WELLNESS & HEALING: INDIGENOUS INNOVATION & ALASKA NATIVE RESEARCH
Proceedings from the Alaska Native Studies Conference (2016)

It's more than just dollars: Problematizing salary as the sole mechanism for recruiting and retaining teachers in rural Alaska

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Abstract

Staffing rural Alaska schools with a stable workforce of qualified teachers has been perennially challenging, and the failure to do so harms student achievement. In the spring of 2014, the Alaska Department of Administration contracted with the Center for Alaska Education Policy Research to produce a uniform salary schedule and community cost differentials with the objective of attracting and retaining highly-qualified teachers to Alaskan communities. In this paper, we summarize the findings of that study, including opportunities for significant teacher salary increases. However, we discuss the role of salary in teachers' decisions to stay or leave rural communities, noting that other working conditions are stronger predictors of teacher attrition. We argue that salaries alone will not ensure a stable and qualified teacher workforce, instead positing that efforts to improve Alaska's rural schools and teacher retention outcomes will require both adequate compensation *and* attention to the working conditions.

Introduction

> For every complex problem there is an answer that is clear, simple, and wrong.
> - H.L. Meneken

Educating our youth is essential to our state's future and wellbeing. The objectives of schooling and curriculum have been debated since the system's inception (see Walker & Soltis, 2004), but no matter the focus of reform or legislative efforts to improve school outcomes good teachers are always central. Children in school districts across the nation need rigorous, culturally relevant, and responsive curriculum, access to instructional resources and technologies, clean and safe facilities, and *highly skilled teachers*. Nationally, attracting talented people into the education profession and keeping them in the classroom is an ongoing challenge. Alaska has its own unique challenges in this realm. Many rural Alaska communities combine geographic remoteness, challenging climate, high living costs, and sharp cultural differences between the school population and most of the educators who teach them. This paper looks at one approach to meeting the State's challenges in providing a stable, well-qualified teaching force for all its schools. In rural Alaska where 90 percent or more of the students are Alaska Natives, serving students and communities means meeting Indigenous students' needs.

In spring 2014, the Alaska Legislature passed House Bill 278, comprehensive education reform legislation including a mandate that the Department of Administration (DOA) "present to the legislature a written proposal for a [standardized] salary … schedule for school districts" (Sec. 52). To meet this, the DOA contracted with the University of Alaska Anchorage's Center for Alaska Education Policy Research (CAEPR) to produce a base salary schedule for teachers and geographic cost differentials for each of the 230 Alaskan communities that have public schools. The context around this legislative mandate included a looming fiscal crisis, ongoing challenges with teacher recruitment and retention, and interest in improving student outcomes, particularly for struggling rural schools.

In the fall of 2014 and spring of 2015, we compiled and analyzed data and literature, met with stakeholders, and developed a model to account for the extreme variations in working and living conditions for teachers across Alaska. It became clear that the primary question – how to compensate teachers – was not the only way districts should try to attract and retain them. Our model identified a need for significant salary increases, but we cannot guarantee that these would truly meet these objectives in rural schools because the magnitude extends beyond "real life" circumstances – teachers have never been compensated at these rates, and so we do not have examples of how they would respond. Additionally, research in Alaska and elsewhere identifies other opportunities – along with increased compensation – that could improve teacher retention outcomes. In meeting the contract obligations and applying sound economic principles, our model had to *assume no changes in current conditions in schools and communities* for the purposes of calculating the needed

salaries; however we do not wish to assume this constant in practice. We argue that those conditions merit as much consideration as the salaries themselves. This paper presents the findings of our study as illustrative examples of teaching and working conditions in the state, and while we advocate for equitable and adequate compensation, we argue that Alaska must examine working conditions alongside teacher pay.

Components of Teacher Compensation

The assumption of the study was that appropriate compensation is the mechanism to attract good teachers and keep them in the profession. Economic theory holds that labor markets function most efficiently when wages clear the market – they are high enough to assure enough qualified workers to fill the available positions, and low enough that not too many are left without jobs. Thus setting appropriate beginning salaries is an important focus in the development of any compensation system (Odden & Wallace, 2007).

Compensation is more than starting salaries; it also includes earning potential as reflected in career opportunity (Joseph & Waymack, 2014). Teaching is different from other professions where employees earn promotions that equate to significant pay increases; teachers earn salary increases through incremental steps. Though salaries for new teachers in the US are generally competitive when compared with starting salaries in other occupations, compensation for teachers with 15 or more years of experience is among the lowest internationally (Akiba, Chiu, Shimizu & Lang 2012), and Hanushek and Rivkin (2004) note that teacher salaries have consistently fallen (relative

to other occupations) since WWII. The impact of slow or marginal incremental growth is significant for both recruitment and retention.

Wage premiums are market incentives or differential compensation for working in difficult-to-staff schools, positions, or subjects. Nationally, one-third to one-half of districts offer some incentive for difficult-to-staff *subjects* (Joseph & Waymack, 2014; Podgursky & Springer, 2011); and many experts support pay to retain teachers in shortage subject areas (Bacharach, Lipsky, Shedd, & Wood, 1984; Odden & Wallace, 2007), particularly because these teachers can find higher wages outside of teaching. Additionally, 36% of US school districts offer incentives for working in high-needs *schools* (Joseph & Waymack, 2014). The logic is that teachers prefer working conditions in low-poverty/high-performing schools, and without increased compensation to offset this, high-poverty/low-performing schools will have fewer and less qualified applicants and therefore will, on average, employ lower-performing teachers (Odden & Wallace, 2007).

Working conditions include many job attributes, including the length of work day and work year, class sizes, the teacher's role in school and district decision-making, physical plant characteristics, curriculum resources and supplies, technology infrastructure, and policies around leave. Working conditions also include the socio-cultural and political environments – both inside and outside the school – including parent and community support and engagement (Berry, Smylie, & Fuller, 2008; North Carolina State Board of Education, 2011). Benefits are also an important consideration in compensation. Nationally, typical teacher benefits align with those provided by

corporations (Odden & Wallace, 2007) and total benefit costs as a percent of salary are similar to those of other professionals (Allegretto, Corcoran, & Mishel 2004).

The Landscape of Teachers in Alaska

In 2013-14, there were 8,788 full- and part-time teachers working in Alaska's schools, serving over 128,000 students in grades K-12. Of those 69% taught in the five largest districts: Anchorage, Matanuska-Susitna (Mat-Su), Fairbanks, Kenai and Juneau. Although the 48 remaining districts employ just over 30% of the state's teachers, higher turnover rates mean that they account for about half of the vacancies that need to be filled each year (author analysis of DEED data).

Further, rural districts need to recruit nationally to fill their vacancies. From 2008 to 2012, in-state teacher preparation programs provided about 16% of the teachers hired by Alaska's five largest districts, but only about 7% of those hired for rural positions (Hill & Hirshberg, 2013). While rural districts filled an additional 20% of vacancies with experienced Alaska teachers returning to the classroom after some time away, they still hired over 70% of their teachers from outside of Alaska. Over the past eight years, the number of teachers prepared within the state at the University of Alaska and Alaska Pacific University has remained largely static at 200-240 per year. To qualify to teach in Alaska, educators must hold a bachelor's degree, complete a teacher preparation program, pass a basic competency examination, and complete three credits each of Alaska studies and Alaska multicultural coursework, either as part of their preparation or within two years of licensure.

Attracting Teachers

Attracting teachers has two dimensions – attracting people into the education profession, and then attracting these educators to Alaska. Though this paper focuses on attracting already-trained and certified teachers to Alaska, the nation has recently witnessed a sharp drop in the number of college students pursuing teaching degrees. California, one of the nation's largest teacher producers, saw a 53% decrease in teacher preparation enrollments between 2008 and 2013; many states are experiencing an accelerating decline in teacher preparation enrollments (Sawchuck, 2014). This will ultimately affect Alaska's ability to attract prepared teachers, as it results in a smaller labor pool.

Teachers are hired from a national labor market; a district trying to fill a classroom teaching position in one community in Alaska competes against all the others trying to fill similar positions – in Alaska and in the lower 48. Whereas in many disciplines, professionals have choices within a single community of working in the public or private sector and a gamut of potential employers, teachers typically seek work only in school districts. Consequently, their salaries must be competitive against other communities and states.

Though Alaska had better capacity to attract teachers during the national economic downturn and workforce reductions of 2008-2010, districts across the nation are now both hiring and paying higher wages as the job markets improve (Rich, 2015). During the oil boom from the mid-1970s to the late 1980s, Alaska's teachers were the best compensated in the nation (McDiarmid, Larson, & Hill, 2002); currently Alaska has the 4th highest average starting salaries by state (including federal schools), but only the

7th highest teacher earnings overall (National Center for Education Statistics, 2015;

National Education Association, 2013). As these data are not adjusted for cost of living,

teachers in Alaska have lower relative salaries than their counterparts in many other

states, and this may result in increased challenges in recruiting and retaining educators

from outside. Indeed, as of mid-July 2015 with less than a month before the start of the

school year, Alaska had over 230 regular teacher vacancies (author analysis of Alaska

Teacher Placement website's posted vacancies). With so many open positions, districts

lose the option and responsibility of selectivity in hiring, finding themselves forced to

"hire whomever they can find" (Loeb, Darling-Hammond, & Luczak, 2005, p. 58).

Teacher Quality

    Measuring teacher quality is difficult, and methods are complex and contentious

(Darling-Hammond, 2000; Darling-Hammond, 2013; Shinkfield & Stufflebeam, 2012)

largely because teachers have so many responsibilities in the process of guiding student

learning that are not easily measured (Edling & Frelin, 2013). Even "objective"

measures like students' standardized test performance are affected by much more than

the teacher (Hanushek & Rivkin, 2004) or the quality of classroom instruction (Polikoff

& Porter, 2014). Though principal evaluations are valid and reliable measures of

teacher quality (Jacob & Lefgren, 2005), these are not standardized, and are not readily

available for analysis. Thus, many metrics of teacher quality use indicators that

correlate with teacher quality, rather than measuring teacher quality itself.

    The federal *No Child Left Behind Act* of 2001 (NCLB) has provided one measure –

highly qualified teacher (HQT) status. This is determined by three factors: education,

certification, and competence in the assigned subject matter. While it is not a complete

measure, and does not attempt to gauge overall teacher quality, there is empirical

support linking these criterion to teacher quality. The research literature shows some

conflicting evidence for graduate degrees in general (see Hanushek, 2003; Pennucci,

2012); however focused, in-subject graduate degrees make a significant positive

difference in student achievement (Croniger, Rice, Rathbun, & Nishio, 2007; Goldhaber

& Brewer, 1997, Goldhaber & Brewer, 2000; Subedi, Swan, & Hynes, 2011). Though

evidence on national board certification is mixed (see Chingos & Peterson, 2011;

Clotfelter, Ladd & Vigdor, 2007; Goldhaber & Anthony, 2007; Vandevoot, Amrein-

Beardsley & Berliner, 2004), the most recent research (Pennucci, 2012) documents a

positive relationship between certification and student test scores (see also Darling-

Hamond, 2000).

Because of the federal mandate and goal that 100% of students be taught by

HQT, the metric is tracked and reported, and provides the most uniform data about

teacher credentials and qualifications. From a research prospective, it allows for

comparison across communities and states, and lets researchers to identify differences

in teacher qualifications along racial, geographic, or socioeconomic lines. In 2013-14,

88.09% of core classes in Alaska public schools were taught by HQTs; by comparison,

nationwide rates were 96.25% (US Department of Education, 2015), and Alaska is one

of only five states reporting less than 90%. Though Alaska has raised its percentage of

HQTs between 2003 and 2012 faster than any other state, it reported a decrease in the

number of classes taught by HQTs between 2012 and 2014, and the state's gap between

HQTs serving high- and low-poverty areas is the third highest in the nation (US Department of Education, 2015).

Teacher Retention

Identifying highly qualified teachers and attracting them to Alaskan school districts is important, but the final piece is getting teachers to stay in those jobs once they are hired. This has been historically difficult for the profession in general, and particularly in Alaskan rural districts. Teachers are at highest risk for turnover in their first few years of teaching; however 66-76% stay in the profession (Boe, Cook, & Sunderland, 2008).[1] Rather than leaving teaching, many "get their foot in the door" in a less desirable teaching assignment and subsequently seek a more coveted job in a higher-income, higher-achieving school (Loeb, et al., 2005). Unfortunately, this pattern disadvantages students in low-income, high-minority schools.

High turnover (teachers leaving one district for a position elsewhere or leaving the profession entirely) that results in the need to hire many new, inexperienced teachers has implications for teacher quality and student achievement. Gains in teachers' effectiveness and impact are most pronounced in the first and second years of teaching, and most teachers reach their peak between five (Rosenholtz, 1985) and ten years (Pennucci, 2012), after which gains are more modest (Clotfelter, Ladd & Vigdor, 2006; Ladd, 2008; Rivkin, Hanushek & Kain, 2005), though some research documents significant teacher improvement well beyond that (Huang & Moon (2009). Unfortunately, high turnover is synonymous with inexperienced teachers.

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[1] Though attrition in the profession is often lamented, it is not high compared to other fields (Boe, et al., 2008).

Some amount of turnover is productive and beneficial (Barnes, et al., 2007).

Teachers retire and some leave because they are not suited to the profession; though

we want a stable school climate, new ideas and diversity are also desirable. Guin (2004)

notes that in high-income, high-performing schools with low turnover, vacancies are

positive – new teachers bring in new ideas and the hiring process helps schools

reinforce values; however these districts also have a high number of qualified

applicants for open positions, and new teachers are mentored in a stable and organized

system. This is a privileged position.

On the other hand, "high rates of turnover that undermine the continuity in

instruction and reflect difficulty securing or keeping competent teachers are

problematic for school organizations and for student achievement" (Loeb, et al., 2005, p.

46). In these instances, turnover challenges the implementation process for curriculum,

diminishes collaboration, and interrupts continuity (Guin, 2004). Ongoing dedication of

resources to hiring results in continuous instability, inadequate mentors, and a lack of

professional development for other teachers, which hinders instruction and ultimately

encourages more teachers to leave (Shields, Esch, Humphrey, Young, Gaston, & Hunt,

1999). The literature well documents that high teacher turnover results in decreased

student achievement (Barnes, Crowe, & Schaefer, 2007; Milanowski & Odden, 2007;

Ronfeldt, Loeb, & Wyckoff, 2012).[2] A consistency in the literature is that higher-poverty,

higher-minority schools experience higher turnover (Guin, 2004; Barnes, et al., 2007),

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[2] Beyond impacts on student learning, administrative costs associated with teacher turnover are considerable, and divert a school district's resources from instruction and other programs that benefit students (see DeFeo, Tran, Hirshberg, Cope, & Cravez, 2017).

and also higher costs associated with turnover (Milanowski & Odden, 2007; Waltington, Shockley, Guglielmino, & Felsher, 2010).

Particularly pertinent to rural Alaska, turnover impacts are further magnified in schools serving nontraditional populations (Guin, 2004). Rural districts are often able to hire teachers who, while new to Alaska, have several years teaching experience. However, teachers need time to learn how to work with local communities and develop the skills to teach Indigenous and rural students. Though an Alaska studies course is part of the state teacher certification process, content is highly variable and largely decontextualized (Jester, 2016), and the trends observed in the literature discussed above play out in Alaska's communities: between 2013 and 2014, turnover in Alaska's five largest districts was about 9%, but 12 of Alaska's 53 districts had annual teacher turnover rates over 30%, and another 17 were over 20% (Hill & Hirshberg, 2013). These rates compound over time; in the five-year span between 2007 and 2012, 12 districts, all rural, lost 66% or more of their teachers (Hill & Hirshberg, 2013). The impact is reflected in student achievement; students in Alaska's highest turnover districts have significantly lower standardized test scores (Hill, Hirshberg, & Kasemodel, 2014) and high school graduation rates (author analysis of DEED school report card and staff assignment data).

Method

Our research objective was to identify and describe a compensation structure that would attract and retain highly qualified educators. This included identifying a structure that would address variation in pay for experience, advanced education or

skills, performance, or specialized job characteristics or assignments; determining

minimum salary levels (base compensation) to put into that structure; and then

calculating how to adjust those levels so they would be appropriate in different Alaskan

communities (community salary differentials).

Salary Schedule Structure

Identifying an appropriate structure for compensation was informed by a

literature review of models for teacher compensation, particularly the relationship

between teacher compensation, retention, and quality, and student achievement. We

also conducted individual and focus group interviews with over 100 stakeholders and

education professionals exploring key issues, opportunities, successes, and challenges

related to hiring, deployment, and retention of teachers, teacher compensation, salary

schedule structures, advancement, and additional compensation. We also administered

an online survey of stakeholders' perceptions, preferences, and expectations regarding

salary and benefits, and how these compensation structures meet specific educational

goals or objectives.[3]

Base Compensation

The base compensation schedule itself was derived from a school-level statistical

analysis of teacher compensation and school characteristics. We used data from

multiple sources including collective bargaining agreements (for non-salary

compensation, to the extent that it could be quantified), Alaska DEED, the US Census

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[3] The full study is available on CAEPR's website:
http://www.iser.uaa.alaska.edu/CAEPR/home/projects/hb278/2015_11_16-
TeacherSalaryAndTenureReport_TechnicalAddendum.pdf

Bureau, the National Weather Service, the Institute of Social and Economic Research

(ISER), the Alaska Marine Highway System, and the Alaska Alcoholic Beverages Control

Board, From this we developed a model to predict the percent of classes taught by

HQTs. Where characteristics of schools and their salary data predict less than the

federal 100% standard, higher salaries could attract more qualified teachers. Where the

model predicted greater than 100 percent, we expect lower salaries would still leave

the school with enough HQTs. Where both the model prediction and the school's actual

level were just at 100 percent, we believe the salary offered was just adequate to reach

the federal standard.

Community Salary Differentials

Community salary differentials were calculated using the same datasets from

which we developed the base salary model. Combining data that reflected school

district conditions (including benefits, salary, and student characteristics), community

characteristics (including population demographics, weather, and transportation), and

personnel data, we developed three models to estimate different aspects of the amount

of compensation needed to attract and retain HQTs to schools in each Alaskan

community. The first model used to identify an appropriate base salary also produced

estimates of the salary differential (relative to the identified base) necessary for each

community to attract enough HQTs. A second approach modeled teacher duration in a

district as a function of school and community characteristics and compensation, and

estimated the salary level differentials necessary to equalize turnover across districts.

The third model used teacher moves between districts; assuming most job moves

involve a transfer to a preferred position (accepting a better salary or better working conditions), we were able to model salary levels necessary for teachers (on average) to be equally willing to move to any community. These models were then combined to produce a single differential for each community.

Findings

Though producing a standardized salary schedule was our contractual obligation, per our survey, stakeholders did not support it, and there was disagreement about its impacts. For example, some perceived that a statewide salary schedule would reduce teacher movement between districts because they would have comparable wages and would not be moving for higher salaries, while others thought that it would encourage movement by allowing teachers to move to areas where they were more needed or that better aligned with their skill set. Though some felt that a statewide salary schedule could benefit rural districts, the overwhelming majority of respondents perceived that this would disadvantage rural districts' ability to recruit and retain teachers.

Salary Schedule Structure

Though the research explored various teacher compensation structures, the most familiar is "step-and-lane." In this system, raises are earned in three ways: annual adjustments (COLA and adjustments for changes to contract length), step increases (additional pay for years of experience), and lane increases (additional pay for academic credits or degrees). The system was developed at the turn of the century to resolve concerns about pay equity and create incentives for teachers to stay in the profession (Firestone, 1994; Podgursky & Springer, 2007), and is used to determine

teacher compensation in nearly all districts nationwide (Joseph & Waymack, 2014; Podgursky, 2006). Though we are interested in other compensation structures and pilot studies are available (see Hirshberg, Berman, DeFeo, & Hill, 2015), at present there is inadequate evidence base to support other models, and our proposed schedule uses this familiar structure. It was not only most preferred by stakeholders who participated in the survey, but it also is structured to reward the attributes most valued by those respondents: experience and education.

Currently, Alaska school boards negotiate certain elements of teacher contracts with local unions or teacher groups (with a few exceptions), including compensation; thus the state has 54 unique salary schedules. All the schedules have a basic step-and-lane structure; most districts also provide for some modest bonuses.[4] Thus or proposed compensation *structure* aligns with current systems.

Base Compensation

The quantitative analysis estimated, for each community, the minimum districts would have to pay teachers in meet their staffing needs on three measures: attracting enough teachers to fill positions, retaining teachers already working in the district, and ensuring those teachers are highly qualified for their jobs. Our model estimated that a few communities pay more than they need to, but the majority pay less. Most relevant for base salary determination were communities that paid just enough.

Several Mat-Su School District communities emerged as paying what the model predicted they would need to pay (but not more), and the district also met the designated measures: turnover is generally less than 10 percent each year, and teacher

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[4] One district – Chugach – provides a significant percent of total salary through merit bonuses.

move data indicates that it is among the preferred districts. Thus, the district's

compensation structure was identified as having appropriate salaries to achieve the

outcomes, and that salary schedule provided the structure for our base schedule. We

adjusted it to Anchorage because it has long been used as the base for state funding

differentials.

Community Salary Differentials

Multiplying the base salary schedule by a community differential at each point in

the step-in-lane structure should result in salaries that would allow other communities

to also attract and retain HQTs for their schools. The analysis produced a number for

each Alaskan community that represents the salary differential – relative to Anchorage

– that would compensate teachers for the range of factors that might make a

community more or less attractive than Anchorage.[5] We calculated differentials that

range from 0.85 to 2.01, with particularly high differentials associated with remote

rural communities. Table 1 presents differentials for select communities.

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[5] The differentials are different from cost of living indices; they *include* costs of living among other working and living conditions that affect teachers' staying or leaving communities.

Table 1
Select Community Differentials and Impact on Current Compensation

Location	Community differential	Percent change from district's current salary expenditures
Kenai Peninsula Borough School District		**14%**
Kenai	0.93	
Homer	1.01	
Port Graham	1.27	
Nikolaevsk	1.40	
Kodiak Island School District		**33%**
Kodiak city	1.11	
Old Harbor	1.58	
Larsen Bay	1.79	
Chiniak	1.70	
Lower Kuskokwim School District		**42%**
Bethel	1.14	
Tooksook Bay	1.49	
Napakiak	1.58	
Goodnews Bay	1.66	

Note. The analysis identified community differentials for every Alaskan community with a public school. The number serves as a multiplier for the base salaries set to Anchorage. Numbers higher than 1 indicate that teachers in those communities need to pay that much more to attract and retain HQTs; numbers lower than 1 indicate those communities can pay less. This table shows that even within a single school district, community differentials can vary considerably. The right column compares our recommended salaries to the districts' current salary expenditures. If our model were implemented statewide, salary costs would increase costs by approximately 15% across Alaska; in individual districts changes would range from a 6% decrease to a 105% increase.

Discussion

Comparing our analysis to current compensation, we find that salaries in Alaska's

urban school districts are close to the levels they need to be. Anchorage salaries are

10% lower, while Mat-Su salaries are appropriate for its central areas, but low for its

outlying communities. Fairbanks, Juneau, and Ketchikan salaries are slightly higher

than needed. This is intuitive – these districts are generally able to attract HQT, and

enjoy lower turnover rates. However, the model tells a different story for rural, smaller

communities; there, teacher salaries are lower than the model says they should be, and

they are substantially lower in the smallest, most remote communities.

Our research helps to identify disparities in compensation, but a limitation of our

model is that it extends further than we can test. Human behavior is difficult to predict,

even with sound models, and the salaries our model recommends have never been

observed in practice. We can predict, but do not really know, what the impact would be.

Furthermore, though our uniform schedule could be called "fair" in that it compensates

everyone in a teaching position using the same formula, it is unclear whether this

interpretation of *fairness* equates to high *effectiveness*. A model that is based on

successes in an urban, on-the-road-system district and rewards career-long retention

many not be most appropriate for rural districts. Indeed, our interviews with many

superintendents who oversee rural schools indicate they want *some* change – especially

in one or two-teacher school sites – and optimize teacher retention at 5-7 years.

Still, the relationship between good teachers and student achievement is

inarguable, and the literature documents a relationship between compensation and

teacher retention. However salary is not the only factor – or even the biggest factor –

impacting teacher employment outcomes. Thus we argue that though the objective of

the legislative mandate was appropriate and a policy response that addresses

appropriate salary is recommended, focusing on compensation alone is too narrow.

Regarding salary as the mechanism to attract HQT, there is some empirical argument that unilaterally increasing teacher salaries does not enable districts to "buy" better teachers (Figlio, 2002; Hanushek & Rivkin, 2004), and will not increase teacher quality, at least not in the short term (Ballou & Podgursky, 1997). Regarding retention, the empirical literature consistently identified working conditions as key to these outcomes. This holds true in Alaska.

In the spring of 2013, Hill et al., (2014) surveyed all rural Alaska teachers (teachers in all districts other than Anchorage, Fairbanks, Juneau, the Mat-Su Borough, and the Kenai Peninsula Borough, excluding Galena because of major spring floods) about their perceptions of their working conditions. Half of rural teachers statewide expressed dissatisfaction around parent and community support, and over 40% expressed dissatisfaction with district leadership and student conduct. Approximately one-third expressed dissatisfaction or strong dissatisfaction with school leadership, instructional materials or resources, and teacher workload. By comparison, only about 14% reported dissatisfaction or strong dissatisfaction with their salaries.

The following fall, individual teacher responses were matched against their assignments to determine who stayed and which left, allowing for a correlation analysis. Teachers who left rural districts were significantly more likely to be dissatisfied or very dissatisfied with job-related aspects of their work, including parent and community relationships or school and district administration or community characteristics such as entertainment, housing, or relationships/friendships. Satisfaction with salary was not statistically correlated with the choice to stay or leave. Table 2 provides additional detail.

Table 2
Job Satisfaction for Teachers Staying in and Leaving Rural Alaska

	Percent Disagree/Strongly Disagree	
=	Leavers	Stayers
Parent & community relationships		
The community is supportive of this school.**	58	24
Families and community support teachers, contributing to student success.**	70	41
Families and the community understand and support policies for student conduct.**	70	45
This school maintains clear communication with the community.*	42	27
Families are involved and supportive of the school.	54	42
Parents/guardians are influential decision makers in this school.	44	44
School & district administration		
Administrators provide feedback that helps teachers improve.**	54	29
Administrators recognize teachers' accomplishments.**	54	30
Teacher performance is assessed objectively.**	44	24

	Dissatisfied/Strongly Dissatisfied	
	Leavers	Stayers
Community characteristics		
Transportation infrastructure**	52	23
Entertainment**	52	23
Housing**	32	18
Relationships/friendships**	24	9
Recreation*	32	14
Cultural events*	24	11
Access to health care*	60	40
Shopping	52	39
Access to internet and communication	24	25
Salary & compensation	**19**	**13**

Note. Adapted from Hill, et al., 2014. The asterisks (*) indicate factors significantly correlated with teachers staying or leaving their assignments. The most strongly correlated factors are family and community support, school and district administration, and community characteristics. Whether or not a teacher was dissatisfied with salary was not significantly correlated with staying or leaving.
* $p < .05$
** $p < .01$

These findings are consistent with other Alaska studies; in 2002, about 35 percent of teachers leaving rural schools cited dissatisfaction with community support for the schools as a "very" or "somewhat" important factor in their choice; of those leaving for other teaching positions, 29% reported they would earn higher salaries with the move (McDiarmid et al., 2002).

The studies in Alaska align with other empirical research on teacher turnover and job satisfaction. When ranking what motivates Arizona teachers, working conditions were rated as more important than compensation, which fell tenth in a list of 18 factors (Mertler, 2016). The role of leadership as a component of working conditions cannot be overstated; a collegial atmosphere led by a principal with a strong instructional emphasis mattered most in North Carolina teachers' decisions about whether or not to stay in their schools (Hirsch, 2004), and New York teachers' perception of school administration is the strongest predictor of leaving teaching (Boyd, Grossman, Ping, Lankford, Loeb, & Wyckoff, 2011). Though compensation has a modest correlation with teacher satisfaction (Perie & Baker, 1997), it cannot be considered independently when predicting teacher staying or leaving. All said, Loeb et al., (2005) found that, when controlling for student characteristics, working conditions are best predictors of teacher turnover, thus, "reducing teacher attrition in schools where turnover is a problem may require improvements in both salaries *and* working conditions" (p. 67, emphasis added).

Because our model was based in part on actual teacher moves, it accounted for staying and leaving and, inherently, the factors that influenced those choices. Some community characteristics (e.g., coldness and darkness, distance from amenities, size,

opportunities for entertainment) cannot be readily changed, and these are realities of living in remote communities that will invariably affect teacher retention. However much of teachers' school-level and district-level dissatisfaction, which were also significant predictors of teacher behavior, are not impervious to significant change. Our research, other Alaska-based research, and the broader corpus of literature on teacher compensation and retention indicate we would be remiss to consider teacher salaries independent of the communities and working conditions within which they are situated.

Recommendations

Though we strongly support fair and appropriate teacher compensation, we do not recommend a uniform teacher salary schedule as the mechanism to achieve this. Rather, we support local control and recommend that districts be adequately resourced to determine how to adapt compensation structures – a combination of salary and benefits – that are most appropriate to their unique circumstances and community priorities. We encourage individual communities to consider our calculated differentials, and to independently determine their utility to inform teacher salary negotiations. At the statewide and policy level, we recommend increasing efforts to recruit and train more Alaskan and Alaska Native educators; tracking patterns, costs, and activities associated with teacher turnover; and further researching the conditions that drive and draw teachers away from our schools and communities.

Our model is based on the current makeup of our teacher workforce; a different labor pool could result in different workforce outcomes. Alaska Native educators stay

longest in rural communities, and teachers prepared in-state have far lower turnover

rates than those prepared "outside," at least in the first ten years of service (Hill &

Hirshberg, 2013; Hill, Hirshberg, Lo, Morotti, & Ryan, 2015). In addition to attracting

certified teachers to Alaska and to specific Alaskan communities, there is a clear need to

attract more Alaskans into the teaching profession.[6] Compensation is a part of this, and

once teachers are recruited – from Alaska or outside – they need adequate support and

mentoring to be successful and stay in their assignments.

To understand these dynamics, we recommend that Alaska continue to study

patterns of teacher turnover, as well as the activities and costs associated with it – those

that are easily monetized, as well as the impacts of lesser-quality instruction that leads

to lower student achievement. Better understanding the true costs associated with

teacher turnover will help the state and individual districts to invest resources wisely,

identify opportunities for efficiencies in these processes, and weigh the costs and

benefits of teacher retention initiatives. There is also an opportunity to invest in

mentoring and other quality induction activities that have been demonstrated to be

cost-effective means to improving teacher retention (Ingersoll & Smith, 2003;

Waltington, et al., 2010).[7]

Staying teacher turnover will also require attention to working conditions and a

better distinction between the adverse conditions and factors that drive teachers away,

and those that entice teachers to other communities or opportunities. This distinction is

important – they necessitate different policy and programming approaches, and they

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[6] See Leary, Tetpon, Hirshberg, & Hill (2014) for a comprehensive list and discussion of
Alaska Native-focused teacher preparation programs.
[7] The Alaska Statewide Teacher Mentor Program has already demonstrated some successes
in this area (see Adams, 2008).

have different outcomes. Teachers who are driven away will not tolerate the objectionable conditions, and retaining them will require ameliorating those factors or circumstances. For teachers who are drawn to other opportunities or communities, retention will involve providing, approximating, or substituting for those opportunities that are presently absent, which may encourage teachers to stay in their assignments for just a little longer.

Conclusion

We acknowledge that our recommendations are not easily implemented. Efforts to recruit Alaska Native educators are stymied by the paradox that high teacher turnover in communities serving primarily Alaska Native students correlates with decreased student performance. The impacts are observed at multiple levels: high school graduation, college attendance, college graduation, and employment rates are much lower for Alaska Natives than other demographic groups. A systemic hegemony results in a diminished pool of individuals available to fill teaching positions in the very system that needs and underserved them.

Community-teacher relationships are also complex. We have been told by both community and school leaders that as communities experience annual turnover, they have learned not to invest in relationships with teachers who they fully expect to soon leave. This creates a self-fulfilling prophecy when new teachers later cite a lack of community connections as a contributing factor to their disengagement and ultimate turnover decisions. These vicious cycles occur in a postcolonial context, and breaking them will require difficult dialogues. When we talk about schooling in rural Alaska, we

cannot ignore the omnipresent historical trauma (see Evans-Campbell, 2008; Graves, Rosich, McBride, Charles, & LaBelle, 2010) and as we recommend building community relationships, we must acknowledge that history before we can find a healthy stasis.

In our work, we have applied western economic principles and metrics of student achievement and teacher qualifications. The irony of this approach as a means to best serve Indigenous students and rural Alaskan communities is not lost on us. Acknowledging the juxtaposition of paradigms, the changing state and national context for curriculum, and the student and community impacts of poor schooling experiences, we echo Meneken: complex problems and opportunities cannot be addressed through simple solutions. To this, we add that complex solutions require honest and invested dialogues from diverse constituencies.

The opportunity here is not merely a shared problem, but a common goal. Staffing Alaska's schools with a stable and competent teacher workforce is critical, and doing so will serve students, schools, communities, and teachers themselves. A part of this certainly includes compensation; our research and the status quo of turnover and student achievement indicate that teachers need to be paid more. However, we owe teachers more than just dollars. Attracting and retaining them will need to be a more concerted effort, supported – rather than driven – by the money.

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