Colleen M. Fitzgerald

Creating sustainable models of language documentation and revitalization

Abstract: In the years since the alarm was raised by linguists (Hale et al. 1992) regarding the survival of many of the world's estimated 7,000 languages, many programs have developed to support language maintenance and revitalization. These programs have been situated in both academic and tribal/grassroots institutions. After at least three decades of such programs, it is clear that many of these programs do not survive. In this paper, I outline the essential properties of successful and sustainable approaches, in part drawing from my own work at the University of Texas at Arlington's Native American Languages Lab. In analyzing the components of a sustainable model, I focus on collaborations primarily in the United States, in Texas and Oklahoma. This case study thus presents one exemplar of how community-based research operates in a larger regional context. This makes the case that long-term capacity building and training is essential.

* This material is based upon work supported by, and conducted while serving at the National Science Foundation. Any opinions, findings, and conclusions expressed in this material are those of the author, and do not necessarily reflect the views of the National Science Foundation. I would like to acknowledge the many colleagues, partners and funding sources without whose support this paper would not be possible. For the Oklahoma Breath of Life workshop activities, thanks to Co-Director Mary Linn and the National Science Foundation for grant BCS-1065068. My thanks to Jim Parrish and Teri Billie of the Choctaw Language Program and to Candessa Tehee and Roy Boney, Jr. of the Cherokee Language Program, as well as David Ludlow, Freeman Jesse, Rae Queton who worked with our graduate field methods students. The Cherokee ethnobotany project was possible thanks to participation by David Crawler and John Ross of the Cherokee Language Program and UT Arlington Sustainability Committee Grant. For the CoLang 2014 and related activities, my thanks to the National Science Foundation for grant BCS-1263939, "2014 Institute on Collaborative Language Research (CoLang/InField) "and to Jonelle and Beryl Battise, and to the Alabama-Coushatta Tribe of Texas for their hospitality and support of our CoLang field methods class working with the Alabama language. My thanks also go to the many colleagues and students who have been part of these projects, especially Mary Linn, Joshua Hinson, Brad Montgomery-Anderson, Dylan Herrick, Racquel Sapien, Tracy Hirata-Eds, Daryl Baldwin, Marcellino Berardo, Jack Martin, Candessa Tehee, Roy Boney, Jr., and students Lori McLain Pierce, Samantha Cornelius, Joshua Jensen, Dan Amy, Kimberly Johnson, Libby Tatz, Vicki Caña, Devin Hornick, Stephen Self, Nathaniel Eversole, Vitaly Voinov, Nick Williams, Eric Katz, Juliet Morgan, Nicole Umayam, Loren Hov, Adrienne Tsikewa, and Abby Denemark.

Colleen M. Fitzgerald: Department of Linguistics and TESOL, The University of Texas at Arlington, Box 19559 — 132 Hammond Hall, Arlington, TX 76019-0559 USA, cmfitz@uta.edu

https://doi.org/10.1515/9783110527018-005

Training is best realized as dynamic, and with rich, multilateral mentoring networks. These collaborations establish an intellectual infrastructure that is a resource for the region, with multiple experts in tribal and academic contexts on a variety of topics. It is this human infrastructure that is the lynchpin of a sustainable model.

Keywords: training, sustainability, American Southwest, revitalization

1 Introduction

Training plays an increasingly important role in many community-based approaches to indigenous language documentation and revitalization. A good description of what falls under this umbrella comes from Genetti and Siemens (2013: 61):

> This term [training] is used broadly to cover a diverse array of activities, from one-on-one instruction to short workshops, small classes, intensive institutes, and formal degree programs. In its simplest conception the term 'training' refers to the transfer of skills and knowledge from one person to another [...] The transferred skills range from orthography development to filmmaking to linguistic analysis, and so on.

Recent work supports the effectiveness of training as a response to language endangerment and revitalization (for example, McCarty et al. 2001; Dobrin 2008; Jukes 2011; Fitzgerald and Linn 2013; Genetti and Siemens 2013; Fitzgerald and Hinson 2016). This is especially true as large-scale training venues like the Institute on Collaborative Language Research (CoLang) assume an increasingly important role in national and international contexts.

Training offers an interesting lens for viewing what it means for language projects to be community-centered, community-based, grassroots-driven or some combination of the three. An excellent, early example of community-centered projects where training and intellectual interchange serve as the cornerstone comes from the indigenous language collaborations between tribal organizations and academics in Oklahoma. Descriptions of these collaborative projects appear in the 1990s as part of the then-emerging literature on language endangerment (i.e., Hale et al. 1992) and they motivate the importance of training as a response to language endangerment (i.e., Watahomigie and Yamamoto 1987, 1992). Current projects in Oklahoma and neighboring regions are characterized by ongoing activities that vary considerably in terms of what we might consider explicitly community-driven, but training continues to play an integral role. As I will show here, because projects often involve overlapping participants, different training events build on and reinforce each other and maintain continuity.

Because language activities are offered with some regularity, this cultivates a deeper knowledge among all involved.

In this chapter, I will focus on collaborative work done in conjunction with UT Arlington's Native American Languages Lab and with our partners. These projects thus serve as a training-oriented case study, which I use to make several key claims about models of community-based language research. From this case study, I make the following claims. First, work in the Oklahoma region shows itself as a sustainable model that has endured over a relatively long time period as far as language revitalization is concerned. Second, that this sustainability is possible when training includes certain fundamental properties (outlined further below) and when training is characterizable in terms that I describe as involving multilayered, dynamic, decentered in authority and complex. This creates intellectual infrastructure that acts as a resource in the region because there are multiple experts who support both their own program and those of other programs. I further argue that where there are sustainable, effective models of endangered language research, these models thrive because they critically blur the distinction between revitalization and documentation. Finally, despite not being explicitly community-driven (at least in its current incarnation), I demonstrate that this case study exemplifies one instantiation of a community-based language research model.

These various projects occur in the southeastern United States, generally focused on Oklahoma, but extend into Texas (at or near the site of my home institution in the greater Dallas-Fort Worth metroplex) and, to a lesser extent, to neighboring southeastern states like Louisiana. Having been involved in this context for about six years, it is a good time to reflect on the growth and development in my students, my collaborators, and the range of stakeholders who participate in various projects – myself included. There are pools of experts, both indigenous and academic, that we all draw on as resources. Stepping back at this point also offers an opportunity to contemplate how a richly-networked area with existing intellectual infrastructure can morph into an even more developed context for language revitalization, language documentation, and training, facilitating for the many parties involved the development of new strengths and the improvement of existing skills. This type of long-term capacity building, where no one person is the cornerstone, but rather, training is the cornerstone, offers a model of potentially sustainable language revitalization at a grassroots level and in academic-tribal collaborations, and in creating experts who are both community and academic.

Turning to how this chapter is organized, I start with a brief background on Oklahoma and the larger southeastern United States, and then turn to a quick summary of the beginning of three decades of a renaissance of language

documentation and revitalization in Oklahoma. I then talk about recent and ongoing collaborative language documentation and revitalization projects where I have been involved. Going from specifics to generalizable, I present a model of the key elements of sustainable language documentation and revitalization projects before concluding the paper.

2 Oklahoma languages

Oklahoma and the greater American southeast serve as an example of a language area created by and showing the effects of forced removal. In the early 19th Century, expansion by Euro-Americans into the south and westward had major implications for indigenous populations in those regions. The most significant implication came through federal policy. The Indian Removal Act of 1830 serves as a tragic legacy from Andrew Jackson's presidency, as the federal law removing Native Americans from their homelands to the west of the Mississippi River. The forced removal (Trail of Tears) moved Southeast tribes into what was then called Indian Territory, but is now the state of Oklahoma, disrupting these Indian nations from their aboriginal homelands. As a result, effected tribes, the Cherokee, Choctaw, Chickasaw, Seminole and Muscogee, have one or more eastern and western bands because not everyone went on this march to Indian Territory. Due to this and a host of other forced marches to Indian Territory, the state of Oklahoma is now home to 39 federally or state recognized tribes, most of which represent communities that are occupying their indigenous homelands. One consequence of forced removal is the creation of a language area in Oklahoma where many communities have significant ties with another band within the state or outside of the state where language and culture and traditional knowledge may flow between communities. Another consequence is the interaction in revitalization projects and training between communities representing languages from different families.

To understand the Oklahoma linguistic context, the essential background actually requires looking at collaborative work in Arizona that preceded it and laid the foundation for subsequent approaches to documentation and revitalization in Oklahoma. The model for Oklahoma was in large part developed first in Arizona, as linguist Akira Yamamoto partnered with the Hualapai tribe. Yamamoto was active in both places (but in Arizona first) and transferred some approaches from Arizona to Oklahoma. From 1973–1975 in Arizona, Yamamoto was part of a Hualapai language-education collaboration developed with tribal members Jane Honga and Lucille Watahomigie. As the Hualapai created a bilingual education

program, the need for a regional resource for the community to create credentialed bilingual teachers became clear. Watahomigie, who was the sole certified teacher, became the program's director. In 1978, the inaugural Yuman Language Institute made its debut. In the years that followed, the institute grew to include members of other languages and eventually became the American Indian Language Development Institute (AILDI), now housed at the University of Arizona. The Hualapai academic-tribal partnership lays out the principles underlying their efforts:

> What the Hualapai program encourages is COLLABORATIVE research. This entails that no one person does the work for any other person or group; rather, members of a collaborative team do the work with other team members. In the domain of research, the principles of the collaborative model go beyond any specific research project. The goal of collaborative research is not only to engage in a team project but also, and perhaps more importantly, to provide opportunities for local people to become researchers themselves. As Watahomigie and Yamamoto state (1987: 79), "It is vitally important that anthropologists and anthropological linguists undertake the responsibility of training native researchers and work with them to develop collaborative language and cultural revitalization and/or maintenance programs." Watahomigie and Yamamoto (1992: 12)

The training-oriented, collaborative, community-based research model made its way to Oklahoma, where communities approached Yamamoto, who was on the faculty at the University of Kansas in Lawrence. Tribal interest in Akira Yamamoto's collaborative work in Arizona was initiated by first the Euchee language community, and later the Loyal Shawnee tribe (Linn et al. 1998). These early efforts began a tradition of partnering with Oklahoma tribes and successfully connecting graduate students with indigenous language communities. In addition, the early interest led to the creation in 1992 of Oklahoma Native American Language Development Institute (ONALDI), as an intensive language institute patterned after Yamamoto's experiences with AILDI, with the same kinds of goals: training bilingual teachers, developing pedagogical materials and increasing linguistic knowledge of the indigenous languages. ONALDI morphed into a new organization in 1996, the Oklahoma Native Language Association (ONLA), a grassroots organization led by community members. ONLA structured training workshops with a shorter duration in answer to what community members desired, since shorter workshops are more manageable with people's schedules and other demands.

ONLA holds annual workshops[1] offering training and support for indigenous language teachers and advocates and has served as the cornerstone of regional

1 The annual October meetings have lost some momentum since government shutdown in 2013, when the absence of travel funds meant many tribes were unable to travel and the ONLA meeting was cancelled.

language work, bringing together language teachers and learners, policy makers, academics and more. Over the course of the following decade, there was a renaissance of Oklahoma indigenous languages, driven in large part by indigenous community members, but also drawing on strong collaborations with and contributions by academic partners such as Akira Yamamoto, and his graduate students: Mary Linn, Marcellino Berardo, Lizette Peter, Tracy Hirata-Edds, and Brad Montgomery-Anderson. Included in this renaissance are the emergence or growth in individual tribal language programs, and the beginning of a Native American Languages collection in 2002 at the University of Oklahoma (via Sam Noble Museum), with Mary Linn brought on as the founding curator for this community-based language archive (Linn 2014). Another important development was several faculty hires in Oklahoma as Linn, Berardo and Montgomery-Anderson all held faculty positions in Oklahoma during the first part of the decade.

Soon after the establishment of OU's Native American Languages Collection, some of the most current comprehensive statistics for Oklahoma languages were collected by Linn (2004), Table 1[2] below. As might be expected, the linguistic situation is much starker now in 2016. The numbers of speakers in 2004 show how dramatically threatened these languages were, with 16 of the languages at that time having no fluent first language speakers within the state. Linn et al. (2002) notes that of Oklahoma languages, only Kickapoo (at that time) was being learned by children in the home, giving an early sense of the negative trajectory of these speaker numbers.

Considering the current vitality of Oklahoma languages in 2016, a few languages are "robust" (as far as Native American languages go), and those would currently be Cherokee, Choctaw, Kickapoo and Creek (Seminole/Mvskoke). Kickapoo likely has the youngest speakers. Roughly half of Oklahoma's languages are sleeping languages, some recently so, others at least a generation back, and the remaining languages are fragile or very fragile in terms of having only elderly speakers and speakers in very, very small numbers.

2 Some additional clarification or comments for this chart: Pawnee includes South Band and Skiri dialects, and Wichita is including Wichita, Keechi, Waco and Tawakonie dialects/languages; those with speakers of the language in other states include Arapaho, Cheyenne, Potawatomi, Fox (Meskwaki), Cherokee, Seneca-Cayuga, Ponca, Choctaw and Seminole. Seneca-Cayuga, Sac and Fox, and Alabama-Quassarte represent linguistically distinct, but federally consolidated tribes or bands. Natchez and Euchee are not federally recognized, but are linguistically distinct entities; both are linguistic isolates. Finally, federally recognized tribal towns are grouped under Creek if historically, Creek or related dialects were spoken there.

3 Oklahoma language reclamation and revitalization in the new millennium

The Native American Languages Lab (NALL) focuses on indigenous languages currently located in the Southwest United States, with an eye to serving communities and their language needs, including onsite technology or linguistic training, database construction and development, and support for grant development. We play a role in supporting training and related teaching and service activity, and involving students in community-based language research projects.

Table 1: Total population c. 1993 and number of speakers for Oklahoma languages (Linn 2004)

Languages by Family	# Speakers
Algonquian	
Absentee Shawnee (2,000)	200
Arapaho (3,000)	100
Cheyenne (4,762)	100
Citizen Band Potawatomi (18,000)	n/a
Delaware (Lenape)	0
Eastern Shawnee (1,550)	0 (?)
Kickapoo (1,800)	1,500
Loyal Shawnee (8,000)	14
Miami (6,000)	0
Ottawa (367)	0
Peoria (2,000)	0
Sac and Fox (2,200)	20
Athapaskan	
Plains Apache (924)	3
Fort Sill Apache (103)	0(?)
Caddoan	
Caddo (3,371)	25
Pawnee (2,500)	7
Wichita (1,764)	0–5
Iroquoian	
Cherokee (122,000)	9,000
Keetoowah Band Cherokee (7,450)	(w/Cherokee)
Wyandotte (3,617)	0
Seneca-Cayuga (2,460)	0
Kiowa-Tanoan	
Kiowa (9,050 in 1986)	300
Muskogean	
Choctaw	4,000
Chickasaw	1,000
Creek	6,000
Seminole	(w/Creek)
Alabama-Quassarte (800)	0
Hitchiti (?)	0
Natchez	
Natchez	0
Penutian	
Modoc (200 in early 1990s)	0
Siouan	
Iowa (366)	0
Kaw (1,678)	0
Osage (11,000)	5
Otoe-Missouria (1,550)	1(?)
Ponca (2,360)	24
Quapaw (1,927)	0
Tonkawan	
Tonkawa (186)	0
Uto-Aztecan	
Comanche (8,500)	100
Uchean	
Euchee (Yuchi) (2,500)	10

Service-learning (Bringle and Hatcher 1995; Fitzgerald 2007a, 2009, 2010) helps to meet community language needs and to give students valuable experiences acquiring and using skills in putting their theoretical and technical skills to practice in a meaningful way. Through the NALL, I lead and organize (and co-lead and co-organize) language workshops primarily in Oklahoma and Texas. This ranges from the creation of specific trainings upon request for a language program, support grant applications, or other collaborations with partners in tribes and universities, bringing the energy and efforts of my students as a resource for these efforts. NALL activities also include advocacy, outreach, and public engagement in support of Native American languages and communities. Along with help from my partners in tribes and at other universities, we mentor and train students in both the linguistic side of the work and in how to work with communities. This work is done in conjunction with many collaborators at both tribes and universities, and I will draw from two primary examples to show how, in the context of community-based language research, there is considerable range in how that is realized with the community collaborations and roles surfacing in different, sometimes more diffuse ways, such as in planning, determining themes, and so on.

Here I turn to a period of time where I have been involved in the region in a variety of ways, covering six years from 2009 to 2015. These years include several major grant-funded workshops with a focus on training in language documentation and revitalization, the Oklahoma Breath of Life Workshop (abbreviated OKBOL) and CoLang 2014 (cf. CoLang website). In addition, I started a new revitalization-driven collaboration with the Chickasaw Language Revitalization Program. Because some of these projects are covered in more detail elsewhere (Fitzgerald and Linn 2013; Fitzgerald and Hinson 2013, 2015, and 2016), I focus on two other examples, the first is our "talking dictionary" workshops, and the second is the Cherokee-UT Arlington sustainability project, both projects where I have been a key agent in the activities, where service-learning has provided the conceptual underpinnings for involving my students, and where established workshops or recurring venues have been productive in fostering projects.

3.1 Dictionary software as a tool for relationship-building

A great example of these different components intersect is by talking about the different roles played by training in Fieldworks Language Explorer (FLEx), a software tool which integrates lexicography and interlinearization of texts.[3] FLEx

3 Special thanks to the following for all their work on UTA FLEx projects: Nathan Eversole, Joshua Jensen, and Vitaly Voinov.

became the cornerstone of a National Science Foundation grant collaborative submission for the 2012 Oklahoma Breath of Life Workshop, which Mary Linn and I co-directed. Part of the innovations we introduced was using databasing both as a method to teach linguistics and to generate new linguistic research on a given language. The UT Arlington team bore primary responsibility for the FLEx component of OKBOL. Between 2010 and 2014, UT Arlington conducted FLEx trainings at 17 different workshops or workshop venues in 4 different states. This includes the 2012 and 2014 Oklahoma Breath of Life Workshops (OKBOL) and the 2014 Institute on Collaborative Language Research (CoLang 2014). For the most part, the participants in these workshops were indigenous community members, many involved in their own community's language program. We frequently billed these as "Talking Dictionary Workshops" and integrated training on how to add audio or photographs, how to use semantic fields to categorize vocabulary for lesson plans, and what exported forms as PDFs or as webpages look like for FLEx projects. How were we able to generate such interest and such capacity for doing this? And what were the more intangible results from this approach?

The key to having the capacity to do this much training revolves around five elements. First, there needed to be a core group of ready students who knew how to use FLEx on at least a basic level. In addition to doing some open training workshops, I also integrated it as a required tool in our graduate field methods sequence. Second, the UTA team created pre-made language-specific "starter kits," which included creating individualized FLEx shells for as many of the Oklahoma languages as might be represented at the 2012 workshop. The idea behind this was that the hardest part of using FLEx might well be to start a project, so if our team started the project for each of the attending languages, participants could focus their energies on learning the software, learning the linguistics, and learning the structure of their language. Over the course of the OKBOL grant, the UTA team created shells for 30 languages total (26 Oklahoma languages plus 4 other Native American languages).

A third important element was that we piloted training repeatedly to test accessibility and clarity and to determine how best to support participants. In 2011, an early training in preparation for the OKBOL workshop focused on Chickasaw, Choctaw and Sauk language program participants learning FLEx. Software installation took over a large portion of the start of the session. One participant asked for screen shots of what we were doing because taking notes was not effective, both because of the participant being a visual learner, but also because screenshots show what is going on in a way that words cannot, especially for software training. From this, we moved from preparing software installation instructions onsite to doing much of that preparation prior to a workshop and eventually, to creating a mobile laptop lab where everything was pre-installed.

The other major development was the creation of a FLEx handbook with screenshots, an index and reader-friendly instructions, as well as contact information for our UTA team for follow up questions.

Fourth, we made sure to have floaters, people with some knowledge of the software who roamed the room and answered individual questions. Software training is most effective when people have a computer where they can use the software as it is being taught, and it is least effective when participants have individual questions that slow down the training. In teaching FLEx, many times the questions were straightforward and often related to navigation issues. This also promoted a collaborative approach. Although one person leads the training, floaters help with pacing since they see when multiple people are struggling or when the instructor is moving too fast. As people chime in with some direction or guidance to the instructor, it becomes clear that this is support, that everyone is trying to help out, and that all roles are useful in the endeavor. Fifth, wherever possible, students led the training, which had numerous benefits. Students learned to teach community members by doing it, usually with a smaller audience. Community members became familiar with students. This created relationships that could be further built on in future workshops.

In considering the more intangible results, the workshops were something that people were interested in and we benefitted from doing them as much as the participants appreciated attending. A great example of how these elements intertwined to build relationships comes in our relationship with the Choctaw Language Program in Oklahoma. For the academic year starting fall 2011, I was slated to co-teach a one-year sequence in field methods. I hoped to work with Choctaw speakers and reached out to their language program, went up and visited, and we talked about parameters and what our class might do to give back as a thank you. I asked the language program if they would suggest speakers in the Dallas area. This created an opportunity to start a relationship with the Choctaw program, and they sent two attendees to a FLEx training a few months later in December 2011. After the academic year wrapped up, they requested an onsite training as part of the Choctaw teacher in-service days prior to their school year starting, which we did in Durant in August 2012. One of our field methods graduate students, Lori McLain Pierce, was interested in continuing to work with Choctaw, and we were able to work with the language program to get her set up and to shepherd her through the Choctaw Nation's IRB process for her approval to do research. To facilitate Lori being better known with the Choctaw teachers who hold community classes, we did a FLEx training at the ONLA meeting in October 2012, which gave people a face to go with a name. And about a year later, our Cherokee language consultant for the field methods class that started in the fall 2013 semester came from David Ludlow, one of the Choctaw language consultants, reaching

out to his contacts at the Urban Inter-Tribal Center. Mr. Ludlow is well-known and respected among the Dallas-Fort Worth community members, and that has opened up opportunities for doing language-related events for the local Native American community.

The FLEx workshops also built relationships across different academic institutions. Other contributors to these workshops included Mary Linn and several generations of grad students from the University of Oklahoma, Brad Montgomery-Anderson at Northeastern University, and Jack Martin at the College of William and Mary, and institutional hosts for different sessions included ONLA, the American Indian Language Development Institute (AILDI) at the University of Arizona, Choctaw Language Program and the Chickasaw Language Revitalization Program.

3.2 The Cherokee-UTA collaboration

While the previous example focused on how we used one tool, FLEx software, as a way of facilitating training and fostering relationships, this example focuses on how we have drawn on existing relationships to strengthen them and to develop new partnerships. Northeastern State University, in the heart of Cherokee country, hosts an annual Symposium on the American Indian where ONLA and Akira Yamamoto hosted an indigenous language documentation and revitalization seminar. As I became involved in this annual event, I became familiar to many of the Cherokee language program staff and instructors in Tahlequah, such as Durbin Feeling, Ed Fields as well as the newer generation of NSU and other Cherokee instructors like Ryan Mackey and Wyman Kirk.

UT Arlington's field methods courses have meshed well by coordinating with tribal language programs and by drawing on the general concepts of service-learning and giving back to the community. Building on earlier success partnering with the Choctaw language program, I reached out to the Cherokee Language Program's then-manager, Candessa Tehee about whether there might be interest in doing something like that with their program for the field methods sequence scheduled to start in fall 2013. I was also able to secure a small internal Faculty Fellowship on Sustainability in the Curriculum from UT Arlington on "Traditional Ecological Knowledge, Sustainability and Indigenous Language Documentation." The Cherokee Nation's Department of Natural Resources has been active as environmental stewards and in preserving traditional and ecological knowledge in the community in various ways, such as basket making exhibits at the Cherokee Heritage Center, the dissemination of heirloom seeds through

CN's Seed Bank, and the publication of Cherokee-language books (and their English translations) on traditional plants and their uses.

Field methods courses typically include the elicitation of grammatical information, more recent language documentation projects seek to include cultural and other traditional knowledge, including Traditional Ecological Knowledge (TEK). Documenting biological knowledge is underutilized in linguistic fieldwork, but recent attention has highlighted the importance of training in this area. This knowledge reflects how indigenous cultures interact with their ecosystems, as well as being a vital part of daily life and ritual referenced in various speech genres (song, autobiography, folk tales, proverbs, etc.). In addition, with the rapid climate change occurring worldwide, there is an urgency in documenting TEK while this is possible (see Velásquez Runk and Carpio Opua this volume for discussion of documentation along these lines).

Adding a unit on "Traditional Ecological Knowledge, Sustainability and Indigenous Language Documentation" to the field methods course facilitated a collaboration with the indigenous language experts of the Cherokee Nation, and with experts at the nearby Botanical Research Institute of Texas. The creation of this curriculum unit served several functions, including training budding linguists how to document language and indigenous knowledge, contributing a service project (the video documentation) and fostering ties between UT Arlington, the Cherokee Language Program and BRIT. The final goal was to create a set of videos documenting Cherokee language and ecological knowledge, with subtitles in both Cherokee and English.

While the field methods course kicked off in fall 2013, we were unable to go to Tahlequah until April 2014, when we filmed speakers and began our initial local contacts through the new manager of the Cherokee Language Program, Roy Boney, Jr. The timing of this was too close to the end of the semester for much more to be done than the filming, but over the next year, we were able to process the videos and deepen the relationships between UT Arlington, Cherokee Nation and BRIT thanks in large part to strong interest by two students, Samantha Cornelius and Vicki Caña, and strong working relationships with David Crawler and John Ross from the Cherokee language program. Thanks to the Sustainability funds, and the need to work on the transcription and translation of the videos, the UT Arlington team made an additional visit to Tahlequah and the Cherokee team made two trips to visit us at UT Arlington, Language Work in Tahlequah. And during CoLang 2014 (the intervening summer), Roy Boney and Candessa Tehee taught a workshop on "Using Technology for Language Documentation and Revitalization in Digital Domains," where they shared the Cherokee Nation's activities with a wider national and international audience.

During the summer and into the fall, several undergraduate research assistants worked on inputting the transcriptions and translations into ELAN. Samantha and Vicki each continued working on this and other Cherokee projects during the following year in coursework, and each was able to secure local departmental research grants to assist with that work. We also gave a collaborative presentation on the project in Hawai'i with both teams (Fitzgerald et al. 2015) at the conference.

By integrating coursework and community in this way, the field methods course has fostered student interest in Native American languages and it has provided a model for how to collaborate respectfully with Native communities. The video project itself ended up being much more labor intensive than originally envisioned, and the videos are in the final stages of processing. University students provided the labor on this project, but the videos will be disseminated by the Cherokee language program, probably through the Cherokee Nation's YouTube channel. While containing traditional knowledge, the videos also have usefulness as pronunciation tools and are being used as part of an investigation into prosody by Samantha, who has since decided to work on Cherokee for her dissertation project. This development has been received with considerable excitement by the Cherokee Language program staff, who have a good relationship with Samantha and are interested in her work because it will lead to a better understanding of Cherokee phonology and pronunciation, which could be utilized in language revitalization.

Samantha's familiarity with Cherokee was a key factor in selecting her as a mentor for Richard Zane Smith at the 2014 Oklahoma Breath of Life. In that workshop, three people attended for the Wyandot language, two who were having their first experience with the language, and the third, Richard, who had a more advanced level of exposure, having been involved in learning his language and teaching it for quite some time. Wyandot, also known as Huron (cf. Mithun 1985) is a Northern Iroquoian language which had fluent first language speakers up until the early 1960s in Oklahoma (Kopris 2001). The language has excellent text documentation collected in 1910–11 (cf. Barbeau 1960). Samantha served as the linguistic partner for Richard in the level two (more advanced) track of the 2014 Oklahoma Breath of Life, thus drawing on what she had learned about the Cherokee language, as well as how the Cherokee speakers trained her to work with Native language community members.

This approach to field methods integrates students like Samantha into productive and respectful collaborations that have long-term viability for sustaining language activity in the region. Participation in the existing grassroots revitalization workshops in Tahlequah at the local university made me a familiar face to the Cherokee program. The participation of Cherokee presenters at CoLang and

at the documentation conference highlights what they are doing and brings new voices to larger venues. A focus on products like videos in the language creates a multi-use item that supports community goals on revitalization and preservation of traditional knowledge and provides authentic materials for the linguistic analysis of Cherokee connected speech. The willingness of communities to collaborate strengthens the region as a whole by contributing to examples of productive collaborations and to the training of our students. The willingness of students to be part of revitalization workshops or field methods courses means that the students are also integral to the endeavors, and that they benefit from learning how to do this work, while down the line, other communities benefit from the efforts of these students and community members as the skills are deployed to other workshops or revitalization and documentation projects.

4 Sustainable models of endangered language research

With its roots in forced removal and Indian wars, Oklahoma's borders contain a dramatic number of tribes and distinct languages and even language families, and as Table 1 showed, a fragility in terms of speakers. Strong tribal grassroots desires to support Native languages fostered early collaborations with academics like Akira Yamamoto and his students. As one generation retires and new generations emerge, the region's many languages and language programs stay active in language revitalization and continue different kinds of collaborations and partnerships with academics in the region.

From this case study, with its focus on more recent activity, we see that language documentation and revitalization activities here are characterized by training playing a fundamental role. In fact, positive relationships between tribal language activists and teachers with linguist-academics is one of the elements which has made the Oklahoma language research model sustainable; the relationships and the experiences and skills of all the people involved constitute a renewable resource. But more than that, there are interwoven, mutually supportive relationships between those of us involved in the region, and these relationships are dynamic, changing, and complex.

The dynamic relationships that characterize the community-based language work in Oklahoma in the last few decades are not unidirectional relationships, centered on linguists (academics) training community members. Rather, these are mutually enriching relationships where the "community" is recognized as trainers as much as the "academics," along the lines of Fitzgerald and Hinson (2013).

Both groups are involved in training and mentoring students and language learners, regardless of institutional affiliation. The networks of these relationships are multilayered and mutually reinforcing, which provides sustainability in language revitalization and documentation activities over the long-haul, and shows how effective and sustainable models critically blur the distinction between revitalization and documentation. By necessity, I would argue, language documentation in Native American communities of the U.S. (and Canada) cannot be separated from language revitalization. Integrating both components into materials creation for indigenous language classes, such as documenting traditional knowledge, as in our Cherokee project, where language analysis can also be done – these multi-use approaches mean that documentation is at its best when it is easily mobilized for revitalization purposes. Further, in our region, the emerging leaders in language programs are doing graduate work in linguistics and revitalization, like Joshua Hinson whose doctorate is in progress, or completing doctorates, like Candessa Tehee. This creates a further blurring of roles because the categories of community member and academic are not as distinct for this generation of indigenous scholars.

Stepping back, it is possible to examine some of the shared properties of successful and sustainable models of endangered language research. AILDI, started in Arizona as grassroots linguistic training for Yuman languages, has been one such enduring model. AILDI can be characterized in terms of three key macro properties: community situated, collaborative and action-oriented. These are characteristics that define community-based research, and I would argue they are essential for sustainable models of community-based endangered language research.

In Table 2, I outline what I would argue are the key and essential properties that underlie sustainable models of community-based language research, drawing from our Oklahoma efforts and projects. Most are extracted directly from the projects in Section 3 above, but six of the properties were not directly addressed: leadership development, portable skills (i.e., not bound to language work), activism, outreach, recognition that language is more than language, and institutional stability.

These properties are more abstract and in fact, not directly taught or trained. Leadership development, I would argue, is an outgrowth of the long-term activity in the region. At some point, people retire or pass on, and for activities to continue, someone must pick up their responsibilities and keep them going. In the region, there are also many opportunities to bring language to the public, whether by the Texas premiere of the Navajo version of *Star Wars*, or by the developing signage in indigenous languages, or by sharing on social media for Native language fairs and contests.

Table 2: Essential properties of sustainable models of community-based language research

Space where indigenous expertise and knowledge is valued
Respect for expertise in all its forms
Intellectual resources (including but not limited to linguists)
Knowledge transfer
Intergenerational interactions
Fostering collaborations of all types
Productivity (product creation and dissemination)
Reciprocity
Indigenous drive (grassroots energy, communities taking charge of their own language)
Multivalent, reciprocal and multilayered mentoring networks
Democratizing training
Learning outside the classroom
Service learning/ethnical underpinnings
Commitment to grassroots and (international) sharing expertise
Leadership development
Portable skills that are not bound to language work
Activism
Outreach
Recognition that language is more than language (either implicit or explicit)
Institutional stability

These are not language-specific characteristics, and because they are transferrable into other activities, I would argue they help in the sustainability of language research by enabling participants from all backgrounds to develop in ways that are valuable in other disciplines and workplaces. Language work is sustained when there is always a person willing to take it on, to support a learner or a teacher from another community, or to host a workshop. Skills independent of language have value in many domains, whether that skill be issue advocacy, grant-writing, technology, working with elders, or building ethical and respectful collaborations.

Not all language revitalization contexts are scalable, an important point to keep in mind, especially as communities seek to set goals for their language programs. For example, the well-known Hawaiian and Māori examples serve as incredible revival stories to communities seeking to energize their indigenous languages. However, implementing these revival models would be challenging in the context of a place like Oklahoma, where so many languages and communities co-exist. Extrapolating from these kinds of language revitalization contexts, as I have done in this chapter, offers another perspective on how to create a sustainable, scalable community-based language research for language documentation and revitalization.

References

Barbeau, C. Marius. 1960. Huron-Wyandot traditional narratives. Translations and Native texts. *National Museum of Canada Bulletin 165*. Ottawa.

Bringle, Robert B., and Julie A. Hatcher. 1995. A service learning curriculum for faculty. Michigan Journal of Community Service Learning, 2.112–122.

CoLang 2014 website http://www.uta.edu/faculty/cmfitz/swnal/projects/CoLang/ (Retrieved February 5, 2016)

Dobrin, Lise. M. 2008. From linguistic elicitation to eliciting the linguist: Lessons in community empowerment from Melanesia. *Language* 84 (2), 300–324.

Fitzgerald, Colleen M. 2007a. Indigenous languages and Spanish in the U.S.: How can/do linguists serve communities? *Southwest Journal of Linguistics* 26. 1–14.

Fitzgerald, Colleen M. 2007b. Developing language partnerships with the Tohono O'odham Nation. Working together for endangered languages: Research challenges and social Impacts. Maya Khemlani David, Nicholas Ostler, and Caesar Dealwis (eds), *FEL Proceedings XI*, 39–46. Bath, England: The Foundation for Endangered Languages.

Fitzgerald, Colleen. 2009. Language and community: Using service-searning to reconfigure the multicultural classroom. *Language and Education* 23 (3). 217–231.

Fitzgerald, Colleen. 2010. Developing a service-learning curriculum for linguistics. *Language and Linguistics Compass* 4 (4). 204–218.

Fitzgerald, Colleen M. and Joshua D. Hinson. 2013. 'Ilittibatoksali 'We work together': Perspectives on our Chickasaw tribal-academic collaboration. In Mary Jane Norris, Erik Anonby, Marie-Odile Junker, Nicholas Ostler and Donna Patrick (eds.), *FEL Proceedings XVII (Ottawa, 2013) FEL XVII: Endangered Languages Beyond Boundaries: Community Connections, Collaborative Approaches, and Cross-Disciplinary Research*, 53–60. Bath, England: The Foundation for Endangered Languages.

Fitzgerald, Colleen and Joshua Hinson. 2015. Using listening workshops to integrate phonology into language revitalization: Learner training in Chickasaw pronunciation. Paper presented at the *4th International Conference on Language Documentation and Conservation*, University of Hawai'i, Honolulu, Hawai'i, 26 February–1 March 2015.

Fitzgerald, Colleen M. and Joshua D. Hinson. 2016. Collecting texts in endangered languages: The Chickasaw narrative bootcamp. *Language Documentation and Conservation* 10. 528-548. http://hdl.handle.net/10125/24717 (accessed 20 May 2017)

Fitzgerald, Colleen M. and Mary S. Linn. 2013. Training communities, training graduate students: The 2012 Oklahoma Breath of Life Workshop. *Language Documentation and Conservation*. 7. 252-73. http://hdl.handle.net/10125/4596 (accessed 1 May 2017)

Fitzgerald, Colleen M., Roy Boney, Jr., Samantha Cornelius, Vicki Caña, David Crawler and John Ross. 2015. Designing pedagogy from Cherokee language and ecological documentation. Paper presented at the *4th International Conference on Language Documentation and Conservation*, University of Hawai'i, Honolulu, Hawai'I, 26 February–1 March 2015. http://hdl.handle.net/10125/25347 (accessed 5 April 2016)

Genetti, Carol and Rebecca Siemens. 2013. Training as empowering social action: An ethical response to language endangerment. In Elena Mihas, Bernard Perley, Gabriel Rei-Doval and Kathleen Wheatley (eds.), *Responses to language endangerment. In honor of Mickey Noonan. New directions in language documentation and language revitalization*, 59–77. Amsterdam: John Benjamins.

Hale, Kenneth L., Colette Craig, Nora England, Laverne Masayesva Jeanne, Michael Krauss, Lucille Watahomigie, and Akira Yamamoto. 1992. Endangered languages. *Language* 68 (1). 1–42.

Jukes, Anthony. 2011. Researcher training and capacity development in language documentation. In Peter K. Austin and Julia Sallabank (eds.), *The Cambridge handbook of endangered languages*, 423–446. Cambridge: Cambridge University Press.

Kopris, Craig. 2001. *A grammar and dictionary of Wyandot.* Buffalo, NY: SUNY dissertation.

Linn, Mary. 2004. Oklahoma's Native Languages. Ms., Sam Noble Museum of Oklahoma Museum, University of Oklahoma. http://samnoblemuseum.ou.edu/wp-content/uploads/2014/12/ok-spkrs-w-notes.pdf (Retrieved October 10, 2011)

Linn, Mary S. 2014. Living archives: A community-based language archive model. In *Language Documentation and Description, Special Issue on Language Documentation and Archiving*, 12. 53–67. http://www.elpublishing.org/PID/137 (Retrieved February 6, 2016)

Linn, Mary, Marcellino Berardo, and Akira Y. Yamamoto. 1998. Creating language teams in Oklahoma Native American communities. *International journal of the sociology of language*, 132 (1). 61–78.

Linn, Mary S., Tessie Naranjo, Sheilah Nicholas, Inee Slaughter, Akira Yamamoto, and Ofelia Zepeda. 2002. Awakening the languages. Challenges of enduring language programs: Field reports from 15 programs from Arizona, New Mexico and Oklahoma. In Barbara Burnaby and Jon Reyhner (eds.), *Proceedings of the Annual Conference on Stabilizing Indigenous Languages (7th, Toronto, Ontario, Canada, May 11–14, 2000)*, 105–126. Flagstaff, AZ: Northern Arizona University.

McCarty, Teresa, Lucille J. Watahomigie, Akira Y. Yamamoto, and Ofelia Zepeda. 2001. Indigenous educators as change agents: Case studies of two language institutes. In Leanne Hinton and Ken Hale (eds.), *The green book of language revitalization in practice*, 371–383. Boston: Brill.

Mithun, Marianne. 1985. Untangling the Huron and the Iroquois. *International Journal of American Linguistics* 51 (4). 504–507.

Watahomigie, Lucille J. and Akira Yamamoto. 1987. Linguistics in action: The Hualapai bilingual/bicultural education program. In Donald D. Stull and Jean J. Schensul (eds.), *Collaborative research and social change: Applied anthropology in action*, 77–98. Boulder, CO: Westview Press.

Watahomigie, Lucille. J. and Akira Y. Yamamoto. 1992. Local reactions to language decline. *Language*, 68 (1). 10–17.