



DIVISION OF EDUCATION

Academic Program Review

May 2021

Overview of Programs in Secondary Education

The Department of Secondary Education comprises 3 secondary education programs. The first two are teacher education programs that lead to bachelor degrees in science: one in Secondary Education - Broadfield Science, the other in Secondary Education - Mathematics. The third program within the department is the STEM Academy, a secondary education bridge program that serves junior and senior high school students from local school districts.

The math and science education programs offered at SKC are unique programs for Tribal colleges. Of the 35 accredited Tribal colleges, only 3 offer bachelor's degree programs in secondary science or math education. On the Flathead Reservation and across the nation, American Indian [AI] students experience opportunity gaps in math and science K12 classrooms. In local schools, a majority of AI students do not test proficient in math and science. These gaps exist because math and science are taught in ways that ask AI students to check their identities at the math and science classroom doors. There are but a handful of Native math and science teachers on this reservation. A majority are graduates of our programs. Our math and science education programs meet a critical need for youth on this reservation.

Both of the teacher education programs in the department are accredited by the Montana Office of Public Instruction. Our last accreditation visit was in 2017 during which both programs underwent externally validated examinations.

Students who complete either program are recommended for state teacher licensure. Both programs also address a critical need for secondary science and math teachers on the Flathead Reservation [and across the state], especially those who are Tribal members or Tribal descendants.

History of Program Development in Secondary Education

The Bachelor's of Science in Secondary Science Education [BSSE] was the first academic program in the department. It was initiated in 2009 with funding from the National Science Foundation [NSF] Tribal Colleges & Universities Program [TCUP] award. The Bachelor's of Science in Secondary Education Mathematics [BSSEM] program was initiated in 2013 also with funds from an NSF TCUP award. Both programs are part of the Division of Education and are housed in the Evelyn Stevenson Building.

The STEM Academy Bridge Program was initiated in 2018 with funds from the National Institute of Health [NIH] Science Education Partnership [SEPA] award. Mary Larson is Program Director which is housed in the Louie Caye Sr. Building.

Overview of Major Changes in Secondary Education Degrees and Programs

In 2018 the three programs were formally consolidated into the Department of Secondary. While both the science and math programs were always part of the DOE, they operated as fairly independently from one another. The Secondary Education department is one of three departments in the DOE which also includes the Elementary Education and Early Childhood education programs. The STEM Academy program was subsequently added to the department later in 2018 formalizing the department's current structure.

Changes In Facilities Prior to 2018 the BSSE program was housed in the Pete Beaverhead Building which included a resource room for the director and staff, a student study room for BSSE students, and storage rooms for program supplies. In 2018 during the program consolidation mentioned above, the BSSE program was relocated to the Stevenson Building which provides current facilities for the program. Another change in facilities coincided with the initiation of the STEM Academy in 2018 which occupied the Louis Caye Sr. Building.

Change in Staffing

- In November of 2017 Dr. Wren Walker Robbins was hired to take over to direct the secondary science program. Regina Sievert, the former director, accepted a rotating Program Officer position at the NSF and temporarily relocated to Washington D.C..
- In August 2018 Mary Larson was hired to direct the STEM Academy program. Mary assumed control of the program when Regina Sievert relocated to Washington D.C..
- In September of 2018 Dr. Heather Bleecker was hired to replace Terry Souhrada as director of the Secondary Math program. Terry retired from the college in the spring of 2018.

- In December of 2018 Debbie Bell was hired as a half-time Program Coordinator within the Secondary Education Department. Debbie shares another half-time position within the DOE so is a full-time employee at the college.

Changes in Grant Funding

In 2018 the department received a Robert Noyce Scholarship award from the National Science Foundation [FAIN# 1758498] in the amount of \$1,999,824.00. The grant provides funds for tuition, fees, and books for junior and senior level secondary math and science students. Students also receive stipends to support their living expenses. The grant also provides two months salary support for the grant PI [Walker Robbins], one month salary for the grant Co-PI [Polly Dupuis], and a half-time salary for a program coordinator [Debbie Bell]. In addition, the grant provides funds to support three summer Noyce interns who provide adventure STEM experiences for students across the reservation.

Access to Higher Education Opportunities for American Indians

Student Data, Secondary Science Program

Table 1 below is an analysis of enrollment data provided by SKC's Office of Institutional Effectiveness [OIE] for the secondary science education program for years 2016 - 2019. In the fall of 2016, the program served 11 secondary science students which are consistent with data from previous years [2010 -2015]. In the fall of 2017 enrollment declined and has remained at a lower yet steady number averaging 4 students per program year. The lower enrollment is offset by significantly higher retention rates for 2017 - 2019 demonstrating that while fewer students entered the program, those who did were more likely to persist and graduate.

A majority of students in the program have been and continue to be predominantly Native American from the Flathead reservation with one or two students from other tribes. Overall students continue to be enrolled full-time in the program, divided fairly evenly between genders, and mid-thirties in age.

Secondary Science Program Enrollment Data Provided by SKC OIC

	Fall 2016	Fall 2017	Fall 2018	Fall 2019
Total Students	11	4	3	5
Ethnicity				
American Indian	6	3	2	2
First Generation Descendent	2	1	1	1
Second Generation Descendent or Canadian First Nations	2	0	0	0

Hispanic	0	0	0	0
Black	0	0	0	0
Asian/Pacific Island	0	0	0	0
White	1	0	0	2
Gender				
Female	6	2	1	2
Male	5	2	2	3
Full Time/Part Time				
Full Time	10	4	3	5
Part Time	1	0	0	0
Other Data				
Average Age	30	34	33	36
First Generation College Student	3	2	2	2
Permanent Residence				
Flathead Reservation	8	2	2	4
Other Reservation	2	1	1	1
Montana, not reservation	0	0	0	0
Out of State, not reservation	0	0	0	0
Out of State, Reservation	1	1	0	0
Unknown	0	0	0	0

Graduation Rates, Secondary Science Program

The tables below provide an analysis of graduation and retention data for the science and math program. Data was provided by the SKC OIE.

As previously mentioned, there was a shift in enrollment and retention rates that occurred in 2017. That year the program showed lower enrollment and higher retention. Graduation rates and fall-to-fall persistence rates for the Secondary Science program since 2017 are equivalent to other SKC Bachelor Degree programs at SKC.

Secondary Science Program Graduation Data Provided by SKC OIC

	2015-2016	2016-2017	2017-2018	2018-2019
Total # Graduates	0	1	2	3
Ethnicity				
Enrolled/First Generation		0	0	3
Non-Indian		1	2	0

Gender				
Male		0	1	2
Female		1	1	1

Secondary Science Program Fall to Fall Persistence Data Provided by SKC OIC

	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
All Students, fall Quarter	12	11	4	3	5
Continuing following fall	5	3	2	0	3
Graduated	0	1	1	3	0
Enrolled at SKC following fall, but changed majors	1	1	1	0	0
Continued to Bachelor program without graduating	0	0	0	0	0
Persistence (with chg majors)	50.00%	45.45%	75.00%	100.00%	60.00%
Persistence (wo chg majors)	41.67%	36.36%	50.00%	100.00%	60.00%

Student Data, Secondary Math Program

The Table below is an analysis of enrollment data provided by SKC's Office of Institutional Effectiveness [OIE] for the BSSEM program for program years 2016 - 2019. On average the BSSEM program serves 3 students. As the BSSEM has had enrollment as high as 8 students, student annual enrollment is lower given students have unenrolled from the program due to commuting time, lack of housing, and COVID-19 modified course offerings.

About half of the students in the BSSEM program are Native American from the Flathead reservation and other tribal communities mostly in Montana. The non-native students in the program are also primarily from the local area. Overall the BSSEM program has a large percentage of first generation college students.

Secondary Math Program Enrollment Data Provided by SKC OIC

	Fall 2016	Fall 2017	Fall 2018	Fall 2019
Total Students	2	4	4	3
Ethnicity				
American Indian	1	2	2	1
First Generation Descendent	0	0	0	0
Second Generation Descendent or Canadian First	0	0	0	0

Nations				
Hispanic	0	0	0	0
Black	0	0	0	0
Asian/Pacific Island	0	0	0	0
White	1	2	2	2
Gender				
Female	2	2	2	0
Male	0	2	2	3
Full Time/Part Time				
Full Time	2	4	4	2
Part Time	0	0	0	1
Other Data				
Average Age	42	37	25	34
First Generation College Student	2	3	4	2
Permanent Residence				
Flathead Reservation	2	2	3	1
Other Reservation	0	1	1	1
Montana, not reservation	0	0	0	1
Out of State, not reservation	0	1	0	0
Out of State, Reservation	0	0	0	0
Unknown	0	0	0	0

Graduation Rates, Secondary Math Program

The tables below provide an analysis of graduation and retention data for the math program provided by the SKC OIE.

The initial BSSEM program enrollment has graduated 1 student in 2016-2017, 2 students in 2018-2019, and 2 students in 2018-2019. This shows the potential for current and future success in the program. In 2018-2019 one student completed teacher licensure in secondary mathematics not shown in the data provided as the student did not complete a degree.

Secondary Math Program Graduation Data Provided by SKC OIC

	2015-2016	2016-2017	2017-2018	2018-2019
Total # Graduates	0	1	2	2
Ethnicity				
Enrolled/First Generation		1	1	2
Non Indian		0	1	0
Gender				
Male		0	0	0
Female		1	2	2

Secondary Math Program Fall to Fall Persistence Data Provided by SKC OIC

	2015-2016	2016-2017	2017-2018	2018-2019
All Students, fall Quarter	1	2	4	4
Continuing following fall	1	0	1	1
Graduated	0	1	2	2
Enrolled at SKC following fall, but changed majors	0	0	0	0
Continued to Bachelor program without graduating	0	0	0	0
Persistence (with chg majors)	100.00%	50.00%	75.00%	75.00%
Persistence (wo chg majors)	100.00%	50.00%	75.00%	75.00%

Department Support of Student Retention

Retention rates in both the science and math programs are similar to or above those of other bachelor's degree programs at SKC. To support retention, the department provides the following activities.

Strong Faculty/Staff Relationships Because both programs are small in terms of the number of students, faculty build strong connections with all our students. Faculty and staff meet with students quarterly to advise them and we have an open-door policy and encourage our students to visit with us regularly.

Transition to Professional Teaching (TPT) Seminar Each fall, junior-level students begin working in local schools with greater frequency. To provide support for these students to adjust to the expectations and realities of public education, the Division provides 2 to 3 evening seminars co-facilitated by current professional educators. This helps pre-service candidates transition smoothly into the more advanced stages of their teacher preparation program, and gives them exposure to networks of teachers and administrators with whom they may later work.

Scholarships and Internships are provided by the department to financially support students in their junior and senior years in the programs.

Flathead Educator Support Hub [FRESH] New Teacher Support Program The Division of Education created FRESH to bring new teachers together with mentor teachers for a monthly dinner to strategize ways to support local educators with the challenges they face in their induction year and beyond. Although the purpose of FRESH has been to support employed teachers, program faculty have invited pre-service teacher candidates in its programs to attend as well. Besides offering useful tips to teacher success, this also conveys to junior and senior-level candidates the concept that the Division will continue to support its graduates even after graduation.

Student Placement Data

Both programs in the department are professional degree granting programs that produce licensed secondary [middle/high school] teachers. Because of this, our programs include a substantial amount of practicum experiences and internship opportunities. In these experiences, students spend hundreds of hours in classrooms in local school districts. These experiences offer our students many opportunities to build career awareness and professional connections with potential employers.

During the past 4 years, all of our graduates have gained teaching positions [10 graduates] within public school districts or have continued to pursue further educational opportunities [1 student]. One math student has gone on to complete a Master's Degree in Education and two others are currently enrolled in Master's Degree programs.

Quality Education for Workforce and Transfer Preparation

Program Mission and Goals

Both programs are also grounded in the Division of Education's Mission. As such both programs provide support for our teacher candidates in making connections between their personal

development and their professional growth, in meaningful integration of cultural learning, and collaborative efforts towards the larger good for local and global communities. All programs in the Division meet three overarching purposes. These include:

- Developing education degrees that are culturally responsive to the teacher candidates within the community served by SKC.
- Preparing candidates to be culturally competent and skilled educators.
- Preparing candidates to provide a culturally responsive curriculum to Indigenous Children as well as other diverse learners.
- Providing candidates with up to date, research-based knowledge and skills that will allow them to support their own students' college and career readiness.

Executive Summary of Direct Assessment Results

Overview of The Department's Assessment of Program Effectiveness

Our Programs undergo continuous and extensive evaluation to ensure their ongoing quality. The evaluation program utilizes student learning outcomes that reflect the colleges 4Cs as well as 10 additional teacher professional standards developed by the Interstate Teacher Assessment & Support Consortium [InTASC] used to evaluate teacher preparation programs in the state. ***Please see the SKC Division of Education Data Analysis Report for 2014 -2017 amended to the end of this report for a detailed description of our program assessment and evaluation program.***

Programs are evaluated using artifacts collected in student Teacher Education [TEP] Portfolios at three critical stages in the programs.

TEP I/Stage 1 occurs immediately before students are formally accepted into the teacher education program. It evaluates student outcomes produced by students in their freshman and sophomore courses collected in their TEP I portfolios. Many of these artifacts are produced by students in the STEM courses they take as they develop their science or math content knowledge.

TEP II/Stage 2 occurs just before student teaching [at the end of the penultimate quarter in the program]. This stage evaluates the effectiveness of our programs to prepare pre-service teachers who have the skills and knowledge to complete their student teaching practicum.

TEP III/Stage 3 occurs at the end of students' programs after they have completed their student teaching. This stage evaluates artifacts exclusively produced by pre-service teachers during their student teaching practicum.

4 Cs Student Learning Outcomes Embedded In Course Syllabi For Evaluation

The department weaves 4 Cs objectives into all its courses and evaluates them using student artifacts in their TEP portfolios. Students also participate in the TPT Seminar Introduces four standards of professional disposition, which are built on SKC's "4Cs": (a) Culture, Tolerance, and Diversity, (b) Communication Skills, (c) Citizenship and Community Interactions (d) Critical Thinking, Reflection, and Self Development.

The 2017 Montana State Accreditation Report emphasized the presence of cultural understanding built into each course; embedding Indian Education for All (IEFA) as part of the overall program.

Faculty in the program evaluate all student portfolios to ensure that our programs are meeting the mission and goals of the Division of Education and the college. The outcomes evaluation indicates that both the math and science programs demonstrate a high level of effectiveness based on our outcomes assessment program. See the SKC Division of Education Evaluation Report amended to the end of this report for details about how we ensure a high level of effectiveness of our programs.

Programmatic Changes Made as A Result of Assessment Data

Three changes have been made in our programs in response to assessment data. These include: 1] increasing the number of language and culture courses in our programs that support our teacher candidates' ability to integrate Indigenous language and culture into their instruction, 2] providing more support for teacher candidates during their student teaching practicums, and 3] enriching coursework to supports our candidates' ability to differentiate their instruction based on formative assessments of their students. The three changes were undertaken based on faculty evaluation of TEP portfolio artifacts which suggested the program changes were needed. Faculty will continue to monitor outcomes data to evaluate that the changes made improved outcomes.

Additional Feedback About Our Programs from Local School District Leadership/Educators/Alumni

The department also utilizes feedback provided by the Division of Education Advisory Board to guide our ongoing program development. The advisory board generally meets once a term and includes community members, local school K12 district leadership [superintendents, principles, and curriculum coordinators], K12 classroom teachers, and department alumni. Below is some of the feedback we've received from the advisory board that directly concern our programs

Trends, Opportunities, & Challenges in Secondary Education on the Flathead Reservation

- Growing local teachers is a benefit to Secondary Education as they know the area, resources, culture, traditions.
- Would be nice to build awareness within local school districts of the seniors in the program.
- Recruitment efforts need to provide strong incentives

Opportunities for Collaboration to Improve Secondary ED

- Have our students who visit classrooms also visit administrators to begin building relationships with school leadership.
- Secondary students can gain experience from substitute teaching (partial days are okay)
- Tribal Community appreciate the program

Review of Secondary Education's Math & Science Education Curriculum at SKC returned these comments and recommendations from the Advisory Board

- Calculus is offered in the fall of the first year - the advisory board wondered if the students were ready and were told by Heather and Polly that about 50% were ready to go, if they were not, the program does have room to allow them to keep moving forward with the required general education courses.
- The Secondary Science program includes a nice, diverse variety of courses.
- Student practicum/observations come later in the program (end of the 2nd year) and the group discussed why that happens.

Programmatic Changes as A Result of Feedback from Advisory Board

School administrators who are members of the advisory board strongly suggested that it would be beneficial for teacher candidates to build robust relationships with schools during their teacher education programs, especially with building principals. To respond to this feedback, we have begun to: 1] provide extended internship opportunities for our teacher candidates, 2] develop a showcase for senior students to share their passions, aspirations, and teaching skills with community, and, 3] we've worked directly with school administrators to increase the opportunities for our teacher candidates to substitute teach in in local school districts.

Faculty Data

Faculty Effectiveness

The department has two faculty members who support our teacher education programs. Dr. Wren Walker Robbins who is the Department Chair and Secondary Science Program Director, and Dr. Heather Bleecker who serves as the Secondary Math Program Director. Both faculty teach courses for the department, general education courses, and service courses for the STEM programs. Both faculty are highly qualified for these positions. Please see Curriculum Vitae of both faculty at the end of this report.

Walker Robbins

Dr. Walker Robbins incorporates critical thinking and decision making into her upper-level courses that stretch the science teacher candidates to be leaders in their field not only in scholarship also in the way that they think about their profession. She encourages them to incorporate thoughtful stewardship responsibilities for local, regional, national, and global issues. She builds strong relationships with her students and does so by creating a classroom environment that engages learners and requires deeper digging through her questioning techniques. Her classroom provides safety for discourse among students and between her and

her students. Student discourse runs freely in asking probing questions for clarifications from Wren and from peers.

Bleecker

Dr. Bleecker has over fifteen years of experience in mathematics education and is a National Board Certified Teacher in Adolescent and Young Adulthood Mathematics. In 2017 Dr. Bleecker served as a Postdoctoral Researcher at the University of Michigan studying Geometry instruction at the undergraduate level for instructors preparing future secondary mathematics teachers. Her research interests include studying mathematics teachers' perceptions of teaching competencies, growth mindset, the mathematics of renewable energy, and Indigenous research methodologies.

Faculty Contributions to Institutional Mission

Walker Robbins

Dr. Walker Robbins serves throughout the SKC campus in many ways. Here is a list of committees that she participates in or has participated.

- Chair, Secondary Education Department, 2018 – current.
- Conducted Needs Assessment for a Master's Degree program in the Division of Education at SKC (2019-20). This is being used to move forward on the Division of Education's proposed programs.
- Member of the Freshman Seminar [IDST 101] Steering Committee 2018 – present.
- Coordinated the NSF funded COSMOS project that provided support for SKC STEM students to explore graduate programs at Montana Tech, Montana State University, and the University of Montana.
- Member, SKC Faculty Professional Development Committee, 2019 – present.
- Member, Hydrology Review Committee, 2020.
- Chair, SKC General Education Sub-committee on Cultural Understandings, 2019.
- Secretary, Flathead Tribal Education Committee, 2017 – current.
- Spirit of Many Colors [SOMC] Faculty Club Advisor 2019 -present.

Promotion of Cultural Understanding

Dr. Walker Robbins is passionate about revitalizing and sustaining Native language and culture through the development and improvements in the campus-wide curriculum. She serves on numerous committees and works with other faculty on smaller projects that align with the mission of SKC. Here is a list of her recent work:

- Chair, SKC General Education Sub-committee on Cultural Understandings, 2019
- Current collaboration with Montana State University and the Flathead Tribal Education to infuse Salish & Kootenai language into STEM Kits that will be distributed to youth across the Flathead Reservation.
- Co-lead Indigenous Research Methodology Reading Club within the Division of Education.

- Collaboration with Michael Munson and Tim Ryan on the development NLTE 231 Indigenous STEM Education for DLL and Immersion Classrooms Course at SKC.

Scholarship & Creativity

Dr. Walker Robbins not only consistently works on developing grant proposals that improve the education programs but was recently published in the Nation Magazine (October, 2020) with her article entitled, As a Young Native American, I Internalized this Country's Homophobia. In addition, she has presented either with other faculty or on her own in the following webinars and workshops:

- Diversiform Storytelling: An Indigenous Pedagogical Model that Invites Diverse Voices into Learning, Webinar, Teaching Sustainable Food Systems, October 22, 2020.
- SKC New Faculty Workshop, Engaging & Mentoring Indigenous Students, January 1st, 2019.
- Integrating STEM, Culture, and Student Identity to Enhance Engagement and Community Connections, Presentation at NSF NOYCE Annual Summit, July 10th, 2019.
- National Science Foundation Grant Review Panel, October 11th, 2018

Heather Bleecker

Dr. Bleecker has published three articles since working at SKC focused on secondary mathematics education. This continued research is collaborative with faculty at the University of South Dakota and the University of Michigan. She regularly attends and presents at professional development workshops, conferences, and meetings. In 2021, she presented at the National Council for Teachers of Mathematics Annual Meeting along with two SKC undergraduate students in the education department.

She participates in College Committees and service to the community. Below is a list of a few examples.

- Co-developed curriculum for SKC developmental math courses.
- Hosts Math Circles for SKC faculty and local K-12 LEA teachers.
- Hosts Math Summer Workshop for SKC faculty and local K-12 teachers.
- Development of STEM kits for local teacher use.

Scholarship & Creativity

Dr. Bleecker continuously seeks grant funding opportunities for the secondary education programs as well as the mathematics department. In 2020, she was awarded a Montana NSF EPSCoR grant to study solar energy. Two undergraduate students and one STEM academy high school student completed a research experience studying local teacher STEM needs and writing STEM curriculum for local 5-10 grade teachers under the supervision of Dr. Bleecker.

Dr. Bleecker has been an active learner at SKC taking courses to further the development of cultural understanding and make connections to student perspectives and needs. She has completed Star Quilting, Salish Language I, Unmanned Aircraft Courses, and Intro to 3D printing. She has served on the curriculum committee, Powwow committee, and departmental

committees (TEP, Secondary Education, Mathematics). Dr. Bleecker is a member of the Carnegie Math Pathways Curriculum team revitalizing cultural curriculum for tribal colleges.

Promotion of Cultural Understanding

Dr. Bleecker participated in the Division of Education Book Study: Applying Indigenous Research Methods to develop knowledge and skills to perpetuate cultural understandings in her teaching and research.

Summary of Secondary Education Programs Strengths

- The mathematics and science education programs are unique programs that meet a critical need in reservation schools. By providing 18 excellent math and science teachers that have enriched local school districts with [mostly Native] teachers who can engage and grow Native students in STEM Classrooms using culturally vitalizing and sustaining education.
- Graduates of the secondary education programs are highly sought-after securing teaching positions on Tribal reservations in MT, ID, WI and/or have continued their educational journey seeking a Master's Degree in STEM disciplines and in Education.
- Faculty in the department are highly qualified and work to support the Mission of the college & the community by teaching departmental courses, developmental courses, general education courses, and service courses [DVSP 078, IDST 101, BIOS 101/102, BIOS 240, MATH 100].

Summary of Challenges for Secondary Education Programs

Increasing our Enrollment

An important but not simple challenge for our programs is increasing the number of students we recruit. Over the period of this report [on average] our enrollment has remained about 9 students/year. Our enrollment reflects similarly low enrollment in secondary math and science education programs across the state [including MSU & UM]. Over the past year we have carried out the following recruiting activities to maintain and increase our enrollment. We have:

- worked with the American Indian graduate center to recruit students nationally,
- developed 2+2 articulation agreements with neighboring Montana tribal and community colleges that include Blackfeet Community College, Chief Dull Knife College, and Flathead Valley Community College,
- created rack cards [flyers] for each of our programs and distributed them widely,
- updated our website making it "recruiting ready,"
- attended virtual tribal college fairs,
- have provided STEM activities in local and regional schools, and
- provided summer internships for SKC freshman and sophomore students interested in teaching.

Despite carrying out all these activities we have not increased our enrollment; this suggests that we need to adopt new strategies to leverage broader support for our programs within SKC, in school districts, and within the broader Tribal communities.

Supporting New Students & Transfer Students in Our Programs

A group of students we have struggled to retain in our programs are students who come from other communities in the state. We have seen these students struggle as they attempt to manage the challenges of relocating to SKC while at the same time tackling rigorous courses and course loads associated with our programs.

To help these students we are restructuring our programs to reduce course loads and working to provide distance learning opportunities that allow them to complete a portion of their degrees from their home communities. This would allow them to complete some courses before they relocate to SKC. It would also allow them to complete practicum experiences in their home communities at the end of their degrees. This would decrease the amount of time they would spend at SKC without the support of their families and communities. The foundations of these hybrid programs will build on already established 2+2 articulation agreements with community and Tribal colleges across the state.

Master's Degree in Curriculum & Instruction in Integrated Indigenous STEM Education

The department is actively working to support efforts in the Division of Education to establish a graduate degree program in integrated Indigenous STEM education. The degree will serve practicing in-service k12 teachers on this reservation and in other Tribal communities to build knowledge and skills to integrate Indigenous language and culture into STEM activities.

Leveraging broader support for our programs, expanding opportunities to help students successfully transfer to SKC from other communities, and helping to establish a graduate are ambitious and challenging goals that will support the ongoing development of our department.

Wren Walker Robbins C.V.

Professional Preparation

1992 -1995 **Ph.D.**, The University of New Mexico, Cell & Tissue Biology
1990 -1992 **M.S.**, The University of New Mexico, Cell & Tissue Biology
1983 -1987 **B.S.**, University of Montana, Billings, Biology

Postdoctoral Fellowships

1997 -1999 The University of New Mexico, Department of Cell Biology & Physiology
1995 -1997 Harvard Medical School, Dept. of Medicine, Massachusetts General Hospital

Professional Experience

2016 – present Chair, Secondary Science Education Salish Kootenai College
2013 – *present* Director, Changing Communities Consulting
2010 – 2016 President, North Star AISES Alliance & Professional Chapter
2014 – 2015 Community Faculty, Metropolitan State University, Department Natural Sciences
2015 – 2015 Advancing Equity in Career & Technical Education, Tech. Working Group, Dep. Ed.
2015 – 2015 Intergovernmental Platform on Biodiversity & Ecosystem Services
2010 – 2013 Project Lead, Professional Development Group, Science Museum of Minnesota
2006 – 2010 Instructor, Native Ways of Knowing Secondary Science, Turtle Mountain Community College
2004 – 2006 Online Faculty, South University
2004 – 2006 Member, Project Kaleidoscope Leadership Initiative
2001 – 2006 Assistant Professor, Dept. Biology, Iona College
2000 – 2001 Faculty, Santa Fe Community College, Santa Fe, New Mexico
2000 – 2001 Biology Teacher, Santa Fe Preparatory School, Santa Fe New Mexico
1999 – 2000 Visiting Assistant Professor, Highlands University, Las Vegas, NM
1997 – 1999 Research Fellow, Department of Cell Biology & Physiology, The University of New Mexico
1995 – 1997 Research Fellow, Department of Medicine, Harvard Medical School, Boston MA
1990 – 1995 Graduate Research Assistant, Dept. Biology, The University of New Mexico, Albq, NM
1987 – 1990 Research Technician, The University of Washington, Seattle WA
1986 – 1987 Research Technician, The Tumor Institute, Swedish Hospital, Seattle, WA

Synergistic Activities:

NSF PI, Noyce Scholarships to Prepare Teachers for Culturally Congruent Science and Mathematics Education, Award #1758498 for \$1,199,824.00.

Design & Development, Weaving Our Communities Together REU program at the University of Minnesota. An organizational partnership between the University of Minnesota, North Star AISES Professional Chapter, and the Gidakiimanaaniwigamig STEM Tribal Culture Camp. The program builds cultural proficiency in the organizations involved and provides research experiences that positively engage and grow Native American students and their communities.

NASA CO-Investigator, NASA Innovations In Climate Change Education–Tribal [NICE-T] Award, \$1,009,807.00.

Bush Foundation, Collaborator, Community Innovations Grant Award \$21,000, Women Elder's Nibi/Mni Council

NSF Co-PI, Peer Alliance for Gender Equity (PAGE) Extension Service, National Supplemental Award (HRD-1102903), PI: Chatman, CoPI's: Strauss – SMM, 2012-2016; \$250,386.

NSF Co-PI, NSF – Peer Alliance for Gender Equity (PAGE) Extension Service (HRD- 1102903), PI: Chatman, CoPI's: Strauss, Walker Robbins – SMM, 2011-2016; \$2,499,555

Design & Development, Native Ways of Knowing Secondary Science Program, Turtle Mountain Community College, a secondary science program for pre-service Native Teachers integrating Native Perspectives into STEM

Selected Invited Papers & Presentations

- Walker Robbins, W., Engaging & Mentoring Indigenous Students, SKC Winter Faculty/Staff In-Service, January 31, 2020.
- Walker Robbins, W., Diversiform Storytelling: An Indigenous Pedagogical Model that Invites Diverse Voices Into Learning, Workshop for The Sustainable Food Systems Community of Practice, October 26th, 2020.
- Walker Robbins, W.J., Carlson, T.E., Sky Woman: Using Diversiform Storytelling to Deconstruct Single Story and Create Inclusive Learning Spaces, Minnesota Education Equity Partnership Conference, Minneapolis, MN, February 25th, 2016
- Walker Robbins, W.J., Bellcourt, M., Greensky, Z.N., Butterfield, A.J., Iyengar, S., Grossman, J., Building Multi-organizational Partnerships that help Native Students Rise & Thrive, AISES National Meeting, Phoenix AZ, November 19-21, 2015
- Walker Robbins, W.J., Wholeness As Medicine To Undo the Infrastructure of Oppression, Keynote Address Midwest LGBTQ Education Summit, Chicago IL, November 7-8, 2015.
- Walker Robbins, W.J., Story & Storytelling to Invite Diverse Identities Into Our Science, Technology, Engineering, and Mathematics [STEM] Classes, Presentation at Midwest LGBTQ Education Summit, Chicago IL, November 7-8, 2015.
- Walker Robbins, W.J., Foundations for Increased Organizational & Programmatic Diversity, Workshop at the Destination Imagination Board of Directors Retreat, October 23rd, 2015
- Walker Robbins, W.J., Meeting the Needs of Native Women in STEM, NAPE online Webinar, February 25, 2014.
- Walker Robbins, W.J., Meeting the Needs of Native American Students, Workshop at National Alliance for Partnerships In Equity [NAPE] Professional Development Institute, April 11, 2014
- Walker Robbins, W.J., Panel Moderator, Under the Lens: Questioning the Culture of Science, University of Minnesota, November 15, 2013
- Walker Robbins, W.J., Keynote Address, Working & Teaching Across Cultures: Inviting Culture into your Classes, Metropolitan State University Spring Faculty Conference, May, 2012.
- Walker Robbins, W.J., Maxon, J.A., Workshop, Working & Teaching Across Cultures: Inviting Culture into your Classes, Metropolitan State University Spring Faculty Conference, May, 2012.
- Walker Robbins, W.J., Strauss, E.V., Equity in K-16 STEM Education: Transforming Ideology and Practice, ASTE 2011 International Conference, Minneapolis, MN, January 2011.
- Chatman, L., Sandland, T.O., Strauss, E.V., Walker Robbins, W.J., The Essence of the Leech: A Coming of Age Story About the Rewards of Teaching and Learning Across Cultural Boundaries. Annual Meeting, National Association for Multicultural Education (NAME), Chicago IL, 2011.
- Walker Robbins, W.J., A Case for High Context Science Instruction: Inviting Culture Into Your Classes, The Collaboration Conference, February 2009.
- Walker Robbins, W.J., Culturally Responsive Teaching, 38th Annual North Dakota Indian Education Conference, May 2008.
- Robbins, J.R. Science students confound the principle of evolution with the theory of natural selection. Paper presented at The National Meeting of The Association for Research In Science Teaching (NARST) Dallas, TX, April 2005
- Robbins, J.R. Science students confound the principle of evolution with the theory of natural selection. Paper presented at the North East Regional Meeting for the Association for the Education of Teachers In Science, Syracuse University, Syracuse, NY October 2004
- Robbins, J.R., Goldring, M.B.: Human Articular and embryonic Chondrocytes Immortalized with tsSV40-Tag Express differentiated phenotypes in Defined Conditions. East Coast Connective Tissue Society Meeting, March 1997.

Honors & Awards

- Kappa Delta Award for outstanding research, Am Acad. of Orthopedic Surgeons, 1996
- Kappa Delta Award for outstanding research, Am Acad. of Orthopedic Surgeons, 1991
- Passed With Distinction, Doctoral Exams, University of New Mexico, 1995

Educational Associations

2011 – present National Indian Education Association
2004 – 2006 Project Kaleidoscope (PKAL) Leadership Initiative
2001 – 2006 National Association for Research In Science Teaching (NARST)
2001 – 2006 Association for The Education of Teachers In Science (AETS)
1999 – 2000 Center for Excellence in Teacher Preparation (CTEP)
1999 – 2000 Math & Science Council, Highlands University

Scientific Associations

American Indians in Science and Engineering Society (AISES)
Society for the Advancement of Chicanos and Native Americans In Science (SACNAS)
American Association for the Advancement of Science (AAAS)

Selected Publications (published under prior name: Robbins, J.R)

Chatman, E.S., Sandland, T.O., Strauss, E.V., Walker Robbins, W., Professional Development for Access and Equity in STEM Education: Changing Teacher and Leader Mindsets, Proceedings of the National Association of Research in Science Teaching (NARST), Pittsburgh, PA, 2014
Robbins, J.R., Science Students Confound the Principle of Evolution with the Theory of Natural Selection. Proceedings of the National Association of Research in Science Teaching (NARST), Dallas, April 2005
Robbins, J.R., Thomas, B., Tan L., Choy, B., Arbiser J.L., Goldring M.B., Immortalized human adult articular chondrocytes maintain cartilage-specific phenotype and responses to interleukin-1 β Arthritis & Rheumatism 43:2189-2201, 2000
Kokenyesi R, Tan L, Robbins J.R, Goldring M.B., Proteoglycan production by immortalized human chondrocyte cell lines cultured under conditions that promote expression of the differentiated phenotype. Arch Biochem Biophys 383:79-90, 2000
Robbins, J.R., McGuire, P.G., Wehrle-Haller, B., Rogers, S.L., Diminished Matrix Metalloproteinase 2 (MMP-2) In Ectomesenchyme-derived Tissues of the Patch Mutant Mouse: Regulation of MMP-2 by PDGF and Effects on Mesenchymal Cell Migration. Developmental Biology 15:255-263, 1999
Robbins, J.R., Goldring, M.B., Methods for Preparation of Immortalized Human Chondrocyte Cell Lines. In: Methods in Molecular Medicine: Methods in Tissue Engineering (Ed. J.R. Morgan and M.L. Yarmush) Humana Press Inc., Totowa, NJ 1999.
Chansky, H., Robbins, J.R., Cha, S., Raskind, W.H., Conrad, E.U., Sandell, L.J., Expression of Cartilage Extracellular Matrix and Potential Regulatory Genes in a New Human Chondrosarcoma Cell Line. J. Orthopedic Res. 16:521-530, 1999.
Robbins, J.R., Evanko, S.P., and Vogel K.G., Mechanical Loading and TGF-B Regulate Proteoglycan Synthesis in Tendon. Arch. Biochem. And Biophys. 342:303 - 211, 1997
Robbins, J.R., Vogel, K.G., Regional Expression of mRNA for Proteoglycan and Collagen In Tendon. Eur. J. Cell Biol. 64:264 - 270, 1994.
Sandell, L.J., Morris, N., Robbins, J.R., Goldring, M.B.: Alternatively Spliced Type II Procollagen mRNAs Define Distinct Populations of Cells During Vertebral Development: Differential Expression of the Amino-Propeptide. J. Cell Biol. 114:1307 – 1991

CURRICULUM VITAE

Heather Bleecker, EdD, NBCT

EDUCATION

Doctor of Education in Curriculum and Instruction **May**
2017

University of South Dakota, Vermillion, SD

National Board Certified Teacher **Nov**
2012

Adolescence and Young Adulthood Mathematics

Masters of Arts in Education in Curriculum and Instruction **May**
2008

California State University, Long Beach, CA (CSULB)

Bachelor of Arts in Liberal Studies with a focus in Mathematics **Dec**
2005

California State University, Long Beach, CA (CSULB)

TEACHING EXPERIENCE

Salish Kootenai College Faculty **Sept 2018-**
Present

Pablo, Montana

- Director of Secondary Mathematics Education Program
- Instructor in Mathematics (Online, Hybrid, Face-to-face)
- Instructor in Education (Online, Hybrid, Face-to-face)

University of South Dakota Adjunct Faculty **2018**

Vermillion, South Dakota

- Online Instructor
- Foundations of Statistics Instructor - graduate level

High School Mathematics Instructor **2012-**
2015

Polson School District, Polson, MT

- Developed Standards-based assessments and performance tasks
- Active member of the district math curriculum team
- Advisor for National Honor Society
- Professional Learning Community (PLC) lead teacher

**High School Mathematics Instructor
2012**

2006-

Long Beach Unified School District, Long Beach, CA

- Engineering Small Learning Community (SLC) lead teacher
- Advanced Placement Statistics instructor
- Advancement Via Individual Determination (AVID) demonstration classroom
- GEAR UP summer school instructor
- Women's cross country and track coach

CURRICULUM DEVELOPMENT EXPERIENCE

Carnegie Math Pathways Tribal Colleges & Universities (TCU) curriculum writer	01/19- Present
HP Prime Graphing Calculator Lesson Developer	04/15- Present
Math Curriculum Team Leader, Polson School District	08/12-06/15
Math Circle Curriculum Leader for K-8 and Pre-service Teachers	08/12-06/15
Polson Curriculum Specialist 7-12 Common Core Standards Mathematics	06/14-06/15
Montana OPI Indian Education Math Lesson Pilot/Lesson Editor	08/13-06/14
Math in Transportation Summer Institute and Curriculum Development Math Teacher Part.	06/12
ConnectEd CA Multiple Pathways District Initiative Team Member	06/09-06/12
Geometry in Construction Summer Institute Math Teacher Participant	06/11
GE (general electric) Foundation Developing Futures in Education Conference	07/10
California High School Exit Exam (CAHSEE) math curriculum developer and instructor	01/05-12/10

RESEARCH EXPERIENCE

**Research Associate Project Manager
2018**

Nov 2017-Aug

University of Michigan, Ann Arbor, MI

- Manager of the GeT Support project an NSF funded grant
- Developing, implementing, and investigating the instructional improvement of the Geometry for Teachers course.
- Recruiting and managing participants
- Preparing data and supporting data analysis
- Planning, convening, facilitating, monitoring participation, and documenting meetings and events

Graduate Research Assistant**2016-2017***School of Education, University of South Dakota, Vermillion, SD*

- Conducted data analysis and completed narrative reports for the Network for Excellence in Teaching (NExT) Common Metrics Project funded by the Bush Foundation

Doctoral Student Researcher**2016-2017***Science of Learning Research Team, University of South Dakota, Vermillion, SD*

- Gathered local business support for the science of learning research projects
- Video and audio data collection and analysis
- Quantitative analysis of Technological Pedagogical Content Knowledge (TPACK) lesson plan data for inter-rater reliability

**Doctoral Student Researcher
2017****2015-***Department of Curriculum and Instruction, University of South Dakota, Vermillion, SD*

- Completed quantitative and qualitative data collection and analysis for a dissertation titled "South Dakota Middle School Mathematics Teachers' Perceptions of Teaching Competencies"
- Completed qualitative data collection and analysis for a poster presentation titled "Becoming a Mathematics Mentor in the Middle School: A Case Study"

PUBLICATIONS

Mourlam, D., Chesnut, S. R., & Bleecker, H. (2021). Exploring preservice teacher self-reported and enacted TPACK after participating in a learning activity types short course. *Australasian Journal of Educational Technology*, 37(3), 152-169. <https://doi.org/10.14742/ajet.6310>

Milewski, A., Herbst, P., **Bleecker, H.**, Ion, M. (2019). Preparing Teachers for Secondary Geometry: Understanding the Tensions in Teaching. *Paper presented at the Annual Meeting of the Association of Mathematics Teacher Education (AMTE), January 2018, Houston, TX.*

Milewski, A., Ion, M., Herbst, P., Shultz, M., Ko, I., **Bleecker, H.** (2019). Tensions in teaching mathematics to future teachers: Understanding the practice of undergraduate mathematics instructors. *Paper presented at the Annual Meeting of the American Educational Research Association, Division K-Teaching and Teacher Education, April 2019, Toronto, CANADA.*

Herbst, P., Milewski, A.M., Ion, M., & **Bleecker, H.** (2018). What influences do instructors of the geometry for teachers course need to contend with? In T.E. Hodges, G. J. Roy, & A.M.

Tyminski (Eds.) *Proceedings of the Annual Meeting of the PME-NA, October 2018*. Greenville, South Carolina.

Bleecker, H. A. (2017). *South Dakota Middle School Mathematics Teachers' Perceptions of Teaching Competencies* (Doctoral dissertation, University of South Dakota).

Mourlam, D., & **Bleecker, H.** (2017). Early Career Teacher Candidate TPACK Development: Implementation of a Learning Activity Types Short Course. In P. Resta & S. Smith (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 2404-2409).

Austin, TX, United States: Association for the Advancement of Computing in Education (AACE). Newland, L.A., Mourlam, D., Strouse, G., Shepherd, D.D., Lin, H., Hanson, C., Cho, M., & **Bleecker, H.** (2017, June). Children's perspectives of the quality of their school life and well-being. Paper presented at The Quality of School Life: Multidisciplinary International Symposium, Nantes, France.

Bleecker, H. (2016, April). System of Linear and Quadratic Equations with HP Prime. HP Prime Forum. Presented at HP Ambassadors Conference, Hamburg, Germany.

Bleecker, H. (2016, April). Matching Quadratic Equations and Graphs with HP Prime. HP Prime Forum. Presented at HP Ambassadors Conference, Hamburg, Germany.

Bleecker, H. (2016, April). Investigating Quadratic Equations with HP Prime posted to HP Prime Forum. Presented at HP Ambassadors Conference, Hamburg, Germany.

CONFERENCE PRESENTATIONS

Mathematics Teachers Perceptions of Teaching Competencies: A Study of Grades 5 Through 8. *14th Int. Congress on Mathematical Education*. Virtual Shanghai, China. 7/12-19, 2021.

Culturally Connecting Geometry Through Storytelling. *National Council for Teachers of Mathematics Annual Meeting*. Virtual, April 23, 2021.

Making Math Relevant: Centering Students at TCUs. *Achieving the Dream Annual Convening*. Virtual. February 17, 2021.

Connecting Geometry Through Storytelling. *Indian Education for All Best Practices Conference*. Billings, MT, May 2020. (Cancelled).

Culturally Sustaining Math Learning Environments. *Indian Education for All Best Practices Conference*.

Practices of Collaborating Digitally, *NCTM Annual Meeting*. San Diego, CA, April 2019.

Leveled Activities for Improving Proficiency on Standards-based Unit Exams in Algebra I. *NCTM Regional Conference*. Hartford, CT, October 2018.

South Dakota Middle School Mathematics Teachers' Perceptions of Teaching Competencies. *IdeaFest* University of South Dakota, Vermillion, SD, April 2017.

Creating a Common Core Classroom. *SDCTM Conference*. Huron, SD, February 2017.

Systems of Linear and Quadratic Equations with HP Prime. *HP Ambassador Conference*. University of Hamburg, Germany, July 28, 2016.

Becoming a Mathematics Mentor in the Middle School: A Case Study. *IdeaFest Conference*. University of South Dakota, Vermillion, SD, April 2016.

CONFERENCE ATTENDANCE

Indian Education for All Best Practices Conference, Billings, MT, May 3-5, 2020. (Cancelled). *National Council of Teachers of Mathematics Annual Meeting*, Chicago, IL, Apr 1-4, 2020. (Cancelled).

Montana Higher Education Consortium Fall Meeting, Havre, MT, Nov 14-15, 2019.

Carnegie Math Pathways TCU Spring Institute, Pablo, MT, June 13-15, 2019

Symposium on Montana Mathematics Teaching, Fairmont, MT, April 28-29, 2019.

National Council of Teachers of Mathematics Annual Meeting, San Diego, CA, Apr 3-6, 2019.

National Council of Supervisors of Mathematics Annual Meeting, San Diego, CA, Apr 1-3, 2019.

Carnegie Math Pathways TCU Fall Institute, NM, Nov 1-3, 2018

National Council of Teachers of Mathematics Regional Meeting, Hartford, CT, Oct 4-6, 2018.

National Council of Teachers of Mathematics Annual Meeting, San Antonio, TX, April 5-8, 2017.

South Dakota Council of Teachers of Mathematics, Huron, SD, February 2-5, 2016.

International Congress on Mathematical Education (ICME-13), Hamburg, Germany, July 24-31, 2016.

IdeaFest Conference, Vermillion, SD, April 13, 2016.

South Dakota Council of Teachers of Mathematics, Huron, SD, February 4-6, 2016.

National Council of Teachers of Mathematics, Minneapolis, MN, November 11-13, 2015.

Indian Education for All Best Practices Conference, Missoula, MT, February 24-25, 2014.

National Council of Teachers of Mathematics Annual Meeting, New Orleans, LA, April 9-12, 2015.

HONORS AND RECOGNITION

National Board Certified Teacher Standard Setting Panelist for AYA Mathematics 08/17

Graduate Student Leadership Award Nominee 04/17

South Dakota Science Olympiad State Tournament Certificate of Appreciation 3/16

Winner of HP Prime lesson plan contest to represent North American Mathematics Educators and HP at the International Congress on Mathematical Education (ICME-13) July 24-31, 2016.

PROFESSIONAL SERVICE

United States Ambassador

2016-present

Hewlett-Packard (HP) Global Learning Community

- Developer of high school lesson plans using the HP Prime graphing calculator
- Provide feedback from teacher and student use of the HP Prime graphing calculator via webinars
- Attended ICME-13 and presented lessons to international HP Prime ambassadors

Peer Reviewer**2015-present***National Council for Mathematics Teachers (NCTM)*

- Review and provide feedback for journal articles
- Conduct NCTM book review
- Review and provide feedback for research proposals for annual research conferences

Graduate Mentor**2015-2017***Vermillion Middle School, Vermillion, SD*

- Mentor middle school early career mathematics teachers
- Provide co-teaching and modeling of mathematics lessons

PROFESSIONAL MEMBERSHIPS

National Council of Teachers of Mathematics	2005-2006, 2012- present
South Dakota Council of Teachers of Mathematics	2016- 2018
Beta Sigma Phi International	2014-present
Montana Council of Teachers of Mathematics	2012-2015
Montana Education Association & Montana Federation of Teachers	2012-2015
National Education Association	2006-2015
The National Society of Collegiate Scholars	2005-2017
California Teachers Association	2006-2012

GRANTS AWARDED

A STEM Summer Camp for Secondary Students on the Flathead Reservation. Montana NSF EPSCoR Grant, \$17,000. February 2020.

University of South Dakota Graduate Research and Creative Scholarship Grant, \$750. November 2016. HP Prime Graphing Calculator Wireless Classroom Kit: Hewlett-Packard, \$5,000. May 2015.

SALISH
KOOTENAI COLLEGE

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Salish Kootenai College Division of Education Data Analysis 2014-2017

Introduction

The purpose of this analysis was to examine student data during the program years of 2014 to 2017 in order to evaluate student growth, student proficiency, program strengths, and program needs based primarily upon assessment indicators that are common to all four division programs, that is, Early Childhood, Elementary Education, Broadfield Science, and Mathematics. This analysis is conducted by a person who has no direct responsibility for the quality of scores on these various evaluations. This analysis is conducted without bias in regard to the findings, conclusions, and/or recommendations.

Assessment Framework

The Educator Preparation Provider (EPP), that is, the Salish Kootenai College Division of Education, utilizes a format having three degrees or stages of progress toward teacher licensure. The Teacher Education Preparation or Stage I (TEP 1) is the entry level stage wherein a student must meet or exceed the criteria of TEP 1/Stage I in order to be admitted to teacher candidacy. The summative assessment of TEP 1/Stage I typically takes place at the end of the sophomore year. TEP 2/Stage II is the period between entering candidacy and prior to student teaching. The student teaching experience is the third and final degree of the Teacher Program and referred to as TEP 3/Stage III. At the end of each stage, students must present their portfolios, which is an extensive, integral, and holistic collection of artifacts that demonstrate how well they have done through the stage being assessed. In addition, two faculty members conduct an interview of the students during the presentation of their portfolios.

Briefly, each stage includes the following assessments:

Stage I: TEP 1.

The aspiring students are provided with an extensive seminar introducing the students to the Transition to Professional Teaching (TPT) dispositions, which include among other topics the core principles of the entire Salish Kootenai College (SKC) known as the 4-Cs, i.e., Culture, Communication, Community, and Critical Thinking; effective conflict management; understanding positive interactions; family and community connections; oral and written paradigms; confidentiality, executive functions; positive attitudes; and learning environments. The TPT criteria are also repeated later in the Preparation Program.

A few examples of what students produce during Stage I include a self-assessment of their TPT exposure, six Reflective Written Analyzes (RWA), a Philosophy of Education paper, and an Indian Education for All assessment. A total of at least 18 assessments are made at the Stage I or TEP 1 level.

Stage II: TEP 2.

Just as Stage I serves as a filter to identify students for Stage II, Stage II serves as a filter to determine Stage III enrollment, that is, Stage II identifies those candidates who have demonstrated they are adequately prepared to serve as a student teacher in an actual school setting. Stage II contains the greater volume of assessment data with no fewer than 49 assessment scores that cover all 10 InTASC standards as well as all 11 Montana 10.58.501 ARM Teaching Standards. Stage II or TEP 2 is evaluated via a portfolio and interview by two faculty members just prior to student teaching.

Stage III: TEP 3.

TEP 3 generates the data needed to determine if a candidate who has completed student teaching is appropriately prepared for proficiency as a first year teacher. TPT dispositions are reviewed and assessed again. There are a minimum of 41 additional assessment scores available in Stage III to inform faculty regarding the final decision to recommend or not recommend licensure. These data also include evidence of all 10 InTASC Standards as well as all 11 Montana 10.58.501 ARM Teaching Standards.

Division Assessment Definitions

Nearly all Salish Kootenai College Division of Education constructed assessments utilizing rank order data such as those taken from a Likert type of scale are differentiated according to content matter and purpose but it is important to understand these assessments also share a common form. Each assessment of this type consists of rating items having four possible categories for responses signified by the terms, Unacceptable, Developing, Proficient, and Exemplary.

These terms are scored and defined as follows: *Unacceptable* (0) is defined to be a level of work lacking demonstration of one or more essential elements being assessed. *Developing* (1) is defined to be a level of work that indicates all essential elements have been demonstrated, but one or more of those elements are underdeveloped to the degree it would be prudent for the candidate to receive additional preparation in each underdeveloped area.

Proficient (2) is defined to be a level of performance that indicates all assessed elements have been developed to the degree that it is reasonable to conclude the candidate has *succeeded* in meeting the stated expectations of the assessment. *Exemplary* (3) is defined to be a proficient candidate who has developed beyond expectations in one or more essential areas being assessed.

In this way, Division of Education constructed assessments utilizing ordinal data are being revised or have been revised to share this common form; however, they are all differentiated according to the content matter and purpose of the assessment. Scoring and terminology for other types of data are defined as they are introduced to those who administer and complete the assessments as well as in this report.

In addition, the concepts signified by the words *standards* and *principles* are often used interchangeably. For the purpose of consistency within this report, the usual philosophical use of standard is as an exemplar or criterion of what is desired to be achieved whereas a principle is the elemental aspect of what comes first in order to achieve a given standard. This distinction is similar to the distinction between *axiom* and *postulate* or between *genus* and *species*. Outcomes are measurements and/or a determination of the degrees to which the principles that sustain the standards have been demonstrated by those who were assessed accordingly.

A final distinction is made between student and candidate. A *student* is a person still in Stage I, so some assessments apply just to students; a *candidate* is a person in Stage II or Stage III with some assessments applying just to candidates; and *student/candidate* assessments are administered to both students and candidates.

Major Components of Assessment

TEP.

An average of 26 elementary/early childhood students/candidates produced over 3,000 Teacher Education Preparation data points that were used among other things, to identify who qualifies for candidacy to the teaching profession, who qualifies for student teaching, and most of all, who is to be recommended for professional teaching licensure. However, other assessments are used to inform decision makers about the attainment of students/candidates as well as program improvement.

TPT.

The total Transition to Professional Teaching (TPT) scores represent the degree to which a student/candidate understands the core values of the Salish Kootenai College. These assessments are administered and self-scored by the students as well as a faculty member at the Stage II level but also reintroduced typically at the Stage III level where they are scored by the supervising teachers.

MACK scores.

The Montana Assessment for Content Knowledge (MACK) is a composite scaled score comprised of three components, i.e., the students' TEP GPA, Montana Student Teaching Assessment (MSTA) scores, and PRAXIS II scores. A MACK score of 7 is considered a passing score.

TEP GPA.

Grade point averages are calculated on a 0 to 4 scale without plus/minus designators. The GPAs are computed over approximately 13 specified courses. These GPA scores are converted back into interval scaled scores 0, 1, 2, 3, and 4. Once in integral form, each score is used as a component of the MACK score.

Student teaching assessments.

The Montana Student Teaching Assessments (MSTA) scores are also used as a component of the MACK score. These scores are derived from the supervising teacher utilizing the Division of Education's 0 to 4 scale and their descriptors as defined above.

PRAXIS II.

The PRAXIS II is an assessment constructed by the Educational Testing Service (ETS). The PRAXIS II is the name, not acronym, of a commonly used test for teacher licensure and certification throughout the nation. The PRAXIS II, with some exceptions, assigns a score of 100 to the lowest score and 200 to the highest and linearly divides the score assignments proportionally between. In general, the scale is interval level data but not ratio, given it does not have a true zero. However, for the purposes of serving as a component of the MACK score, the actual Praxis II score is converted one more time to a 0 to 4 scale and the interval properties of the initial PRAXIS scores are lost when expressed in the 0 to 4 scale.

The MACK score is then compiled from the GPAs, the MSTAs, and the PRAXIS II scores, all of which are based on a 0 to 4 scale. The sum of these three categories of scores must be at least 7 in order to have a passing MACK score, which is a requirement for recommendation for licensure.

Distinctions Preliminary to Analyses

It is important to note this analysis recognizes the scores of 0, 1, 2, and 3 are varying degrees of *qualities* rather than integral *quantities* of measure. This is say that the ordinal scores of 0, 1, 2, and 3 are not treated as quantities and subject to calculations of averages or mean differences etc., but rather are simply a convenient way to indicate the degree to which a person demonstrates a quality desired in the profession of teaching. As a consequence, ordinal scores may be validity analyzed by frequency of a given response if that response is defined in a manner that all scorers have the same understanding of Exemplary, Proficient, Developing and Unacceptable as defined above.

This is a good place to note that sampling or even random sampling is not used in any of these analyzes; rather the entire population of scores for each assessment is used thereby eliminating any error of inference found in statistical analysis and allowing for parametric procedures to be used without introducing p-values and related statistical margins of error in the findings. Consequently, there are no minimum “sample” sizes to meet in order for the findings to be valid simply because in all cases, the entire population of data is used for the calculations and present in the findings. The result of parametric analysis is a finding of *what is* as contrasted with statistical analysis the findings of which are *what might be*.

Unfortunately, two administrators who typically have the major role in producing this report were not available to contribute to the development of the accreditation report. Consequently, it was quite late in the summer before enough information was available to begin the specific components of the report.

This was primarily a result of people who were needed to provide specific data, etc. on vacation or off contract during the summer. If additional data is found, it will be integrated into the report.

Finally, some data were recorded in the pre-2011 INTASC format. These standards are denoted in the Division’s database as, for example, TEP 2.5 (Stage II.INTASC Standard 5); subsequently TEP 2.5 was aligned and recoded to RTEP 2.3 (Revised TEP Stage II InTASC 3. All references and calculations involving InTASC Standards in this report are always in the post 2011 InTASC format and order.

Analysis of Division of Education Data

Analysis of InTASC/501 teaching standards.

Fidelity to the 10 InTASC/11 Montana Teaching 501 Standards was calculated using 3,015 data points administered and collected by the SKC Division of Education from 2014 to 2017 school years. As noted, INTASC Standards were reordered according to the 2011 InTASC format and all standards reported herein reference the 2011 InTASC Standards. Unacceptable scores in this particular analysis were very uncommon and do not provide the same information of the other three scores and so were not included in the analysis. Therefore the data utilized for the InTASC and Montana Teaching Standards,

10.50.501 MCA is delimited to the scores of those students who registered a non-zero score on at least one of the assessment indicators.

Again it is important to note this analysis recognizes the scores of 1, 2, and 3 are varying degrees of various *qualities* rather than integral *quantities* of measures. Often the scoring appears to be numeric

because of the use of integers such as 1, 2, and 3 to signify each quality of scoring and unfortunately often used to produce averages such as 2.3.

However, levels of quality cannot be averaged even if coded with what appears to be numbers and an average of 2.3 does not reveal anything substantial about the data that produced such an average. As a consequence, ordinal scores may be validity analyzed by frequency of a response if that response is defined in a manner that all scorers have the same understanding of Exemplary, Proficient, Developing and Unacceptable.

Distribution of TEP assessments as per InTASC standards by stage.

The first table introduced to analyze the goodness of fit of the TEP assessments with the InTASC Standards is presented below in Table 1.

Table 1 : 1 InTASC Standards by Number of Assessments and Stage

Standard	Number of TEP			
	Assessments	Stage I	Stage II	Stage III
InTASC 1	11	4	3	4
InTASC 2	13	3	5	5
InTASC 3	11	0	7	4
InTASC 4	9	2	5	2
InTASC 5	8	0	4	4
InTASC 6	9	0	6	3
InTASC 7	8	0	5	3
InTASC 8	10	2	4	4
InTASC 9	11	1	6	4
InTASC 10	11	2	4	5
Totals	101	14	49	38
Percentages		14%	49%	38%

The first observation regarding Table 1 is to note the plethora of data is so robust that it is almost necessary to use a plethysmograph for analysis of the 101 various TEP instances of assessments.

However, in the alternative to using a plethysmograph to determine the amount of plethora, it is clear the assessment plan of the Division provides an excellent coverage of the InTASC standards ranging from 8 to 13 separate assessments per standard. Further, it is notable that the Stage I battery of assessments accounts for 14% of the total assessments, providing a reasonable amount of data for informing transition to candidacy. The Stage II frequency of assessment accounts for nearly half of all TEP assessments indicating a solid conviction to ensure candidates are prepared for student teaching. Stage III is well over a third of the total volume of assessments providing an abundance of summative programmatic data as well as new data illuminating the quality of classroom practice.

Table 2 below offers a focus on the actual amount of data collected and more importantly, highlights the subsequent quality of the respondents' performance on the assessments with respect to the corresponding InTASC Standard.

Overall Distribution of TEP assessments qualifiers per InTASC standard.

**Table 2: InTASC Standards by Frequency
and Percentage of Qualifiers**

Standard	Total # Data Pts	Exemplary (3)	Proficient (2)	Developing (1)	Exemplary Proficient (2+3)
InTASC 1	372	34	309	29	92%
InTASC 2	282	32	236	14	95%
InTASC 3	384	79	216	89	77%
InTASC 4	380	42	310	28	93%
InTASC 5	284	40	219	25	91%
InTASC 6	205	31	158	16	92%
InTASC 7	251	25	205	21	92%
InTASC 8	236	38	176	22	91%
InTASC 9	352	42	275	35	90%
InTASC 10	269	26	203	40	85%
Totals	3,015	389	2,307	319	90%
Percentages		13%	77%	11%	90%

The 3,015 InTASC data points were generated in three stages by a total of 101 indicators which were used to form scores for 46 assessment categories or factors some of which are discussed later in this section. The average number of students/candidates being assessed was 26 per TEP assessment, which provided a range of data points for each individual standard from 205 points to a high of 384 points.

Included in Table 2 is a distribution across all 10 of the InTASC Standards of the Exemplary, Proficient; and Developing qualifiers that generated the 3,015 data points. To further clarify these ratings, the core qualifier is Proficient and the other qualifiers are based upon the meaning of proficient. Proficient

etymologically means "to succeed." When a student/candidate has been scored with a 2, it is the judgment of the rater that the person has been *successful* in demonstrating the stated expectations of the assessment.

InTASC standards outcomes ranked by exemplary/proficient.

Proficient is *not* analogous to a C in GPA terminology; Proficient in the Division vernacular means such person is believed to have succeeded in meeting the stated expectations and consequently, the descriptor of Proficient could have served as the highest level of rating a response or assessment. The faculty determined it would make it clear Proficient is not simply a term defined by arbitrary statistical procedures as is often how the term is defined in standardized testing, but more prudently, it means a demonstrated high level of attainment, i.e., a successful level of attainment. However the faculty also

determined it would reserve a level of qualitative ranking that is not only successful, but a ranking that shows meritorious preparation. This rating is signified by the word Exemplary, which means “fit to be an example.”

Hence, a person having this rating is not only “successful,” but also “fit to serve as a model” of the attribute having a rating of 3, that is, to not only successfully teach, but to also serve as a mentor.

So in Table 2, the number of Proficient and Exemplary scores by InTASC Standards are combined and converted to a percentage of the total non-zero responses. As can be seen in Table 2, 13% of the rating on the InTASC Standards was at the Exemplary level; 77% Proficient, and 11% Developing.

The

Standards are next ranked in Table 3 on the right according to the combined Exemplary and Proficient responses found in Table 2 along with

Table 3: InTASC Standards Ranked by Exemplary/Proficient Percentages

Rank	Standard	Exemplary Proficient	InTASC Standard Descriptor
1	InTASC 2	95%	Learning Differences
2	InTASC 4	93%	Content Knowledge
3	InTASC 1	92%	Learner Development
4	InTASC 6	92%	Assessment
5	InTASC 7	92%	Planning for Instruction
6	InTASC 5	91%	Application of Content
7	InTASC 8	91%	Instructional Strategies
8	InTASC 9	90%	Professional Learning and Ethics
9	InTASC 10	85%	Leadership and Collaboration
10	InTASC 3	77%	Learning Environment

a descriptor of each standard. There is very little difference, 5%, between the standards that rank in the first eight ranks. Nevertheless, Leadership/Collaboration and Learning Environment are noticeably lower. A further breakdown of the responses is instructive in better understanding the data for these standards.

Table 4 shows the rank order for just the Exemplary responses, Table 5 presents the rank order for the Proficient responses, and Table 6 ranks the standards according to the least number of Developing responses. That is, a low score or high rank in each of the three tables is the most desirable standing while a higher score or low rank is the least desirable in each of the next three tables.

InTASC standards' rankings individually and collectively by levels of achievement.

In order to more clearly understand the degree to which each of the standards was being met as evidenced by the scores taken from the assessments appropriate InTASC Standard for each assessment level, i.e., Exemplary, Proficient, and Developing, the percentage of responses for each level per each standard. Tables 4, 5, and 6 show the various ranks depending upon magnitude of frequencies of Exemplary/Proficient responses for each of the three qualifiers. The column by which the rankings were generated in those three tables is bolded to highlight the qualifier.

Table 4: Rank of InTASC Standards by *Exemplary* Frequency

Rank	Standard	Sorted by			InTASC Standard Descriptor
		Exemplary	Proficient	Developing	
1	InTASC 3	21%	56%	23%	Learning Environment
2	InTASC 8	16%	75%	9%	Instructional Strategies
3	InTASC 6	15%	77%	8%	Assessment
3	InTASC 5	14%	77%	9%	Application of Content
5	InTASC 9	12%	78%	10%	Professional Learning and Ethics
6	InTASC 2	11%	84%	5%	Learning Differences
6	InTASC 4	11%	82%	7%	Content Knowledge
8	InTASC 7	10%	82%	8%	Planning for Instruction
8	InTASC 10	10%	75%	15%	Leadership and Collaboration
10	InTASC 1	9%	83%	8%	Learner Development

Table 5: Rank of InTASC Standards by *Proficiency* Frequency

Rank	Standard	Exemplary	Sorted by		InTASC Standard Descriptor
			Proficient	Developing	
1	InTASC 2	11%	84%	5%	Learning Differences
2	InTASC 1	9%	83%	8%	Learner Development
3	InTASC 4	11%	82%	7%	Content Knowledge
3	InTASC 7	10%	82%	8%	Planning for Instruction
5	InTASC 9	12%	78%	10%	Professional Learning and Ethics
6	InTASC 5	14%	77%	9%	Application of Content
6	InTASC 6	15%	77%	8%	Assessment
8	InTASC 8	16%	75%	9%	Instructional Strategies
8	InTASC 10	10%	75%	15%	Leadership and Collaboration
10	InTASC 3	21%	56%	23%	Learning Environment

The rank on the left regarding Table 4 is determined by the rank of the qualifier in bold print. This results in the InTASC Standards' descriptors changing as its rank changes. As can be seen above, Table 4 shows the rank of each InTASC standard from the highest Exemplary percentage of response to lowest. Table 5 does the same thing for the Proficient responses. There are some interesting findings in observing these two tables.

For example, InTASC Standard 3 had the highest percentage of Exemplary responses, 21%, which is quite remarkable; however it had the lowest or 10th ranked level of responses for Proficient. That might be explained by having such a high percentage of respondents in Exemplary, so Table 6 was developed

to see what the rankings are for Developing. In Tables 4 and 5, a high percentage in Exemplary and Proficient categories was the desired outcome; however, in Table 6, the desired outcome is to have a low percentage in Developing so in this Table, a lowest percentage is ranked first and the highest percentage of Developing ratings is ranked 10th.

Table 6: Rank of InTASC Standards by Developing Frequency

Rank	Standard	Exemplary	Proficient	Developing	
1	InTASC 2	11%	84%	5%	Learning Differences
2	InTASC 4	11%	82%	7%	Content Knowledge
3	InTASC 1	9%	83%	8%	Learner Development
3	InTASC 6	15%	77%	8%	Assessment
5	InTASC 7	10%	82%	8%	Planning for Instruction
6	InTASC 5	14%	77%	9%	Application of Content
6	InTASC 8	16%	75%	9%	Instructional Strategies
8	InTASC 9	12%	78%	10%	Professional Learning and Ethics
8	InTASC 10	10%	75%	15%	Leadership and Collaboration
10	InTASC 3	21%	56%	23%	Learning Environment

Table 6 shows InTASC Standard 3 to rank 10th in Developing, which means its 10th rank rating in Proficient wasn't a result of a high percentage of respondents in the Exemplary category as nearly one fourth of the respondents are still Developing, which is defined as to be a level in which it would be prudent to advise the student to acquire more understanding and/or

practice in the appropriate InTASC standard(s). One obvious conclusion regarding InTASC Standard 3 is some students are learning it exceptionally well while a relatively high percentage of students require further development.

Table 7 presents the composite of the findings of Table 4, 5, and 6 by average ranks.

Table 7: InTASC Standards by Average Rank of Rating Scores

Rank					InTASC Standard
Standard	Exemplary	Proficient	Developing	Average	Descriptor
InTASC 2	6	1	1	2.7	Learning Differences (1)
InTASC 4	6	3	2	3.7	Content Knowledge (2)
InTASC 6	3	6	3	4.0	Assessment (3)
InTASC 1	10	2	3	5.0	Learner Development (4)
InTASC 5	4	6	6	5.3	Application of Content (5)
InTASC 7	8	3	5	5.3	Planning for Instruction (5)
InTASC 8	2	8	6	5.3	Instructional Strategies (5)
InTASC 9	5	5	8	6.0	Professional Learning and Ethics (8)
InTASC 3	1	10	10	7.0	Learning Environment (9)
InTASC 10	8	8	8	8.0	Leadership and Collaboration (10)

Table 7 is perhaps the most concise way to view the degree to which the acquisition of each InTASC Standard is being assessed. An example of one way to interpret Table 7 is to look at Learning Differences beginning with InTASC 2, which has the highest average *rank*. For Learning Differences, students are ranked 6th for Exemplary but the best rank for number of Proficient and the least percentage of students who are still Developing. The conclusion for this Standard is it is being acquired very well with relatively fewer students showing a need for further development, that is, 95% of the students are assessed to have successfully met the criteria for Learning Differences with 11% of these students considered to be a viable mentor in this regard. One further step to take the conclusion is to reflect upon what the actual standard addresses, that is, learning differences. A teacher who has demonstrated proficiency in learning differences is positioned to be an educator who will make an essential difference in the lives of many students that goes well beyond a good grade point average.

Consideration of InTASC factors.

Table 8 provides a level of analysis to complement the findings for the InTASC Standards.

Table 8: InTASC Standards by Average Rank with Factors

Ave Rank	Standard	Factor
2.7	InTASC 2 Learning Differences	The Learner and Learning
3.7	InTASC 4 Content Knowledge	Content Knowledge
4.0	InTASC 6 Assessment	Instructional Practice
5.0	InTASC 1 Learner Development	The Learner and Learning
5.3	InTASC 5 Application of Content	Content Knowledge
5.3	InTASC 7 Planning for Instruction	Instructional Practice
5.3	InTASC 8 Instructional Strategies	Instructional Practice
6.0	InTASC 9 Professional Learning and Ethics	Professional Responsibility
7.0	InTASC 3 Learning Environment	The Learner and Learning
8.0	InTASC 10 Leadership and Collaboration	Professional Responsibility

This Table provides for an analysis that is not often conducted. The developers of the InTASC Standards saw fit to generate the construct validity of the InTASC Standards by reducing the 10 Standards to four conceptual factors as they are sometimes referred when in this format. That is, InTASC Standards 1, 2, and 3 are held by the developers to form a conceptual whole signified by the terms **Learner and Learning**. As such, it is cognitively desirable to have the scores from the three standards at approximately the same level. These standards are denoted in **red** above to make it more convenient to see how well they do or do not correlate. In this case, the three standards or elements of **Learner and Learning** are quite disjoint, ranging in average rank from 2.7 to 7.0! On the other hand, the best case scenario is the lowest ranking elements of the **Professional Responsibility** factor where both Standards 9 and 10 are separated by just a single standard. The **Instructional Practice** factor has two elements together and if the third, Assessment, would have ranked next to or with them, then the **Instructional Practice** factor would have an added and beneficial quality it otherwise does not have.

Content Knowledge has two nice rankings but also lacks somewhat the correlative relationship that is most desirable.

The practical application of this type of analysis is often the focus is on each individual standard as if any given standard had no particular relationship to the others. However, the InTASC standards are reduced by their developers to four factors, which in turn are reduced to a single factor, that is, a complete educator! When all of the elements (standards) of one of the factors are at or near the same assessment level, then the factor is more wholly and completely developed than if the elements are dispersed in assessed levels. So as noted, the “Professional Responsibility” factor is comprised of two elements of similar ranking, which suggests that while ranked lower than the other elements, will be present in the teacher candidates in a way in which each of the two elements complements or supports the other. This is to say, the teacher will very likely demonstrate professionalism and responsibility at a level higher than the rank score for that factor would suggest.

On the other hand, the “Learner and Learning” factor is strongly supported by Learning Differences, well supported by Learner Development, and not as well supported by Learning Environment.

Consequently, the obvious take from this is to address the issue that a great development in Learning Differences can be impeded by a lesser level of understanding Learning Environment. That is, just as the factor “Professionalism and Responsibility” can assume a capacity *greater than the sum of its parts*, that is, two lower but nearly equally ranked Standards, a factor such as “Learner and Learning” can end up with a capacity *less than the sum of its parts* as a result of diverse levels of attainment. A car motor having 60 pounds of compression in each cylinder runs much better than a car having compression of 95 pounds in all cylinders except one having 40 pounds of compression.

A Teacher Education Preparation Program as exemplary and proficient as SKC’s Division of Education would benefit from tracking the InTASC Standards holistically, that is, to give attention to the consistency of the scores that form each of the four

There are a couple of caveats important to this aspect of the analysis. Ranking obviously produces rank order data, which always results in a first, last, and every rank in between. Rank order data does not preserve the magnitude of difference between each of the ranks so there may be more difference between 9th and 10th place than there is between 1st and 8th place such as in Table 3, so interpreting rank order data requires a much broader analysis and is less definitive than ratio level data would require for analysis. Closely related to this point is given rank order data will always have a last place, being in last place does not indicate an absolute deficiency but rather in only a potential indicator of what aspects of the program may require additional resources.

The last perspective of the InTASC Standards is to briefly look an assessment that spans all three stages of preparation and two less comprehensive assessments, Philosophy and Integrated Unit Plan. In addition to spanning all three stages of teacher education preparation, the Reflective Written Analysis (RWA) assessment has the most frequent administrations as well as spanning all 10 InTASC Standards.

Stage I of the RWA TEP assessments covers five InTASC Standards, namely, InTASC Standard 1, Learner Development; InTASC Standard 2, Learner Differences; InTASC Standard 4, Content Knowledge; InTASC Standard 9, Professional Learning and Ethical Practice; and InTASC Standard 10, Knowledge; InTASC Standard 9, Professional Learning and Ethical Practice; and InTASC Standard 10, Leadership and Collaboration. The 45 students having scores on the TEP 1 RWAs covering InTASC Standards 1, 2, 4, 9, and 10 produced 219 data points, 7% of which were Proficient or Exemplary.

Interestingly, the Learner Development Standard (InTASC 1) was the only one of the assessed standards in TEP 1 that did not have a student with an Exemplary score.

Stage II and Stage III RWA assessments were given to an average of 23 students/candidates in a manner that the assessed the learners' development on each of the 10 InTASC standards. A total of 481 and 430 data points were generated by Stage II and Stage III RWA assessments respectively. The outcomes of these 1130 assessment data points on the RWAs across all three TEP Stages and all 10 InTASC Standards are presented in Table 9 below.

Table 9: Analysis of RWA Assessments by Stage and Qualifier per Individual InTASC Standards

	Number of RWAs	Exemplary	Final RWA Exemplary
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By Stage/RTEP					Proficient	By Stage/RTEP			
Standard	I	II	III	Pts	All Stages	I	II	III	InTASC Descriptor
InTASC 1	1	2	2	135	93%	0%	13%	21%	Learner Development
InTASC 2	1	2	2	134	95%	7%	13%	21%	Learning Differences
InTASC 3		2	2	99	91%		24%	21%	Learning Environment
InTASC 4	1	2	2	134	92%	7%	19%	19%	Content Knowledge
InTASC 5		2	2	92	87%		13%	23%	Application of Content
InTASC 6		2	2	90	91%		22%	19%	Assessment
InTASC 7		2	2	90	92%		13%	19%	Planning for Instruction
InTASC 8		2	2	90	90%		27%	21%	Instructional Strategies
InTASC 9	1	2	2	132	92%	7%	15%	16%	Professional Learning/Ethics
InTASC 10	1	2	2	134	90%	7%	22%	21%	Leadership and Collaboration
Totals	5	20	20	1130	91%	6%	17%	20%	

A total of 45 RWAs were administered across the appropriate Standards and Stages. Proficient results, including those that scored Exemplary, are calculated for all three stages, disaggregated, and presented in bold for each Standard. As can be seen, there is a great deal of consistency among very respectable scores for each of the Standards. The RWA range of Exemplary/Proficient scores for all Stages is 87% to a high of 95% with the average score being 91% over all 10 InTASC Standards. The RWA assessment is so broad and so well utilized, it is very good to find all 10 InTASC Standards both well represented and evenly distributed on this assessment. The final information shows the change in percentages of Exemplary for the final RWA assessments in each Stage. Stage I had an average of 6% of Exemplary responses over the five standards covered in TEP 1; Stage II made a nice gain to 17%; and Stage III topped it off at 20%.

However, while TEP 3 made a good gain in Exemplary responses going from final RWA assessments in Stage II to Stage III, it is notable that the TEP 3 or Stage III gain in Exemplary responses, there was a 2% increase in the TEP 3 Developing responses compared to TEP 2. The same phenomenon is present if both administrations of RWA assessments are taken into account for Stage II and Stage III, that is, there is a 3% gain in Exemplary responses from TEP 2 to TEP 3 but also an additional 2% of responses were added to the Developing level.

Clearly many candidates are doing very well on the TEP 3 RWA assessments so the problem to address is how to increase the Proficiency level and simultaneously reduce the Developing qualifier. Given the TEP 2 and TEP 3 Exemplary/Proficient scores are so consistent both between Stages, but also with each Stage, it is very likely the tendency to have more Developing responses as the Stages progress will likely have a common cause and be readily addressed.

The philosophy papers show a similar pattern. The Exemplary only InTASC 2.1 philosophy scores were 0% while the philosophy InTASC 3.1 Exemplary scores rose to a very substantial 28%! Unfortunately the increase in Exemplary scores was also accompanied by an increase from 4% to 16% in Developing level of responses.

The RWA and Philosophy Papers are two of the 46 categories created by the Division Preparation Program. Most of the assessments do not have multiple administrations throughout the stages for comparison of scores as the student/candidate progresses through the Program. Another example of one assessment that does assess a common standard (InTASC 4) in both TEP 2 and TEP 3 but is not hampered with increasing Developing responses as the Program progresses is the Integrated Unit Plan.

In the case of the Integrated Unit Plan, the InTASC 2.4 scores for Exemplary, Proficient, and Developing are 0%, 96%, and 4% respectively. The InTASC 3.4 scores for the Integrated Unit Plan are 40%, 60%, and 0% respectively for Exemplary, Proficient, and Developing. In this case as well as other categories similarly situated, the most current TEP Exemplary percentage (40%) is substantially higher than the previous TEP Exemplary percentage (0%) while the Developing percentages will occasionally have the opposite relationship.

MACK scores.

As previously noted, the MACK scores assess content knowledge by utilizing three scores, i.e., the TEP GPA, the Montana Student Teaching Assessment (MSTA) scores, and the Praxis II scores. This particular form of assessment has been in use since 2013 as a means to identify Highly Qualified Teachers in Montana as well as maintain a common teacher education program throughout the state.

MACK scores range from 0 to 12, with 7 or more points required for recommendation for licensure.

The following six pages cover the elements of the MACK scores and how the MACK score is calculated.

Table 12: Assessment of Content Knowledge Demonstrated during Student Teaching

Descriptor n = 39	Elem Ed Indicator (a) Content Knowledge				Elem Ed Indicator (b) Content Alignment			
	LA	Math	Sci	SS	LA	Math	Sci	SS
Exemplary	49%	49%	46%	51%	51%	56%	62%	54%
Proficient	51%	49%	54%	49%	49%	44%	38%	46%
Developing	0%	3%	0%	0%	0%	0%	0%	0%
Unacceptable	0%	0%	0%	0%	0%	0%	0%	0%
Exemplary Proficient	100%	97%	100%	100%	100%	100%	100%	100%

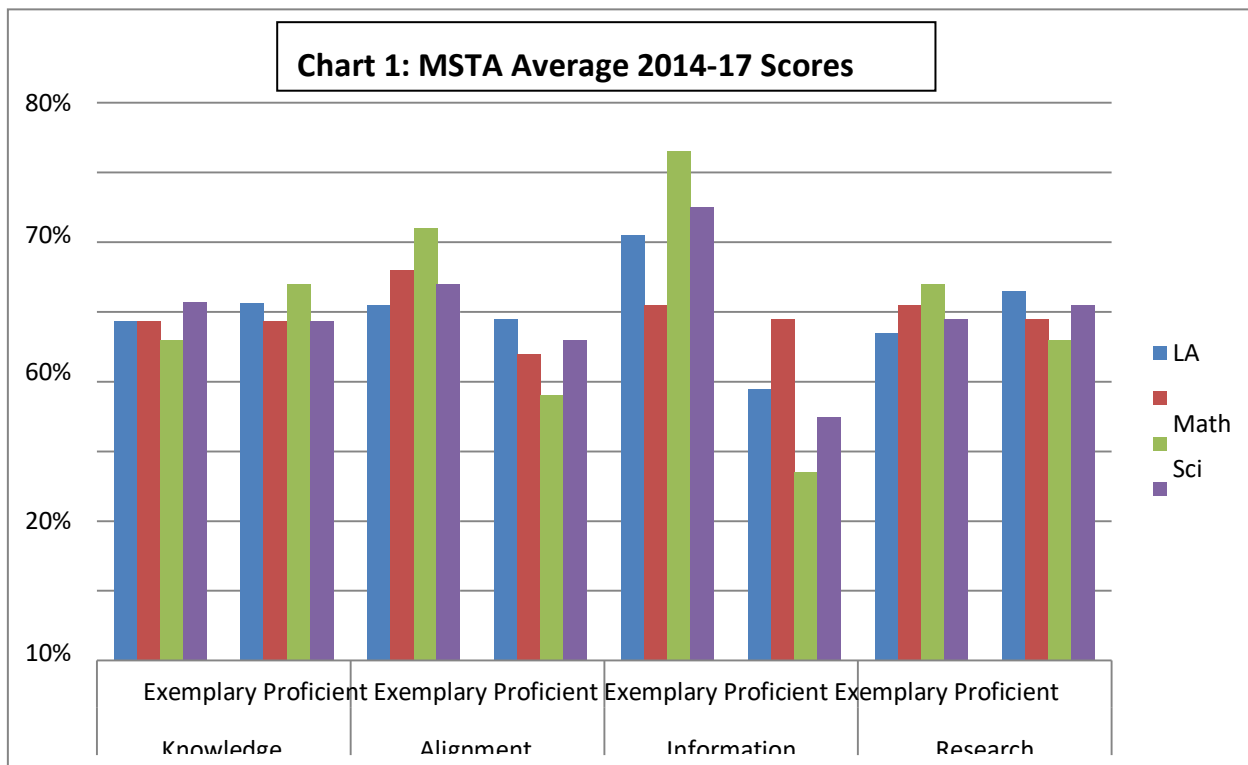
Table 12 (Continued) Assessment of Content Knowledge during Student Teaching

Descriptor n = 39	Elem Ed Indicator (c) Sources of Information				Elem Ed Indicator (d) Research Driven Lessons				Total Ave %
	LA	Math	Sci	SS	LA	Math	Sci	SS	
Exemplary	61%	51%	73%	65%	47%	49%	54%	49%	54%
Proficient	39%	49%	27%	35%	53%	51%	46%	51%	46%
Developing	0%	0%	0%	0%	0%	0%	0%	0%	0%
Unacceptable	0%	0%	0%	0%	0%	0%	0%	0%	0%
Exemplary Proficient	100%	100%	100%	100%	100%	100%	100%	100%	100%

While not available on Table 12, a review of the previous accreditation review shows a 10% decrease in total Exemplary responses for this review but an 11% increase in Proficiencies. That is, the number of Developing scores decreased by 1% and with one small exception, 100% of the MSTa scores were proficient with over half of the proficient scores reaching the level of Exemplary.

To perhaps gain a better grasp of all of the scores in Table 12, Chart 1 is presented below to show how acquisition of each of the four indicators may or may not differ among themselves or within each individual indicator.

Looking at the Content Knowledge scores, it can be seen the Exemplary and Proficient scores were earned with approximately the same frequency though Proficient has a bit of a tendency to show more responses than Exemplary. On the other hand, Content Alignment has a higher percent of Exemplary responses than does Proficient and equally notable, science has a clear lead in Exemplary responses. This same trend is even more pronounced with Sources of Information where the Exemplary responses have a strong showing relative to the Proficient frequencies; however, the good news is a rating of Proficiency in itself signifies candidates are perceived by their supervising classroom teachers as being successful, and hence, these candidates were prepared in a successful teacher education program to the extent the MSTA assesses. Finally, it is noted that Research Driven Lessons has very similar qualities as Content Knowledge.



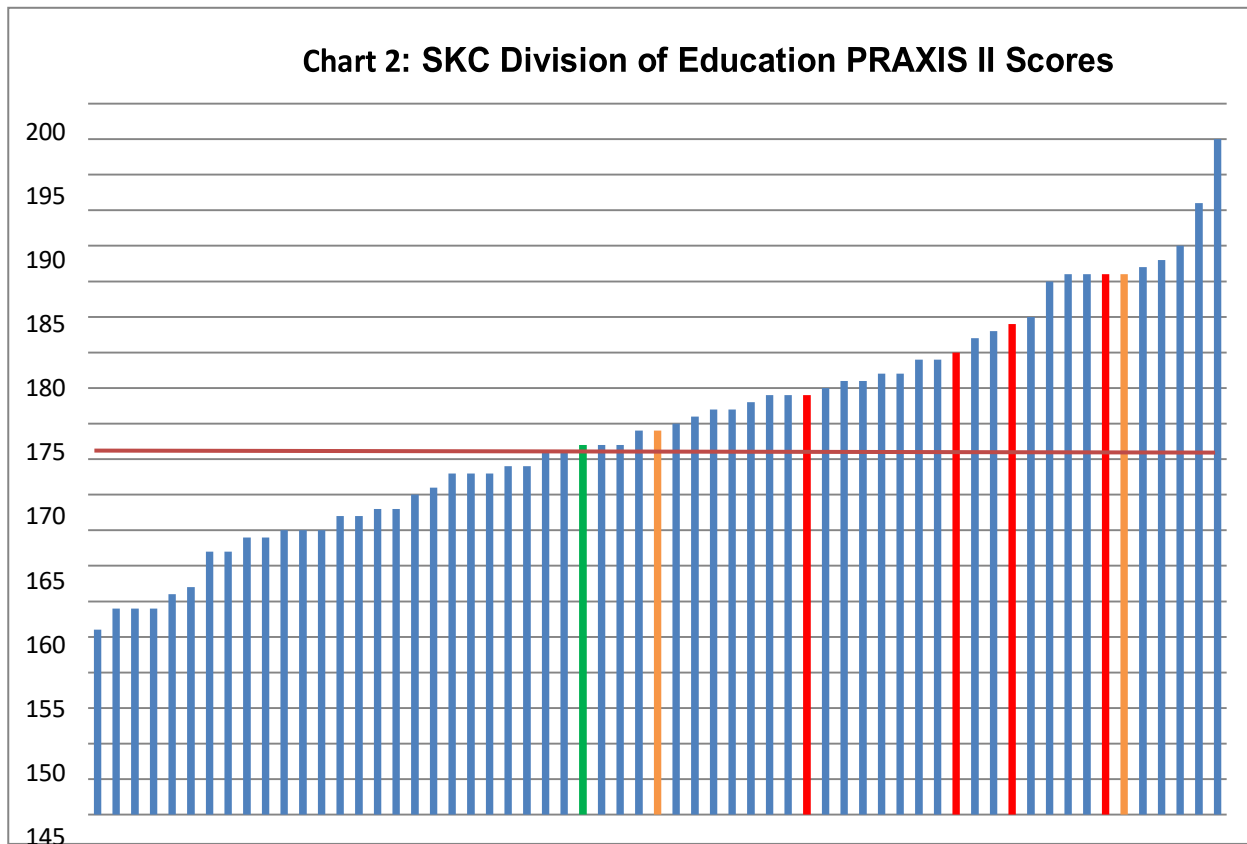
The candidate is given an overall score on this assessment, which then serves as the second of three evaluations that comprise the MACK. The third and final score for the MACK is taken from the PRAXIS II the outcomes of which are presented below.

PRAXIS II.

The PRAXIS II is an assessment constructed by the Educational Testing Service (ETS). The PRAXIS II is the name, not acronym, of a commonly used test for licensure and certification throughout the nation. The PRAXIS II, with some exceptions, assigns a score of 100 to the lowest score and 200 to the highest and linearly divides the score assignments proportionally between. In general, the scale is interval but not ratio given it does not have a true zero. This is to say, there is in general the same distance between equal intervals on the PRAXIS II score scale, but the scores do not lend themselves to ratio relationships.

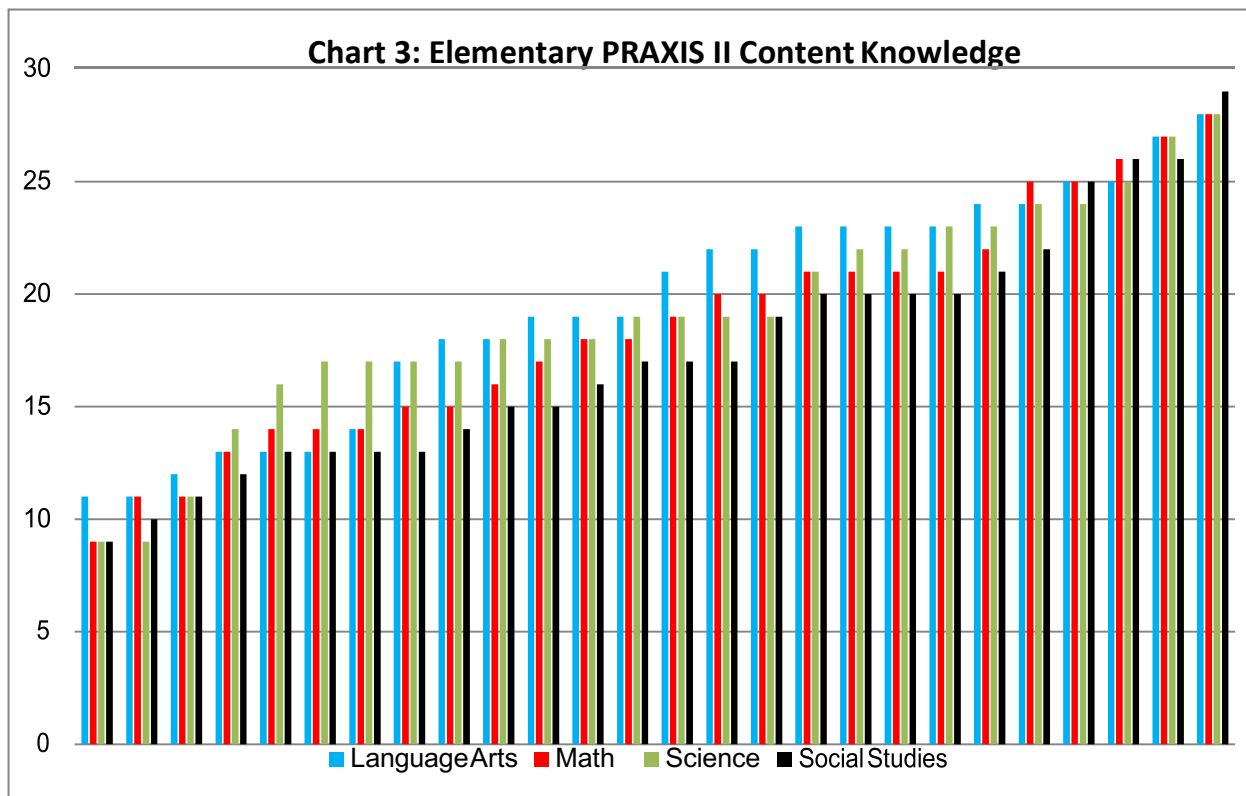
Passing the PRAXIS II is a common requirement for the Elementary and Secondary programs in the Division of Education prior to licensure. However, the scores are not easily compared across programs given each program has its own unique assessment depending upon academic content and level of licensure thereof.

The Chart below presents the available PRAXIS II scores received during the 2014 to 2017 time period from 61 students across all four departments.



The elementary scores are in blue, the math score is in green, the P-3 is in red, and the science scores are in orange. The red horizontal bar represents the 50th percentile, which is the approximate level necessary to pass the PRAXIS II. Scores falling less than 123 do not receive any MACK points; scores between 123 and 138 are scaled as 1 MACK point; 139 to 153 receive 2 MACK points; 154-180 receive 3 MACK points, and 181 to 200 are assigned 4 MACK points. A score of 181 is at the 95th percentile, so a candidate requires a score having a rank at the 95 percentile or higher in order to receive all four points.

A score of 140 is still within the average range (25th percentile) but receives 2 MACK points. It would be very difficult for any candidate retaking the PRAXIS II to go from a score of 140 (2 MACK Points) to 154, the lowest PRAXIS II score that receives 3 MACK points. As can be seen in Chart 2, there are seven candidates with scores within that range who could possibly bump up to 3 MACK points, but it is very difficult to go from the 25th percentile to the 50th percentile on a nationally normed test.



The above chart reflects the four elementary content areas from the PRAXIS II scaled scores. The mathematical procedures used by ETS to scale these scores is not clear; however, the scores across content areas within the elementary domain are comparable given the apparent maximum scaled score is 30 for all four content areas, but each content area is normed differently meaning a scaled score of 15 in math may not be lower than a scaled score of 23 in Social Studies. These scores are sorted according to the lowest score to the highest score for Language Arts, math, science, and Social Studies. The appearance of the chart shows that in general, Language Arts and science tend to be the highest of the four scores *within* each ranking while Social Studies tends to be the lowest score for each candidate with the interesting exception that when the highest score in all four content areas are compared, Social Studies wins! One of the primary takeaways from this chart is to note the instruction in all four areas was strong enough for some of the students to score very well. Additionally, the average scaled scores are 20, 19, 19, and 17 respectively, suggesting one area of academic opportunity is not dominated by a single content area nor is the least academic opportunity identified apart from the others. A possible explanation for the low scores is there may be some misalignment with ETS expected content knowledge and what is taught in a tribal college having a vision and mission somewhat different than the typical four-year college. Another interesting finding is that the mean percentage of students below the average for each content area is 47% with only a deviation from the average mean of 5% points among the four content area averages. Again, this consistency indicates a very consistent quality of instruction across all content areas while a mean of the content averages of 47% (two of the four were exactly 50%) is consistent with scaled scores wherein by design half of the population of scores is above and half is below the mean.

Given these three areas of assessment, it is now possible to compute a MACK score for each of the 34 candidates. A MACK score of 12 is the highest possible MACK score, with two candidates achieving an 11. Of the 32 remaining candidates, 7 candidates scored a 10, 7 more scored a 9, and 7 more scored an 8. A MACK score of 7 was earned by 8 of the candidates and the remaining 3 candidates just missed the minimum score for licensure recommendation by scoring a 6. In all, 91% of the 34 candidates met or surpassed the criteria necessary to receive a recommendation for Montana teacher licensure!

Transition to Professional Teaching (TPT)

All teacher candidates are required to complete the Transition to Professional Teaching Seminar as a requirement of entry into the Teacher Education Program. The emphasis of the TPT is to further develop the 4Cs, that is, the qualities of communication, cultural understanding, critical thinking and citizenship in teacher candidates. The four standards or 4Cs are formed from the configuration of 16 teacher dispositions, which are assessed and serve as indicators of the degree to which the four standards are part of the students' preparation for teaching. Table 13 displays the data from the initial and final teacher scored assessments. The Standards and dispositions are all rated by percentage of response according to the Exemplary (3), Proficient (2), and Developing (1) qualifiers. There were no Unacceptable or (0) responses.

Table 13: Teacher Scored TPT 4Cs Evaluation

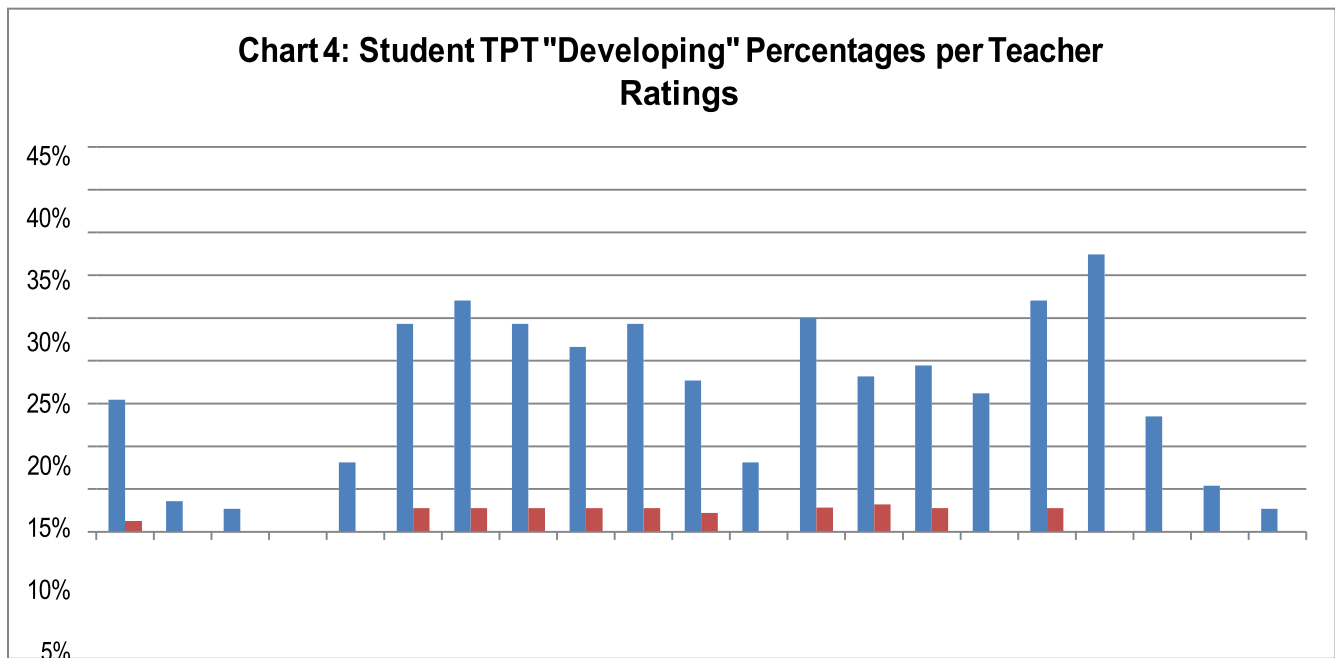
STAGE I					STAGE II				N =37 and N = 36 Respectively
Rater	Cs	3	2	1	Cs	3	2	1	
Average	1.0	26%	58%	15%	2.0	49%	50%	1%	Percentages for all Dispositions
Average	1.1	34%	62%	4%	2.1	62%	38%	0%	Culture
Teacher	1.1a	38%	59%	3%	2.1a	61%	39%	0%	Sensitive to cultural diversity/perspective.
Teacher	1.1b	32%	68%	0%	2.1b	69%	31%	0%	Willing to learn/interact with other cultures
Teacher	1.1c	32%	59%	8%	2.1c	56%	44%	0%	Promotes tolerance/diversity
Average	1.2	15%	61%	24%	2.2	37%	60%	3%	Communication
Teacher	1.2a	16%	57%	27%	2.2a	31%	67%	3%	Understanding of verbal/nonverbal
Teacher	1.2b	16%	59%	24%	2.2b	36%	61%	3%	Appropriate use of spoken/written language
Teacher	1.2c	14%	65%	22%	2.2c	42%	56%	3%	Uses variety of communication tools
Teacher	1.2d	14%	62%	24%	2.2d	39%	58%	3%	Knowledge/use of conflict resolution
Average	1.3	25%	57%	18%	2.3	42%	56%	2%	Citizenship
Teacher	1.3a	43%	49%	8%	2.3a	61%	39%	0%	Professionalism with peers, students, etc.
Teacher	1.3b	19%	56%	25%	2.3b	37%	60%	3%	Involvement in community
Teacher	1.3c	18%	64%	18%	2.3c	29%	68%	3%	Participates with SKC learning community
Teacher	1.3d	19%	61%	19%	2.3d	42%	56%	3%	Knows/applies content to community
Average	1.4	29%	51%	16%	2.4	53%	47%	0%	Critical Thinking
Teacher	1.4a	27%	27%	27%	2.4a	61%	36%	3%	Concern for profession & lifelong learner
Teacher	1.4b	14%	54%	32%	2.4b	49%	51%	0%	Growth in creative problem solving
Teacher	1.4c	14%	73%	14%	2.4c	33%	67%	0%	Meets educational obligations
Teacher	1.4d	43%	51%	5%	2.4d	67%	33%	0%	Professional appearance
Teacher	1.4e	46%	51%	3%	2.4e	64%	36%	0%	Consistent positive attitude

In Tables 13 and 14, the focus of the analysis is on the percent of students and candidates who are in the Developing (1) level with the remainder being of course in one of two levels of proficiency. Looking at the Teacher Stage I data and following Developing or #1 down in Table 13 on the previous page, it becomes quite clear there is a substantial difference in the percentage of students in the Developing category, both among the standards (the 4Cs) and among the dispositions. For example, the Culture Standard baseline has an average of 4% in the Developing level with the four individual dispositions, 1.1a, 1.1b, and 1.1c, are relatively consistent meaning the Culture component is quite *strong* for two reasons; the percentage in Developing is low and the scores are consistent within that standard. On the other hand, dropping down to the Communication Standard in Table 13, the average number of students in the Developing level is six times what it is in the Culture standard. The dispositions are quite consistent, meaning in Communication, there is consistently a weak presence among the students regarding Communication as perceived by the Division rater.

Citizenship and Critical Thinking are similar to each other in that they both have approximately the same overall percentage in the their Standards, 18% and 16% respectively, and both have substantially mixed levels of performance among the dispositions in each of those two standards. Hence they are both *weak* for two reasons; they have poor scores with inconsistent frequencies, the opposite of Culture.

Some very good information awaits examination when looking across the same teacher data in Table 13, Stage II, Again, looking down the Developing or the 1 column of Stage II data, nearly all of the Developing students have moved over to Exemplary or Proficient, leaving an overall decrease in Developing across all 4Cs from 15% to just 1%. Looking down the Developing column, the maximum percentage of Developing students is just 3%, down from the baseline maximum of 32%! In addition, The Exemplary percentage went from a baseline of 26% for all four standards to 49%, again a remarkable reflection on the capacity of the program to meet desired standards.

These findings are so good they merit a chart to perceptually display how good they are!



The dispositions being charted can be found in Table 13 above. The blue bars are the baseline scores and the reddish bars reflect the greatly decreased level of Developing responses toward the end of the Teacher Program Program. The final ratings are for the same dispositions as the initial but are preceded by a 2 instead of a 1 to indicate they were the second round of scoring the TPT assessment.

The next table, Table 14, has the same form as Table 13 but represent the students' self-scores rather than teachers.

Table 14: Student Self-Scored TPT 4Cs Evaluation

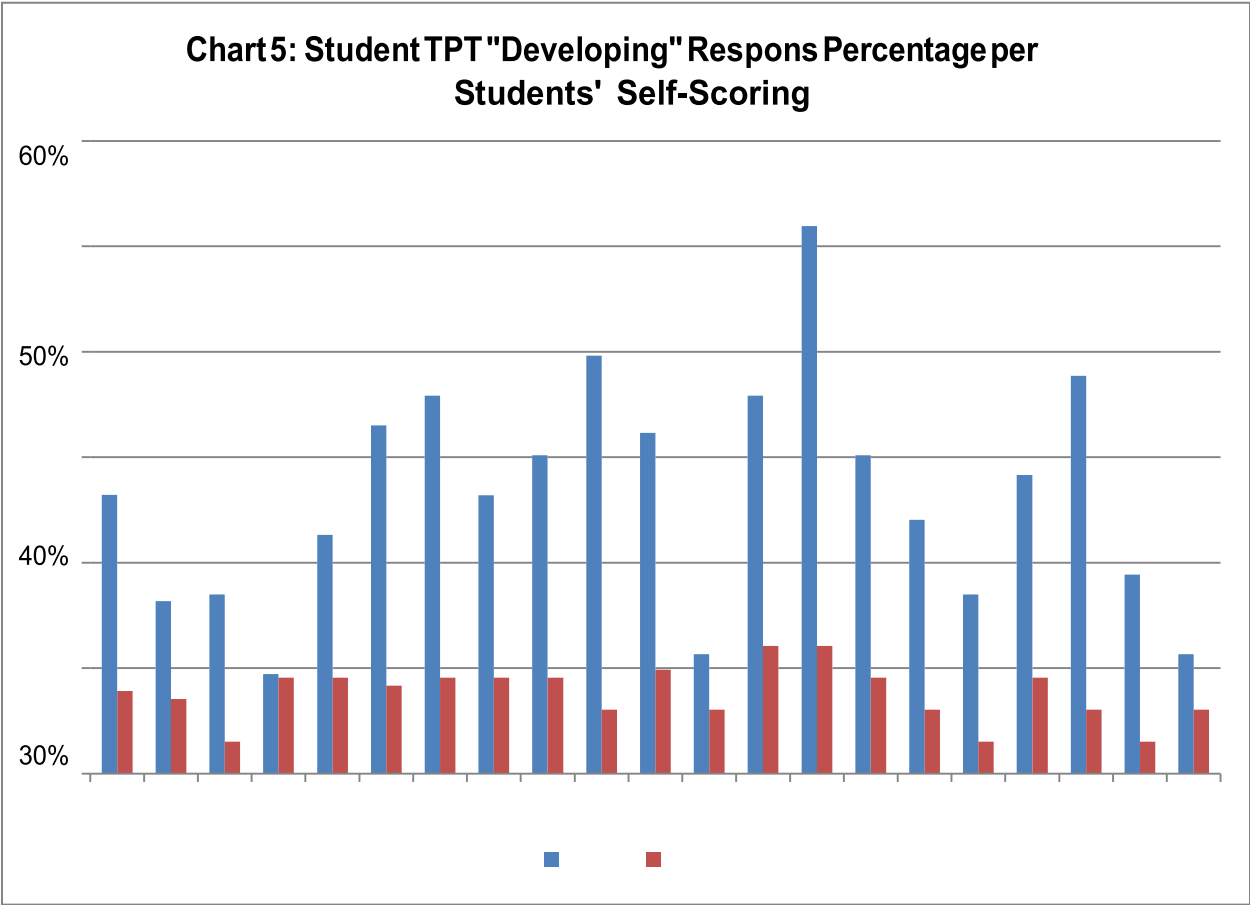
Rater	STAGE I				STAGE II				N =53 and N = 33 Respectively
	Cs	3	2	1	Cs	3	2	1	
Self	1.0	23%	50%	26%	2.0	36%	57%	8%	Percentages for all Dispositions
Self	1.1	25%	59%	16%	2.1	42%	51%	7%	Culture
Self	1.1a	23%	60%	17%	2.1a	42%	55%	3%	Sensitive to cultural diversity/perspective.
Self	1.1b	30%	60%	9%	2.1b	45%	45%	9%	Willing to learn/interact with other cultures
Self	1.1c	21%	57%	23%	2.1c	39%	52%	9%	Promotes tolerance/diversity
Self	1.2	17%	50%	33%	2.2	29%	63%	8%	Communication
Self	1.2a	21%	42%	36%	2.2a	30%	61%	9%	Understanding of verbal/nonverbal
Self	1.2b	19%	53%	26%	2.2b	21%	70%	9%	Appropriate use of spoken/written language
Self	1.2c	9%	60%	30%	2.2c	30%	61%	9%	Uses variety of communication tools
Self	1.2d	17%	43%	40%	2.2 d	33%	61%	6%	Knowledge/use of conflict resolution
Self	1.3	23%	44%	32%	2.3	33%	58%	10%	Community
Self	1.3a	34%	55%	11%	2.3 a	58%	36%	6%	Professionalism with peers, students, etc.
Self	1.3b	25%	38%	36%	2.3b	33%	55%	12%	Involvement in community
Self	1.3c	15%	31%	52%	2.3c	21%	67%	12%	Participates with SKC learning community
Self	1.3d	19%	51%	30%	2.3 d	18%	73%	9%	Knows/applies content to community
Self	1.4	27%	49%	24%	2.4	39%	55%	6%	Critical Thinking
Self	1.4a	28%	55%	17%	2.4a	58%	39%	3%	Concern for profession & lifelong learner
Self	1.4b	21%	51%	28%	2.4b	30%	61%	9%	Growth in creative problem solving
Self	1.4c	23%	40%	38%	2.4c	24%	70%	6%	Meets educational obligations

Self	1.4d	28%	53%	19%	2.4d	48%	48%	3%	Professional appearance
Self	1.4e	36%	53%	11%	2.4e	52%	42%	6%	Consistent positive attitude

The same type of examination of the data for the evaluations completed by the students is equally profitable. The first comparison is to compare the overall scores from the teachers in Table 13 and students in Table 14 in the first or baseline evaluations. They agree pretty much on the percentage of Exemplary responses but the students perceive more of them at the level of Developing compared to the teacher raters. Looking down the self-scored percentages in the students' Developing category (lightly shaded in yellow), it would appear the Division faculty has a very large task in front of them to move a lot of students from Developing to one of the two levels of Proficient.

However when examining the second set of self-rated scores in Table 14, the students made some very impressive gains. Overall the percentage of Developing students went from 26% to 8%. Looking down the Developing column in Stage II, a very impressive decrease in the percentage of Developing ratings took place across all standards and dispositions with one exception in which the score on that disposition, 1.1b and 2.1b didn't change but fortunately that score was the lowest score to start with in the baseline data.

Again, these self-scored data are so good that the Division faculty deserve to have their students' TPT gains displayed in a second format.



Normally an analysis of data on an assessment such as this one leads to making recommendations regarding a number of elements or in this case, dispositions that need improvement. Had the assessment been limited to just the initial evaluations, that would have been the case for about 80% of the dispositions; however, the follow-up evaluation eliminated almost all what would have been the recommendations without it. This shows the importance of multiple assessments using the same or very similar assessments so as to have indicators to demonstrate progress.

Perhaps the most important conclusion to draw from these data is that clearly the incoming students lack the desired level of professional standards the Division and College wishes its graduates to have. Given that, the Division is obligated to integrate these four professional standards into all of its curricula, but it becomes very difficult in those classes to determine specifically just how successful the integration of these qualities has been. These data provide strong evidence the Division has been very successful, very proficient in substantially achieving the desired growth in the fundamental qualities required of all SKC graduates. Sometimes a faculty and/or students will question the amount of assessing that takes place in a program; however, it is very clear that in this case, the second assessment was exceptionally valuable in that it confirms the success of what is being done in this regard and eliminates misdirecting resources that might have been otherwise committed had only one TPT assessment been administered.

To quote from the Division's 2017 Student Handbook, "Addressing this aspect of professional development early in the program sequence will help to ensure that candidates develop holistically in their pursuit of careers in education." These data underscore the reality of that statement!

Student Teacher Evaluation

The student teacher evaluation (**STE**) is part of the Stage III or TEP 3 program level and is the single most comprehensive and meaningful assessment available to reflect the quality of education and training the Division of Education students have acquired over the entire span of their coursework. When taken in concert with the previous assessments reported herein, the Division of Education has a very good profile of the degree to which the most essential qualities required of highly qualified teachers exist individually in any given graduate as well as systemically in the Division as a whole across all programs.

The STE is based upon the 10 InTASC Standards, which are comprised of 43 elements. These elements are rated Exemplary (3), Proficient (2), Developing (1), and Unacceptable (0). The STE is given at both the midpoint and end of the student teaching experience. The same form is completed at both time periods by the Supervising Classroom Teacher (SCT) and the College Supervisor (CS). This provides for a variety of ways to gauge student teacher growth and quality of program development in the same assessments. The summative data are provided in the two tables below with a more extensive analysis to follow.

Overall, the STE produced 8,819 data points from three raters on 70 students. Of those 8,819 data points, 24% were Exemplary, 69% were proficient, and 6% were Developing.

Table 15 breaks the data down further into Midterm and Final ratings. There were 4,321 data points gathered at midterm and 4,498 at the end of the term. As can be seen in Table 15, there was a substantial positive progression of responses between mid and final terms. More specifically, there was an 11% increase in the frequencies of the Exemplary/Proficient responses while Developing happily experienced a decrease from 12% at mid-term to just 1% by the end of the term! Further examination shows not only did the Developing responses go down, so did Proficient as Exemplary responses went from 14% mid-term to 34% Final, an overall gain of 20% at the Exemplary level!

Table 15: Overall Findings of STE Student Teacher Evaluations by Term
Percentage of Responses by Qualifier

	Mid-Term			Final		
	Exemplary	Proficient	Developing	Exemplary	Proficient	Developing
Frequency	600	3,218	503	1548	2,889	61
Percentage	14%	74%	12%	34%	64%	1%
Exemplary/Proficient		88%		99%		
			Change	+11%		-11%
Total Responses	8,819	Qualifier	Exemplary/Proficient	Developing		

Table 16 continues disaggregation by term of assessment but also by each InTASC Standard. The first mid and final terms comparison for the mentoring teacher (MT) are the frequency of the responses under the InTASC Standards reordered to correspond to the current InTASC standards (denoted RMT) for purpose of comparison. The last four columns also represent the frequency of responses expressed as a percentage of total responses for each specific category ordered as per the current InTASC structure.

Table 16: Elementary Student Teacher Evaluations

Program	Percentage of Exemplary/Proficient						
Evaluator	MT	MT	RMT	RMT	CS	CS	
Time Period	Mid	Final	Mid	Final	Mid	Final	
Score Range	0-3	0-3	0-3	0-3	0-3	0-3	
Standard	N=14	N=16	N=24	N=25	N=27	N=27	Number of Candidates
InTASC 1	91%	99%	88%	99%	88%	99%	Learner Development
InTASC 2	91%	100%	88%	99%	89%	98%	Learning Differences
InTASC 3	87%	100%	89%	98%	89%	98%	Learning Environment
InTASC 4	96%	97%	88%	98%	88%	99%	Content Knowledge
InTASC 5	92%	99%	89%	98%	74%	99%	Application of Content
InTASC 6	74%	97%	74%	99%	84%	99%	Assessment
InTASC 7	82%	100%	85%	98%	85%	98%	Planning for Instruction
InTASC 8	87%	98%	84%	99%	88%	98%	Instructional Strategies
InTASC 9	94%	100%	89%	100%	89%	100%	Professional Learning & Ethics
InTASC 10	89%	98%	93%	100%	93%	100%	Leadership & Collaboration
Average	88%	99%	87%	99%	87%	99%	Average all Standards
MT = INTASC Mentor Teacher			RMT = InTASC Mentor Teacher			CS = College Supervisor	

Each mid-final terms comparison regardless of evaluator shows an average increase of approximately 12%. Individual comparisons remarkably do not have a single standard regardless of evaluator in which the initial percentage of frequency

of Exemplar/Proficient is greater than or equal to the final frequency. Even more notable is that regardless of how high or how low the initial frequency was, the final frequency was always higher. Of the 30 final scores, 100% of them are 97% or higher. This strongly indicates that regardless of how well prepared a candidate was initially, their preparation had fostered in each of them the capacity to reach a high level of preparation for the teaching profession.

The overall construct of the InTASC Standards is to define the concept of a successful professional teacher. In order to make judgment regarding the degree to which a candidate has the proper preparation to be a successful teacher, 10 standards have been identified that when present in a person as an integral whole, such person is considered to be properly prepared to be a professional educator.

However, those 10 standards are not directly evaluated but rather the quality of each standard is judged based upon a number of indicators that conceptually represent each individual standard. There are 173 of these indicators divided among the 10 standards according to three separate categories, that is, Performance, Essential Knowledge, and Critical Dispositions.

So if one of the standards is judged to be unacceptable, then a candidate is not yet prepared to enter the teaching profession. However, the judgment regarding meeting any one standard is based upon the average of the associated indicators that form the given standard. Like all averages, important specific data can be hidden in those averages. There is often a tendency to assume all is well when an average is quite high, which in fact may actually result in overlooking weaknesses within that standard.

There is an especially high importance associated with studying STE data owing to the STE evaluation having multiple evaluators, multiple evaluations, and its juxtaposition within Stage III all of which give it the capacity to serve as a summative assessment of this four year Preparation Program. So a further analysis will be developed to highlight those standards and their indicators that received an excessive midterm score. An excessive mid-term score is defined to be any one of the indicators having more than 20% of the responses at the Developing level in the initial assessment of the InTASC standards, which occurs very near the end of the candidates' 4-year program of preparation.

To do this, all indicators having more than 20% of the mid-term responses at the Developing level from the MT and/or the CS were selected for this analysis. From the existing population of data, 11 such indicators were found in the college supervisors' responses and 14 in the mentor teachers' responses.

The CSs' highest (worst) Developing score was 48%, that is, nearly half of candidates were at a "Developing" level at midterm during the candidates' student teaching; the MTs' highest (worst) score was 37% Developing. All 25 scores had a mid-term percentage of more than 20% Developing responses.

As can be seen on the next page in Table 17, InTASC Standards 4, 9, and 10 did not have a single Developing mid-term score over 20% among any of their indicators and Standards 1 and 5 each only had a single instance of an indicator over 20% Developing. So half of the standards, 1, 4, 5, 9, and 10, only had 2 instances of an indicator having more than 20% Developing! However, it can be seen Table 17 that InTASC Standards 2, 3, 6, 7, and 8 all had multiple instances of standard indicators having 20% or more at the Developing level.

Table 17 shows the standards in green signify standards that have no indicators with excessive Developing responses; red indicates standards having indicators common to both the mentor teachers and the college supervisor.

Table 17 also shows the distribution of InTASC Indicators according to Standard and distribution based upon Performance, Essential Knowledge, and Critical Dispositions.

Table 17: Distribution of Students' "Developing" by InTASC Indicator Categories								
Red indicates common to CS and MT			Total CS and MT			Total InTASC Indicators		
Green indicates no hits				Essential	Critical		Essential	Critical
			Performance	Knowledge	Dispositions	Performance	Knowledge	Dispositions
Learner Development	InTASC 1	1				3	4	4
Learning Differences	InTASC 2	3	2			6	5	4
Learning Environment	InTASC 3	2	1			8	5	5
Content Knowledge	InTASC 4					9	5	4
Application of Content	InTASC 5				1	8	8	3
Assessment	InTASC 6	4	2	2		9	7	6
Planning for Instruction	InTASC 7	1	1	1		6	7	4
Instructional Strategies	InTASC 8	2	1			9	6	4
Prof Learning and Ethics	InTASC 9					6	5	4
Leadership/Collaboration	InTASC 10					10	4	5
(24 CS+MT), (173 Indicators)	Totals	13	7	4		74	56	43
Comparison of CS/MT responses with Possible			54%	29%	17%	43%	32%	25%

As can be seen, Standard 6, Assessment, has eight hits, that is, between the two evaluators, Assessment Indicators at mid-term had eight indicators with responses of more than 20% of the responses at the Developing level. Four of those hits were Performance Indicators; two were Essential Knowledge; and two were Critical Dispositions. To the right of those figures are the number of indicators in the full set of indicators have in InTASC Standards Those standards in red present a greater focus given those three standards have multiple indicators with excessive Developing from both evaluators.

Another observation is Performance Indicators were disproportionately represented at 54% but it is instructive to see if Performance Indicators are disproportionately represented in the InTASC Standards themselves. As can be seen on the right side of Table 17, the distribution of indicator categories are also disproportionately in the standards but at 43%, 32%, and 25% respectively. Consequently, that would be the expected distribution of the three categories in the STE; however, it can be seen the Performance Indicators at 54% in the actual evaluations is greater than would be expected from the design of the assessment, i.e., 43%.

Table 18 below breaks down the totals above by college supervisor and mentor teacher responses. As noted, the college supervisor responses have 11 excessive Developing indicators while the mentor evaluations had 14, so they were nearly equal in numbers and shared several of the same InTASC Indicators.

Table 18: Distribution of Students' "Developing" by Evaluator								
Red indicates common to CS and MT			College Supervisor			Mentor Teacher		
Green indicates no hits				Essential	Critical		Essential	Critical
			Performance	Knowledge	Dispositions	Performance	Knowledge	Dispositions
Learner Development	InTASC 1	1						
Learning Differences	InTASC 2	2	1			1	1	
Learning Environment	InTASC 3	1	1			1		
Content Knowledge	InTASC 4							
Application of Content	InTASC 5							1
Assessment	InTASC 6	2	1			2	1	2
Planning for Instruction	InTASC 7	1			1		1	
Instructional Strategies	InTASC 8					2	1	
Prof Learning and Ethics	InTASC 9							
Leadership/Collaboration	InTASC 10							
(11 CS), (13 MT), (24)	Totals	7	3	1		6	4	3
Percent of Possible Indicators			9%	5%	2%	8%	7%	7%

The concern regarding the Performance and Essential Knowledge categories are relatively equally shared by all evaluators with the mentor teacher having a little more concern over the development of the candidates with regard to Critical Dispositions. This along with the previous data regarding all evaluators share concerns with three of the same standards shows a balance of congruity among evaluators the objectivity of which strongly suggests a functional level of face and content validities in the assessments.

The next and final analysis of these data is found in Table 19 below. This table has a great deal of specific information in it that would provide some direction regarding data informed decision making. The table lists all of the specific indicators that were identified with excessing frequency of Developing responses.

The analysis shows there are 19 separate indicators having more than 20% of the responses in the Developing qualifier. Some of these indicators were used more than one time making for a total of 24 hits having a high level of Developing responses. Of the 19 different indicators, 9 were from Performance, 6 from Essential Knowledge, and 4 from Critical Disposition categories.

The contents of each of these indicators are provided in the Table, as are the InTASC indicator category appropriate to each one, the number of "hits" each indicator had, and again red is used to show which indicators (rather than standards) having excessive frequency of Developing responses. This provides specific information within the standards regarding how to strengthen the standards and hence the Teacher Program Program by addressing the precise elements that are less developed within a standard within any standard. In this case, we have five standards that have lots of room for more responses in the Exemplary/Proficient qualifiers three of which are a common concern to mentor teacher and college supervisor. As can be seen in the next table, InTASC Indicators 2(a), 3(d), 6(c), 6(g), and 6(l), were found on both the MT and the CS responses. The remaining indicators all appeared one time.

Table 19: High Incident "Developings" InTASC Indicators by Category, # Hits, and Commonality

Red Denotes Common (CS/MT) Indicators			
#	P= InTASC Performance	EK= InTASC Essential Knowledge	CD = InTASC Critical Disposition
1	P	1(b) The teacher creates developmentally appropriate instruction that takes into account individual learners' strengths, interests, and needs and that enables each learner to advance and accelerate his/her learning.	
5	P	2(a) The teacher designs, adapts, and delivers instruction to address each student's diverse learning strengths and needs and creates opportunities for students to demonstrate their learning in different ways.	
	P	2(c) The teacher designs instruction to build on learners' prior knowledge and experiences, allowing learners to accelerate as they demonstrate their understandings.	
	EK	2(g) The teacher understands and identifies differences in approaches to learning and performance and knows how to design instruction that uses each learner's strengths to promote growth.	
	EK	2(h) The teacher understands students with exceptional needs, including those associated with disabilities and giftedness, and knows how to use strategies and resources to address these needs.	
3	P	3(d) The teacher manages the learning environment to actively and equitably engage learners by organizing, allocating, and coordinating the resources of time, space, and learners' attention.	
	EK	3(i) The teacher understands the relationship between motivation and engagement and knows how to design learning experiences using strategies that build learner self-direction and ownership of learning.	
1	CD	5(o) The teacher understands creative thinking processes and how to engage learners in producing original work.	
8	P	6(c) The teacher works independently and collaboratively to examine test and other performance data to understand each learner's progress and to guide planning.	
	P	6(g) The teacher effectively uses multiple and appropriate types of assessment data to identify each student's learning needs and to develop differentiated learning experiences.	
	EK	6(l) The teacher knows how to analyze assessment data to understand patterns and gaps in learning, to guide planning and instruction, and to provide meaningful feedback to all learners.	
	CD	6(r) The teacher takes responsibility for aligning instruction and assessment with learning goals.	
	CD	6(t) The teacher is committed to using multiple types of assessment processes to support, verify, and document learning.	
3	P	7(c) The teacher develops appropriate sequencing of learning experiences and provides multiple ways to demonstrate knowledge and skill.	
	EK	7(l) The teacher knows when and how to adjust plans based on assessment information and learner responses.	
	CD	7(n) The teacher respects learners' diverse strengths and needs and is committed to using this information to plan effective instruction.	
3	P	8(e) The teacher provides multiple models and representations of concepts and skills with opportunities for learners to demonstrate their knowledge through a variety of products and performances	
	P	8(h) The teacher uses a variety of instructional strategies to support and expand learners' communication through speaking, listening, reading, writing, and other modes	
	EK	8(k) The teacher knows how to apply a range of developmentally, culturally, and linguistically appropriate instructional strategies to achieve learning goals.	
24	Hits	# = number of hits per standard	1(b) = Standard 1 Indicator (b) P=9; EK=6, CK=4.

A good method to utilize the information in Table 19 is to study each of these indicators and see if there is a commonality among a few or more of them. If a common theme can be found for a portion of these indicators, the issue could be best addressed across the appropriate part of the curricula.

When these 19 indicators having excess developers at the mid-term were conceptually examined, it appeared an argument could be made that 14 (74%) of them dealt in one way or another with learning differences and two more dealt with assessment. Given assessment is quite closely related to working with learning differences, 84% of the high levels of Developing responses dealt with the area of differentiated learning abilities.

Clearly this is a difficult area to prepare for without actual classroom experience, but it is certainly a very important quality that all teachers should nurture throughout their careers. Learning to recognize and address learning differences is a huge responsibility that falls first and foremost upon each classroom teacher. For many students, this will be the only chance they have in their young lives to realize they too have an equally profound dignity as the other students because they too can demonstrate the ability to learn and earn an education if enough effort is made to identify the little window these students have that allow them to learn alongside of all students, even if it is a bit differentiated. The bottom line here is every teacher at every possible stage of their long and successful careers should still be “Developing” in this regard!

Surveys

SKC teacher education program exit survey.

The questions and responses from this exit survey follow.

Please reflect on which aspects of the SKC TEP were most beneficial to you prior to student teaching...

- The ability to be a part of classrooms all over the valley was the most beneficial part of my TEP. It allowed me to put to work what I was learning in class. I really enjoyed when my teachers made connections consistently from real world situations to theoretical concepts of education. It was helpful when my instructors made the content learned relevant to me.
 - To me, the whole TEP process was beneficial. I really liked focusing on classroom management, curriculum planning, math courses, and meeting the needs of families/special needs.
 - The most helpful parts of this program were the faculty. Without their encouragement, professionalism, and support, earning my degree would not have been possible.
 - Being able to interact so closely with my professors all the time was extremely beneficial to me, also the class sizes.
 - My mentors were great and worked hard to see me finish the program. Very helpful and generous in all of my school activities.
 - The mentoring and bonding within cohort and with teachers in the TEP. The required observations in course were very educational.
2. Please comment on which aspects of the SKC TEP were least helpful to your evolution as a teaching professional.

- There were times when we were short staffed and there were inconsistencies in the way our classes were set up and I feel like I could have had more support and learned more in those courses. My cohort and I feel like we didn't learn as much about literature as we could have.
- One thing I wish I could have focused more on was how to use formative assessment with kindergarten/1st grade.
- The least helpful...I have given you plenty of feedback during my time as a student, and I have nothing left to say...except THANK YOU!
- I struggled with classroom management for the first couple of weeks of my student teaching experience – it would have been beneficial to work with active students more on behavior expectations before student teaching.
- Being Science and Ed. Seems to give us the short end of the stick in two ways. 1st, the class times tend to be arranged for the Elementary Ed and pure science degree students, so making them work for us is many times a struggle. 2nd, the ed classes other than those taught specifically for SECED are typically designed for Elem. Ed and BIO or Chem students.
- The portfolio process was least helpful.

3. During your student teaching experience, which events, activities, or other aspects did you find to be most helpful in preparing you for professional teaching?

- Observation and exploratory hours in each of my courses helped me solidify what was being taught in class. The trip to Creston was a great experience; I wish we had others like it. The school for the Deaf and Blind was exceptional!
- All of it, especially focusing on culture, special needs, management, technology, having TEMP events, guest speakers, field experience and partner projects/individual projects.
- Everything about my student teaching experience was important and valuable to my preparation. The school, teacher, and setting were ideal!
- I was able to help with Muffins for Mom's, Donuts for Dad's, parent teacher conferences, as well as, re-vamping the schools pacing guide – all were great!
- Before EDUC 471- aside from not actually starting my real project reflections for Regina on bi-weekly basis.
- Planning and teaching lessons were the most helpful activities.

4. What are some specific obstacles that you faced in your TEP experience, and how did you deal with them?

- One challenge I faced was scheduling observation hours. I got to know more teachers as I went in to observe, but getting started was hard. Maybe, a TEP event showing students how to approach schools would be a good idea for the future.
- Blank
- I struggled in some courses to understand what was expected of me. Sometimes expectations changed, which made things very stressful. I tried to be honest and communicate with individuals to make things clear.
- There were several times where there was a miscommunication between student and instructor expectations. This was frustrating. To deal with them, I asked many different questions all the time.
- The EDUC 495 class meetings tended to be less of a help and more of a hindrance in terms of managing time during student teaching.
- It was hard to manage how demanding the TEP is. I had to manage my time to

complete coursework while maintaining a job and participating in athletics.

This survey was provided by six faithful completers. The survey requests opinions rather than a vague scale. As such, this survey provides very beneficial information to the Division and in general can be summed up as having been very positive to the preparation they experienced at SKC Division of Education. While the responses all seemed candid and sincere, not requiring the students to put their names on the surveys might be worth considering.

Montana education preparation provider completers' satisfaction survey

To gather information regarding students' perspectives of their professional preparation, the Montana Educator Preparation Provider Completer Satisfaction Survey was administered to Salish Kootenai College Division of Education completers. Surveys were returned by nine completers. The survey consisted of 19 questions requiring ranked responses and one open ended question in which the completer could offer comments with regard to their preparation experience.

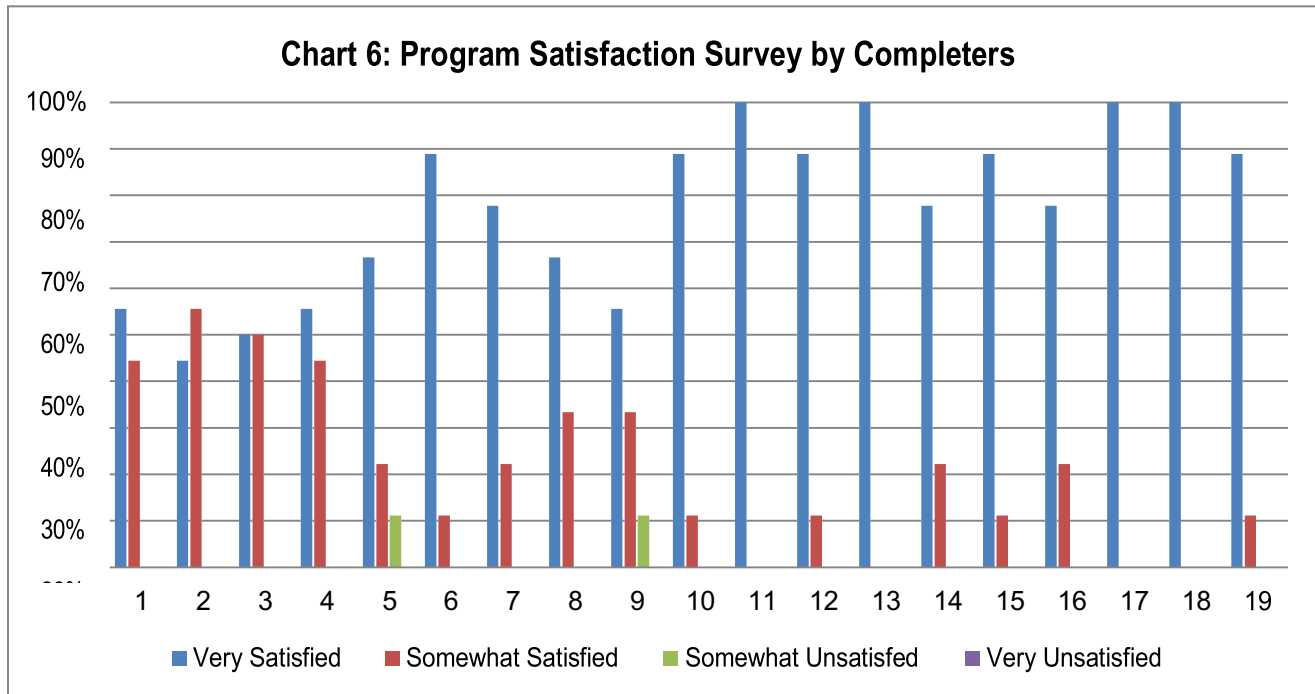
The overall findings were compiled from a total of 170 responses and were found to be very good with 99% of the respondents either Very Satisfied (78%) or Some What satisfied (21%) across all 19 of the professional preparation survey elements. Those items receiving 100% of Very Satisfied responses were items Number 11, (encouraging critical thinking); Number 13, (growth as a professional); Number 17, (engaging with supervisors in supportive, professional conversation); and Number 18, (taking an active role on the instructional team).

Two elements of the survey, Number 5 (managing a classroom conducive to learning) and Number 9 (analyze assessment data to improve the effectiveness of instruction) each received one Somewhat Unsatisfied responses. While 78% of the total responses were Very Satisfied, its contrary, i.e., Very Unsatisfied, received no responses.

These responses indicate a very high degree of satisfaction with how completers have been prepared in critical thinking, professional growth, engaging with supervisors in supportive and professional conversation, and taking an active role on the instructional team. There is a very nice logical conceptual flow with those four items; completers have learned how to think critically, that is, with judgement predicated by understanding objective principles, which provided these completers with the confidence to engage in professional level conversations with supervisors and then to act upon that confidence by participating on a team to make important curricular decisions. Certainly it is no surprise these same completers are 100% very satisfied with their preparation in how to grow as a professional educator!

The two areas that drew Somewhat Satisfied responses are crucial areas where today's teacher must be proficient. Classroom management is now so important that the concept should be upgraded to classroom leadership. All teachers need to learn well the principles of classroom leadership and to implement those principles proficiently so that all learners have the opportunity to learn in the appropriate environment.

The other area of concern is that of understanding action research and how to use it in order to inform instruction. The Division of Education has taken recent steps in this regard including introducing a new course dedicated to this very survey item. There is little doubt that the number of Very Satisfied will increase in coming years while the number of Unsatisfied responses will vanish.



So while only one Somewhat Unsatisfied response was given for each of these two survey elements, both areas are highly important in today's classrooms.

The open ended comments are also instructive. There were three completers with comments, which included:

(a) "The instructors at Salish Kootenai College did an excellent job of helping prepare me as a future teacher. I was encouraged to think outside the box, incorporate Indian Education for All into my lesson plans, understanding different learning styles and differentiating my lessons, and lastly, to remember to focus on students and not just the curriculum." Another student offered quite concisely, "I feel that the institution prepared me very well!"

A third completer provided this insightful comment, "After completing my education in MT, I moved out of state and began teaching. I feel the education I received at SKC was much more diversified and gave me more real-world skills compared to many educators currently in the field who received their education at much larger institutions. I feel I was better prepared to work with a diverse group of students and have a well-rounded view of education and what it takes to be an educator in today's world."

This is a state level assessment that would be much more useful if the categories of responses were not ambiguous and if they were well defined. For example, a completer could respond with, "Somewhat Satisfied" but that would imply the student is somewhat dissatisfied; on the other hand, a completer could respond with "Somewhat Unsatisfied" but obviously must be somewhat satisfied.

Or, it would not be impossible for a student to be very satisfied but also somewhat unsatisfied about a particular aspect and vice versa. Maybe the student will let the somewhat dissatisfied dominate the decision to check “Very Satisfied” or maybe the student will let the very satisfied dominate a “Somewhat Satisfied” response. At any rate, the developers of this survey will provide more information to preparation programs if this simple aspect of it were cleaned up to a more logical configuration.

SKC TEP student teacher evaluation of college supervisor.

The Division of Education assigned one of four supervisors to each of the six student teachers who returned their surveys wherein they evaluated their individual college supervisor during their student teaching. The survey contains seven ratable and three open ended items. Responses were scored on a five response scale with an additional option to check NA. The categories of responses are Excellent, Very Good, Good, Fair, Unsatisfactory and N.

The elements of the survey are:

The College Supervisor:

1. Provided me with information regarding all aspects of the evaluation of my performance throughout the student teaching experience. B, A, A, D, A, A
2. Clarified any confusion I verbalized regarding documentation of my performance. C, A, A, F, A, A
3. Helped me to develop a positive working relationship with the cooperating mentor teacher (CMT). B, A, B, E, B, A
4. When I asked, provided me with assistance and support in dealing with the CMT. A, A, F, F, B, A
5. Completed at least the minimum number of visits A, A, A, E, A, A
6. Interacted with myself and the CMT in a respectful and encouraging manner. B, A, A, C, A, A
7. Responded to my questions and dilemmas about such matters as management techniques, classroom supervision, methods of presenting subject matter, assessment techniques, teaching strategies appropriate for the diverse needs of learners, and student teaching assignments. B, A, B, F, A, A

There were 25 As (Excellent), 6 Bs (Very Good), 2 Cs (Good), 1 D (Fair), 2 Es (Unsatisfactory), and 4 Fs (Not Applicable). In glancing at these scores, don't misinterpret the Fs for a poor rating.

Table 20 summarizes the frequencies of response levels by percentages.

Table 20 Student Teachers' Evaluation of their College Supervisors							
Completers	Excellent	Very Good	Good	Fair	Unsatisfactory	Excel/VG	E/VG/G
Response	A	B	C	D	E		
1	67%	17%	0%	17%	0%	83%	83%
2	80%	0%	20%	0%	0%	80%	100%
3	33%	50%	0%	0%	17%	83%	83%
4	60%	40%	0%	0%	0%	100%	100%
5	83%	0%	0%	0%	17%	83%	83%
6	67%	17%	17%	0%	0%	83%	100%
7	60%	40%	0%	0%	0%	100%	100%
Average	64%	23%	5%	2%	5%	88%	93%

The open ended questions provide much more practical information and are as follows.

. Answer the following questions completely and candidly.

8. In what additional ways (not indicated above) did the College Supervisor assist you or the CMT?

- My college supervisor was excellent at encouraging me to keep trying techniques of teaching. He was upbeat about my faults and helped me overcome my feelings toward a lesson that didn't go as planned.
- Anytime me or my cooperating teacher had any questions, our supervisor was always available by person, email, and phone to answer those questions.
- Mr. Schinderle was very helpful in finding an excellent student teaching placement for me, and was supportive and approachable.
- Answered several question over email very vaguely.
- Providing forms and deadlines to us and being flexible with the dates, etc.
- The supervisor was very attentive to any needs I or the CMT had. He would frequently check in and was very professional.

9. What assistance did you request of the College Supervisor that was not provided?

- None that was not already provided.
- Everything was provided.
- There were no requests made that he did not respond professionally to.
- None
- None
- All necessary assistance was provided.

10. In order to improve the Teacher Education Program at Salish Kootenai College, please identify any area in which you feel you were inadequately prepared.

- My responsibilities of what I needed prepared for my college supervisor was unclear prior to his arrival. Going over student teacher handbook before student teaching, as a class, would have been helpful.
- Learning more about math expressions is and it works on applying for grants for certain things in the classroom (tablets and smart tables).
- I felt mostly prepared for student teaching. However, I never received a copy of or went over the Student Teacher Handbook prior to ST and I wish that would have happened.

- Lack of research as to who would be completing my evaluations during my student teaching in a different area – I was put in a position where I had to pressure the Principal to hold up his end of the responsibility.
- I feel like it would be helpful before the student teaching experience, to work with the CMT and College Supervisor to design an entire unit, notes, lab that will be taught at some point during the ST experience.
- I felt adequately prepared.

Two items, #4 (assistance dealing with the cooperating teacher mentor) and #7 (responded when asked for help with virtually any issue that came up) both had 100% approval for all six completers when responses for Excellent and Very Good are combined. An additional two items, #2 (clarified documentation of performance and #6 (interacted with student teacher and cooperating teacher in a respectful and encouraging manner) also reached 100% positive responses when the responses for Good is added to Very Good and Excellent.

Once again the responses to the survey present an internal level of validity given items #4, #6, and #7 are collational in that the college supervisors were viewed to be most helpful in part when working with the student teachers and mentors to resolve issues and they do so with respect while at the same time providing encouragement of inspiration to both parties. The high score for Item #2 brings the summative piece to the evaluation in that student teachers is particularly noteworthy in that first of all they want to know how to better document their performance and second, found their supervisors quite proficient in helping them to that end.

This is an excellent finding in that these two items are essential to not just to the success of the student teacher and not just to making sure students receive a high level of education under the purview of the student teacher, but just as important of maintaining crucial partnerships. This is a fine line in which to be proficient given the supervisor is providing support for the student teacher without offending the district personnel. SKC Division of Education students often enter their student teaching experience with knowledge more current than their mentor teachers, for example, in technology and action research methods. The college supervisor has to walk a very tight rope so that the student teacher can put into practice what they have learned without offending district personnel who might be data a bit on some of these things.

The remaining three survey items, #1, #3, and #5 were all at 83% when scored combining Excellent and Very Good responses. While this is slightly below 100%, #1 and #3 are tempered a bit by the higher responses on #2 and #4 respectively. The responses to the remaining item, #5 (supervisors completed the required number of visits), provide useful information as well that will be addressed as a result of this accreditation review.

The overall findings found in Table 20 reflect a strong program of supervising. An average of 64% of the responses was Excellent and an average of 23% was rated as Very Good. The combined Excellent and Very Good responses then accounted for 87% of the total responses. Just 2% of the responses were Fair and 5% were rated Unsatisfactory.

Item #8 asks the student teachers to identify any other ways in which they or their cooperating teacher mentor was supported by their college supervisors. Five of the six responses were very positive, noting their supervisors were always ready and able to help with any issues needing their attention. The sixth respondent noted his or her college supervisors responded to emails but was somethings vague.

Item #9 asks the student teachers to identify anything needed but not provided by their college supervisors. The respondents unanimously agreed nothing needed by them had been omitted or neglected and on the contrary, had been provided in a timely manner.

The final item, #10, requests the respondents to identify anything that might improve how the Division of Education serves its students. All six responses are important to note, so each is included here verbatim.

- My responsibilities of what I needed prepared for my college supervisor was unclear prior to his arrival. Going over student teacher handbook before student teaching, as a class, would have been helpful.
- Learning more about math expressions is and it works on applying for grants for certain things in the classroom (tablets and smart tables).
- I felt mostly prepared for student teaching. However, I never received a copy of or went over the Student Teacher Handbook prior to ST and I wish that would have happened.
- Lack of research as to who would be completing my evaluations during my student teaching in a different area – I was put in a position where I had to pressure the Principal to hold up his end of the responsibility.
- I feel like it would be helpful before the student teaching experience, to work with the CMT and College Supervisor to design an entire unit, notes, lab that will be taught at some point during the ST experience.
- I felt adequately prepared.

Evaluation of cooperating teachers' ability to mentor a student teacher.

Six completers returned this survey. Repeated attempts by faculty for other completers to return this and other surveys did not generate any new data. The scoring is quite vague, from 1 to 5 with no definitions of what is meant by the gradations in scoring other than generic terms such as Greatest/Least. To complicate the analysis, 1 represents the best score with 5 representing the worst score but on other assessments, 1 represented the worst score and 5 the best score. The later scheme seemed to confuse some completers and so it is not possible to know what scores correlated. The completers were given this open ended question: *Please make additional comments on how the role of the cooperating teacher might be changed to improve the student teaching experience.*

Their responses are:

- My cooperating teacher was a great asset to me. She helped me so much and I believe I grew tremendously. I would ask her to observe I would ask her to observe me more frequently throughout my student teaching.

- She was an excellent mentor. I am so grateful to have been her student teacher!
- No suggestions at all – my experience was a wonderful one and she was such a huge help. She truly was such an inspiring educator to work with.
- More frequent feedback.
- Blank
- I was happy with my cooperating teacher. She was very supportive and good at making me get in there and teach. A longer student teaching experience would be beneficial for more observation and co-teaching.
- I thought he did a great job of explaining everything. He gave me honest feedback every day. We got to know each other very well. I honestly don't think his role could be changed. He was positive and helpful in all aspects. All of my questions were answered.
- I had the most positive experience. Student teaching, the knowledge I have obtained is invaluable. My mentor teacher was amazing. Thank you for allowing me the opportunity pick my mentor teacher and advocating for me to the district on my behalf. I appreciate it.

These few comments pretty well sum of the quality of their mentor teachers as well as the preparation they were given prior to student teaching.

Employers' survey of completers' employment.

There were 15 employers who have responded with the appropriate survey regarding the employment of the Division's completers. The criteria for survey are the 10 InTASC Standards and Indicators. A total of 70 data points were completed by each of the 15 employers for the SKC Division of Education graduates who are employed as teachers in their Districts. The results are quite interesting as presented in Table 20.

Good to notice is the 83% Exemplary and Proficient combination average and the absence of any Unacceptable responses. This leaves the Developing qualifier as a point of interest.

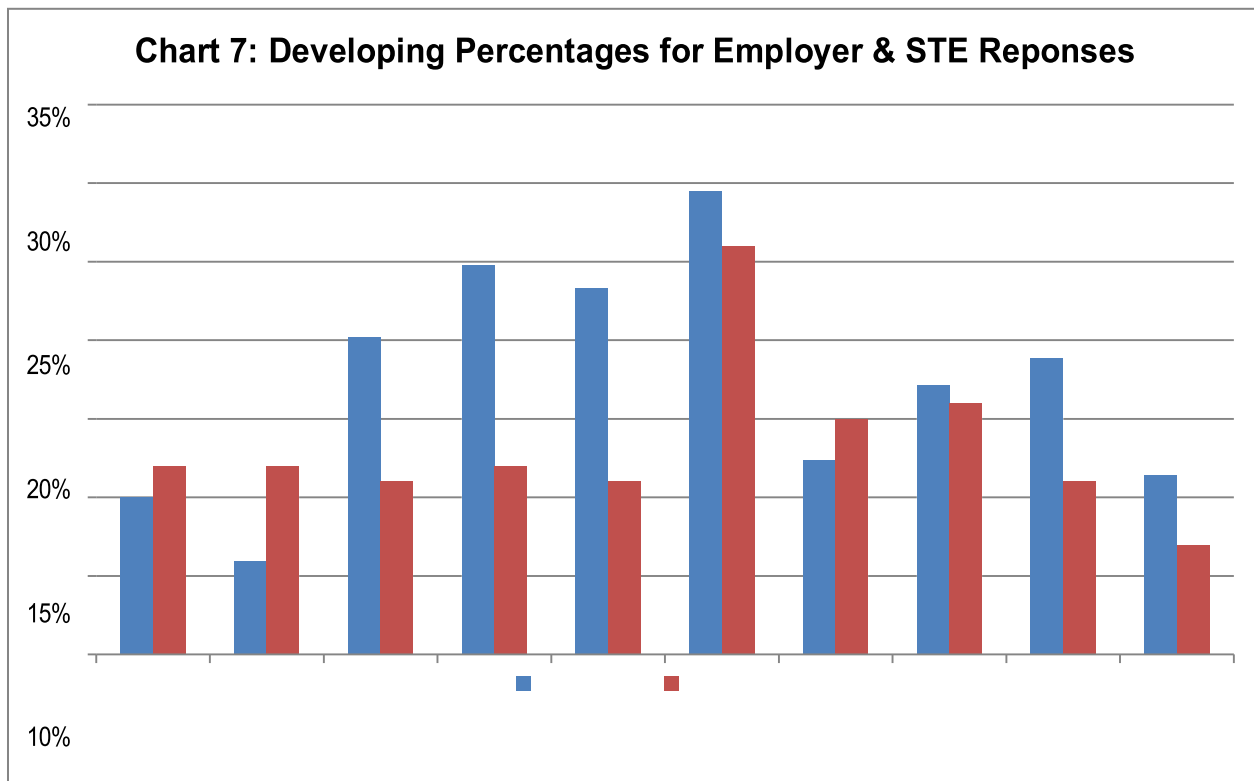
Note that Standard 6, Assessment resurfaces again from the STE analysis as the highest Developing frequency standard among all 10

Table 21: Frequency of Employer

Descriptor	Standard	Exemplary	Proficient	Developing
Learner Development	InTASC 1	12%	68%	10%
Learning Differences	InTASC 2	30%	64%	6%
Learning Environment	InTASC 3	30%	50%	20%
Content Knowledge	InTASC 4	24%	51%	25%
Application of Content	InTASC 5	14%	62%	23%
Assessment	InTASC 6	4%	67%	30%
Planning for Instruction	InTASC 7	29%	59%	12%
Instructional Strategies	InTASC 8	13%	70%	17%
Prof Learning and Ethics	InTASC 9	23%	58%	19%
Leadership/Collaboration	InTASC 10	39%	50%	11%
Average		23%	60%	17%

InTASC Standards. In other words the employers noticed the relatively weaker development of Division graduates in the Assessment Standard 6 as did the mentor teachers and college supervisors.

To pursue this observation a bit further, the Developing percentages for each of the InTASC Standards for both the STE Mentor Teacher and employer survey evaluations are contrasted in Chart 7.



The relationship between the outcomes of the two assessments is remarkable and certainly good enough to gather and analyze annually as this initial analysis certainly suggests the scores from the STE may very well have a good predictive validity of the employers' scores across the same standards and indicators. This would provide graduates with the weaknesses and strengths that are likely to also be observed by their future employers unless the graduate secures additional preparation in appropriate areas. The above chart also shows the standards employers find well developed such as Standards 1, 2, 7, and 10. The identity of these InTASC standards can be found on the previous page in Table 21.

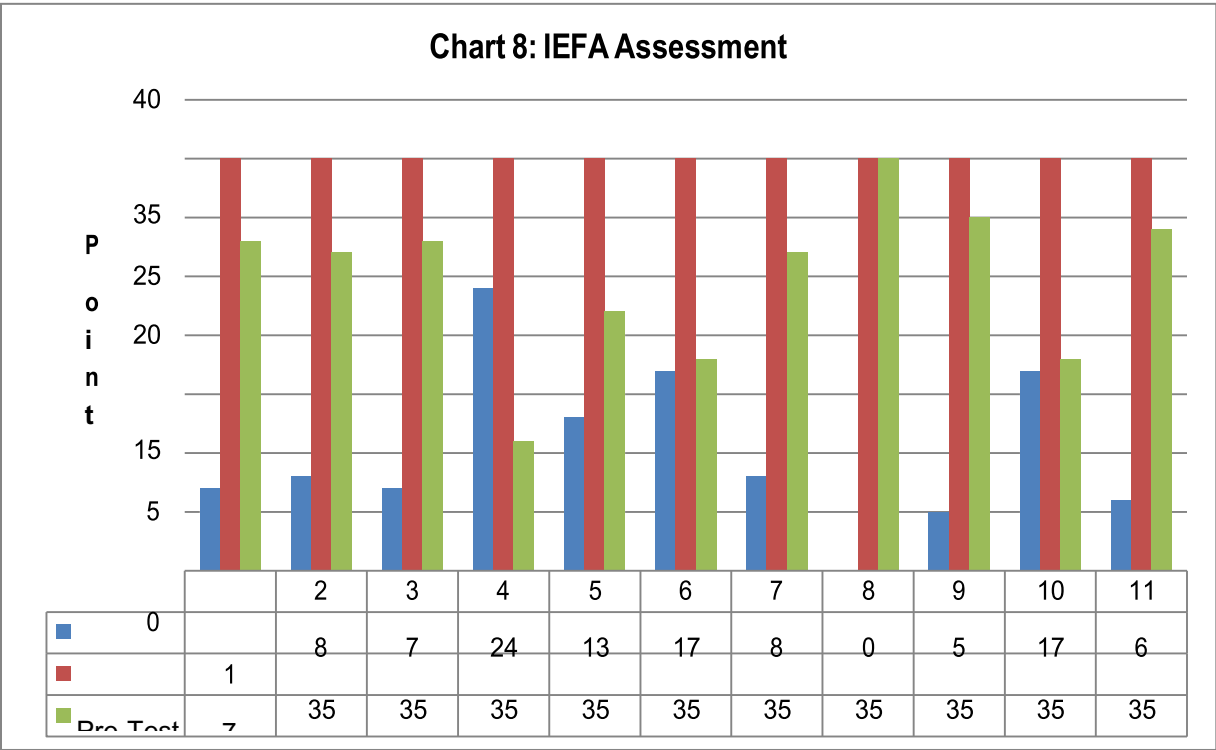
Native American History and Culture

The crown jewel in the SKC Division of Education's curricula is its conformity with the College's vision and the Division's mission; specifically, to preserve the native culture, not limited to being simply a separate body of knowledge to be studied as any given subject might be studied merely for content knowledge, but more importantly, as an understanding of a form of human dignity that exists to be expressed as life itself.

As alluded to earlier in the TPT assessments, there is very good evidence the Division has successfully integrated specific qualities, for example, the 4Cs, into its curricula as an integral part of the whole curricula. Preserving native culture and understandings, while taught as a specific class, are also successfully integrated throughout the whole curricula offered by the Division. However, one assessment is available for this analysis that directly gathers data regarding a basic level of knowledge

regarding the native history and culture. Specifically the assessment is *The Conceptual Knowledge for IEFA Integration Assessment* (Elser, 2012) , which assesses students' knowledge of IEFA including Tribes, Reservations, Essential Understandings, knowledge of culturally responsive practice, and the intent of MCA 20-1-501. This assessment is given at the beginning and again at the end of several classes throughout the Preparation Program and serves in part to fulfill the 11th 501 Montana Teaching Standard.

The assessment scores from 0 to 35 and consists of geographical knowledge of Montana Indian tribes, reservations, and Essential Understandings. The administration of this assessment is relatively new to the Division; however, there are available for this analysis the Pre and post data for 11 students. The data and the associated gains from this assessment are presented below in Chart 8.



The pretest scores (blue) are as might be expected; however, the post-test scores (reddish) are remarkably the same and all with perfect scores of 35 points. The green bars represent the gain each student achieved between pre and post-tests. Clearly this material is being presented in a manner conducive to at least this random group of education students. This assessment will have substantially more data when the next accreditation review is held.

Summary

Given the abundance and distribution of **InTASC** assessment indicators as well as the volume of data and proportionate distribution throughout the entire Preparation Program gathered, it is clear the construct of the assessment plan has ample capacity to provide the necessary validity to ensure viable content and face validities that ultimately support a good predictive validity. The quality of these three

validities is certainly strengthened by the fact all SKC Division of Education teacher graduates this year either had contracts in hand or verbal offers to teach five weeks prior to their graduation!

The ranking of the InTASC standards provides a general overview of the degree to which the standards are being acquired by students and candidates in the Preparation Program. In general, a strong percentage of the students/candidates have increasing Exemplary/Proficient scores as they progress through the three stages while Developing percentages decrease. As noted, there was an exception or two where Developing responses increase in number as the Preparation Program progresses. It would be very interesting to see if non tribal colleges would have Learning Differences as the highest ranked standard at the Exemplary ranking.

The **RWAs** serve a vital role in the assessment of a student/candidate's preparation for a career as a professional teacher. One of the RWAs' most valuable qualities is they cover all of the InTASC Standards, providing a common form of assessment with multiple iterations across all 10 standards. RWA scores tend to have uniform improvement among all students as they progress through the three Stages. Two InTASC Standards found to need a bit more attention are Standard 3 (Learning Environment) and Standard 10 (Leadership and Collaboration). Both of these standards will surface again from the perspective of other assessment forms. Finally and most notable of all is the high academic level achieved by the end of the program.

MACK scores were found to be exceptionally strong . The TEP GPA score displayed an interesting characteristic in that as the program progressed, there were fewer 4.0s yet the average GPA increased. This suggests the average GPA is supported by increasing achievement across the student body rather than a dependency upon a few students to earn 4.0s.

The Student Teaching Evaluations regarding content knowledge were exceptionally good. Practicing teachers find the candidates are very well prepared in content knowledge, which reflects quite favorably upon the content and face validities of the program.

Finally the **PRAXIS II** scores that comprise the third element of the MACK score continues to be a problem for many of the candidates, although a reasonable percentage of the students do well on it. There are many explanations for why Division candidates have difficulties with standardized tests normed for a much different population of students; however, this challenge has to be met and the scoring methodology for the MACK score provides two other forms of assessment to help support a weaker PRAXIS II score, which has resulted in 91% of the candidates received the Division's recommendation for licensure.

The **TPT** scores regarding the 4Cs are amazing. The initial scores are quite weak; however, the final scores are exceptionally strong. Once again, this not only speaks to the capacity of the Division to bring students from typical levels of performance to quite high levels, but this also points to the universality by which the Division integrates educational performance objectives and goals into both the direct curricula and also the indirect or hidden curricula.

The **STE** scores were excellent. Once again, high scoring students end up scoring even higher while initially lower scoring students end up scoring as well as their higher scoring peers (see Chart 4, Pg 22). This strongly indicates that regardless of how well prepared a candidate was initially, their preparation

had fostered in each of them the capacity to reach a high level of preparation for and during their student teaching experiences as well as for severing a professional teacher upon graduation.

The STE evaluation is particularly useful in reflecting the validity of the curricula and faculty who deliver those curricula given it provides (a) pre-post data and (b) an opportunity to compare the judgment the practicing teacher in the field regarding the quality of the Division candidates' preparation with the judgment of a person associated with the college. The college supervisor initially tended to have more Developing responses than the mentor teacher indicating the mentor teacher typically viewed more of the candidates as proficient than did the college supervisor. This finding confirms the validity of what students were promised (face validity), the validity of what and how they were prepared (content validity), and given both of these, the judgment of the Preparation Program personnel serves as a predictor (predictive validity). In other words, the Division faculty promises a specific education and delivers that promise to the degree the purpose of the promise is fulfilled.

The STE data were further analyzed in more detail, leading to the conclusion that half of the InTASC Standards are viewed at mid-term as having been proficiently demonstrated, two are somewhat less developed in a couple of subcomponents of the Standards, and three are more troublesome.

When the 19 indicators having excessive numbers of Developing at the mid-term assessment were conceptually examined, it appeared an argument could be made that 14 (74%) of them dealt in one way or another with learning differences and two more dealt with assessment. Given assessment is quite closely related to working with learning differences, 84% of the high levels of Developing responses dealt with the area of differentiated learning abilities while the remaining area of concern was the learning environment.

A number of **surveys** were distributed and as always, there tends to be difficulty in having some of them completed and returned. Nevertheless, there were five surveys for which data were available, specifically, the SKC Teacher Education Program Exit Survey; the Montana Education Preparation Provider Completers' Satisfaction Survey; the SKC TEP Student Teachers' Evaluation of their College Supervisors; the Evaluation of Cooperating Teachers' Ability to Mentor a Student Teacher; and the

Employers' Survey of Completers Employment.

All of the surveys speak highly of what is being surveyed indicating a broad acceptance and appreciation for many of the elements that make up the entirety of the Program. The respondents in all surveys offer some candid information that should be useful to improving future preparation as the open ended responses provide better insight than the Likert type of responses.

The satisfaction survey produced a very high degree of satisfaction with how completers have been prepared in critical thinking, professional growth, engaging with supervisors in supportive and professional conversation, and taking an active role on the instructional team. Certainly it is no surprise these same completers are 100% very satisfied with their preparation in how to grow as a professional educator!

The responses from the mentor teacher evaluation by the student teachers were also very high and for areas of concern, the candidates were very positive in how they phrased any concerns, tending to suggest alternations that would improve and better maximize their own student teaching experiences.

The employers' survey was exceptionally beneficial. The survey basically addresses all of the InTASC/ 501 Teaching Standards. Standard 6, Assessment, resurfaces again from the STE analysis as the highest Developing frequency standard among all 10 InTASC Standards. The fact that employers noticed the relatively weaker development of Division graduates in the Assessment Standard 6 as did the mentor teachers and college supervisors presents great construct validity as well as the potential for good predictive validity. This is to say that it is possible that the STE scores may serve the Program well if those scores can serve as predictors for what employers, that is, school principals, will find the Division completers may need to improve when they begin their professional careers. Given the great correlation between the STE and the Employer Survey finding the same weakest InTASC Standard, the rest of the standards were similarly compared and the results displayed in Chart 7 on Page 40. These two assessments may be able to serve the program in an unexpected way, that is, as a form of predictive validity for a criterion of high value, specifically, employer satisfaction!

IEFA is an important component for the Division of Education as a responsibility both internally as well as externally. That is, the Division itself enjoys promulgating IEFA as part of its Program for the added benefit to all of the students who participate at any level in the Division. However, most of the

Division's completers will find the promulgation of IEFA as part of their professional responsibilities and so it is necessary to ensure each completer leaves the Program having the necessary knowledge and understandings of IEFA and related components. As can be seen in the data on Page 41, Division students are gaining such knowledge and understandings.

Recommendations

Personalizing education in a classroom is certainly one of the most difficult qualities to acquire but is more importantly, one of the most rewarding qualities when accomplished. Meeting personal needs of students' educational performance is a win-win for the student and for the teacher, who in his or her own way is hopefully still a student as well.

This analysis found virtually everything upon which data are gathered is being accomplished very well to exceptionally well. The findings from these data suggested the areas that could use more attention during the preparation process include learning more about differentiated learning abilities, classroom management, understanding assessment, better prepared to read/conduct research, and leadership.

During the final two years of this review period, the Dean had recognized the need for additional preparation in research methods wherein she supported the development and implementation of a specific class devoted to research. During the past year, she also recognized the need for additional preparation in assessment and had started the development of a course on assessment. Given the findings of this analysis, it would be prudent for the division to pursue the development and offering of an assessment class at the Stage II level.

The most informative data came from assessments that were of the pre-post design, had more than one rater, and given over more than one Stage if appropriate. In addition, the open ended questions on Division assessments provided good specific information. Particularly valuable are assessments having raters from two different perspectives, such as the student/faculty TPT assessments and the mentor teacher/college supervisor assessments.

The division faculty has improved its assessment construct by having a common means of characterizing and defining those characteristics used to denote varying degrees of attainment. The division faculty should double check to make sure all current assessments of the appropriate type utilize this same system and its definitions of the descriptors. All raters of these assessments must be aware of the definitions and apply them accordingly if the data are to have any aggregate validity.

The standards at all levels seek reliable and valid measures. In order for the Division to have valid data generated by state and federal assessments, those assessments must provide the correct form of the data if it is to have the capacity to be valid. As pointed out earlier in this report, the state uses assessment the undefined descriptors of Very Satisfied; Somewhat Satisfied; Somewhat Unsatisfied; and Very Unsatisfied. It is not possible for the Division to somehow infuse validity and reliability into the findings from such an assessment.

If Likert type responses are wanted, there must be a clear definition of what each individual indicator such as 1, 2, 3, and 4 mean. If the raters do not have a common definition of Very Satisfied, for example, then an analysis of that data lacks the assurance that when tallying those scores, each rater meant the same thing for each signifier. In the absence of those definitions, then validity is compromised, not at the fault of the EPP, but as a fault of the assessment developers failure to provide an assessment having the capacity to combine categories of responses. Developers and practitioners of those assessments need to keep in mind that ordinal data such as Likert type data or standardized data from SBAC, ACT, etc. do not measure at all; they provide ordinal data, which does not have the capacity to measure but rather to rank. The recommendation in this regard is for the state to upgrade the validity of their assessments so that EPPs have data having the validity and reliability that the state and federal government want schools to use.

The MACK scores are inclusive of numerous kinds of indicators and provide a single score that sums up all of those indicators. One problem that is apparent with the MACK scores is that a completer's MACK score is comprised of the program's GPA, the MSTA scores, and the PRAXIS scores. In order to combine these three scores into a single score, they must all be transformed to a common scale. In doing so, GPA is scaled to an integer from zero to four. A difference of one hundredth of a GPA point can make the difference between a 3 and a 4, which could make the difference between a MACK score of 6 and 7, which would make a difference in licensure and no licensure. It is not possible to have meaningful reliability and validity in an assessment that encompasses all of the TEP grades, all of the MSTA scores, and the PRAXIS II scores and yet the final determination can be made by an insignificant difference of 1/100th in Grade Point? Both at the state and national levels, EPPs need to be helped so that the assessments they are required to give have the construct validity that allows the EPPs to reliability and validly assess their programs.

In conclusion, the quality of the SKC Division of Education is competitive with any teacher preparation program in Montana. The Division has many indicators that find concurrent information; yet, each assessment retains its ability to find useful information unique to that assessment. Congratulations to the exemplary division leadership and faculty responsible for such a quality program of teacher preparation.