Cooperation and Coordination among the School Districts in Nevada County "Can We Talk?"

Summary

There are approximately 7,000 students in Nevada County (County) spread among eight independent elementary school districts and one high school district. The Tahoe Truckee Unified School District operates under the auspices of the Placer County Board of Education. Those elementary schools feed into the two public comprehensive high schools that serve the vast majority of County high school students. The eight elementary districts vary widely in empowering students to meet or exceed the California Common Core State Standards (State Standards) promulgated by the California State Board of Education. Some elementary students in the County are better prepared than others for high school due only to the quality of elementary instruction they have received.

Elementary students' differences in preparation is exacerbated in mathematics by the use of different mathematics pathways in Nevada Union and Bear River High Schools. Some may find themselves at a high school that uses a different pathway in mathematics than the one used in their elementary school. These differences pose a challenge for the affected students and act as a drain on the educational resources at the comprehensive high schools. A process to more clearly communicate the expectations of the high schools in all academic areas for entering ninth graders should be established and followed.

The time is right for more cooperation and coordination among the teachers in the County's school districts to better prepare students to move from kindergarten through high school. With the existing State Standards in English Language Arts and Mathematics, and the looming adoption of additional standards in Science and the Social Sciences, the timing is perfect for a broader and more assertive plan for cooperation and communication. School districts should assist teachers to develop better ways to prepare students to meet all the State Standards.

Research indicates that when teachers communicate with their peers to create a unified approach to education, students are more successful in meeting the standards set for them. Such communication should be directed by administration and led by teachers.

The nine school districts in the County should find ways to encourage teachers to work in Professional Learning Communities (PLCs) within their own schools and between schools from different districts. This will ensure that all students are provided the educational experiences to prepare them for each transition as they move from kindergarten through twelfth grade. Along with the training offered by the Nevada County Office of Education (NCOE), instruction should be provided to teachers to establish functioning PLCs to better meet the needs of all of the students in the County.

The Nevada Joint Union High School District should adopt a unified approach to the teaching of mathematics in the two comprehensive high schools. This will allow the elementary districts to better prepare their students in mathematics. These actions would result in Nevada County students being better prepared, better able to master the standards, and more successful in their preparation for college and career. The Jury recommends that the district choose one pathway as a better practice to implement the adopted curriculum and policies of the district.

Glossary

BRHS	Bear River High School
CDE	The California Department of Education
County	Nevada County
DBCIP	Data Based Continuous Improvement Protocol
Jury	Nevada County Grand Jury
NCOE	Nevada County Office of Education
NCSOS	Nevada County Superintendent of Schools
NUHS	Nevada Union High School
PLC	Professional Learning Community
Smarter Balanced	Smarter Balanced Assessment System
State Standards	California Common Core State Standards

Background

California Penal Code section 925 provides, in part: "The grand jury shall investigate and report on the operations, accounts, and records of the officers, departments, or functions of the county…" The Nevada County Office of Education (NCOE) and the nine Nevada County (County) school districts all are entities within the County which fall within the jurisdiction of the Nevada County Grand Jury (Jury). The Tahoe Truckee Unified School District operates under the auspices of the Placer County Board of Education.

There are nine separately administered school districts in the County serving the approximately 7,000 students in kindergarten through twelfth grade**,** each with an elected Board. There also is a centralized office in the County, the NCOE, that is managed by the Nevada County Superintendent of Schools (NCSOS), with extensive responsibilities but limited administrative powers related to those districts. The Jury has proposed in the past that some of these districts be consolidated to increase efficiency and reduce cost. In this report the Jury looks instead at the existing level of coordination and cooperation that exists among the nine districts to determine whether all of the County's students are being provided the same opportunities for success as they proceed from district to district in the course of their education. Research indicates that students are more successful when teachers communicate and collaborate in their planning for instruction both within grade clusters and between grades as the student goes through school from kindergarten through middle school. It also indicates that students are more successful in a

seamless and logical transition in instruction when teachers at all levels communicate the expectations for preparation at each grade level. (Appendix A)

The adoption of the California Common Core State Standards (State Standards) by the California State Board of Education poses a challenge for county boards of education and their school districts to adopt new curriculum materials and teaching methodologies. It also creates the opportunities for teachers to find new ways to assess students' levels of achievement and to collaborate in planning to help students achieve new levels of mastery of the State Standards. The opportunity to develop protocols for cooperation and communication in the areas of English Language Arts and Mathematics at the present time could also serve as the protocols to follow as the State of California adopts standards in the areas of History-Social Science and Science in the near future.

The separate State Standards for English Language Arts and State Standards for Mathematics were adopted by the California State Board of Education in August 2010 and modified in January 2013. The 2013 modification of the Mathematics State Standards permitted districts to choose from different pathways for instruction in the ninth through twelfth grades, including either the traditional or the integrated pathway. "The traditional pathway consists of the higher mathematics standards organized along more traditional lines into Algebra I, Geometry, and Algebra II courses. The integrated pathway consists of the courses Mathematics I, II, and III. The integrated pathway presents higher mathematics as a connected subject, in that each course contains standards from all six of the conceptual categories."[1] The traditional pathway also meets the new State Standards by modifying past practice to include all of the previous standards in the areas of number and quantity, algebra, functions, modeling, geometry, and statistics and probability.

While both pathways are designed to result in a student being taught everything necessary to master the Mathematics State Standards by the time of graduation, the pathways differ in the timing of instruction. This can lead to problems, for example, in the many instances when seventh or eighth grade students are ready to begin the transition to high school level courses. When such students enter ninth grade having completed either one-third or two-thirds of required subject matter through the courses required by one pathway and their high school is using the other pathway, a discontinuity of instruction occurs. School districts can ensure continuity in a specific pathway by making those schools that share students as they matriculate from elementary to middle school and then high school coordinate and cooperate on curricular planning.

[1] *California Common Core State Standards: Mathematics, Electronic Edition*, California State Board of Education 2013, page 4.

Approach

The Jury being aware of the provisions in the Penal Code precluding them from dealing with curriculum or policy when investigating public school districts concentrated on looking at practice as it relates to implementing said curriculum and policies. This investigation, therefore, looked at the practice found in the various schools and districts as it relates to what is considered best practice in educational research.

The Jury interviewed administrators and staff from these public agencies:

- Nevada County Office of Education
- Nevada County Superintendent of Schools
- Clear Creek Elementary School District
- Chicago Park Elementary School District
- Grass Valley Elementary School District
- Nevada City Elementary School District
- Nevada Joint Union High School District
- Pleasant Ridge Union School District
- Penn Valley Union Elementary School District
- Twin Ridges Elementary School District
- Union Hill Elementary School District

In doing so, the Jury examined the extent to which the County school districts engage in planning, coordination, and cooperation to provide County students with a seamless and logical transition in instruction from elementary through secondary schools, a process referred to as vertical program articulation.

The Jury also examined the extent to which County school districts engaged in cooperation and coordination by teachers in the same grade levels, called horizontal program articulation, designed to ensure that teachers at the same grade levels are providing their students with the same learning opportunities.

The Jury examined research on the educational benefits to the formation of PLCs and the protocols that are a part of Data Based Continuous Improvement Protocol (DBCIP) as they help students reach their full potential in the mastery of the State Standards. These protocols are part of PLCs and function in both horizontal and vertical articulation. Research papers and briefs of such studies are plentiful in the literature and are published in educational periodicals such as *Educational Leadership* and the *Center for High Performing Schools at the Southwest Development Laboratory*. Both descriptions and reports of such systems are even part of *Taking Center Stage – ACT II TCSII*, a publication of the California Department of Education. A bibliography of examples of such research is attached as Appendix A.

Finally, the Jury reviewed school district performance results reflected in student scores on the Smarter Balanced Assessment System (Smarter Balanced), a testing system mandated by the California Department of Education that "utilizes computer-adaptive tests and performance tasks that allow students to show what they know and are able to do."[2] Using the published Smarter Balanced results administered in the spring of 2016 for each district within the County, the Jury compared test results with the extent to which the teachers in those schools had worked collaboratively with the goal of achieving better results for their students through horizontal and vertical articulation.

The goal of the Jury's investigation was to develop a list of suggestions to help all students in the County have equal opportunities to meet their full potential and matriculate through our schools successfully.

Discussion

With the adoption of the State Standards, the time is right for the school districts in the County to come together and develop a mechanism for cooperation and communication to benefit students in the County preparing them for college and career. Research shows that the use of a DBCIP would help students better meet the standards set for them by the state.

Educational research (Appendix A) suggests that students are more successful in mastering subject matter when teachers share planning and results with each other. Such planning groups have come to be called PLCs. Such PLCs can coordinate educational offerings and approaches both within a grade level (horizontal articulation) and between grade levels in cooperation with feeder schools (vertical articulation). These PLCs can concentrate on communicating and coordinating in the areas of English Language Arts and Mathematics State Standards to begin with, and then be established in the areas of History-Social Science and Science as those standards are adopted by the State Board of Education. Teacher leaders need to be identified by administrators and trained to establish and develop functioning PLCs within all schools in the County.

The adoption of the State Standards in California creates the opportunity for teachers to find ways to collaborate in assessing students' levels of mastery of the State Standards and in planning to increase mastery. The Smarter Balanced results vary widely among the individual districts in the County (Appendix B), inviting the question of why certain districts were more successful than others and, in particular, whether levels of horizontal and vertical articulation within and between districts varied as widely. In seeking to explain these differences, the Jury examined opportunities for articulation by grade level and between grade levels as well as differing opportunities for teachers to work together with teachers from surrounding districts in PLCs (Appendix C). The Jury also reviewed the Smarter Balanced results for the two comprehensive high schools in Nevada Joint Union High School District, Nevada Union High

[2]California Department of Education, http://www.cde.ca.gov/ta/tg/sa/ (accessed December 22, 2016).

School (NUHS) and Bear River High School (BRHS). The results varied between the two schools with one performing at a higher level in English Language Arts and the two showing similar results in the area of Mathematics (Appendix D). While the Jury found no direct correlation between the levels of collaboration and communication and the Smarter Balanced results, research indicates a strong correlation between the development of PLCs and the use of DBCIP and higher test results.

The results of interviews to determine the levels of cooperation and communication were striking. All but one of the districts within the County provide time for their teachers to meet within their school/grade level to prepare for instruction. However, very few districts provide time for teachers from different grade levels to consult. Moreover, there was no evidence of the existence of any PLCs. Even fewer districts provide time for teachers to meet with teachers from other schools within the same district. For example, while three districts provide time weekly, two others only provide time bi-weekly. Two other districts only schedule once-a-month time for teachers to articulate within their school. Time provided to articulate with teachers from other schools within the district varies more widely: one district schedules such contacts once every six weeks; two others schedule bi-weekly meetings; another schedules for once a year; and four others, not at all.

There is little articulation with neighboring elementary districts in six of the eight elementary districts other than a once-a-year day of workshops organized by the NCSOS. These workshops include training in areas such as: Positive Behavior Intervention and Support Programs; workshops in Science, Technology, Engineering, Arts, and Math; and textbook adoption.

In two districts, seventh and eighth grade teachers meet weekly with their peers from another district. Two other districts indicated that their teachers met to plan adoption of mathematics curricular materials during the recent adoption of the State Standards.

Another important area of articulation is between eighth grade teachers and ninth grade teachers in County high schools. The lack of evidence of communication and collaboration between the elementary teachers and the high school teachers suggests a lack of clarity on expectations for student competence as they matriculate from eighth grade to ninth. Such articulation is complicated for County eighth graders because the primary comprehensive high schools, NUHS and BRHS, have adopted different pathways for mathematics instruction. While one middle school coordinates with its neighboring high school in this area, other schools with seventh and eighth graders in the County do not. Taking this into account, a student who has taken Algebra I in middle school may find him or herself trying to integrate Algebra I with Mathematics II in high school. This anomaly is somewhat reduced since many middle schools feed primarily into a single comprehensive high school. But even in those instances, the reported consultation and cooperation was reported to be “none” or “minimal.” Only one district responded that the relationship allowed “a lot” of articulation because its high school is located right next to its feeder middle school. There appears to be little or no articulation in the area of English Language Arts or the other core subjects.

Moreover, there appears to be little communication at all between middle schools and the comprehensive high schools. Of the eight elementary districts, four indicated there was no relationship other than scheduling their eighth graders for classes as they transitioned to high school. One district reported an "Eighth Grade Day" and another was proud of articulating well in certain electives. One high school provided a "Futures Program" to help middle school students get excited about the transition to high school.

The two comprehensive high schools in Nevada County showed varying degrees of collaboration and articulation. Different afternoons are set aside for teachers to meet and work at the two high schools in the areas of site-based and departmental initiatives. While there is some articulation within each high school, there was little collaboration between teachers from the two schools. No evidence was found of protocols used to communicate with feeder schools.

While the State Standards allow for different pathways, the lack of articulation in the area of mathematics in a small district with only two comprehensive high schools should be an area of concern to students, parents, and teachers in the elementary districts in the County. One school delivers its mathematics instruction through the integrated pathway. The other delivers its instruction through the traditional pathway. This poses problems not only for the feeder schools with students who are accelerated in mathematics, but also for students who transfer between the two high schools.

Findings

F1 The failure of the school districts within the County to identify teacher leaders and coordinate teacher collaboration and articulation negatively impacts student opportunity.

F2 There is an apparent lack of Professional Learning Communities in the areas of English Language Arts and Mathematics in the nine school districts in the County.

F3 The failure of NCOE to train and support teachers in the nine school districts within the County in teacher leadership and the formation of functioning Professional Learning Communities negatively impacts student opportunity.

F4 There is a lack of communication and collaboration between the two comprehensive high schools and their feeder elementary districts concerning expectations for entering ninth graders.

F5 Having two comprehensive high schools using different mathematics pathways may negatively impact the ability for students to transfer between the schools.

F6 Having two comprehensive high schools using different mathematics pathways may negatively impact students in the feeder schools in their ability to master the State Standards.

F7 While the State allows different pathways in the teaching of mathematics, students in the County would be better served by the adoption of a common pathway.

Recommendations

R1 The superintendents from each district should come together and set communication and collaboration guidelines for teachers including the coordination of time for this communication and collaboration. (F1 and F4)

R2 The individual school districts should select teachers to act as leaders in the process of forming Professional Learning Communities in the areas of English Language Arts and Mathematics. (F1 and F2)

R3 The Nevada County Superintendent of Schools and staff should provide training to these leaders. (F3)

R4 These leaders should establish working relationships with their peers allowing them to freely share their ideas, plans, and the results of their instruction. (F1, F2 and F4)

R5 The Nevada Joint Union High School District should develop a process in collaboration with the elementary districts to more clearly identify the expectations for entering ninth graders. (F4)

R6 The Nevada Joint Union High School District should adopt one mathematics pathway to be used by both of the comprehensive high schools in the district. (F5, 6, and 7)

Request for Responses

Pursuant to Penal Code Section 933.05, the Nevada County Civil Grand Jury requests responses from the following:

- Nevada County Superintendent of Schools (F3 & R3) by July 24, 2017
- Nevada County Board of Education (F3 & R3) by August 23, 2017
- Clear Creek Elementary School District Board of Trustees (F1, F2 and F4 & R1, R2, R4 and R5) by August 23, 2017
- Chicago Park Elementary School District Board of Trustees (F1, F2 and F4 & R1, R2, R4 and R5) by August 23, 2017

- Grass Valley School District Board of Trustees (F1, F2 and F4 & R1, R2, and R4 R5) by August 23, 2017

- Nevada City Elementary School District Board of Trustees (F1, F2 and F4 & R1, R2, R4 and R5) by August 23, 2017

- Nevada Joint Union High School District Board of Trustees (F1, F2, F4, F5, F6 and F7 & R1, R2, R4, R5 and R6) by August 23, 2017

- Pleasant Ridge Union School District Board of Trustees (F1, F2 and F4, F3, & R1, R2, R4 and R5) by August 23, 2017

- The Governing Board of the Penn Valley Union Elementary School District (F1, F2 and F4 & R1, R2, R4 and R5 by August 23, 2017

- Twin Ridges Elementary School District Board of Trustees (F1, F2 and F4 & R1, R2, R4 and R5) by August 23, 2017

- Union Hill School District Board of Trustees (F1, F2 and F4 & R1, R2, R4 and R5) by August 23, 2017

Appendix A
Nevada County Grand Jury
Bibliography

Blankstein, Alan B. (2010). "Failure is Not an Option: Six Principles for Making Student Success the Only Option". Thousand Oaks, CA.: Corwin Press: HOPE Foundation: National Education Association.

Church, Susan M. (2009). "From Literature Circles to Blogs: Activities for Engaging Professional Learning Communities". Markham, Ont.: Pembroke Publishers, Ltd. ; Portland, OR: Distributed in the U.S. by Stenhouse Publishers.

Depka, Eileen. (2006). "The Data Guidebook for Teachers and Leaders: Tools for Continuous Improvement". Thousand Oaks, CA: Corwin ; London: SAGE Distributor.

Dooner, Anne-Marie et al. (2008). "Stages of Collaboration and the Realities of Professional Learning Communities". Teaching and Teacher Education. Vol.24(3), pp564-574 [Peer reviewed journal]

DuFour, Richard. (1947). Essentials for Principals- the School Leader's Guide to Professional Learning Communities at Work". Bloomington, In.: Solution Tree Press.

Gomez, Louise. (2016). "The Right Network for the Right Problem". Phi Delta Kappan. Vol.98 Issue 3, pp8-15

Guskey, Thomas R. (2003). "How Classroom Assessments Improve Learning". Educational Leadership. Vol.60(5), pp6-11

Kiefer Hipp, Kristine & Bumpers Kaufamn, Jane. (2010). "Demystifying Professional Learning Communities: School Leadership at its Best". Lanham, Md.: Rowman & Littlefied Education.

Kruse, Sharon D & Gates, Gordan S. (2016). "Leading Professional Learning Communities: Applying a High Reliability Organization Perspective". Proceedings of the Multidisciplinary Academic Conference. Aug 2016, pp38-45.

Lalor, Brian & Abawi, Judy. (August 2014). "Professional Learning Communities Enhancing Teacher Experiences in International Schools". International Journal of Pedagogies and Learning. Vol.9(1), pp76-86 [Peer reviewed journal]

Lassonde, Cynthia A. & Israel, Susan E. (2009). "Teacher Collaboration for Profesional Learning Facilitating Study, Research, and Inquiry Communities". Hoboken : Wiley

Popp, Jacquelymm S. & Goldman, Susan R. (October, 2016). "Knowledge Building in Teacher Professional Learning Communities: Focus of Meeting Matters". Teaching and Teacher Education. Vol.59, pp347-359 [Peer reviewed journal]

Rigelman, Nicole Miller & Ruben, Barbara. (2012). "Creating Foundations for Collaboration in Schools: Utilizing Professional Learning Communities to Support Teacher Candidate Learning and Visions in Teaching". Teaching and Teacher Education: An International Journal of Research and Studies. Vol.28(7), pp979-989 [Peer reviewed journal]

Riveros, Augusto. (2012). "Beyond Collaboration: Embodied Teacher Learning and the Discourse of Collaboration in Education Reform". Studies in Philosophy and Education. Vol.31(6), pp603-612 [Peer reviewed journal]

Smith, Laura-Jane, et al. (2014). "Successful Collaboration in Education: the UMeP". The Clinical Teacher. Vol.11(7) pp.546-550 [Peer reviewed journal]

Stoll, Louise. (2007). "Professional Learning Communities: Divergence, Depth, and Dilemmas". Palo Alto, CA: Maidenhead: McGraw-Hill/Open University Press.

Teague, Ginger M. & Anfara, Vincent A. (2012). "Professional Learning Communities Create Sustainable Change through Collaboration". Middle School Journal. Vol.44(2), pp58-64 [Peer reviewed journal]

Winchester, Ian. (2013). "Editorial: Two Meanings of Collaboration in Education". Interchange: A Quarterly Review of Education. Vol.44(3-4), p149 [Peer reviewed journal]

Appendix B

Smarter Balanced Results Spring 2016

English Language Arts

District	Number of Students	Number Tested	Standard Exceeded	Standard Met	Standard Nearly Met	Standard Not Met
Chicago Park Elementary	122	115	11%	39%	21%	29%
Clear Creek Elementary	101	98	36%	41%	17%	6%
Grass Valley Elementary	1126	1041	17%	29%	27%	27%
Nevada City Elementary	639	599	25%	35%	25%	16%
Penn Valley Union Elementary*	422	408	13%	34%	31%	21%
Pleasant Ridge Union Elementary	817	789	20%	36%	26%	19%
Twin Ridges Elementary	63	62	5%	19%	27%	48%
Union Hill Elementary	373	367	13%	33%	25%	30%
Total/Average	3663	3479	18%	33%	25%	25%
Nevada Joint Union High SD	**685**	**622**	**37%**	**33%**	**15%**	**15%**
*includes 14 11th graders	14	14	7%	43%	36%	14%

Mathematics

Chicago Park Elementary	122	115	11%	28%	29%	32%
Clear Creek Elementary	101	98	36%	30%	31%	4%
Grass Valley Elementary	1126	1047	14%	23%	31%	32%
Nevada City Elementary	638	594	19%	24%	30%	26%
Penn Valley Union Elementary*	422	408	14%	22%	36%	29%
Pleasant Ridge Union Elementary	817	789	20%	28%	35%	17%
Twin Ridges Elementary	63	63	8%	13%	37%	43%
Union Hill Elementary	373	367	11%	24%	38%	27%
Total/Average	3662	3481	17%	24%	33%	26%
Nevada Joint Union High SD	**686**	**619**	**19%**	**24%**	**27%**	**30%**

Source: caaspp.cde.ca.gov

Appendix C – Results from Interviews with Staff Members

District in Nevada County	Number of Schools, Configuration, and Number of Classes at Each Grade	Common Time for Teachers	Teachers Meet by Grade Level/Subject (Horizontal Articulation)	Teachers Meet with Colleagues at Other Grade Levels (Vertical Articulation)	Teachers Meet with Teachers from Other Schools Within the Same District (Horizontal and Vertical Articulation)	Teachers Meet with Teachers from Other Schools Outside the District (Horizontal and Vertical Articulation)	Teachers Meet with Teachers from the High Schools (or visa versa) (Vertical Articulation)	High School Branding
District 1 NJU	4 High Schools 2 Traditional 2 Specialized	Not asked	Not asked	Not asked	Not asked	Not asked	One high school articulates with the middle school next to it in mathematics. Attempts to get all feeder districts to give a math placement test.	One high school has a "futures" program with its middle school and gives faculty at the feeder elementary district tickets to games. Both comprehensive HSs have days wherein they bring 8th graders for orientations.
Two HS NU & BR	N/A	Yes	Yes	Bi-Weekly	Varying degrees with ELA further along and Math not at all	No	No meeting with elementary teachers	BR yes; NU no

Appendix C – Results from Interviews with Staff Members

District in Nevada County	Number of Schools, Configuration, and Number of Classes at Each Grade	Common Time for Teachers	Teachers Meet by Grade Level/Subject (Horizontal Articulation)	Teachers Meet with Colleagues at Other Grade Levels (Vertical Articulation)	Teachers Meet with Teachers from Other Schools Within the Same District (Horizontal and Vertical Articulation)	Teachers Meet with Teachers from Other Schools Outside the District (Horizontal and Vertical Articulation)	Teachers Meet with Teachers from the High Schools (or visa versa) (Vertical Articulation)	High School Branding
District 2 **PR**	3 Schools 2 K-5 1 6-8	Weekly Meeting Time	Teachers meet together by grade.	ELA teachers adopted the same curriculum and meet together.	Teachers meet once every six weeks.	Some articulation in math with a neighboring district as both adopted Go Math. Once in the year sponsored by County Superintendent.	Math teachers articulate well with the high school.	Students are "branded" in a "futures" program. Staff are brought to first football game at the feeder high school.
District 3 **TR**	2 Schools Both K-8	N/A	None as only one teacher at each grade.	Does not occur.	Does not occur.	Superintendents collaborate between the smaller districts.	Told that the two high schools are too inconsistent.	
District 4 **CP**	1 school 1 teacher per grade 6/7/8 offered electives	monthly	monthly	monthly	N/A	Different schedules preclude this from happening. Once in the year sponsored by County Superintendent.	No relationship with any high school.	No relationship with any high school.

Appendix C – Results from Interviews with Staff Members

District in Nevada County	Number of Schools, Configuration, and Number of Classes at Each Grade	Common Time for Teachers	Teachers Meet by Grade Level/Subject (Horizontal Articulation)	Teachers Meet with Colleagues at Other Grade Levels (Vertical Articulation)	Teachers Meet with Teachers from Other Schools Within the Same District (Horizontal and Vertical Articulation)	Teachers Meet with Teachers from Other Schools Outside the District (Horizontal and Vertical Articulation)	Teachers Meet with Teachers from the High Schools (or visa versa) (Vertical Articulation)	High School Branding
District 5 **PV**	4 Schools in 3 buildings Will drop to 2 One K-5 and One TK-8	Once a month all teachers in the District	Every other week	Unclear	Every other week	Once in the year sponsored by County Superintendent.	Minimal at best.	Minimal at best.
District 6 **GV**	2 Schools One K-4 One 5-8 And a charter school K8 Five or six classes at each grade K-3rd and five or six at each grade 5-8	Yes	Professional Development once a month. Teachers CAN meet on the other Wednesdays	Unanswered	Yes, but no elaboration	Once in the year sponsored by County Superintendent. Also said one principal communicates with another in a nearby district.	Says there is no articulation. Participated in a CTE grant but the high school has all but excluded them.	None
District 7 **UH**	3 Schools One Charter K-6 One Middle 7-8 One for toddlers and PreK. One T-K 4-K; 3 at each 1st and 2nd;4 at 3rd; 2 and ½ at both 4th and 5th. 6th graders are with 7th and 8th in single subjects	Every other week.	Every other week.	Every other week.	Every other week.	Unofficially between friends. Jointly adopted math curriculum with another district. Once in the year sponsored by County Superintendent.	Math teachers jointly trained with their high school counterparts. Gets any information requested on former students.	Not referenced in interview.

Appendix C – Results from Interviews with Staff Members

District in Nevada County	Number of Schools, Configuration, and Number of Classes at Each Grade	Common Time for Teachers	Teachers Meet by Grade Level/Subject (Horizontal Articulation)	Teachers Meet with Colleagues at Other Grade Levels (Vertical Articulation)	Teachers Meet with Teachers from Other Schools Within the Same District (Horizontal and Vertical Articulation)	Teachers Meet with Teachers from Other Schools Outside the District (Horizontal and Vertical Articulation)	Teachers Meet with Teachers from the High Schools (or visa versa) (Vertical Articulation)	High School Branding
District 8 **CC**	One school TK-8 TK with Kinder One each 1st through 6th 7th and 8th combined	Every Week.	Every Week.	Every Week.	N/A	Every Week with 7th an 8th teachers in a neighboring district.	Mostly in math with multiple high schools but some others though the superintendents.	8th grade day at the high school
District 9 **NC**	Three schools One TK-4 One 5-8 One charterTK-8	Early release once a month	Once a month	Once a month possibly	Once a year	Once in the year sponsored by County Superintendent.	This is not happening.	Articulation in choir and band.
Results		All but one TR 3 Weekly 1 Biweekly 3 Monthly	All but one TR 3 Weekly 2 Biweekly 2 Monthly	1 ELA adoption 1 Weekly 1 Biweekly 2 Monthly	1 every 6 wks 2 Biweekly 1 Yearly	6 Yearly 1 Weekly 7/8 2 Math Adoption	1 Math a lot 2 Math min 3 None 1 Minimal 1 Too inconsistent (math)	1 8th grade day 4 None 1 Choir/Band 1 "Futures" Program

Interviews with the principals of BR and former principal of Nu told the story of the high schools adopting two different pathways for mathematics. Principals wanted a single pathway and chose the integrated pathway and were backed by the district curriculum committee but the superintendent chose to overrule those bodies and allowed the math department at NU t vote to keep the traditional approach and was backed by the Board of Trustees. Both principals verified this as well as a few superintendent of elementary districts spoke t the difficulty of preparing students for mathematics due to this situation

Appendix D

RESULTS 2016 - Two comprehensive high schools in NJUHSD

English Language Arts Literacy	NUHS	BRHS	Mathematics	NUHS	BRHS
Number of Students	356	176	Number of Students	356	176
Number Tested	324	166	Number Tested	324	163
Number Scored	324	166	Number Scored	323	161
Overall			**Overall**		
Standard Exceeded	33%	48%	Standard Exceeded	21%	11%
Standard Met	37%	37%	Standard Met	25%	29%
Standard Nearly Met	18%	11%	Standard Nearly Met	28%	37%
Standard Not Met	11%	5%	Standard Not Met	26%	24%
Reading			**Concepts & Procedures**		
Above Standard	44%	52%	Above Standard	31%	19%
Near Standard	43%	41%	Near Standard	36%	45%
Below Standard	13%	7%	Below Standard	33%	36%
Writing			**Problem Solving and Modeling & Data Analysis**		
Above Standard	39%	55%	Above Standard	27%	20%
Near Standard	47%	36%	Near Standard	51%	60%
Below Standard	14%	9%	Below Standard	22%	20%
Listening			**Communicating Reasoning**		
Above Standard	31%	36%	Above Standard	24%	17%
Near Standard	57%	58%	Near Standard	57%	65%
Below Standard	12%	5%	Below Standard	19%	19%
Research/Inquiry					
Above Standard	41%	59%			
Near Standard	48%	36%			
Below Standard	11%	5%			

Source: caaspp.cde.ca.gov