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Individual Adaptation and Structural Change: Culturally Sustaining Pedagogy
in a Tribal College Context

Taylor Topham

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Master of Science

Carol J. Ward, Chair
Benjamin G. Gibbs
Michael R. Cope

Department of Sociology
Brigham Young University

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ABSTRACT

Individual Adaptation and Structural Change: Culturally Sustaining Pedagogy in a Tribal College Context

Taylor Topham
Department of Sociology, BYU
Master of Science

Tribal Colleges and Universities (TCUs) are educational institutions owned by Native American tribes intended to address the failure of the education system to support Indigenous students. Significant research has been done on the value of culturally sustaining pedagogy (CSP) and on TCUs, but little has been done to examine whether and how TCUs implement CSP. This study aims to fill that gap by examining teaching at Chief Dull Knife College (CDKC), a tribal college on the Northern Cheyenne reservation. Interviews were conducted with eight white faculty members and four Cheyenne administrators at CDKC. Analysis of the interviews revealed that the instructors saw building personal connections with students as the foundation of teaching at CDKC and that they engaged in attempts at individual adaptation and structural change to support such teaching. The Cheyenne administrators found these efforts valuable, but suggested that more needed to be done to foster a connection between the white faculty members and the Cheyenne community and culture. Ultimately, this study reveals that instructors at CDKC are attempting to implement CSP, but that there are still gaps in that implementation. The interviews suggest that further structural changes are needed at CDKC to better support CSP and ensure that students are receiving the support they need to succeed.

Keywords: culturally sustaining pedagogy, tribal colleges, Chief Dull Knife College, teacher learning, Northern Cheyenne Tribe, interviews, institutional change

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There are innumerable people who have contributed in one way or another to the creation of this thesis, and I am certain I will not be able to do their contributions justice in this small section. If I were to attempt to do so, the acknowledgements would likely be longer than the rest of this thesis. But, some form of acknowledgement is necessary, if not sufficient.

I'd first like to thank each member of my committee. Michael Cope read the earliest draft of what eventually became this project and encouraged me to keep asking questions and developing it. Ben Gibbs is the one who originally talked me into joining this master's program and has brokered a number of relationships for me that have enriched me both personally and professionally. Finally, Carol Ward has been the most helpful guide I could have hoped for throughout this process. Her knowledge of research, methods, and the Cheyenne people and her wisdom in understanding and applying these things is sprinkled throughout this thesis.

Others have contributed in less visible ways to this project, including Bryant Jensen, Bill Saunders, and others I have worked with during the past three years. All of the professors I've taken classes from have helped me see with more clarity and greater insight, which has been immensely helpful during the process of carrying out this project. Margaret McCabe has always been supportive and helpful in navigating the bureaucracy, even as I've followed some unorthodox paths and taken an extra year to complete my degree.

Finally, we come to the influence that has been least visible and remains the least understood: my family. My parents have given so much to support me to where I am today and I am immensely in their debt. My three children, Kate, Thomas, and Peter, (it's hard to believe that two of them have been born since I started working on this thesis) have been a motivation for my efforts and have gotten used to the idea that I take trips out of state to work on this

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INTRODUCTION

Native Americans are one of the most disadvantaged groups in the United States, especially in the area of education. Native American students drop out, are absent, experience violence or threats of violence at school, and are classified as having disabilities at a higher rate than most other racial and ethnic groups in primary and secondary education (Musu-Gillette et al. 2017). In higher education, the disparities continue, especially in the STEM disciplines (NSF 2019). Research into these disparities in STEM education has revealed that epistemological differences between western and indigenous cultures are a major part of how our education institutions are failing Native American students (Bang and Medin 2010). Further research has found promising avenues of culturally sustaining education that support the success of Native American students, including in STEM fields (Castagno and Brayboy 2008).

Tribal Colleges and Universities (TCUs) are another development in higher education that allow for greater cultural support of Native American students. TCUs were created to restore educational sovereignty to Native Americans and have helped increase Native American students' persistence in higher education (Cole 2006; Bryan 2019). At the confluence of these two lines of support sit faculty members at TCUs, who must learn how to adapt their teaching to the cultural backgrounds of their students. Unfortunately, there is lack of research on how teachers learn culturally sustaining pedagogy in a tribal college context. This proposal aims to help fill that gap by accessing and analyzing the learning experiences of science and math faculty at Chief Dull Knife College (CDKC), a Tribal College on the Northern Cheyenne Reservation. There are several reasons why CDKC is a good location to pursue this research. CDKC developed and operates a successful STEM internship program for their students, indicating that faculty have been at least somewhat effective at bridging cultural divides. Furthermore, CDKC

has faculty members with a wide range of years of experience teaching Native American students, meaning that it is a good place to hear from teachers who are at different stages of the process of learning to implement culturally sustaining pedagogy.

LITERATURE REVIEW

A Sociological View of Native Americans in U.S. Education

Native Americans have been described as “the smallest and poorest minority group in the United States” (Stein 1999:2). This status is clear when viewed through the lens of education in the U.S. The history begins with severely oppressive and assimilationist practices in boarding schools (Child 2018; Lomawaima and Ostler 2018). This difficult educational history still influences the relationship between Native Americans and the U.S. school system, reflected in low educational participation and completion among Native American students (Ward 2005; Musu-Gillette et al. 2017; NSF 2019). For students who do succeed academically, the path to success is still filled with misunderstanding and marginalization (Cinnamon Spear 2017).

Despite this history, schooling remains one of the best ways to provide opportunities to oppressed minorities (Brint 2017). Research has revealed the value of place-based and culturally sustaining approaches to education for native students (Ward, Jones, et al. 2014; Cajete 2020). This is supported by earlier research (e.g., Huffman 2001, 2011) showing that a strong Native American identity could be an asset in a higher education setting under the right circumstances. This research falls under the umbrella term of decolonization, which is the process of dealing with the ongoing effects of settler colonialism on indigenous peoples (see, for example, Jacob 2018; Lunny, et al. 2017). While attempts at decolonization are varied and wide-ranging, that overarching framework and goal reach all the way down to micro-level processes and interactions that take place between students and faculty at TCUs on a daily basis.

Educational and cultural neglect and oppression are just the beginning of what Native American students face. Most tribal college students come from rural, low-SES reservations. A recent report reveals that educational attainment among rural populations, while improving, continues to be lower than among urban populations (USDA 2017). Furthermore, rural ethnic minorities have even lower educational attainment than their rural white counterparts (USDA 2017). At CDKC, particularly, this intersection of low socio-economic status, rurality, and ethnic minority status is visible: 92% of students enrolled at CDKC are first-generation college students and 67% come from a low-income background (CDKC 2020). The one public high school on the Northern Cheyenne Reservation, where many CDKC students attended high school, has a 100% economically disadvantaged student population and had a cohort graduation rate of 54.5% for the 2018-2019 school year (GEMS 2019). These data reveal more of the immense barriers students and teachers at CDKC are facing in the complex context of a tribal college. Understanding how teachers at CDKC learn to navigate those barriers will provide important insights into how rural schools can be both community serving and student serving organizations (Tieken 2014). Clarifying the social and cultural interactions that take place as teachers and the college attempt to help their students succeed will also shed light on an aspect of educational stratification at the micro level.

The Role of Tribal Colleges

Tribal Colleges and Universities (TCUs) can play an important role in helping Native American students persist and succeed in higher education (Bryan 2019). TCUs are a comparatively recent development in the history of Native American education and represent a movement towards educational autonomy for Native Americans (Cole 2006). Because of the history of boarding schools and educational oppression and the continuing failure of schools to

meet the needs of Native American students, many students feel an inherent distrust of the education system and are unsure about their ability to succeed within that system (Child 2018; Lomawaima 2018). TCUs offer programs with the cultural support, trust, and mentoring needed by Native American students to finally start to feel that they can succeed in the education system (Ward, Jepson, et al. 2014; Ward, Jones, et al. 2014). This support and mentoring are often instantiated in trusting, personal relationships with faculty members (Ward, et al. 2022). However, TCUs are still far from perfect educational environments for Indigenous students. Faculty members at TCUs have been and continue to be majority non-Indigenous (Cross and Shortman 1995; Al-Asfour and Young 2017). Researchers and educators have consistently found that non-Indigenous educators must inhabit a complex role to be able to teach Indigenous students while maintaining Native American educational sovereignty (Anthony-Stevens 2017). A major component of understanding and adopting this role involves learning about Indigenous cultures (Lunny, et al. 2017; Castagno and Brayboy 2008). This often proves challenging for non-Indigenous faculty. Indeed, Al-Asfour and Young (2017:47) found that non-Indigenous faculty “reported significantly greater challenges in learning Native American culture(s) in comparison to Native American faculty.” Hermes (2005) found that instead of talking about cultural issues, non-indigenous teachers of indigenous students that she interviewed focused on the problem of poverty. While poverty is certainly an important issue, adapting teaching to fit the cultural backgrounds of students is an indispensable part of improving education for Native Americans and ought to be on the minds of all tribal college faculty (Bang and Medin 2010; Bang, et al. 2012; Cajete 2020).

Culturally Sustaining Pedagogy

This culturally adaptive approach to teaching has gone by many names as it has

developed (e.g., Culturally Relevant Pedagogy, Culturally Responsive Pedagogy) and Culturally Sustaining Pedagogy (CSP) is the latest incarnation (Ladson-Billings 1995; Paris 2012). CSP aims to recognize the cultural differences between teachers and students and to further recognize the value of the culture that students bring to the classroom (Vélez-Ibáñez and Greenberg 1992) by making the students the subject of learning rather than the object (Ladson-Billings 2014). CSP has been used to support the education of minoritized groups across the United States and world, and a body of research has studied its applicability to Native American students. This research reveals that teachers who practice the principles of CSP are generally more effective at teaching Native American students (Hays 2017; Castagno and Brayboy 2008). However, attempts to teach Native American students using CSP must take into account the unique position of Native Americans as a minoritized group in the U.S. (e.g., tribal nations have political sovereignty) (Castagno and Brayboy 2008). Struggles to implement CSP in indigenous contexts have led to a deeper recognition of the complex relationships between indigenous and colonizing groups, prompting recent study of decolonization in education, especially higher education (see, for example, Pirbhai-Illich and Martin 2020; García and Baca 2019). While this approach places a stronger emphasis on colonial relationships and power structures, it does not refute the basic tenets of CSP (Pirbhai-Illich and Martin 2020).

Gloria Ladson-Billings centers her conception of culturally sustaining pedagogy on three concepts related to teachers: teachers' "conceptions of self and others," "the manner in which social relations are constructed" by teachers, and teachers' "conceptions of knowledge" (Ladson-Billings 1995:478). Because teachers are central to creating culturally sustaining teaching and culturally sustaining classrooms, helping teachers recognize this role and fill it is paramount in advancing culturally sustaining approaches to teaching. There are no simple answers to the

question of what behaviors, relationships and characteristics help teachers best fill this role in an indigenous context (Ladson-Billings 1995; Castagno and Brayboy 2008). Teachers' ability to be culturally sustaining depends upon their own cultural background (Au and Blake 2003), involvement and relationships with the community (Jacob 2018), and pedagogical knowledge (Castagno and Brayboy 2008). Castagno and Brayboy (2008:969) ultimately argue that for culturally sustaining teaching to really be successful, teachers must move beyond simple practices and information and develop "a particular set of dispositions, attitudes, values, and knowledges."

Cultural background. Before they are ready to engage in CSP successfully, teachers must be aware of their own cultural background (Au and Blake 2003). This involves a process of personal reflection, interaction with others, and education about cultural issues (Lunny et al. 2017; Anthony-Stevens 2017). Teachers must also be informed about the cultural background of their students (Hays 2017). This can be particularly difficult for teachers from a different cultural background (Au and Blake 2003). Al-Asfour and Young (2017) found that white faculty members at tribal colleges felt that they did not understand the cultural backgrounds of their students and were not sure how to learn about Indigenous culture, indicating that this is an important area for faculty development.

Involvement with community. As a prerequisite to CSP, teachers should be involved in the cultural community of their students outside of the classroom. In her original exploration of what she called "culturally relevant pedagogy," Ladson-Billings (1995) described teachers who practiced CSP as teachers who "made conscious decisions to be a part of the community from which their students come" (p. 479). Jacob (2018) argued that teacher involvement in the community must exceed interaction in a school setting. In a study of an Indigenous education

program in Western Montana, Ngai and Cohen (2016) found that a parent-teacher partnership program had a positive effect on Native students' attitudes towards school, suggesting that involvement in the community does help these students.

Pedagogical knowledge. The key to teaching lies in “the capacity of a teacher to transform the content knowledge he or she possesses into forms that are pedagogically powerful and yet adaptive to the variations in ability and background presented by the students,” which requires extensive knowledge of pedagogy (Shulman 1987:15). Shulman (1987:8) describes four sources for this “knowledge base” for teaching: “scholarship in content disciplines,” “the materials and settings of the institutionalized educational process,” research on the “*social* and *cultural* phenomena that affect what teachers can do,” (emphasis added), and “the wisdom of practice.” In formulating culturally sustaining pedagogy, Ladson-Billings (1995) explicitly extends Shulman’s framework to focus more fully on the cultural elements of teaching. For teachers of Native Americans, this cultural knowledge must include “an awareness and understanding of Indigenous cultures, histories, and political issues” (Castagno and Brayboy 2008:972). Vaughn (2016) showed that attempts by teachers to learn about culturally sustaining curriculum and how to practice it led to changes in the attitudes of teachers toward culturally sustaining teaching methods, though her study did not attempt to discover if those changes in attitudes led to changes in practice.

Learning Culturally Sustaining Pedagogy

While CSP has been shown to be a very promising approach to educating Native American students, implementation (especially in the subject of science) has been underwhelming and there have been frequent calls for reform (see, for example, Castagno and Brayboy 2008; Bang et al. 2012; and Abrams et al. 2014). In a recent review of the literature on

the implementation of CSP, Neri, et al. (2019) attempted to reframe the supposed resistance to CSP by teachers that has consistently been found during attempts to implement CSP. Instead of casting this resistance as “a problem of individual compliance,” they saw it as “a multi-level learning problem” (p. 197).

This conclusion is in line with recent developments in theories of teacher learning. Russ, Sherin, and Sherin (2016) provide a framework for understanding the development of teacher learning theories. They delineate a group of recent theories that constitute a situative and sociocultural perspective on teacher learning. Theories that fall in this group tend to emphasize the contextual nature of learning, the complex changes required for learning, and the need for systemic support of learning and development (Russ, Sherin, and Sherin 2016).

Research following this situative and sociocultural perspective has argued that professional learning opportunities have historically been inadequate to support teacher learning and that systemic reforms are necessary to help improve teacher learning (Goldenberg and Gallimore 1991; Lieberman 1995). Researchers have studied collaborative inquiry groups; institutional alignment of goals, structures, and settings; and institutional commitment as means of supporting teacher learning (Gallagher and Cottingham 2019; Ermeling 2012; Stein and Coburn 2008; Garet et al. 2001). As educational systems focus on this kind of systemic reform, teacher improvement will eventually lead to student improvement (Resnick 2009).

Limitations of Extant Research

There are several limitations in the literature on these topics. The primary limitation is that the two bodies of literature, one surrounding culturally sustaining pedagogy for Native American students and the other surrounding structural supports for teacher learning, interact with one another very little. This has left a great deal of research supporting the benefits of

culturally sustaining pedagogy with little discussion of how teachers learn to implement it. On the other hand, research on teacher learning tends to focus on large, urban school districts and the teachers and students that occupy them. For all its emphasis on the contextual nature of learning, this research has generally not considered a wide variety of contexts. Research by Neri, et al. (2019) represents a first step at wedding the literature on culturally sustaining pedagogy and teacher learning generally but does not discuss the Native American context directly. Vaughn (2016) studied a teacher inquiry group in a Native American context but was focused on an elementary school. The nature of teacher learning at rural institutions and institutions of higher education (such as tribal colleges) has gone relatively unstudied. This leaves a large space for an exploratory study of the experiences of teachers trying to learn to teach at tribal colleges, as proposed here. There are complicated, interacting influences that affect Native American students' participation and success in education, including household, family social network, school, community, and other influences (Ward 2005). Focusing on the experiences and actions of teachers alongside a view of these other social factors will help make visible the complex ways tribal colleges and the individuals that work there can support and teach Native American students and contribute to their academic achievement.

Institutional Context

This study will focus on the experience of faculty members at Chief Dull Knife College, the tribal college on the Northern Cheyenne Reservation in eastern Montana. While TCUs tend to be grouped together, each one is a unique institution, influenced by the tribe's culture, history, resources, and location. This section, while certainly nowhere near exhaustive, will attempt to give a brief overview of some of the unique features affecting CDKC. CDKC's remote location in Lambe Deer, Montana makes staffing difficult. There are three other small towns within about

20 miles, but the nearest city (Billings, MT) is over 100 miles away. There are 57 listed employees of the college. Of these, 26 are instructors in some capacity (CDKC 2021). Eleven are adjunct faculty, 13 are considered full-time instructors, and 2 split time between research and teaching. Of the 15 non-adjunct faculty, only 2 (14%) are Cheyenne, while the rest are white. On the administration and staff side, however, the percentages are nearly reversed, with about 80% Cheyenne and about 20% white. While there are many reasons for these distributions of Cheyenne and non-Cheyenne among the faculty and staff, the unique hiring requirements and challenges at CDKC play an important role. As noted above, few Cheyenne reach post-graduate education. It is important to keep Cheyenne as the face of the college, so any Cheyenne with a post-graduate degree is usually recruited into the higher levels of administration, leaving very few with the educational qualifications to be instructors. The lower-level administrative positions are typically filled with local Cheyenne who have bachelor's or associate's degrees. Faculty, which are generally required to have master's degrees, are often recruited from educational institutions in the nearby off-reservation towns, leading to a mostly-white faculty.

DATA AND METHODS

Sampling

The primary data for this study is a corpus of interviews with thirteen individuals, nine white instructors and four Native American administrators. These participants were recruited via purposive snowball sampling. All interviews were conducted one on one using a semi-structured format (Martin 2017; Weiss 1995). All interviews took place between September 2020 and July 2021. The COVID-19 pandemic made travel to the college difficult for a time. Thus, interviews with three of the participants were conducted via Zoom, interviews with two participants were conducted over the phone, and interviews with the remaining eight individuals were conducted

face-to-face once travel to the college was possible again.

Since this is an exploratory study, the aim was not to make generalizable claims and participants were not recruited randomly. Participants were invited based on whether they fit the aims of the study. Because the aim of the study is to understand how white, outsider instructors are able to implement CSP in a tribal college context, the majority of the sample consisted of white instructors (n=9). While this sample size seems small, it fits the nature and scope of this study. There are only thirteen full-time white faculty members at CDKC. Three of those faculty members were unavailable during the period of the study. In essence, it would be rather unlikely for a similar study to be able to get a significantly larger sample of white instructors. The sample of Native American administrators was selected to provide a variety of Native voices from the college and to highlight the differences in perspective between the white and Native individuals at the college (Kovach 2010; LaFrance and Nichols 2009).

Interviews began with questions about the interviewee's background in education and teaching and proceeded in a conversational style, generally covering the topics included in the interview guide (see Appendix A). The sequence of questions and topics found in the interview guide was not usually followed, with questions asked and answered as the topics came up naturally. In such cases, it is difficult to disentangle the influence of the interviewer since some topics came up naturally in conversation while others were directly brought up by the interviewer.

Since each participant's background influenced their inclusion in the study, Table 1 provides more information about the background of each participant. All personal names of participants are pseudonyms.

Analysis

Interviews were transcribed using a combination of manual and automated transcription. The transcripts were then open coded by hand to reveal emergent themes (Charmaz 2014; Corbin and Strauss 1998). These themes were then compared, re-analyzed, and consolidated over a period of several months. The resulting themes and topics are described in the results section with representative quotations from interviews provided for support. Careful attention was paid to ensuring that the themes emerged from the interviews. External theories were only applied to the themes after they were already fully developed and supported solely by the transcripts themselves.

Positionality Statement

I am a white male graduate student with academic training and only minimal teaching experience. This makes me an outsider to both the Indigenous community to which the college belongs and to most of the communities and identities inhabited by the white participants in this study. I am also a member of the Church of Jesus Christ of Latter-day Saints,¹ which further deepens the divide between myself and the subjects of this research. I have tried to be mindful of this position and have spent time reflecting on how it may color my interpretations of the interviews I have conducted, including the historical relationship between my religious community and Native Americans. I attempted to ask for additional clarification where necessary and have attempted to account for the biases I bring to the analysis here presented and encourage the reader to keep my position in mind while reading and interpreting this study.

RESULTS AND ANALYSIS

¹ The relationship between the Church of Jesus Christ of Latter-day Saints and Native Americans in the West is long and complicated, including at times better treatment than other white settlers, attempted conversion, educational placement programs, apathy, and many other things. Those interested in this history are invited to learn more and evaluate whether it has had an impact on this project.

This section lays out the results of the thematic analysis of the interviews. It first lays out how the white instructors at CDKC thought about teaching: their theory of how good teaching works and examples they shared of what good teaching looks like. The next section details the challenges these instructors found as they tried to carry out their vision of good teaching and how they dealt with those barriers, grouping their responses to barriers into two categories: individual adaptations and structural changes. The final section discusses what the Cheyenne administrators at CDKC thought about the instructors' efforts, ways they feel those efforts could improve, and the white instructors' comments on the ideas raised by the administrators. Excerpts from interviews have been labelled using the pseudonym of the participant being interviewed and line numbers from the transcripts of those interviews.

Instructors' Theory of Teaching

The instructors at Chief Dull Knife College had a shared understanding of what good teaching looks like. They understood the fundamental aspect of good teaching to be building and maintaining personal connections and relationships with students. They felt that once the process of establishing that relationship was complete, helping students grasp specific content and material was much simpler. For example, Frank, a math instructor, said, "I think the main thing to make teaching successful is you have to develop a connection with your students... once you develop the connection, then learning the math is easy" (Frank 1:261-263, 264-266). Derek, a science instructor, seconded this: "You know, to me teaching is ... uh, 75% of it is your connection with the student. And if you can do that, it doesn't matter what you teach. Then they're going to learn" (Derek 1:244, 246-248). Thus, they felt that building relationships with students was the most important piece of their teaching work.

For the instructors, building a relationship with students meant connecting with the

students on a personal level. One instructor defined these connections as “having a way to communicate” with students and “getting along well with the students” (Frank 1:266-267). The process of building these connections, of having a way to communicate, meant the instructors had to get to know the unique and personal parts of the students’ lives and then reciprocate by sharing their own experiences and potentially establishing commonalities. Many instructors commented on this process:

Like these kids I have now, I don’t know them really at all, but you talk to them and you find out, you know, do you have any brothers and sisters, or who are your parents, and what do you want to do when you grow up, and where’d you go to school... cause you’re just sitting there visiting with them, you know, what are your ambitions... And that’s why you’re talking to these, you know, they need to know more than I’m just you know, whatever, [Catherine], they need to know, yeah, I’ve got kids, and sometimes we’ll have emergencies, and I’ve got cats and dogs, and we drive all the way from [a town off the reservation], and [laughs]... but just those, you know, they’re minor little personal things, you know, what’s your favorite color, when’s your birthday, or you know. Somebody’s asking, so they care about me. Not just another name on the list. (Catherine: 625-630, 635-637, 708-712)

I do talk to my students a lot. And I have had students that come and talk to me about problems. ... [B]y the end of the semester, in general, we, we’re a pretty tight group, and then it’s sad to see them go. ... I think the other thing that is important, for me at least, is to tell stories about, maybe, struggles that I’ve had or dumb things that I’ve done... to show them how very, very human I am, I think that helps some too, to just, like, kind of understand that they can talk to me. (Jane: 492-494, 502-504, 511-514, 524-

527)

These examples reveal that the process of establishing connections with students and building relationships within which communication can flourish was a careful, drawn-out, and mutual one.

Developing and maintaining such connections required a variety of ingredients. One of the most important of these was time, in at least two senses. The teachers needed time with each individual student to build a rapport. However, these relationships also required time in a broader sense: time for the instructor to be accepted by the larger community, which could often take up to a year. On this second point, Allen, a math instructor, shared his experience when he first arrived at the college:

Uh, when I started here, it was that thing again. In fact, it was weeks before anyone would, any of the students would really even talk to me. ... I'd have to go around and see what they were doing and, you know, bring stuff into the conversation that way, and then extricate myself and gradually they apparently decided, okay, I was going to be alright, and then they would start asking questions and so... the second year I was here there was much less of that, and I think it—at the time, it was largely because I *was* here for a second year. Not from my perspective that I was here for a second year and more comfortable with it, but the students that were coming back saw that I was here for a second year and it was like, 'Oh, wow, there's a guy who's staying here for another year.' We used to have a huge amount of turnover, you know. (Allen 197-200, 202-207, 226-235).

Others highlighted the importance of that as well, with Catherine, also a math instructor, commenting, "You have to be able to relate to them. I think the staying power is very

important... when they know that they've got you now and they're going to see you next year and the next year" (Catherine 506-508, 511-513).

Another important part of building these connections was simply personality fit. Because of their varied interests and backgrounds, some students connected better with some instructors than others. For example, Derek commented, "That's why we need teachers that are diverse from all different areas, because our students are diverse and looking at all different areas... And then they can make those connections. If they connect with one teacher, that's all that matters" (Derek 1:250-253, 255-257). Frank further elaborated on this:

And it's interesting, because some students will connect with me, and they'll open up to me. Some students will connect with different instructors, I mean some, some develop relationships with, well, [Catherine] and [Derek] and... we've got [Anna] and [Nick] and everybody. So different students make connections with different instructors, kind of about—I don't know, it's just a personality thing. We try to make an effort, you know. (Frank 1:454-463)

The value of these connections was that they made individualizing instruction possible, as Brenda highlighted: "Once you have that connection, they grow. Meet them where they are. I always tell them, 'I'm going to meet you where you are, and I don't care where that is, and we're going to move forward. We can make—however fast you need to move forward that's what we're going to do'" (Brenda: 74-79). Meeting students where they are requires adjustment from the teachers because they did not come from the same background as their students in a variety of ways. Thus, they rely on these individual connections to help them understand where students are coming from, something they will never be able understand on their own.

This, then, is the crux of what the teachers mean when they say relationships are central

to teaching: building and maintaining these relationships was a process of constant negotiation and adaptation, which helped the instructors bridge the cultural, racial, and other gaps between them and their students. A variety of teachers highlighted how their experiences at the college with students helped them understand things about their students' lives that they never would have on their own. Derek, for example, explained:

Even though I've taught for twenty years twenty miles away, and, uh, thinking that I understood the reservation, when I [came to the college] I saw another side of the reservation. It makes me understand that I'm still not seeing, you know, the underbelly of the reservation, the side that, uh, nobody ever talks about, you know. (Derek 1:360-367)

Others, like Jane, described in detail some of the individual challenges they had heard about from students:

Our students are dealing with so many things that would've put me, as a student, in the hospital, you know. There's just no way. They've got family addiction issues, abuse issues, people dying, people sick and in the hospital. Many of them, I would say most of them, have children. So they're dealing with daycare and trying to figure—I mean, I just cannot imagine how they are a student at all. (Jane: 197-205)

Brenda, among others, noted how her relationships with students helped her understand and be mindful of cultural differences:

I think that that base knowledge really of the Northern Cheyenne people, to start with, their roles, you know, they're not as prominent as they used to be, but they're still there. The Cheyenne women are pretty quiet until they're outspoken, and then they're outspoken. The men, the way they address you or the way you address the, you know, there's just some things that, um, it takes a little bit to get to that bond. And you may think

they're being rude and snubbing you, but they're not. That's just where they're at. So, just that education, I think you just really have to be patient with yourself to and understand that I'm learning too. And I think letting them know. I always say to them, "This is what I would do, but what would you?" or I'll say, um, "Is that... would that be offensive to you?" And they'll tell you, "Yeah, if you said that to me..." (Brenda: 632-650).

Finally, teachers also noted how relationships with students helped them come to terms with the racial discrimination (past and present) their students faced. John told a long but pointed story on this topic:

I had a student that was my age. We were exactly the same age. ... I started teaching summer school down here, and she started taking advantage of the free classes in the summer. And I got to know her some more. But she didn't miss too many opportunities—it used to really torque me off—to slam white people. ...

And just at every opportunity. "Well, everything's white people's problem. All our problems on the reservation are white people's." And there's some truth to some of that. No question. But, I would— And she'd badmouth coworkers that I had that they were prejudiced and racist and stuff and she was way off-base on most of that. And she'd picked people that were some of the most conscientious, worried more about that than anything else... Anyway, one day I'd about had it with her, and I had told her that. I said, "I get really tired of hearing your white-man-hating, you know, routine." And she absorbed it and thought about it for a few days. And after class one day, she said, no, actually it was in class, in front of everybody. She said, "Do you want to know why I have such issues with white people?" I said, "I really do. I don't get it. Why are you so hateful? I mean, you've worked amongst white people for years. You seem to like me.

You and I've always gotten along.” She said, “I do like you. You're not racist. I like you.” I said, “But I don't get it. Why do you hang on this?” And she said, “Let me tell you why.” She said, “Because when I was a little girl,” and she grew up here. She said, “When I was a little girl, I remember signs up in places around here, off the reservation, that said ‘No Indians allowed.’” ...

And when she said that, I had a flood of memories coming back, also as a little white kid growing up around here. Like, just in [a town near here], I remember, and I believe it was the bowling alley as a kid growing up, there was a sign that hung out there that said, “No Indians allowed.” And in [another town] I remember signs like that, when I was pretty young, but just old enough to read. And that hit me like she'd smacked me on the side of the head with a baseball bat. I mean, it was like “Oh my God! No wonder— I mean, yeah. I'm kind of—” So, we had, man, that became a class discussion, and then she and I talked other times about it, and I said, “I am so sorry.” I said, “I even remember asking my parents, ‘What's that mean? Why can't Indians go in?’” You know. Um, and that really [long pause] it pissed me off, as a white grown-up, to remember that—realize what it was, and so, her having been a target of that, I just—it really, uh, changed how I think a lot. (John: 641-642, 661-669, 671-697, 699-717)

This story illustrates the power these relationships can have to challenge the teachers and help them adjust their own understandings and approaches to better meet their students' needs. When such personal connections exist and are working well, they provide the basis for mutual understanding that is so essential to the process of teaching. As these relationships continue to develop, they create trust between the instructor and the student. This trusting relationship is especially important for students who have been poorly served by the education system and feel

excluded by its western values. In some ways, these mentoring relationships may mirror traditional relationships between tribal elders and younger generations (Ward, Jones, et al. 2014; Ward, Jepson, et al. 2014). In this way, such relationships can help students open up and be willing to share, as the student in John's story did, providing opportunities for the students to recognize the good they can gain from tribal colleges.

These relationships can also be catalysts for transforming the teachers, fundamentally altering their approach to helping students. Note, for example, what John compares his conversation with a student to: "like she'd smacked me on the side of the head with a baseball bat." This is not necessarily a peaceful, happy process, but it is the process through which common ground is built and from which teaching across cultural and racial differences can occur.

Ultimately, this section reveals how the instructors at this tribal college thought about the fundamental processes of their teaching: building and maintaining relationships with students in a way that allowed them to adapt their teaching to fit their students' needs. As instructors connected with student perspectives through informal conversations and unexpected experiences, their own perspectives and approaches changed. However, making space for these informal interactions was not a simple task. For example, Frank said he had to "make [an] effort every day" to make such connections even possible (Frank 1:442). The next section will focus on some of the institutional barriers teachers faced to carrying out this adaptive, personal approach to teaching and how they dealt with those barriers.

Dealing with Barriers to Making Connections with Students

Instructors consistently identified one particular barrier to carrying out their vision of teaching as building relationships: the traditional, formal classroom structure. Anna, for example,

labelled the classroom as a “pressured situation,” where the teacher is “at the front of the class talking to [students]” and claimed this makes it harder to build connections with students than “when you can be more relaxed and be more yourself” (Anna: 217, 224-225, 227-228). Others noticed a similar dynamic in classrooms, with Frank explaining,

My goal in teaching is, the first few days, to try to open up some dialogue and get students to relax and enjoy coming to class, so that’s just the way I start pretty much all my classes ... Get them comfortable in class, and then we’ll worry about the math after that. (Frank 1: 272-276, 278-280)

Note how both indicate that traditional classrooms are by default uncomfortable for both teachers and students and it requires substantial effort to overcome. Frank further elaborated, “It’s not that I dislike doing [things to get students to relax], but I have to make sure and make that effort every day to do that” (Frank 1:441-442). Jane homed in on a specific classroom practice that was particularly ineffective:

Lectures really don’t do anything at all—I mean, I still do them, I still stand up in the front and I give all the information and it’s just wonderful and great, but then I go and I visit them individually and talk to each of them individually, and find out that most of them haven’t really gotten much out of my getting up there [laughs] and giving that great performance. (Jane: 329-336)

Jane’s discussion of this issue begins to reveal the tension these instructors faced: they recognized that the traditional classroom format did not help build relationships with students or result in any kind of effective teaching, and yet breaking out of traditional, lecture-style teaching practices within the setup of the traditional classroom was difficult. This tension is at the center of the first of two responses the instructors had to the barrier classrooms presented to building

relationships with students: individual adaptation.

Individual adaptation involved each individual instructor doing different things in their individual classrooms to try to make the classrooms more hospitable to building relationships with students. These adaptations typically consisted of efforts to make the classroom less formal and more personal and trying to find ways to connect with students despite the barriers presented by the classroom structure. Each teacher implemented different strategies. For example, Anna explained that her lessons had “a lot less time spent just doing lecture or a PowerPoint. And it’s gotta be a little bit more interactive ... what I had done at a larger university wasn’t that. It wasn’t as interactive, and not nearly as many activities” (Anna: 253-255, 265-268). Others tried other tactics, and Frank reported, “I do goofy things like play stupid YouTube videos at the beginning of class and do jokes, do card tricks, just stuff to get them to come, to open up and come out of their shells” (Frank 1: 437-440).

Interestingly, the subject area, or content, of what was being taught in a class affect the ways individual teachers were able to adapt the lecture-style classroom structure to better meet student needs. Jane, who taught communications and humanities classes, found that it did not take a lot of adaptation to build personal connections with students in her classes. She explained:

In [one of my classes], our students speak about their lives. And they’re very, very direct and honest about their lives. ... I learn a lot there and in the writing class as well. You know, they write an initial essay, just introducing themselves and a lot of the times they’ll talk about stuff like that, just in their introductory essays...

I feel like most of the relationship building that I do is an organic outlay of the classes that I teach. ... I mean you can’t not have a personal relationship with somebody that you’re sharing writing, you know, because writing is a very personal... activity. And

so, if you are engaged with writing, especially writing that is of a personal nature... then you are automatically, kind of, revealing part of who you are and so then I need to be able to respond to that appropriately and with support. (Jane 230-233, 237-241, 474-475, 477-479, 481-487)

This reveals an interesting connection between the content taught in a class (science vs. writing, for example), the processes by which that content is taught, and the classroom structures used to support those processes. The science and math teachers (content) felt that they had to make more effort in their classes to build relationships with students (process) because their content fell more easily into a lecture-style classroom (structure). In a writing or public speaking classroom, where students were giving speeches to one another and reading and commenting on each other's writing, it was easier to move away from the lecture-style classroom structure that inhibited building relationships with students. Recognizing the interconnectedness of these elements leads to the second response instructors used to overcome the challenges they faced in building relationships with students: structural change.

In response to the challenges they faced, the instructors at the tribal college built alternatives to the lecture-style classroom structure. These alternative approaches included the science internship program, the math lab, and the writing lab.

The Science Internship Program. A group of science and math faculty built the science internship program as a way to help students learn science and gain hands-on research experience in a mentored setting. Throughout the fall and spring semesters, students who are in the internship program attend regular classes and are paid a stipend and participate in supportive weekly meetings with other interns as well as science and math faculty members. Then, during the summer, the interns are divided into small groups (of 2-4 interns, usually) to work directly

with a faculty member on a research project in the local area. Examples of past and current research projects include testing water quality in local water sources, testing local mosquitos for the West Nile Virus, or using a drone to map areas of the reservation and traditional sites of buffalo jumps. (For more information on the science internship program, see Ward, Jones, et al. 2014 and Ward et al. 2022.)

The primary value of the internship program for the topic being discussed here, however, is the relationships it builds between faculty members and students. All the faculty members who were involved with or previously had been involved in the science internship program commented on how its structure facilitated the process of building and maintaining relationships with students. Some, for example, emphasized how doing hands-on research in the field provided a better opportunity to build relationships than in the classroom, with Allen saying,

[The internship program gave] us quite a bit more opportunity to interact with students outside of the usual classroom setting. And that makes a huge difference. ... The students that I have gone on field trips with and, um, you know, put on waders and gone out into the river with... those students are much more interactive with everything that they're doing. (Allen: 702-705, 724-727, 729-730)

And Anna explaining, "They get to see you having fun. And I think that's huge too. I'm happy as a clam when we're outside, so, I think that rubs off and it makes you a more likeable person" (Anna: 387-390). This reveals how the hands-on learning opportunities changed the dynamic between the instructors and the students opening up a deeper level of relationships.

Other instructors noted other ways that the internship program fostered relationships between faculty and students. Several pointed out that the opportunity to travel together gave ample opportunities to get to know one another:

One of the advantages of the intern program is what we call windshield time. I mean, if you get to drive out to the hills with a group of students, you get—the experience in the hills doing research is pretty cool in itself, but the windshield time getting from the college to there is when you can—those relationships start to develop, and you can talk to students about what they were doing, and it’s really open. (Frank 1:423-431)

The best part for [making connections] is what we call windshield time when we’re driving somewhere to do something. Or it would be our [down] time when we’re sitting there... cause you’re just sitting there visiting with them. (Catherine: 630-633, 635-636)

Nick noted that the assignment of mentors to small groups of students also helped good relationships flourish, “this internship is nice because I have two that I work with pretty much on a daily basis. ... So I’ve got to know those two. [Brenda] and I took four students to Washington DC and Wallops Island, Virginia, and now I have four students that I know really well” (Nick 218-219, 223-226).

Thus, there were a variety of structural differences between science learning in a lecture-style classroom and science learning in the science internship program and these structural differences seemed to facilitate building relationships with students. By building the internship program in a way that created more informal settings and more informal interactions between students and faculty, the faculty members were able to create a space in which they were better able to fulfill their vision of what good teaching looked like.

The Math and Writing Labs. The math lab at the tribal college is a large room where students come to work on their remedial math classes. Many of the students at the tribal college

begin their college careers in the remedial math classes. The classes are hosted on an online platform and students are able to set their own pace through the classes, with some students finishing multiple math classes per semester. The math lab consistently has one or two math faculty members in the room who help students one-on-one with math questions and instruction. Students are able to come and go as they please and obtain help as needed. This math lab has evolved slowly over the past two decades into its current form through the work of various math faculty members, and some recent work is showing that it is improving students' academic performance. (For more information about the math lab, see Ward et al. 2014 and Ward et al. In progress.)

The math lab is very different from the science internship program, but it is also significantly different from a traditional lecture-style classroom. These differences accomplish a number of things, but they also make it easier for one-on-one interactions and developing relationships with students. Catherine, for example, said, "It's harder in the classroom to have the time [to make connections] with them, you know, coming in and out. You still try for that, but it's tougher. ... The math lab's easier cause, again, we've got them one on one, we're kind of talking to them" (Catherine: 748-750, 756-757). Allen, who has been very involved with the development of the math lab over many years, clearly connected this dynamic with the formal classroom setting, explaining,

I've never really been comfortable with that stereotypical student-teacher dynamic anyway. ... Okay, great, in a classroom where my sole focus is let's get the material out there, that's useful, but, um, it's even more useful when the students are comfortable enough with me as a person to know that they can ask whatever they want to ask. ... And, when I only have a student in that more formal classroom setting, that kind

of dynamic just doesn't necessarily evolve. (Allen: 706-708, 710-715, 719-721)

Frank compared the success students find in the math lab to the bad experiences students may have previously had in math classes and implies that the difference may be in the connections with math instructors:

They can still work at their own pace, but we're always there to help them ... I don't know why some of the students haven't seen success at math, because it's not that they're not good at math ... maybe they just had a bad experience with a teacher that they didn't get along. But, for the most part, it isn't that they can't do the math, they just have a negative block towards it, and feel like they can't do it. And, once they see some success and get their confidence up, then they tend to take off and go. (Frank 1: 383-387, 398-404)

The success of the math lab has led others to try to imitate it in some ways. Brenda, a writing instructor, has started trying to create a writing lab that has a similar structure to the math lab. She described how she saw the math lab as facilitating connections with students and wanted to try to create a similar space for writing:

[When I first came to the college, I thought,] I'm only getting little glimpses of them and someone needs to make those connections. We had the math lab, which is busy all the time. And I said, I just want a space, and I set up tables, I said, I want a space where they can come and feel, um, feel needed, feel valued, feel, if I have a question, she can help me... It's absolutely the same model [as the math lab]. That's what we tried to model this off of... I can go sit in the math lab, and I might not know how to do basic math, but [Frank] or [Catherine] or [Allen] are going to come sit by me. (Brenda: 160-167, 308-309, 311-314)

Anna also participated in running the writing lab and felt that the more informal approach helped her connect with students:

The writing lab that we have on campus... basically it's the writing lab/study center/let's just hang out and visit with [Anna], [Derek], and [Brenda], so ... that's been like, one of the most positive things that has also really gotten me close to a lot of students, so [making connections with students] was a bit slow, but now it's really good.
(Anna 195-198, 200-203)

Together, the science internship program, the math lab, and the writing lab all reveal how these instructors were able to go beyond individual adaptation and instigate structural changes to better align the school settings to their vision of good instruction. In the final section, we will examine additional perspectives from Indigenous administrators at the college and discover how their vision expands beyond what the white instructors have accomplished and suggests future directions for turning the college into a more thoroughly culturally-sustaining institution.

Beyond Individual Connections

The Native American administrators that I interviewed recognized the value of what the white instructors were doing, both with individual adaptation and structural change to facilitate building individual relationships with students. They felt it was very important for the instructors to build relationships with students and adjust to meet students' individual needs. Tom, for example, felt that this was a key part of what made the tribal college experience different from universities off the reservation:

The classes [at a nearby university are] bigger, and I think they're, I would say a little more impersonal ... than what you experience here at the tribal college, because your classes are smaller. And you have more contact, personal contact with the

instructors. They take a, they take a more personal interest in you. (Tom: 165-167, 173-176)

Stephen, who was a fairly recent graduate of the college, saw this same thing:

[The instructors] are really supportive. Every single one of the instructors, they, even if you're not in their class, they'll interact with you ... that's kind of the benefit of the small classes ... I kind of did make good friends with a lot of the faculty members ... and so them becoming my instructors and then becoming my co-workers is kind of like, whoa, cool.

And yet, there was another level of adaptation and adjustment the Indigenous interviewees hoped could exist at the college, which involved building relationships not just with individual students but with the larger community and culture. For example, Tom, when asked if building relationships with individual students and asking them for help to adjust teaching practices based on cultural differences was a helpful thing for the white instructors to do had this to say:

I think that's a really good idea. And that's the only way you're going to—you know, if you're not taking, if you're not out in the community, getting that exposure out there, that would be a good way to, to gain that, some of that cultural background and asking the students for their input. Yeah, I think that's a good idea. (Tom: 353-358)

In Tom's response, you can see the different levels of this playing out. He clearly sees value in building and maintaining individual relationships with students and sees how those relationships can be an important source for the white instructors to get cultural background on the community. But that is not the only way to get such cultural background, and clearly Tom believes that in an ideal world the white instructors would do more to learn about the culture of

the community than just talk with individual students.

Beyond these individual connections, the Native administrators emphasized connecting with the community and culture as an important part of what the white instructors could do to best support students. They felt that integrating these cultural elements more fully in all classrooms would be helpful. Stephen, for example, highlighted the curiosity for the culture that he saw in the best instructors and how it might influence their teaching:

They're always asking questions, and they come over here [to the cultural center] and ask if they can have signage, signage in Cheyenne, a lot of them come in, they'll say "Good morning" in Cheyenne, you know. Or just little things in Cheyenne that shows they want to know the language... they want to know the history, the culture, and they always want to integrate it into their lessons. (Stephen: 394-403)

Melanie, the director of the cultural center, felt similarly:

One of the instructors was talking about how in the past they used, you know, like setting up a tepee, how it was based on almost kind of like an engineering type of—you know how, because it withstood all these winds, winter, all the elements of the, you know, the weather. And they didn't fall over, because of how they were constructed. So I think they had that in mind too, so they really appreciate, you know, our culture.

(Melanie: 216-225)

Stephen summed up the attitude he hoped the instructors would have this way: "Even though they're teachers here, like, they learn too. And so, I think being [at the college] is a never-ending learning experience" (Stephen: 439-441).

This "never-ending learning experience" is essentially at the center of how the Indigenous administrators view the culturally hybrid nature of the tribal college. They hope the

instructors can be involved in this learning experience by accepting and being accepted by the local cultural community. Gordon explained the process of gaining acceptance in a tribal community culture this way:

Whenever you are interested in a people, it's at first, it's first it's the food, you gotta eat the food, their food. Second is you gotta have sympathy with the language and that'll give you a lot of entrée into a lot of the activities that are going on. For me I know that because I worked in Alaska for 10 years, out in the villages and so forth. And I don't like seafood. But every feast, every meal we had, there was always fish, some kind of fish, some kind of seafood. Well, I would eat it. Even as much as I disliked it, the taste, the smell, so forth. I would eat it because I knew that was one of the avenues for getting accepted in that place ... And I learned how to control my gag reflex [laughs]. Because it was difficult for me to do that. And I tried to overcome that. I tried to, "Hey, I like whale." You know, be able to say that. I just could not—I just could not make the crossover. But I did the crossover because I knew that was how we were accepted.

(Gordon 533-546, 548-554)

Gordon's personal experience working to be accepted in Native Alaskan villages mirrors what he hopes will happen with the white instructors at the college. His personal experience outlines three essential pieces of accepting and gaining acceptance in a culture: food, language, and activities. However, he also recognizes the difficulty of opening up to a new culture, even describing it as beyond his capacity ("I just could not make the crossover") and yet somehow still possible ("But I did the crossover").

Tom felt similarly, recognizing the importance of the instructors being involved in the local community and culture, but also careful to note some of the obstacles the instructors face in

being involved in the community:

The other thing that I think the instructors should get more involved with community, community effort, community stuff. And we have powwows and, I don't know, rarely see the instructors or the people that live off the reservation, rarely see them at these powwows or things that go on after work. Because like I said, they, they live in [a city or town off the reservation], 4:30 comes, they jump in their cars, and they're gone. And I don't know how, how we could get them to come to these evening activities. Even when we have cultural stuff on the campus after, after hours, not too many of them stick around. (Tom: 407-418)

These quotes reveal the particular hope these administrators had that the college could become something more, a truly hybrid institution, but they felt there was still a gap between themselves and the white instructors. Melanie probably summed this gap up best in introducing herself and describing her role at the college. She first described the science, English, and other, more western-oriented, classes students take, then said, "Where I come in is I'm on this other side with the cultural [center] and our main goal is to preserve our language, our culture, traditions" (Melanie: 57-60). The Native administrators recognized that there are still two sides to the college, but hoped for a more robust connection between themselves, the Indigenous community, and the white instructors who teach at the college.

White Instructors' Response. For their part, the white instructors also seemed to be somewhat aware of this division and made some efforts of their own to overcome it, but also emphasized the challenges they faced in doing so. Frank explained some of his attempts to participate in local food and activities:

The powwow here at the school, I'm glad they do it. I wish faculty and staff

would attend that better. That's my personal opinion. And a lot of our faculty and staff, well faculty specifically, don't live here, they may commute to [towns and cities off the reservation]. And so a lot of them—the powwow is always held in the evening, during Native American week, it's usually Thursday or Friday in the evening. So, a lot of faculty take off and go home. I usually try to stay, but I live in [a town just outside the reservation], I'm 22 miles away... It would be a really good experience for some of those people that have never been to a powwow. (Frank 2: 122-133, 139-140)

On the weekends in the summer, if you go downtown to Main Street, they call it Little Tijuana is the nickname for it. And people set up barbecue grills and they'll cook burgers, they'll cook steaks, they'll cook kabobs, it's like a huge garage sale. They're selling stuff out of the backs of their cars, their pickups. I try to walk downtown every Friday and have, you know, I find something to eat, visit with people. And that's a good way to go meet people in the community. ... I think it's kind of intimidating for somebody that doesn't know anybody here. (Frank 2: 197-211)

Jane also described something she had done to try to learn more about the language and culture:

I actually took four semesters of the Cheyenne language class that we have here. ... It is very interesting, because the language itself is... like I've learned French and I've learned Spanish, and I can speak a little Italian and a little bit of German ... but Cheyenne is so different from any of those languages, the sounds are different, like it took me a whole semester before I could even start to hear some of the whispered vowels and things that they were talking about, because I was just like, I just can't, I just can't even hear what you're saying. ... Just learning the language and, like, understanding how the, um,

how ideas are expressed in the language, um, not that I can speak any of it now, but, um, I can, I have a few phrases that I can say, that's about the length of it. But, um, it just was really good for me. And it was, and the, the phrases, the words would often be taught in conjunction with, uh, you know, some story about the teacher's grandfather or something that happened, you know, back in the day, and so there were all these other things that were folded in. (Jane: 803-804, 808-811, 813-818, 820-830)

What is interesting is how much these attempts seem similar to the individual adaptations that the instructors used to try to make their classrooms more supportive to building relationships with students. These adaptations did help, but required a lot of effort from the individual instructors and were not consistent across classrooms. The efforts of instructors to understand and be accepted by the local tribal community have only yet reached the level of individual adaptation and have not yet embedded themselves in institutional structures the way the process of building connections with students has been embedded.

DISCUSSION AND CONCLUSION

The findings presented above provide an interesting picture of the teaching and learning that goes on in a tribal college and reveal the tensions inherent in trying to build a hybrid institution that is an institution of higher education with western academic standards but is also supportive of Native American students and the local tribal culture and community. These results also map onto the theoretical framework of culturally sustaining pedagogy in interesting ways.

The instructors are clearly on the path toward fully implementing the three parts of CSP described above (Ladson-Billings 1995). They have developed a clear body of pedagogical knowledge based on making connections with individual students and using those connections to support students' learning. This approach has been shown to be consistent with the local culture

and very helpful in supporting student learning and success (e.g. Ward, Jones, et al. 2014; Ward, Jepson, et al. 2014; Ward et al. 2022). There have also been clear efforts on the instructors' part to understand their own cultural backgrounds and connect with the cultural backgrounds of their students. This has primarily happened through individual relationships with students, but also seems to be occurring as instructors choose take advantage of the resources at the college, such as language classes and the cultural center as well as some of the college's Native American cultural activities. While these results are promising, something still seems to be lacking in the third part of CSP: involvement in the community. While some of the instructors are involved in the community to some extent, all of the instructors interviewed here live outside the reservation and are not as fully involved with the community as they could be. This also affects their ability to truly connect with their students' cultural background and makes real CSP far more difficult.

Thus, there is still work to do to fully implement CSP at this tribal college, as particularly noted by the Indigenous administrators interviewed. However, there are interesting lessons that can be taken from the challenges that still face the college. As discussed above, the instructors felt that the institutional setting of higher education was somewhat inhospitable to the kind of teaching that best helped their students. To help facilitate their vision of teaching, the instructors designed new institutional structures and settings that were better suited to building and maintaining personal relationships with students. The college seems to be facing a similar problem in trying to help the instructors connect with the larger culture and community: the traditional structures of an institution of higher education are inhospitable to building and maintaining the robust intercultural connections necessary to sustain CSP. That this is a system-wide issue is reflected in the frequent calls for general reform mentioned above (e.g. Castagno and Brayboy 2008; Bang et al. 2012; and Abrams et al. 2014). The instructors at CDKC seem to

be engaging in attempts at individual adaptation with respect to the broader cultural connections in the same way they engaged in individual adaptations to make their classrooms more fertile ground for personal connections. These individual adaptations include taking language classes individually or individually choosing to attend cultural or community events. What seems to be missing at this point is an attempt at structural change similar to what the instructors did to carry out their vision of teaching. Such structural adjustments are a key part of supporting teacher and student learning (Goldenberg and Gallimore 1991; Lieberman 1995). The development of the science internship program, the math lab, and the writing lab was a process of institutional adjustment designed to make personal connections with students easier. Could a similar approach be taken to design new institutional structures to help the instructors become more involved in the local culture and community?

It is beyond the scope of this paper to suggest which institutional structures may be inhibiting intercultural connections or to generate ideas about what new structures might be helpful. Those are questions for future research. Instead, this research reveals that something resembling Culturally Sustaining Pedagogy does seem to be happening at this tribal college, but that full implementation of CSP is being inhibited by a variety of forces that go beyond individual choice to engage in CSP or not. This supports Neri, et al.'s (2019) argument that implementing CSP is a multi-level learning problem. It is a multi-level learning problem because it requires learning and adaptation both at the individual level (the instructors) and at the structural level (the institution). The institution itself must adapt and change to support CSP or attempts to implement it will consistently fall short. Thus, the findings here seem to support both the value of engaging in CSP and recent discussion about the institutional work necessary to implement it. This suggests that there is much more work to be done in bringing together the

research around CSP and research on institutional improvement in schools. Further research should dive deeper into questions of how changes in institutional structure, like the science internship program and math lab at CDKC, are started and maintained and what kinds of institutional structures can best support CSP in all of its variety.

Further research can also help address the many limitations of the present study. This work is limited to only one tribal college on one reservation, so the findings are potentially relevant but not generalizable to other tribal colleges or locations. While the efforts toward CSP at this college do seem promising, other tribal colleges may be finding more or less success. Furthermore, more should be done to include Indigenous voices in the process of carrying out this work. The Native perspectives represented in the present study were invaluable, but more are needed. Certainly, any attempts at institutional change should be in keeping with the principles of tribal educational sovereignty on which tribal colleges are built. Including a wider range of voices from the tribal community in question will also help to ensure that the goal of helping instructors become involved in the community can be met.

With these limitations in mind, it is clear that this exploratory study has only taken the first small step toward understanding and describing culturally sustaining pedagogy in a tribal college setting. However, the insights it has provided are helpful and point the way toward the possibility of creating real hybrid institutions, where robust learning can take place that supports indigenous cultures and fulfills the mission tribal colleges have been created to pursue.

REFERENCES

- Abrams, Eleanor, Larry D. Yore, Megan Bang, Bryan McKinley Jones Brayboy, Angelina Castagno, Joanna Kidman, Huei Lee, Mary Grace Villanueva, Ming Huey Wang, Paul Webb, and Chiung-Fen Yen. 2014. "Culturally Relevant Schooling in Science for Indigenous Learners Worldwide: Stressing the *All* in Science Literacy for All". Pp. 671-696 In *Handbook of Research on Science Education, Vol. 2*, edited by N. G. Lederman and S. K. Abell. Routledge.
- Al-Asfour, Ahmed and Suzanne Young. 2017. "Faculty Professional Development Needs and Career Advancement at Tribal Colleges and Universities." *The Journal of Faculty Development*, 31(1):41-48.
- Anthony-Stevens, Vanessa. 2017. "Cultivating Alliances: Reflections on the Role of Non-indigenous Collaborators in Indigenous Educational Sovereignty." *Journal of American Indian Education*, 54(1):81-104.
- Au, Kathryn and Karen Blake. 2003. "Cultural Identity and Learning to Teach in a Diverse Community: Findings from a Collective Case Study." *Journal of Teacher Education*, 54(3):192-205.
- Bang, Megan and Douglas Medin. 2010. "Cultural Processes in Science Education: Supporting the Navigation of Multiple Epistemologies." *Science Education*, 94:1008-1026.
- Bang, Megan, Beth Warren, Ann S. Rosebery, and Douglas Medin. 2012. "Desettling Expectations in Science Education." *Human Development*, 55:302-318.
- Brint, Steven. 2017. *Schools and Societies*. 3rd ed. Stanford, CA: Stanford Social Sciences.
- Bryan, Rachel. 2019. "The Influence of Tribal Colleges and Universities on Native American Student Persistence." *New Directions for Student Services*, 167:49-62.

- Cajete, Gregory. 2020. "On Science, Culture, and Curriculum: Enhancing Native American Participation in Science-Related Fields." *Tribal College Journal of American Indian Higher Education*. <https://tribalcollegejournal.org/on-science-culture-and-curriculum-enhancing-native-american-participation-in-science-related-fields/print/>
- Castagno, Angelina E. and Bryan McKinley Jones Brayboy. 2008. "Culturally Responsive Schooling for Indigenous Youth: A Review of the Literature." *Review of Educational Research*, 78(4):941-993.
- Charmaz, Kathy. 2014. *Constructing Grounded Theory*. 2nd ed. Thousand Oaks, CA: Sage.
- Chief Dull Knife College (CDKC). 2020. *Chief Dull Knife College SSS Application*.
- Chief Dull Knife College (CDKC). 2021. *Chief Dull Knife College Catalog and Student Handbook 2021-2022*. http://www.cdkc.edu/catalog21_22.pdf.
- Child, Brenda J. 2018. "The Boarding School as Metaphor." *Journal of American Indian Education*, 57(1):37-57.
- Cinnamon Spear. 2017. "Little Woman from Lame Deer." Pp. 118-136 in *I Am Where I Came From: Native American College Students and Graduates Tell Their Life Stories*, edited by A. Garrod, R. Kilkenny, and M. B. Taylor. Cornell University Press.
- Cole, Wade M. 2006. "Accrediting Culture: An Analysis of Tribal and Historically Black College Curricula." *Sociology of Education*, 79(4):355-388.
- Corbin, Juliet and Anselm Strauss. 1998. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. 2nd ed. Thousand Oaks, CA: Sage.
- Cross, Kyle Patterson and Phillip V. Shortman. 1995. "Tribal College Faculty: The Demographics." *Tribal College Journal of American Indian Higher Education*, 7(1):34-42.

- Ermeling, Bradley A. 2012. "Connect the Dots: A Dedicated System for Learning Links Teacher Teams to Student Outcomes." *JSD*, 33(2):24-31.
- Gallagher, H. Alix and Benjamin W. Cottingham. 2019. "Learning and Practicing Continuous Improvement: Lessons from the CORE Districts." *Policy Analysis for California Education*.
- García, Romeo and Damián Baca. 2019. "Hopes and Visions: The Possibility of Decolonial Options." Pp. 1-48 in *Rhetorics Elsewhere and Otherwise: Contested Modernities, Decolonial Visions*, edited by G. Romeo and D. Baca. Urbana, IL: National Council of Teachers of English.
- Garet, Michael S., Andrew C. Porter, Laura Desimone, Beatrice F. Birman, and Kwang Suk Yoon. 2001. "What Makes Professional Development Effective? Results from a National Sample of Teachers." *American Educational Research Journal*, 38(4):915-945.
- Goldenberg, Claude, and Ronald Gallimore. 1991. "Changing Teaching Takes More than a One-shot Workshop." *Educational Leadership*, 49(3):69-72.
- Growth and Enhancement of Montana Students (GEMS). 2019. *GEMS School Profile: Lame Deer High School*. Montana Office of Public Instruction. Retrieved Oct. 5, 2020. (<https://gems.opi.mt.gov/SitePages/SchoolInfo.aspx?schoolID=1816>).
- Hays, Alice. 2017. "Authentically Authored Native American Young Adult Literature (YAL) and Culturally Sustaining Pedagogy (CSP) in the Preparation of Preservice Teachers." *Journal of American Indian Education*, 56(2):34-42.
- Hermes, Mary. 2005. "Complicating Discontinuity: What about Poverty?" *Curriculum Inquiry*, 35(1):9-26.
- Huffman, Terry. 2001. "Resistance Theory and the Transculturation Hypothesis as Explanations

- of College Attrition and Persistence among Culturally Traditional American Indian Students.” *Journal of American Indian Education*, 40(3):1-23.
- Huffman, Terry. 2011. “Plans to Live on a Reservation Following College Among American Indian Students: An Examination of Transculturation Theory.” *Journal of Research in Rural Education*, 26(3):1-13.
- Jacob, Michelle M. 2018. “Indigenous Studies Speaks to American Sociology: The Need for Individual and Social Transformations of Indigenous Education in the USA.” *Social Sciences*, 7(1):1-10.
- Kovach, Margaret. 2010. *Indigenous Methodologies: Characteristics, Conversations, and Contexts*. University of Toronto Press.
- Ladson-Billings, Gloria. 1995. “Toward a Theory of Culturally Relevant Pedagogy.” *American Educational Research Journal*, 32(3):465-491.
- Ladson-Billings, Gloria. 2014. “Culturally Relevant Pedagogy 2.0: A.k.a. the Remix.” *Harvard Educational Review*, 84(1):74-84.
- LaFrance, Joan and Richard Nichols. 2009. *Indigenous Evaluation Framework: Telling Our Story in Our Place and Time*. American Indian Higher Education Consortium.
- Lieberman, Ann. 1995. Practices That Support Teacher Development: Transforming Conceptions of Professional Learning. *Innovating and Evaluating Science Education: NSF Evaluation Forums, 1992-1994*. 64-78.
- Lomawaima, K. 2018. “Indian Boarding Schools, Before and After: A Personal Introduction.” *Journal of American Indian Education*, 57(1):11-21.
- Lomawaima, K. Tsianina and Jeffrey Ostler. 2018. “Reconsidering Richard Henry Pratt: Cultural Genocide and Native Liberation in an Era of Racial Oppression.” *Journal of American*

Indian Education, 57(1):79-100.

Lunny, Debbie, Derek Maisonville, Jimena Marquez, Ragnė Racevičiūtė, Candis Steenbergen, Sarwat Viqar, and Ryan Young. 2017. "Decolonizing pedagogy: Ten guiding principles for CEGEP teachers." John Abbott College, Sainte-Anne-de-Bellevue, Quebec.
<https://eduq.info/xmlui/bitstream/handle/11515/36231/lunny-et-al-decolonizing-pedagogy-john-abbott-college-2017.pdf>

Martin, John Levi. 2017. *Thinking Through Methods: A Social Science Primer*. University of Chicago Press.

Musu-Gillette, Lauren, Cristobal de Brey, Joel McFarland, William Hussar, William Sonnenberg, and Sidney Wilkinson-Flicker. 2017. *Status and Trends in the Education of Racial and Ethnic Groups 2017* (NCES 2017-051). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

National Science Foundation (NSF). 2019. *Women, Minorities, and Persons with Disabilities in Science and Engineering* (NSF 19-304). Alexandria, VA: National Center for Science and Engineering Statistics.

Neri, Rebecca Colina, Maritza Lozano, & Louis M. Gomez. 2019. "(Re)framing Resistance to Culturally Relevant Education as a Multilevel Learning Problem." *Review of Research in Education*, 43:197-226.

Ngai, Phyllis B. and Peter H. Cohen. 2016. "Teacher/Family Partnerships for Student Learning: Lessons from *Indian Education for All* in Montana." *Journal of American Indian Education*, 55(1):23-48.

Paris, Django. 2012. "Culturally Sustaining Pedagogy: A Needed Change in Stance, Terminology, and Practice." *Educational Researcher*, 41(3):93-97.

- Pirbhai-Illich, Fatima and Fran Martin. 2020. "De/Colonizing the Education Relationship: Working with Invitation and Hospitality." *Critical Questions in Education*, 11(1):73-91.
- Resnick, Lauren B. 2009. "Nested Learning Systems for the Thinking Curriculum." *Educational Researcher*, 39(3):183-197.
- Russ, Rosemary S., Bruce L. Sherin, and Miriam Gamoran Sherin. 2016. "What Constitutes Teacher Learning?" Pp. 391-438 in *Handbook of Research on Teaching*, edited by C. Bell. American Educational Research Association.
- Shulman, Lee. 1987. "Knowledge and Teaching: Foundations of the New Reform." *Harvard Education Review*, 57(1):1-21.
- Stein, Mary Kay and Cynthia E. Coburn. 2008. "Architectures for Learning: A Comparative Analysis of Two Urban School Districts." *American Journal of Education*, 114(4):583-626.
- Stein, Wayne J. 1999. "Tribal Colleges: 1968-1998." Pp. 259-270 in *Next Steps: Research and Practice to Advance Indian Education*, edited by K.G. Swisher and J. W. Tippeconnic III. ERIC Clearinghouse on Rural Education and Small Schools.
- Tieken, Mara Casey. 2014. *Why Rural Schools Matter*. UNC Press.
- United States Department of Agriculture (USDA). 2017. *Rural Education at a Glance, 2017 Edition* (Economic Information Bulletin 171). Washington, DC: United States Department of Agriculture Economic Research Service.
- Vaughn, Margaret. 2016. "Re-Envisioning Literacy in a Teacher Inquiry Group in a Native American Context." *Literacy Research and Instruction*, 55(1):22-47.
- Vélez-Ibáñez, Carlos G. and James B. Greenberg. 1992. "Formation and Transformation of Funds of Knowledge Among U.S.-Mexican Households." *Anthropology and Education*

Quarterly, 23(4):313-335.

Ward, Carol. 2005. *Native Americans in the School System: Family, Community, and Academic Achievement*. Lanham, MD: AltaMira Press.

Ward, Carol, Kacey Widdison Jones, Ryan Coles, Loren Rich, Stan Knapp, and Robert Madsen. 2014. "Mentored Research in a Tribal College Setting: The Northern Cheyenne Case." *Journal of Research in Rural Education*, 29(3):1-17.

Ward, Carol, Sachiko Jensen Jepson, Kacey Jones, and Richard Littlebear. 2014. "Making Math Count: Tribal College Leadership in Education Reform on the Northern Cheyenne Reservation." *American Indian Culture and Research Journal*, 38(3):107-134.

Ward, Carol, Taylor Topham, Hannah Dixon, Avanlee Peterson, Jeffrey Rieder, Breann Duffin, and Jordan Coburn. 2022. "Culturally Inclusive STEM Learning: Mentored Internships for Native American Undergraduates at a Tribal College and a University." *Journal of Diversity in Higher Education*, Online First Publication.
<http://dx.doi.org/10.1037/dhe0000413>.

Weiss, Robert S. 1995. *Learning from Strangers: The Art and Method of Qualitative Interview Studies*. Free Press.

TABLES

Table 1: Participant Names and Descriptions

Name	Description
Frank	White math instructor with 28 years of teaching experience at the high school level, been at CDKC for 9 years.
Derek	White science instructor with 28 years of teaching experience at the high school level, been at CDKC for 4 years.
Anna	White science instructor, background in environmental research, has been at CDKC for 4 years.
Brenda	White communications instructor with over 20 years of teaching experience from pre-K to college level. At CDKC for at least 5 years.
John	White social sciences instructor with a background in teaching, family therapy, and school administration. Split time between high school and CDKC, but now primarily works for CDKC.
Nick	White instructor with a varied background including working for the military, a chemical research company, and teaching middle school. Has been at CDKC for 2 years.
Allen	White math instructor with many years of teaching experience in a variety of settings, been working at CDKC for 16 years.
Jane	White communications instructor, started teaching at CDKC 12 years ago after working in journalism.
Catherine	White math instructor with 33 years of experience working at tribal colleges. 9 years at CDKC.
Gordon	Indigenous administrator at CDKC
Tom	Indigenous administrator at CDKC
Melanie	Indigenous administrator in the CDKC cultural center
Stephen	Indigenous graduate of CDKC, administrative employee in cultural center

APPENDIX A

Interview Guide

Note: Questions were not asked exactly as written and questions that were not applicable to a particular participant were rephrased or skipped (e.g. questions about working with the science internship program were only asked of individuals who worked with that program).

- How did you come to work at CDKC?
 - Possible follow-ups: Ask about education, other teaching experiences, other background with Native Americans
- What were your first experiences teaching at CDKC like?
 - Possible follow-ups: How was teaching at CDKC different from other teaching experiences? Did you feel adequately prepared to teach at CDKC? What were some ways that you felt prepared/unprepared?
- Are there any topics or areas related to teaching at CDKC that you would like to have more information about? What info are you most interested in? How could you get this type of info? How could the college help?
- How have your experiences working with (mentoring) science interns affected your teaching and mentoring of CDKC students? I.e., what have you learned from your experiences about teaching at CDKC? Can you talk about specific experiences that taught you these things?
- How important have the summer field trips and research activities been in mentoring students? How have the summer internship experiences affected them personally?

- How has working on research projects affected your teaching (work) responsibilities - either positively or negatively? What are the drawbacks (if any) for faculty of having these types of internships?
- What are the main benefits of the internships for CDKC students? for the college? for the community? Any negatives or drawbacks?
- How important is it for the college to offer these type of science internships to students? and to include CDKC faculty as mentors?
- Should CDKC do more (or something different) to support the faculty who mentor science interns? What should they do?
- Should CDKC offer more internship or different kinds of internships (non-STEM)?