry still care and hope to give what they can to the community." The student comments range from mayhem to cooperation, which may be due to the different stories they transcribed. Another wrote "*understanding all the controversy that went on with the mining that eventually leads to the Preserve made me appreciate it all the more."* In addition, one student transferred the learning to something happening in his own place: "*It allowed me to make comparisons between what is going on at the nature preserve to my hometown, which has been developing much more of late, and whether or not that is beneficial.*" Again, these realizations on the part of students take steps in the direction of the UC Davis commitment to sustainable stewardship of resources.

Environmental writing course student learning in the area of place-based politics was also reflected in their answers on what they gained from the project. Out of 17 student survey responses, students gained an understanding of the Preserve (3), an appreciation (2), and an awareness of their local environment (3), but by far the most comments in terms of what was gained pertained to an understanding of the difficulty and complexity of preserving a piece of land (6)—the politics involved, the negotiations, and the time and personal investment. According to a selection of student comments: *"I gained a sense of how different community members with divergent interests shape their common space*." "*I gained an understanding of how a problem must be solved when dealing with two very opposing sides concerning environmental issues.*" I learned "*the process or challenge involved in restoring land. It's not simply reclaiming land and fixing it up*." The ability to discern the ingredients of a community problem solving process is an excellent awareness with which to emerge from the college experience, and not one which can be easily taught.

Although the storytelling itself is a political process, it nonetheless, in this case (due to the random distribution of story collection, transcription, and editing) allowed multiple students access to stories which provided insight into experiences different than their own. This is reflected in realizations such as "*not all mining companies are bad*." This community engaged in a challenging experience, resulting in a collaborative process in which land was moved out of gravel production and into a form of restoration. In the process of working on this project, students became familiar with community members' complex and sometimes conflicting relationships to the land and to one another. Students engaged in a questioning process regarding the value of restoration, the environmental commitments of miners, and the possibilities of collaboration.

Another way to organize data about place is to ask, "what did the students learn," and "how did they learn it?" To address the first question, they learned of:

1) A beautiful place outside of Davis which is available for their use.
2) The power and possibility of collaborative efforts around land preservation.
3) The complexity of place based politics and human relationships.

They learned these concepts through

1) Spending time in a particular place (the beauty and the natural environment).
2) Interaction with storytellers and community members.
3) The historical context and the stories themselves.

When students commented on what contributed to the change in their connection to the preserve (survey), all aspects of the project, including reviewing the maps and newspaper articles (3), transcribing interviews (4), going to the Preserve ("the single most helpful thing on this project was seeing the nature preserve); (2), and profile writing (2), all contributed to the transformation. This indicates a well-conceived curriculum, orchestrated by both Dr. Glover and jesikah, and it also illustrates aspects of successful learning that are well-documented in the literature on education, including the idea that students encounter material in different ways, and have different learning styles (Gardner, 1989), and the concept that, if curriculum can be organized to allow for multiple pathways of access (experiencing physically, writing, reading etc), or multiple modalities, it can lead to the greatest depth of learning and have the broadest reach to students (Ladson-Billings, 1995).

CONCERNS AND FRUSTRATIONS

When asked about challenges which arose during the process, the largest issue mentioned was time constraints (6 out of 10), which is not surprising with committed university students; however several students indicated an important systemic issue—this course was offered pass/no pass and not required for their major. Even though many of them felt it was the most important class of their year, if not their college career, they were forced to prioritize their graded and required coursework. If such a course was worked into their major as a requirement it would help to ameliorate the tension expressed by students between a project which they felt was literally a "culmination" of all they were doing at the university, yet one which was underemphasized in major requirements. Other concerns included condensing stories while respecting storytellers, and struggles with audio quality. Finally, two students wrote of lack of computer availability and access.

As in many more experiential projects that take place in a traditional learning environment, the project can be confusing or frustrating for students who are used to precise directions with a known final product. In answering the question, *"What was challenging or frustrating about working on the project*?" five of the environmental writing Course students (N=17) indicated difficulties transcribing the interviews due to the tedious nature of the process, difficulty in hearing, and the lack of access to the interviewer to ask follow-up questions. Four felt challenged by the lack of clear direction and final product, and two felt they did not understand the context at first, asking, "*What is this land in question? What are they debating over?*" In keeping with their learning about the politics of land preservation, two noted that "*cutting through the politics*" was challenging, and that *"It was difficult to decipher what was going on in the gravel wars."* Four students clearly stated that nothing was challenging.

The educational system at times does not support project based learning, whether due to the time commitment required, the financial investment, or risk management issues. In addition, students in K-12 education are brought up in an environment increasingly characterized by memorization and rote instruction due to the current emphasis on school accountability (see Marx and Harris, 2006). This constellation of challenges may be related to the issues students discuss here, and present a challenge to those attempting to experientially engage students. Students both crave and resent these attempts. As one student concluded, "*I felt uncomfortable at the beginning because there was less structure than I thought there would be, but after we got under way it was a positive experience*."

A significant project concern external to the student's experience consisted of the tension between product excellence and student involvement. This tension rested primarily on the shoulders of the project director, jesikah maria ross. In interview, she described the tension in this way: *"It works when I think about it as meeting the goal of having a learning community. And it works very well in terms of my own participatory media methods and approaches and values. It works less well in terms of my blood pressure around if pieces will actually get done because I don't know if they will, and that creates a lot of tension because I feel I'm on the line to our community partners. I kind of assume that there will be a range of production values. And I embrace that. It's harder for the larger community to embrace that. Our partner may not embrace that. The art world certainly does not embrace that. And I have to deal very much with this tension that comes up in community arts—is it art, or is it activism? And I think that what I try to do is aim for both, and see where we land. I think that in some ways when you do this kind of project you do have to decide what you're privileging."*

This tension remains unresolved, but, later in the interview, jesikah discussed trying to set up the *Restore/Restory* project as a model—a community media project which had both student engagement in one component, the website, and high production value in another, the audio tour.

Final data collection on how the community partners received each component may be revealing as to the success of this arrangement.

IMPLICATIONS AND RECOMMENDATIONS

The UC Davis Vision Plan sets forth six commitments for UC Davis to continue and enhance its work as a transformative, world-class university. In so doing, it would "provide access to a socially relevant, world class education" known for "collaborative research endeavors" and leadership in "social responsibility and a sustainable global environment.[10] The three commitments highlighted in this report were exemplified in the *Restore/Restory* program, which provided a space for students, graduate students, staff, and faculty to participate in collaborative, engaged learning and research, with potential for contributing to both future careers and a sustainable environment. In addition, the commitments and the program closely correspond with best practice research in the fields of educational psychology and place-based education. Analysis of interviews, field notes, and course documents points to a participant experience that exemplifies situated learning to a startling degree:

First, *Restore/Restory* created a context for the application of book and classroom learning, as advocated by Brown, Collins, and Newman in various publications (1989). As one student noted in his survey, *"I feel that projects like these provide the most direct, real world learning experiences a student can have, and are important for students to gain a better understanding and knowledge of the world beyond just textbook academia."* (Marcelo) This context was not manufactured for the sake of educational experience, but was a "real" project, and intended for public consumption.

Second, this contextualized learning took place within and across communities. The student community was strongly developed and characterized by shared expertise; their community was both guided by and integrated with graduate students, faculty, and mentors. This university community was interactive with an external community, members of which were treated as sources of expertise and historical knowledge.

Third, the process set up by jesikah incorporated student prior knowledge (Moll, 1992; Flavel, 1996), and drew from student expertise, while continuing to build skills. As Lonny worte, "it forces us to apply our previous knowledge."

[10] http://vision.ucdavis.edu

Finally, Collins et al (1989, p 477) describe strategic knowledge as "the usually tacit knowledge that underlies an expert's ability to make use of concepts, facts, and procedures as necessary to solve problems and carry out tasks." *Restore/Restory* takes a step in the direction of providing such strategic knowledge. For example, student conversation indicates complex decision making drawing on multiple knowledge domains, including the technology, landscape, and human interaction. Moreover, those decisions were often made in a distributed way, among a small group of students working together.

Experiences such as *Restore/Restory* thus prepare students for the complex problem solving, technologies, and interactions of a workplace. In addition, students emerged with relationships with both community and faculty mentors, and with other students which may serve as pathways to various goals outside of college. The learning process closely follows the latest research on cognition; it is no surprise that the students felt the experience to be the most important of the year, or of their college career.

Equally important is how closely aligned to "best practice" this type of program is. In a 2007 publication, the American Association of Colleges and Universities summarized research on high impact educational practices, resulting in ten suggestions. Out of those ten, the *Restore/Restory* project fulfills five, including Collaborative Assignments and Projects, Learning Communities, Undergraduate research, Service and Community Based Learning, and Capstone courses. These are university practices which have been shown to reduce drop-out rates, support and enrich the educational lives of all college students, include the diverse ranks of entering student populations, and increase community engagement and responsibility. In addition, they prepare students for participation in an evolving economy where analytical skills and interdependent approaches are as valued as content knowledge.

Although a project such as *Restore/Restory* incurs costs outside of traditional curriculum, the extent to which it accomplishes both UC Davis' stated goals and accepted excellent educational practices indicates a need to examine such projects in light of larger goals. *Restore/Restory* involved at least 80 students and faculty members. It provided for those students a range of opportunities from engagement with the community, to project-based and service learning, to a capstone course. Such opportunities always require additional resources, planning, and

pedagogical skill. A university committed to such a Vision Plan should be looking for committed faculty and directors to carry them out. In addition to teaching goals, the project provided research opportunities, and at least two graduate students and two faculty members will be producing publications from the research. In terms of service, the projects accomplishments are clear: in addition to the actual product which benefits both the community and the university, the university has, through this project, established a better relationship with local constituents. In sum, the manner in which projects such as *Restore/Restory* effectively "close the gap between knowing and doing" should be carefully considered, even in lean budgetary times.

FUTURE DIRECTIONS

A group of scholars involved in the *Restore/Restory* project intends to develop the research on program outcomes for publication, contributing to the scholarly dialogue on how such experiential programs impact student learning. These scholars include Kathryn Hayes, PhD student in the School of Education, Beth Rose Middleton, Assistant. Professor in Native American Studies, Heidi Ballard, Assistant Professor in Education, Angela Booker, Assistant Professor in Education and jesikah maria ross, Director of the Art of Regional Change. Kathryn Hayes recently presented on how technology mediates informal learning in university contexts, using *Restore/Restory* data, at the American Anthropological Association meeting in November, 2011. Hayes, Booker, Middleton and ross recently had a journal article based on this report accepted to the peer reviewed publication LEARNing Landscapes.

Work continues in other areas of the project as well. ARC Director jesikah maria ross recently involved Tim McNeil, Associate Professor in Design, and 14 undergraduate students in his *Narrative Environments* course (DES 187) in designing a wayfaring system for the audio tour as well as a moble app for the project. Ms. ross also partnered with Mike Ziser, Associate Professor in English to secure a highly competitive system-wide UC Humanities Research Institute "Extramural Explorations" grant to host a series of public events to showcase work generated through *Restore/Restory* in the Fall of 2012. Meanwhile, ross is putting together the project website and audio tour that scheduled to debut in summer of 2012. Until the project wraps up in December 2012, there be opportunities for research and further partnership with the community as the material becomes public, and the desired outcomes initially developed by the Cache Creek Conservancy and the Art of Regional Change are achieved.

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