Evaluation of the Creating Cultural Competence of Rural Early Career Teachers Project 2012-17

Dale L. Nelson Cope, Ph.D.
Amy A. Germuth, Ph.D.
# Executive Summary

Overview ................................................................................................................................................. 1

The C3 Project ............................................................................................................................................. 3

  C3 Theory of Change ............................................................................................................................... 4
  Continuous Improvement and the C3 Model ............................................................................................... 5

Partner District Profiles ................................................................................................................................. 7

  Lower Kuskokwim School District ........................................................................................................... 7
  Northwest Arctic Borough School District ................................................................................................. 8

Features of Success ...................................................................................................................................... 11

Teacher Retention and Student Outcomes ................................................................................................. 12

Hiring Implications ...................................................................................................................................... 12

The Cost Benefit of C3 Induction .................................................................................................................. 14

Recommendations ......................................................................................................................................... 15

  Limiters (Mediating Variables) to the Success of C3 Induction .............................................................. 16

References ..................................................................................................................................................... 18
Executive Summary

With years of experience building cultural understanding in Alaska, and with funding from a US Education Department Alaska Native Equity program (USED ANE) grant, the Alaska Humanities Forum proposed a coordinated intervention to address the need for better orientation and induction of new teachers into rural Alaska communities. Newly hired teachers working in the Lower Kuskokwim (LKSD) and Northwest Arctic Borough (NWABSD) School Districts attend an orientation, cultural immersion camp, and debrief during the summer prior to their initial year of teaching in rural Alaska. Additionally, they enroll in and complete a 3-credit university course related to cultural competence required for continuing Alaska teacher certification by the end of their first year of teaching.

The impacts of this program are compelling. Consider the following:

- **Twice as many C3 teachers were retained in LKSD compared to non-C3 teachers; in NWABSD, 1.7 times as many C3 teachers were retained compared to non-C3 teachers.**
  
  Using data provided by the school districts, the retention rate for Non-C3 participants over the past five years district-wide was 41 of 123 teachers or 33.3% (LKSD) and 36 of 123 teachers or 29.3% (NWABSD). In comparison, for LKSD, among the 37 teachers inducted via the C3 model from 2012-17, 24 remained teaching there as of January 2017 for an overall retention rate of 64.9%. For NWABSD, of 74 teachers who went through the C3 project over the past five years, 37 remained in the district as of January 2017 for a retention rate of 50.0%.

- **The C3 induction model becomes cost effective by year 2 or 3, depending on the scale of teacher replacement in a district.**
  
  A cost-benefit study commissioned by Alaska Humanities Forum concluded that the upfront cost of the full C3 model is $7,987 per participant. Using actual data from the C3 partner districts, researchers concluded the model saved between 27% to 49% in recruitment and hiring costs. **Further, the C3 induction model becomes cost effective by year 2 or 3, depending on the scale of teacher replacement in a district.**

- **Increasing cultural competency, as the C3 Project does, increases teachers’ grit and growth mindsets.**
  
  Based on survey data, we found a statistically significant correlation between growth in cultural competency as demonstrated by C3 participants and perseverance. Additionally, we found a positive significant correlation between demonstrating a growth mindset and cultural awareness. This means that individuals with a high growth mindset were also likely to have higher cultural awareness scale scores. The significance of these research findings is important for rural Alaska where teacher turnover is a long-standing problem. Teachers who are “gritty” and demonstrate a growth mindset are more likely to continue teaching where they are placed.
Based on our findings we make the following recommendations:

- Consider using the following tools: 1) the Cross-Cultural Adaptability Inventory (CCAI), which has high statistical reliability and predictive validity for measuring emotional resilience, flexibility/openness, perceptual acuity, and personal autonomy, and 2) the Assessing Intercultural Competence instrument, which has scales to measure language and communication not measured on the CCAI. Tools such as these, administered before a hiring selection is made, would compensate for inexperience among hiring administrators. For uniformity in administration and analysis, this function could be performed by a neutral agency such as the Alaska Teacher Placement through University of Alaska.

- Routinely include local community members in interviews and hiring decisions. In such small villages as are common in rural remote Alaska, the interjection of just one individual who “doesn’t fit in” is highly disruptive to an entire community, causing discomfort for everyone and likely reducing a teacher’s tenure.
Evaluation of the C3 Project

Overview

The goal of the Creating Cultural Competence of Rural Early Career Teachers (C3 and C3-2) projects is to reduce the teacher turnover rate in rural Alaska that exacerbates low student achievement. This is accomplished by helping new teachers to Alaska in the Lower Kuskokwim School District (LKSD) and Northwest Arctic Borough School District (NWABSD) become better prepared for living in rural Alaska villages. To achieve this goal, the project includes a set of coordinated interventions: an intensive cultural induction, university coursework, and connection to a community mentor. For a subset of teachers who are new to the teaching profession, the C3 project is coordinated with professional mentoring through Alaska Statewide Mentor Project (ASMP). ASMP mentors are employed by the Alaska Department of Education and Early Development and provide non-evaluative support to ECTs around pedagogy and lesson planning, through the structure and protocols of the Alaska Statewide Mentor Project at the University of Alaska Fairbanks.

C3 Project Theory of Change

New teachers will better adjust to living and teaching in a rural Alaska community if they know what to expect before the start of their employment, learn about Alaska Native cultures and have an opportunity to develop supportive relationships with other new teachers and Alaska State Mentoring Project (ASMP) mentors. Increasing new teachers’ cultural competency will positively impact student achievement in rural Alaska because teachers will understand their students better. Teachers who feel more successful in their job and have made a better adjustment to community life will be happier and stay longer in rural Alaska, creating stability for schools and communities.

The C3 Project

With years of experience building cultural understanding in Alaska, and with funding from a US Education Department Alaska Native Equity program (USED ANE) grant, the Alaska Humanities Forum proposed a coordinated intervention to address the need for better orientation and induction of new teachers into rural Alaska communities. Newly hired teachers working in the Lower Kuskokwim (LKSD) and Northwest Arctic Borough (NWABSD) School Districts attend an orientation, cultural immersion camp, and debrief during the summer prior to their initial year of teaching in rural Alaska. Additionally, they enroll in and complete a 3-credit university course related to cultural competence required for continuing Alaska teacher certification by the end of their first year of teaching. See Appendix A for the C3 logic model. All C3 teachers are ones that have been newly hired by either the Lower Kuskokwim School District or Northwest Arctic Borough School District.
C3 Theory of Change

The C3 project is guided by three main tenets. First, **educators who are new to rural communities in Alaska struggle to make meaning of cultural differences, and benefit from a carefully constructed cultural induction.** Educators who understand their community and students are more likely to be happy and stay in that community longer. Over six years, Alaska Humanities Forum has systematically gathered data about the educators who attended their summer cultural inductions. Results show that educators who participated in a cultural immersion experience expressed higher satisfaction with their first year of teaching than others who did not have the same experience. Important is the difference in retention rates between educators who participated in a cultural induction and those who did not – the retention rates were double or more.\(^v\)

In one recent study, the evaluators found that cultural competency was mentioned by teacher stayers as a factor related to retention. Educators who were unable to grow their cultural competency eventually left\(^vi\). This phenomenon and efforts to address it are well described in the health care and international NGO sectors, and has led to the development of a variety of inventories and instruments for measuring cross-cultural adaptability and change over time.\(^vii\) Meyers, et al (2008) concluded that training for workers entering a different cultural environment needed to address emotional and social factors, not just a cognitive understanding of cultural differences.\(^viii\) Results of the C3 cultural inductions since 2012 show that following a carefully managed set of cultural experiences including a summer immersion, followed by ongoing local cultural mentorship, and a university-level course taught by an Alaska Native instructor, new educators’ self-assessment of their cultural competency was statistically significantly higher on the post-assessment. Since 2014-2016, we have found a statistically significant correlation between growth in cultural competency and the perseverance subscale of the grit instrument developed by Angela Duckworth.\(^ix\)

**Educators who are willing to grow their own cultural competency contribute to better teacher retention and higher student achievement.** We tracked the retention of educators who participated in the Alaska Humanities Forum’s cultural induction compared to educators who did not and found that the five-year retention rate of educators who had an induction was 31.6 percent higher.\(^x\) This is highly significant, since retaining educators is a known contributor to student academic success. The correlation between high turnover and low student achievement is evident in Alaska, where in 2013 the difference in the percentage of students proficient in reading between Alaska’s five lowest-turnover districts compared with its five highest-turnover districts was close to forty percent.\(^xi\) Other researchers found that as educators stay and gain experience, students do better on other measures of success such as school attendance, and that teaching in a collegial environment increases new teachers’ effectiveness.\(^xii\)

Teacher retention is a critical issue in Alaska where much of teacher turnover is related to attrition as opposed to retirement, family moves, etc. Low retention rates in rural Alaska result from the remoteness and lack of amenities such as healthcare, shopping, and transportation\(^xiii\). Teachers who move to rural Alaska face
Evaluation of the C3 Project

additional challenges including finding adequate housing and adjusting to a new and unfamiliar culture and environment.\textsuperscript{xiv} A recent report (DeFeo et al., 2017) noted that between 1999 and 2012, teacher turnover in rural districts averaged around 20% compared to 10% in the five largest districts\textsuperscript{xv}. Pierson and Fantz (2016) found that for 2016-2017, teacher turnover rates in schools in rural-remote locations (those not connected to the road system) averaged 36% compared to 18% for schools in rural hub communities. Additionally, they found that rural remote schools had, on average, retention rates 12 percentage points lower than non-rural remote ones.\textsuperscript{xvi} The five-year state average for retention of new teachers with 0-3 years of experience (using 2007 - 2012 data) was 87.5%. This includes both urban and rural districts; when just rural schools are considered, the retention ranged widely from 50% - 70% in over a dozen districts. There were a few rural districts with retention at 90% or better, bettering the retention of large, urban districts in the state.

\textbf{Culture shock and the importance of collegial relationships:} Drawing from research in the health care and social work sectors, researchers found that professionals working in a new culture experience a U-curve pattern of adjustment to the new culture. The lowest point of the “U” comes after arrival, while individuals are settling in. The C3 project has included a mid-year cultural gathering to help educators reunite face-to-face with their cohorts, as there is a strong positive, and statistically significant correlation, between the presence of colleagues (a teacher cohort) and successful cultural adaptation.\textsuperscript{xvii} The cultural induction experience, development of teacher cohort relationships, and ongoing village mentorship help educators develop their social and emotional intelligence well beyond a cognitive understanding of cultural differences. Research suggests that developing an individual’s capacity for empathy, emotional resilience, effective emotional expression, and interpersonal skills vastly improves intercultural functioning.\textsuperscript{xviii}

\textbf{Continuous Improvement and the C3 Model}

Over the five years of the C3 project, three significant changes were implemented to increase the potential for achieving stated outcomes. The first change relates to the audience for the intervention. The second change increases the ongoing cultural support during the school year following the cultural induction, and the third change is related to the measures of success.

\textbf{Changes in eligible audience:} The C3 project as originally funded through the Alaska Native Education program included a partnership with the Alaska Statewide Mentoring Project (ASMP). The ASMP project serves only teachers who are \textit{new to the profession}. Over time, it was apparent that the partner school districts were hiring experienced teachers \textit{new to Alaska} who were being excluded from the C3 experience by this restrictive definition. While some C3 teachers still fit the AMSP qualifications and receive those services, between one half and two thirds of C3 teachers fall into categories not served by ASMP, such as subjects like CTE, counseling, early childhood, and other school support roles. Others do not fit the ASMP model because they are coming to Alaska with some prior teaching experience.
Throughout the partnership with ASMP, mentors were invited to attend the C3 immersion with teachers. In interviews with evaluators, the mentors said the immersion was one of the most important personal growth experiences they had. The AHF C3 immersion is far more robust than the ASMP-provided cultural competency training for mentors. Mentors also said they could see a clear difference in the confidence of new teachers who participated in the C3 induction. The C3 teachers are more ready to focus on pedagogy (the core effort of ASMP) without concurrent effort to gain balance in the new setting. C3 teachers, according to mentors, are also more likely to incorporate cultural relevance into their instruction earlier than their peers.

**Development of a village mentor program:** Over the last two years, AHF leveraged its strong, positive relationships with local Native communities to develop an ongoing mentoring program with a different focus than the ASMP model which is instructional and pedagogical. The C3 Village Mentors are Elders or other respected members of the local community who agree to befriend the new teacher(s) in their community. The intent is to develop cross-cultural understanding and give the new teachers a trusted individual to talk with and ask questions of a local nature.

This element of the C3 model seemed to work better in the communities in LKSD than in NWABSD, and could be reflective of the quality of the regional management, availability of village mentor candidates, and other community health variables. C3 teachers in healthy village mentoring relationships cited that again and again as a significant reason for staying in their village for a second or third year of teaching. Village mentors have included C3 teachers in the life of the village through shared steam baths, hunting, fishing, family celebrations, shared meals, sewing and arts, and dance.

**Indicators that gauge impact:** It is not only logical but well-researched that a stable teacher workforce increases student achievement. In the initial C3 design, anticipated outcomes included increased student achievement measured on statewide assessments, and teacher retention. There were several reasons that made it impossible to compare achievement of students of C3 teachers to that of new teachers not trained through the C3 model. Alaska’s statewide testing system includes results from three different, non-comparable assessments since the start of the C3 project, and a one year hiatus with no assessment results. This makes longitudinal comparison using statewide assessment data impossible.

Next, evaluators turned to interim assessment data but found inconsistencies in which students were tested, when they were tested, and lack of pre/post data. Many C3 teachers are teaching in non-tested grades or subjects, further reducing data quality and quantity. Anecdotally, C3 teachers are noting student growth and development. Once the PEAKS assessment system becomes stabilized, it may be possible to again consider using statewide assessment data as a measure of C3 effectiveness, if the student results are comparable from year to year, and if there are no adjustments to the assessment.
Partner District Profiles

Lower Kuskokwim School District

The Lower Kuskokwim School District (LKSD) was officially established in 1976. LKSD is Alaska’s largest rural school district in terms of the number of schools, students, and staff that it supports. The district encompasses the lower part of the Kuskokwim River Delta, along the coast of the Bering Sea. It is Alaska’s second largest rural school district in terms of geographical area, encompassing approximately 22,000 square miles.

LKSD’s district office is in Bethel, the largest community in southwestern Alaska. LKSD provides coordination of services and support to 22 village and 6 Bethel schools. Travel to the district office is by air from Anchorage; travel between Bethel and the surrounding villages is primarily by small planes, with snow machines and boats used seasonally as conditions allow. During the winter months, an ice road on the Kuskokwim River provides temporary access to Bethel from a few nearby villages. The village communities located in the LKSD range in population from 60 to 750 residents, with many village families living a subsistence lifestyle of hunting, fishing, and gathering. Every village has a K-12 school, with enrollments ranging from 20 students (Arviq) to 250 students (Ket’acik/Aapalluk). The school is usually the largest building in the community and has traditionally been and continues to be the gathering place of the community.

The district enrollment over the past few years has increased gradually from 3,972 students (2011-2012) to 4,088 students (2013-2014). Ninety-five percent (95%) of the student body is identified as Alaskan Native. Yup’ik Eskimo are primarily represented by this high percentage, with many students coming to school speaking the Yup’ik language. Given that many students come from an environment where a language other than English is spoken, 64% of the student body is identified as limited English proficient. Eighty-seven percent (87%) of students are identified as economically disadvantaged. Twenty percent qualify for Migrant Education services.

The district employs 466 classified and 380 certified employees, including 345 certified teachers, 35 administrators, and 60 associate teachers. Associate teachers are paraprofessionals fluent in Yup’ik and English who teach students in the Native language. Among certificated staff, the average length of service with LKSD is 8.13 years and the median number of years of service is 6 years in the district. The number of first and second year certified is the largest sub-group of all certified staff. Turnover of certified staff has averaged around 15%, which places LKSD among the rural off-road school districts with the lowest turnover rates.
Northwest Arctic Borough School District

The Northwest Arctic Borough covers 38,000 square miles with much of the region located north of the Arctic Circle. Northwest Arctic Borough School District (NWABSD) operates schools in eleven villages, serving approximately 1,850 students. In terms of geographic size, it is the 11th largest school district in Alaska.

Schools in NWABSD range in size from 30 students and 4 teachers (Deering) to 664 students and 54 teachers (Kotzebue). Ninety percent of the students are Inupiaq Eskimo and 88% qualify for free and reduced-price lunch. Approximately 25% are considered as English Language Learners. The student mobility rate is around 25%, meaning approximately a quarter of the student population moves schools at least once during the same school year.

NWABSD’s central office is in Kotzebue, the largest village within the district’s boundaries. NWABSD employs approximately 160 certified teachers, 26 administrators, and 175 classified staff. Whereas annual turnover...
rates have been around 19%, 5-year turnover rates among teachers is approximately 68% and 94% among administrators. Most teaching positions are filled by teachers with fewer than three years’ teaching experience.

**C3 Impacts**

In 2016-17, LKSD had 298 teachers, 4,109 students, and 28 schools. In 2015-2016, LKSD hired 67 new teachers, or 21% of its teacher work force. In 2016-17, NWABSD employed 148 teachers for 1,969 students at 11 schools. In 2015 - 2016, NWABSD hired 47 teachers, or 30% of its teacher work force. (Alaska Department of Education and Early Development, 2017). The table below provides historical data on the number of newly hired teachers NOT participating in the C3 project returning each year from 2012-2017 in Lower Kuskokwim School District and Northwest Arctic Borough School District. Over five years, retention rates for teachers who did not participate in C3 averaged 33.3% and 29.3% for LKSD and NWABSD, respectively.

![Five-Year Retention Rates: Non-C3 Teachers](image)

Historical data from the start of the C3 project reveal that for LKSD, among the 37 teachers inducted via the C3 model from 2012-17, 24 remained teaching there as of January 2017 for an overall retention rate of 64.9%. For NWABSD, of 74 teachers who went through the C3 project over the past five years, 37 remained in the district as of January 2017 for a retention rate of 50.0%.
Using data provided by the school districts, the retention rate for Non-C3 participants over the past five years district-wide was 41 of 123 teachers or 33.3% (LKSD) and 36 of 123 teachers or 29.3% (NWABSD). In comparison, for LKSD, among the 37 teachers inducted via the C3 model from 2012-17, 24 remained teaching there as of January 2017 for an overall retention rate of 64.9%. For NWABSD, of 74 teachers who went through the C3 project over the past five years, 37 remained in the district as of January 2017 for a retention rate of 50.0%.

In other words, twice as many C3 teachers were retained in LKSD compared to non-C3 teachers; in NWABSD, 1.7 times as many C3 teachers were retained compared to non-C3 teachers.
Despite receiving the same services as part of the C3 project, the retention rate of C3 teachers in NWABSD is almost 11 percentage points lower than the retention rate of C3 teachers in LKSD. Reasons could include:

- Differences in what the two districts look for in an ideal candidate;
- Differences when teachers are hired and thus the quality of the overall teaching pool;
- Differences in the level and quality of support provided new teachers by each district;
- Differences in teacher expectations;
- Differences in the quality of local mentoring and leadership;
- Differences in living conditions; and
- Differences in turnover among key central office personnel, such as HR staff, and administrators.

**Features of Success**

C3 is a robust year-long guided cultural immersion. While others have replicated parts of the C3 model, six years of C3 data show a dramatic difference in retention rates between educators who participate in the C3 model and those who do not. The C3 immersion includes a skillfully facilitated week-long cultural immersion camp. Before heading to a remote camp, trained facilitators provide an introduction for what participants will experience. The camp itself is a model of culturally appropriate community engagement, where instructors are respected local Elders. Students attend a concurrent camp and mingle with educators during some activities. Reflection is embedded into the daily routine and guided by a facilitator. Following the camp (and time for showers!), in a rural hub community, AHF again facilitates a thoughtful final reflection and wrap-up. The friendships and bonding among the cohort of participants endures and sustains teachers through some isolated winter months. Our interviews are replete with examples of ongoing activities based on friendships established during the immersion.
The C3 experience includes ongoing support for participants in the form of a 3-credit university course that partially satisfies the credit requirements for a continuing Alaska teaching certificate. The Alaska Culture course is taught by an Alaska Native instructor from the region, so educators increase their cultural competence in a personally applicable way and learn more of the language of their village. The course begins during the immersion camp, with the instructor present at camp, and continues through the fall semester.

When the course ends, teachers are still receiving support. A signature feature of the C3 model is inclusion of local village mentors. Each educator is paired during the fall with an adult from the village who has expressed willingness to extend friendship to the teacher. Through those relationships, teachers report they have shared meals, gone hunting and fishing, picked berries, taken steam baths, and learned more about the culture and relationships in their setting. This component of the program has done much to cement commitment to “a place”, with teachers reporting that connection to people and students was a pivotal factor in their decision to return for a second year in the same village.

### Teacher Retention and Student Outcomes

Low teacher retention has other costs, often ignored. One of the biggest costs of teacher turnover is the cost related to lost productivity. Multiple studies have documented that new teachers tend to have lower productivity than experienced teachers, as measured by student achievement. As noted earlier, the correlation between high turnover and low student achievement is evident in Alaska where student proficiency in reading between Alaska’s five lowest-turnover districts compared with its five highest-turnover districts was considerable.

In both LKSD and NWABSD there is a large Reading and Math academic achievement gap when comparing their students to other Alaska Native students. (AK EED, 2013-14, State Report Card, and LKSD District Report Card). For 2103-14, in LKSD, 29% were proficient or above in math compared to 52% statewide and 35% were proficient or above in reading compared to 58%, both 23 percentage points below the state average. In NWABSD, proficiency rates were 43% (math) and 47% (reading), representing differences of nine and eleven percentage points.

### Hiring Implications

The average tenure of teachers in our rural schools is three years or less. The low retention rate for teachers, meaning they do not stay long enough to learn our language and culture, has been correlated to lower Alaska School Performance Index ratings (mentioned above). The dollar cost of teacher turnover is also considerable. A recent study (2017) calculated it to be $20,431 per teacher – conservatively. High teacher turnover affects continuity in instruction, leads to a lack of teaching expertise to make curriculum decisions, necessitates ongoing support and mentoring for new teachers, and requires time and resources to be
Evaluation of the C3 Project

reallocated for finding and training replacements. Even for teachers with classroom experience, transitioning to a new environment requires additional time and support, especially if they are moving to a school that is culturally distinct from their previous experience. This is especially pronounced for those moving to rural Alaska. In a survey we administered to 400 teacher stayers in 2012, we found that the individuals who stayed shared some common characteristics:

- Buy-in to the community, and development of community connections
- A passion for teaching
- Satisfaction with pay and job security
- Love of the outdoors and Alaska
- A view of the job as a blend of teaching and social work
- Hobbies and interests they brought with them
- Ability to be independent and comfort in being alone at times
- Ability to make new friends
- Successful adjustment to spending time and distance from extended family

And they believed that others left for these reasons:

- Feeling of isolation/loneliness and a desire for a relationship or missing extended family
- Inability to adapt to cultural differences
- Lack of preparation for the job of teaching (a low-quality teacher preparation program)
- Disenchantment: a mismatch between idealism and reality
- Poor living conditions; misinformed or misunderstood the living conditions
- Overwhelmed by the job demands and community problems
- Lack of professional support
- Inability to change, inflexibility
- The pay did not cover the high cost of village living and the other expenses the teacher brought with him/her

An additional study of factors related to teacher retention in Alaska comes from the federally-funded Teacher Incentive Fund (TIF) program, evaluated by Dr. Dale Cope. In 2007 three Alaska school districts (Chugach, Kuspuk, and Lake Peninsula) were awarded $7 million to spend on teacher incentives and performance pay over five years. The TIF program theorized that opportunity to earn more money would entice teachers to remain in their jobs and at their current assignments. By the conclusion of the grant period, there was not a retention pattern that could be uniformly and reliably correlated to performance pay for teachers. Other findings from the TIF project related to turnover and retention included:
Evaluation of the C3 Project

- During the TIF project teachers could earn a $4,000 one-time bonus or incentive for becoming highly qualified in mathematics. When the retention data were disaggregated by HQ/not HQ, math teachers who were highly qualified had a higher retention rate in the district, showing this as a possible promising investment in staff development.

- During the grant period, the reasons teachers left one of the three TIF districts was tabulated. By far, the most reported reason was resignation (32%), followed by non-retention (16%). The resignation category included individuals lured by the possibility of larger salaries in the TIF districts, but incapable of “fitting in” to some unique district and community cultures. Another 23% cited family reasons, often in tandem with leaving Alaska as their reason for leaving the TIF district.

Cultural competency was mentioned by teacher stayers as a factor related to retention in both teacher interviews and post-project surveys administered to C3 teachers. Teachers who were unable to grow their cultural competency, left. Since 2014, we have correlated the change in our measure of cultural competency to the two scales on the Grit Scale developed by Duckworth. What does it mean to be gritty? Someone who is gritty is resilient in the face of failure or adversity. A person with grit has consistent interests, or focused passion, over a long time.

Grit can predict success over and beyond talent. Researchers have found that individuals who have a growth mindset tend to be grittier. This was of interest to us related to C3-2 teachers and was the basis for the grit and growth mindset correlations we conducted. We found a statistically significant correlation between growth in cultural competency and the perseverance subscale of the grit instrument. We also administered a growth mindset survey to C3 participants. We tested the statistical correlation between the two growth mindset factors and our cultural awareness scale. We found a positive significant correlation between the post-survey incremental growth factor (Mean = 3.56 sd = .85) and the post-survey cultural awareness (Mean = 3.65 sd = .71), $r = .70$, $p = .008$, $n = 13$. This means that individuals with a high growth mindset were also likely to have higher cultural awareness scale scores. Another study offering evidence that positive traits that determine commitment and resilience in the face of adversity are good predictors of teacher effectiveness was conducted with new teachers in the Teach for America corps.

The Cost Benefit of C3 Induction

Cost benefit analysis quantifies the costs of a project in monetary terms and compares the costs with the benefits, also expressed in monetary figures.

Given that the C3 project has demonstrated a positive impact on teacher retention over five years, and knowing the significant cost of replacing teachers in Alaska, a critical question is, How long does it take to recoup the up-front costs of teacher induction through C3, compared to the as-is model of teacher turnover?
To answer this question the costs associated with the C3 model were broken down into six broad areas:

- Recruitment
- Camp Planning
- Teacher Orientation
- Teacher Immersion/Camp
- Teacher Debrief
- Teacher Participation in a Multi-Cultural Course

The cost-benefit study commissioned by Alaska Humanities Forum concluded that the upfront cost of the full C3 model is $7,987 per participant. The allocation of costs for the C3 immersion by category are illustrated in the following figure.

Using actual data from the C3 partner districts, researchers concluded the model saved between 27% to 49% in recruitment and hiring costs. Further, the C3 induction model becomes cost effective by year 2 or 3, depending on the scale of teacher replacement in a district.

**Recommendations**

The Alaska Humanities Forum C3 cultural induction model provides the greatest cost effectiveness for rural school districts when the desired outcome is
teacher retention. Given the research that shows a correlation between teacher retention and a school’s Alaska School Performance Index ranking (an indicator of student achievement), the C3 cultural induction model is an important component and should be considered for statewide implementation.

The Alaska Humanities Forum enjoys a highly favorable reputation as an agency skilled at bridging gaps among community groups, institutions, and individuals. The AHF reputation is built on the strength of partnerships with local groups, such as those involved in the C3 induction. Since the C3 immersions take place in local communities there is ownership for success of the effort. Local community members are involved in all phases of the immersion, making C3 a best practice model of community based participatory practice.

The Alaska Humanities Forum is not the only organization compelled to action to increase cultural understanding in our state. However, it is our belief that the quality and success of the C3 program model is because the C3 program is an exact mirror of the Forum Mission, Vision, and Values statements.

**Limiters (Mediating Variables) to the Success of C3 Induction**

Put succinctly, grittier teachers are more likely to remain in the profession longer. The significance of this research finding is important for rural Alaska where teacher turnover is a long-standing problem. The staying power of gritty individuals has been recognized in both health care and NGOs when hiring professionals for remote assignments. So how do districts go about finding and hiring “right-fit” educators?

The skill of the individuals hiring rural Alaska teachers, as well as the cultural competence and other attributes of the new rural teachers, are mediating factors to the success of the C3 model. Inexperienced administrators hiring teachers “out of phase” – late in the cycle and in desperation to fill a slate of teaching assignments – may not be making the best choices in candidates.

We recommend careful use and analysis of two instruments: 1) the Cross-Cultural Adaptability Inventory (CCAI), which has high statistical reliability and predictive validity for measuring emotional resilience, flexibility/openness, perceptual acuity, and personal autonomy, and 2) the Assessing Intercultural Competence instrument, which has scales to measure language and communication not measured on the CCAI. Tools such as these, administered before a hiring selection is made, would compensate for inexperience among hiring administrators. For uniformity in administration and analysis, this function could be performed by a neutral agency such as the Alaska Teacher Placement through University of Alaska.

A second recommendation is to routinely include local community members in interviews and hiring decisions. In such small villages as are common in rural remote Alaska, the interjection of just one individual who “doesn’t fit in” is highly disruptive to an entire community, causing discomfort for everyone and likely reducing a teacher’s tenure.
With these mediating variables addressed, implementation of the C3 model, *with fidelity yet sensitivity to local contextual factors*, will have a positive impact on teacher retention and student achievement in rural Alaska.
References

i Alaska Humanities Forum was awarded an ANE grant in 2011; 56 teachers in LKSD and NWABSD participated in the C3 program. In 2015 AHF received a second ANE award and served an additional 57 teachers from the same school districts.


iv Alaska Humanities Forum was awarded an ANE grant in 2011; 56 teachers in LKSD and NWABSD participated in the C3 program. In 2015 AHF received a second ANE award and served an additional 57 teachers from the same school districts.


ix This research is part of the longitudinal evaluation of the Creating Cultural Competence in Early Career Teachers program managed by the Alaska Humanities Forum.


Evaluation of the C3 Project


This research is part of the longitudinal evaluation of the Creating Cultural Competence in Early Career Teachers program managed by the Alaska Humanities Forum.


