Alaska ANSWERS

Findings from Policy and Research Question Vetting Process

Synopsis and Recommendations

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Executive Summary

The U.S. Department of Education Institute for Education Sciences awarded Alaska a $4,000,000 grant in 2012 to build a P-20W statewide longitudinal data system (P-20W SLDS), which Alaska has named ANSWERS, Alaska Navigator: Statewide Workforce and Education-Related Statistics. The ANSWERS data system will connect key education and workforce data together in order to better understand the relationship between educational experiences and workforce outcomes across Alaska. Nine high level policy questions were included in the P-20W SLDS proposal. ACPE contracted with DataSmith Solutions, LLC to meet with key education and workforce stakeholders in Alaska in order to vet the proposed policy questions and examples of associated research questions and solicit input on any stakeholder information needs not covered by the original nine policy questions.

Findings

All stakeholders who participated in these meetings are very supportive of this project. Each stakeholder is clamoring for the type of information that ANSWERS can produce so that they can better help their constituencies. The policy and research questions were reviewed and successfully validated with strong support from a broad array of Alaska stakeholders. The vetting process included a large number and variety of stakeholders from partner organizations, state leadership, state agencies, non-profits and school districts.

All nine policy questions were viewed as being valuable, particularly those that would shed light on education and workforce outcomes, student migration patterns in and out of Alaska, and teacher recruitment and retention. In addition, common themes raised across stakeholder groups included a desire for data to be disaggregated by standard demographics (e.g., gender, race/ethnicity, low income status) and by participation in career and technology education. In addition, stakeholders felt it is very important to look separately at the experiences of Alaska Native students and students in rural or remote regions.

Stakeholders would like to understand trends over time about how students move through K-12 education and in and out of postsecondary environments and the workforce. Useful information would include transcript-level information to provide context for understanding successes, challenges and patterns.

In addition to wanting answers to the nine proposed policy questions, stakeholders expressed strong interest in annual High School Feedback reports. These reports, from the postsecondary and/or labor perspective, provide information back to school districts and high schools about how former students are performing in a postsecondary environment (e.g., where enrolled, GPA, remediation courses, degree-seeking and degree/certificate completers) or in the workforce (e.g., what industry or occupation, where, certifications or licenses, salary). In addition to feedback reports, stakeholders would like to use ANSWERS to conduct analyses based on key K-12 data (e.g., attendance, GPA, courses and grades, test scores, AP/IB participation) to help predict subsequent performance in postsecondary or work environments. Predictive modeling can facilitate more efficient and effective career and academic

counseling and advising programs and course placement (e.g., advanced placement versus remediation requirements).

Recommendations

1. Develop common data standards and terms. As the data from multiple sectors is gathered and merged, it will be essential to take the time to fully investigate, plan for and document each data element name, definition and format, so all stakeholders can correctly use and interpret each element.

2. Identify a short-term report to produce as a proof of concept. The SLDS grant is for a three-year period; however, partners do not need to wait for an operational data warehouse before starting to merge and analyze data. It would be helpful to develop one or more reports in the meantime to serve as a proof of concept of the value of cross-sectional data.

3. Establish an advisory board that includes non-partner representatives. Establish an advisory board that continues to engage external stakeholders to help with an ongoing vetting process and system planning to keep external stakeholders interested and engaged and provide an active group of participants to help communicate about and sustain demand for this system with state policymakers and funders.

4. Decide on the highest priorities for analyses. There was general support for all nine of the proposed policy questions; however, some questions garnered more discussion and wide-spread enthusiasm than others. Much interest was expressed in understanding who Alaska students are and what educational pathways and patterns different groups of students experience on their way to employment. The first policy question would attempt to provide a sound description of the Alaska student population, disaggregated by subgroup, and begin to describe that swirl in and out of education and the workforce.

5. Determine the appropriate mode for disseminating information. It will be important to consider the end user of the information when determining how to scope a question, display results and disseminate findings. The differences between traditional academic research and applied research should be considered and information should be analyzed and disseminated according to user need. Examples of different modes include data dashboards, short briefs, white papers, and research articles.

6. Establish ANSWERS as the authoritative source for evaluation. As part of the legislative process when mandating and appropriating funds for new programs or reports, Alaska should consider requiring an evaluation and analysis component and providing funds for conducting applicable P-20W analyses and producing a report back to the legislature. Ideally, ANSWERS would become the de facto data source for those evaluations and return on investment analyses.

Presenting Issue

The U.S. Department of Education Institute for Education Sciences awarded Alaska a $4,000,000 grant in 2012 to build a P-20W statewide longitudinal data system (SLDS), which Alaska has named ANSWERS, Alaska Navigator: Statewide Workforce and Education-Related Statistics. The ANSWERS data system will connect key education and workforce data together in order to better understand the relationship between educational experiences and workforce outcomes across Alaska. With the ability to follow students as they move across the education continuum and into the workforce, even as they move in and out of each sector, policy-makers and practitioners can evaluate the relationships between varieties of elements (e.g., programs, assessments, courses, outcomes, teachers, poverty, and geographic location) that could never have been evaluated prior to the advent of student-level longitudinal data systems. The Alaska Commission on Postsecondary Education (ACPE) is the managing partner for ANSWERS; other partners include the Department of Education & Early Development (EED), the Department of Labor and Workforce Development (DOLWD) and the University of Alaska Statewide System (UA).

From these student-level data, ANSWERS can aggregate statistics based on longitudinal data to answer key policy questions and provide users with the data tools to understand the impact of campus-, district- or state-level outcomes. The key policy questions identified in the SLDS grant proposal are:

1. How many and which students are progressing through an education program/system to achieve college, workforce, and life readiness?
2. What are the migration rates and outcomes for Alaskans attending postsecondary programs outside of Alaska and subsequently returning to Alaska?
3. Of those Alaskans who participated in and exited Alaska secondary or postsecondary institutions without credentials, how many are within three or fewer semesters to completion and what are their employment status and income?
4. Of those Alaskans who receive education services from Alaska secondary and postsecondary institutions, how many remain in the state and contribute to the economy?
5. What is the impact of financial aid on college access and success?
6. How effective are specific interventions and strategies to increase the rate at which students/citizens, particularly those from low-income families, progress through an education program/system to achieve college, workforce, and life readiness?
7. How do Alaska's postsecondary institutions' educational program productivity and capacity align with Alaska's current and anticipated workforce needs?
8. What is the private/public return on private/public investment in education?
9. How does Alaska attract and retain teachers?

ACPE contracted with DataSmith Solutions, LLC to meet with key education and workforce stakeholders in Alaska, including but not limited to staff in partner organizations, in order to vet the policy questions listed above and the associated example research questions developed by partners, and solicit input on any stakeholder information needs not covered by the original nine policy questions.

Vetting Process Methodology

DataSmith Solutions conducted two series of meetings in fall 2012 for the purposes of meeting with an extensive array of education and workforce stakeholders and gathering feedback on proposed policy questions. Site visits were conducted in November to Juneau and Anchorage and in December to Fairbanks and Anchorage. Meetings were held at all three UA campuses with representatives from a variety of offices including UA senior leadership and the UA System President, along with many deans, program administrators and researchers. Additional meetings were held at DOLWD with administrators and staff from DOLWD Research and Analysis unit, as well as at EED with early childhood, teacher certification and career and technology education (CTE) representatives. Additional meetings were held at two school districts (Anchorage and Matanuska-Susitna), and with representatives from multiple non-profits, and a member of both the state house and state senate.

The stakeholder meetings included an introduction to the purpose, plans and scope for ANSWERS, discussion of the data sources and a review of the proposed policy and research questions. Stakeholders were asked to provide feedback on the wording, the priority or value and the scope of the questions[1]. In addition, stakeholders were asked to identify other policy or practical questions they need answered or reports that would help them do their jobs better.

While the primary goal of each meeting was to gather feedback on each of the proposed policy questions, the meeting structure was not limited to discussions about just those questions. In order to elicit information about the full range of data needs and garner a better understanding of how stakeholders use or would like to use data to inform their work, the vetting team enabled a relatively free-flowing structure to the discussions, within the guidance of focusing on the benefits of longitudinal or cross-sector data. This process yielded valuable input about each of the proposed policy questions, but also identified a few common themes about the type of information most stakeholders think will prove beneficial in understanding the influence on educational and workforce outcomes and enable all of these stakeholders to help Alaska's students.

Findings

The policy and research questions were reviewed and successfully validated with strong support from a broad array of Alaska stakeholders. All stakeholders who participated in these meetings are very supportive of this project. That is the single-most important finding from this process. All stakeholders, from many different organizations and roles, are clamoring for the type of information that ANSWERS can produce so that they can better help their constituencies. All stakeholders were appreciative of being included in the vetting process. This interest and support should be respected and maintained throughout the life of ANSWERS to ensure that it remains a vital part of the policymaking process in Alaska.

[1] Detailed feedback for each question can be found in Appendix A: *Policy and Research Question Feedback*. Stakeholders also frequently referenced other stakeholders to engage and other possible data sources to consider, outside of the four partner organization databases. These lists are documented in Appendix B: *Additional Stakeholders and Data Sources.*

As one individual stated, leadership in the state wants "…all Alaska youth to have opportunities and options to succeed, no matter where they live." In order to ensure those opportunities and options are available, policymakers and practitioners need data to understand where and how interventions are needed and what policies and practices need to change. Stakeholders indicated that they need ANSWERS to help with myth-busting. People generally hold assumptions about how things are working or why they are not based on their experiences or the anecdotal experiences of those around them. The ANSWERS data, however, can break down those assumptions where necessary and help illuminate what is really happening. The fundamental element of planning for and ensuring educational success is having and effectively using large-scale, systematic evidenced-based information. Stakeholders expressed a strong desire and belief in building an effective system that could help them help students. ANSWERS also provides a cost effective way to help policy-makers, practitioners and students. ANSWERS can alleviate the existing process faced by interested stakeholders which requires much time and many resources to gather partial data from multiple sources and sectors by offering a centralized, coordinated process for exploring systemic patterns and outcomes and identifying what works with which students

Common Themes

A few common themes occurred across the discussions, regardless of the organization and role of stakeholders.

Subgroup analyses

Stakeholders overwhelmingly raised the need to disaggregate the data by common subgroups, as opposed to publishing only statewide numbers. For example, data in federal reports are generally disaggregated by gender, race/ethnicity, limited English proficiency, economic status, and special education status. Stakeholders consistently raised the need for these types of subgroups, especially gender, race/ethnicity, program participation, and economic status. The most commonly cited program was career and technical education (CTE), from K-12, postsecondary and workforce perspectives. Given Alaska's population and industries, much discussion time was spent on CTE programs and the need for evaluating those programs separate from the general population. Many stakeholders also requested that the race/ethnicity category be delineated further into Alaska-specific categories, such Alaska Native versus non-Native. The education and workforce experiences of Alaska Natives is perceived to be very different than for other students, so analyses need to be conducted separately by those subgroups. Given the influx of international students, it was also recommended that analyses be further broken down by country/region of origin (e.g., Korea, Asia). In addition to student demographics, most stakeholders indicated that it would be important to disaggregate analyses by school district size or type, such as urban, suburban and rural. Many of the discussions and questions centered on the effects of living in rural Alaska, specifically the bush, on students and teachers, especially in terms of opportunities and options. Given the small populations for different subgroups, care must be taken in how the findings of subgroup analyses are disseminated and to whom to ensure both student privacy and appropriate use and interpretation of findings. Small samples sizes do not preclude analyses, but they do require due diligence in terms of protecting privacy and use.

Educational pathways and patterns

Most stakeholders expressed an interest in better understanding the pathways or patterns of movement through students' educational careers and into the workforce. Generally, people assume a linear route through education (K-12 and into postsecondary) and into the workforce, but reality indicates that plenty of individuals follow a swirling pattern in and out of educational sectors and workforce. Some students drop out of high school and go to work, only to reenroll later or earn a GED. Others may drop out or experience some type of interruption in postsecondary engagement, but later enroll in a trade-specific certification program or reenroll in a four-year degree program. Alternatively, some individuals engage in parallel patterns, such as dual enrollment in high school and postsecondary institutions or full-time employment while at university.

Policymakers, researchers and advocacy stakeholders all understand that the swirl occurs and probably occurs at different rates in different regions or for different groups of students, but no one knows the degree to which the swirl occurs and in what patterns with different subgroups as well as identifying related impacts. Stakeholders in all meetings expressed a desire to have more information about trends and patterns broken down by different subgroups to understand how to intervene and with whom.

Course-level data

A strong and steady desire for transcript-level data (e.g., course name, description, grade earned) at both the K-12 and postsecondary levels was conveyed in stakeholder discussions. The courses taken, the course-taking patterns and grades earned provide a great deal of valuable contextual information in understanding students' educational experience. This level of information is also very instructive in predictive modeling, especially when looking at projected postsecondary success and potential career paths. It was noted that K-12 transcript-level of data is not currently available at EED, but is planned as part of the teacher effectiveness evaluation process; similar postsecondary data is available from UA.

Labor patterns

Stakeholders suggested that it would be useful to look at hiring trends in Alaska relative to an individual's educational history. For example, what industries have typically hired residents versus non-residents over the past five years, by region, with additional analyses about engagement with UA, regional training centers or adult education among those hires? Stakeholders thought it would be indispensible to understand the relationship between educational experience and subsequent employment patterns, apprenticeship and other types of training, industry and occupation, and salary.

Useful Reports and Analyses

In addition to discussions about the analyses and reports that might come from answering the proposed policy questions, two other report types came up in multiple meetings.

High School feedback reports

Many stakeholders discussed the benefits of using ANSWERS to create feedback reports for districts and high schools about their former students. The feedback reports are becoming common across the country from a postsecondary perspective. Some states provide aggregate statistics to high schools

about the number and percentage of graduates who were enrolled in postsecondary the following year, by standard subgroup and the number and percentage who participated in remediation courses and which ones, along with the average postsecondary GPA. ANSWERS could be used to produce these types of reports back to EED from a statewide perspective and specific to districts and/or schools. A desire for student-identified reports was expressed, but student privacy concerns would need to be considered before those reports are created.

In addition to a feedback report from the postsecondary perspective, some stakeholders indicated that the labor perspective would be helpful too, especially since many students do not enroll in postsecondary institutions the year after high school graduation. A labor feedback report might include the industry, occupation, salary, geographic location and any certification/licensure information that is available. A labor feedback report could be used to help with counseling of students about future prospects, in addition to be used in predictive analyses and modeling.

Predictive modeling

Another common theme raised by stakeholders was the desire to use longitudinal data in predictive analyses and modeling. Using data from previous cohorts to identify systemic trends to inform future policy and practice would be valuable for educators. Longitudinal data can also help inform programs and policies to assist students through critical transitions, particularly from high school to the postsecondary environment.

Based on aggregate statistics culled from analyzing education patterns and outcomes from a cohort of students, Alaska could use ANSWERS to develop models that predict the likelihood of subsequent outcomes. For example, analysis of the educational experiences and outcomes (e.g., GPA, assessment scores, attendance, AP/IB participation, and mobility) for a group of students could be used to identify characteristics of students likely to be at risk of dropping out or needing remediation in college. Counselors, academic advisors and admissions officers could use this systemic trend data to shore up their admissions and advising program in an effort to help students identify their educational goals and the best pathway to achieving them. As with other analyses, predictive modeling by subgroup was discussed, particularly with Alaska Natives and first generation students (i.e., students who are the first in their family to enroll in postsecondary education).

Recommendations

1. Develop common data standards and terms. There are many common terms used across different educational settings, but they do not always mean the same thing in each. For example, student retention in K-12 means that a student repeated a grade, whereas in postsecondary it means that a student has returned to the same institution for another semester or year of college. As the data from multiple sectors is gathered and merged, it will be essential to take the time to fully investigate, plan for and document each data element name, definition and format, so all stakeholders can correctly use and interpret each element. As soon as data is published or made available to researchers, a glossary of terms should be produced and shared.

2. Identify a short-term report to produce as a proof of concept. The SLDS grant is for a three-year period and much of that time will be spent designing and developing a robust data warehouse to support the ANSWERS data system; however, partners do not need to wait for an operational data warehouse before it starts to merge and analyze data. Given the excitement and strong desire for longitudinal analyses now from so many stakeholders, it would be helpful to develop one or more reports that can be developed in the meantime to serve as a proof of concept of the value of cross-sectional data. The process of developing and producing an interim report that uses data from multiple partners would also help in the development of communication, organization, and governance processes among the partners.

3. Establish an advisory board that includes non-partner representatives. It would be helpful to establish an advisory board that continues to engage external stakeholders to help with an ongoing vetting process and system planning. This would serve to keep external stakeholders interested and engaged and provide an active group of participants to help communicate about and sustain demand for this system with state policymakers and funders. Bringing individuals from different sectors and organizations together on an advisory board also helps to break down silos and build coalitions among stakeholders. Advisory members can learn from each other and gain a broader perspective about the overall P-20W enterprise.

4. Decide on the highest priorities for analyses. There was general support for all nine of the proposed policy questions; none were deemed unimportant. However, some questions garnered more discussion and wide-spread enthusiasm than others. As stated previously, much interest was expressed in understanding who Alaska students are and what educational pathways and patterns different groups of students experience on their way to employment. The first policy question would attempt to provide a sound description of the Alaska student population, disaggregated by subgroup, and begin to describe that swirl in and out of education and the workforce. As described under Question 1 in Appendix A, a flowchart[2] that delineates the progression of students in and out of education and the workforce would be useful to provide policymakers and practitioners. This flow-chart could be created for at least five cohorts of students, since EED has K-12 longitudinal data back that far. Annual flowcharts could then support trend analyses at the state and/or district levels or UA campuses and serve to further refine and prioritize subsequent analyses. Given the general interest in high school feedback reports among stakeholders, creating those reports might also be deemed a high priority and produce a "quick win" in terms of serving as a valuable proof of concept and way to engage stakeholders. Other topics that generated much interest were questions about recruiting and retaining teachers (particularly how to recruit and retain Alaska Native teachers) and studying the migration patterns in and outside of Alaska.

[2] An example can be found in *Every Student Counted: Using Longitudinal Data Systems To Calculate the National Governors Association's High School Graduation Rate and Improve Student Success (DQC, 2007)*

5. Determine the appropriate mode for disseminating information. Many people assume that the data from ANSWERS will naturally lead to long-term formal research studies. That is certainly one use of the data, but not the only use. It will be important to consider the end user of the information when determining how to scope a question, display results and disseminate findings. Even though the field generally talks in terms of "research" questions, the differences between academic research and applied research should be acknowledged and each should play a role in ANSWERS data analysis. Policymakers (both state and district) typically need information very quickly and succinctly; consequently, it will be important to conduct more applied research and produce findings in multiple modes and in varying degrees of sophistication for the different users. Examples of different modes include
    a. Data dashboards (with multiple graphs and charts and little text) published on a website;
    b. Two-to-five page briefs that include short synopses of the questions and findings, along with a few bullet points or charts;
    c. Longer annual reports or white papers that address many questions, include multiple charts and graphs and much explanatory text (e.g., DOLWD annual *Trends* report); and
    d. Research articles published in academic environments.

    All of these modes are valuable to different stakeholders, but each style is best used with certain groups. It is common in many education agencies to try to make one report fit the needs of many stakeholders due to limited time and resources, but often that leads to dissatisfaction from all groups. It will be important to disseminate findings in many modes to meet the needs of a variety of stakeholders.

6. Establish ANSWERS as the authoritative source for evaluation. State legislatures pass many laws and mandates about educational and workforce programs and periodic reporting requirements, and they are also responsible for statewide appropriations for these sectors. Oftentimes, though, state legislatures pass mandates without requiring an evaluation of program effectiveness or return on investment studies. As part of the legislative process when mandating and appropriating funds for related new programs or reports, Alaska should consider requiring an evaluation and analysis component and providing funds for conducting applicable ANSWERS analyses and producing a report back to the legislature. Ideally, ANSWERS would become the de facto data source for those evaluations and return on investment analyses.

The policy and research questions were successfully validated with strong support from a broad array of Alaska stakeholders. The vetting process included a large number and variety of stakeholders from partner organizations, state leadership, state agencies, non-profits and school districts. All stakeholders who participated in the vetting are very supportive of this project and the specified policy and research questions. Each stakeholder, regardless of organization and role, is clamoring for the type of information that ANSWERS can produce so that they can better help their constituencies and improve Alaska education outcomes and workforce development.

Appendix A
Policy and Research Question Feedback

1. **How many and which (Alaska) students are progressing through an education program/system to achieve college, workforce, and life readiness?**

   Example Research Questions

   - How many students graduated from high school and pursued postsecondary education within two years of graduating?
   - How many students pursuing postsecondary studies are attending full time?
   - Of those pursuing postsecondary education, how many dropped out after one year? After two years? Before completing their program?
   - Were students who pursued a career in their field of study less likely to experience periods of involuntary unemployment compared to students taking an unrelated job?

   Discussion Points from Stakeholders

   - Life readiness is hard to define and operationalize; delete that phrase and keep the college and workforce focus.
   - Key indicators should include participation in IB/AP program. With AP, distinguish between participation in AP classes and AP test score.
   - Include SAT and ACT scores as performance measures, along with GPA (high school and university)
   - Analyses should occur at school, district and state levels
   - Analyses should be disaggregated by critical subgroups, such as
     a. Federal subgroups of gender, race/ethnicity, limited English proficient, low income status
     b. Non-resident and transient students that become resident
     c. TAG – talented and gifted
     d. Career and technical education (CTE) students (sometimes referred to as vocational education) at both K-12 and postsecondary levels
     e. In addition to federal race/ethnicity categories, break down further for Alaska population where data is available
     f. Rural, urban, suburban: might use National Center for Education Statistics (NCES) district type code or categorize enrollment size in logical breakdown for Alaska
     g. Subsistence living schools versus other small rural areas
     h. First generation postsecondary students (this data is in UA data, not EED but can be incorporated in longitudinal database to enable study of K-12 experiences relative to postsecondary outcomes)
   - Mobility within state across school districts and/or UA campuses
   - Class size issues and outcomes for intensive needs students
   - Alaska Native Claims Settlement Act (ANSCA) region analyses

- Impact of number of schools days in a school (minimum versus additional)
- Average student expenditures in a school or district by performance measure
- Connect K-12 attendance rate to outcome indicators by school, district, region, demographic subgroups
- School funding and base funding by outcome or performance indicators, by subgroup
- Don't limit analyses to just 2- and 4-year university programs
    a. Include Regional Training Center (RTC) engagement and outcomes
    b. Adult education, non-traditional students working on supplementary skills or new skills
    c. Apprenticeship programs
    d. Occupational certification, licensure or endorsements
- Disaggregate by full-time/part-time enrollment status
- Look beyond annual descriptive statistics for a cohort. Use longitudinal data to create a flow chart of pathways[3] from K-12 to employment, broken down by number and percent of students. Types of milestones along the pathway would likely include
    a. Retained at least once in high school versus those never retained
    b. Dropped out at some point but returned by their final status (e.g., graduate, still enrolled, dropped out again, GED)
    c. Have a final status as a graduate in 4 years, graduate in 5 years, dropout, GED recipient within 4 or 5 years, enrolled in 5th year but did not graduate, or are otherwise missing over time from the data system
    d. Enrolled in either 2-year or 4-year program within (categories to be determine, but might be the following)
        i. one year of high school graduation
        ii. two-three years
        iii. four-six years
        iv. after six years for first time
            1. By part-time or full-time status
    e. Enrolled in supplementary education program, part-time or full-time
- Dual enrollment status by subsequent postsecondary enrollment indicators and/or employment
- Analysis should include gap between high school diploma requirements and college admission requirements and subsequent employment success
- Predictive studies of K-12 indicators by disaggregated groups and UA indicators, such as remediation enrollment and grades, GPA (first year and cumulative), persistence beyond first year, and degree obtained. Predictive analyses and modeling could help determine admission cut points, prerequisite cut points, placement/advising recommendations, career/degree paths.
- Dropout analyses could shed light on long-term effects of being a K-12 dropout economically and illuminate impact of dropping out or having some interruption in postsecondary.
- Analyze K-12 and postsecondary experiences and outcomes for APS students, both those who used the aid and those who were eligible but did not use APS assistance.

[3] Pick a 4- or 5-year cohort or two and follow students over time as they move in and out of various education and work environments. Produce this flow chart annually and add years to each cohort to identify trends over time.

- Impact or effectiveness of e-learning or distance learning opportunities
- Impact of preschool and Head Start on subsequent outcomes and performance indicators
- K-12 course taking patterns and grades. High school transcripts and course taking patterns were raised many times, but these data will not be ready for inclusion in the initial phases of the data system.
- Brick and mortar schools versus independent study charter schools

2. **What are the migration rates and outcomes for Alaskans attending postsecondary programs outside of Alaska and subsequently returning to Alaska?**

Example Research Questions:

- How many Alaska high school graduates and GED completers pursue postsecondary studies outside of Alaska?
- Are students pursuing their education in Alaska more or less likely to complete their degree or certificate?
- Of those pursuing studies outside of the state, how many eventually return?
- Does the existence of Alaska's financial aid programs increase the number of students who attend school in Alaska? Who complete their program of study?

Discussion Points from Stakeholders

- Look at migration and mobility patterns and subsequent outcomes for students who move from rural to urban
- How likely are students to complete postsecondary outside and return?
- Are they more likely to complete if they go outside or stay in AK and go to UA?
- Look at military families if able to identify. Do they eventually return?
- What percentages of students who go outside for postsecondary receive financial aid to do so? (e.g., merit, need, athletic)
- Disaggregate by typical subgroups (outlined in #1)
    a. International students
    b. First generation in postsecondary
- Look at migration both ways: into Alaska and outside Alaska, distance courses by program of study or degree
- Disaggregate by standard K-12 indicators
    a. GPA
    b. Test scores (state test, SAT, ACT, AP)
    c. Graduation
    d. Years since high school graduation
    e. Ever retained versus never retained

3. **Of those Alaskans who participated in and exited Alaska secondary or postsecondary institutions without credentials, how many were within three or fewer semesters to completion and what are their employment status and income?**

Example Research Questions:

- How did the wages of high school graduates who went on to complete a degree or certificate program compare to those who did not pursue postsecondary education? To those who did not complete?
- For both drop outs and graduates in secondary and postsecondary, in which occupations were these students most likely to be employed? In which industries?
- How many Alaska secondary students failed to graduate, but obtained a GED in Alaska within two years of their expected graduation year?

Discussion Points from Stakeholders

- Do not limit the analyses to "within three semesters," instead create categories that cover long-term outcomes to provide a complete picture
- Why did student leave K-12? In what grade? What path was taken afterwards?
- Look at geography, regional and rural trends and comparisons, but define geography very carefully. Might use native Alaska corporation regions
- Don't just compare Alaska Natives to non-native. Compare Natives in one area to those in another comparable area.
- Occupation is the key
- Include international or out-of-state: how many stay and compete, engage in workforce
- Timeframe: number of credits by amount of time based on program area or degree
- Issues:
    a. Diplomas awarded versus raw number of graduates
    b. GED
    c. Native or rural might be employed, but not documented as such depending on industry

4. **Of those Alaskans who receive education services from Alaska secondary and postsecondary institutions, how many remain in the state and contribute to the economy?**

Example Research Questions

- Do teachers who received Alaska subsidized loans, particularly those focused towards the profession, exhibit different retention and turnover patterns than those teachers who did not receive these loans?
- Do students returning after pursuing out-of state postsecondary education make higher wages than those pursing postsecondary education in Alaska? How many find employment in Alaska, and how does this compare to students pursuing postsecondary studies in state?
- Were degree/certificate completers less likely to experience periods of involuntary unemployment compared to students not pursuing postsecondary education?

Discussion Points from Stakeholders

- Itinerant workers – what's their story? How do they add to the economy?
- What does "contribute to the economy mean?" How to measure?
- How many and who leave Alaska after retirement?
- Student teachers: there are many programs, what are the demographics of participants in each program and outcomes?
- How many graduates teach in Alaska or leave the state? Do they teach in their field of study or another field?
- Need information on teacher certification and recertification rates by key subgroups.
- Are native teachers retained? Do they become part of the community?
- Counselors are an important group? Are they trained here? Stay here?
- Who are the itinerate counselors? Their background, tenure, mobility?

5. **What is the impact of financial aid on college access and success?**

Example Research Questions:

- Does the existence of Alaska's financial aid programs increase the number of students who take standardized tests (SAT/ACT/WorkKeys) to pursue a postsecondary education? Who fill out a FAFSA?
- Are postsecondary students receiving financial assistance more likely to attend school full time?
- Are postsecondary students receiving financial assistance less likely to work while attending school?

Discussion Points from Stakeholders

- Many do not complete the FAFSA out of privacy concerns.
- Need to delineate by merit and need-based. (Do athletic scholarships only apply outside?)
- How many received a scholarship to go outside, but did not complete their degree and came home? What happened to them upon return? Particularly athletes.
- Who has some interruption in study (short- or long-term) and for how long? Is financial aid a factor in original enrollment or subsequent return?
- Would be helpful to have K-12 course work sequence, in addition to postsecondary.
- Math is deemed to be critical subject. Two questions were raised:
    a. What is impact of middle school math course and performance on high school and subsequently postsecondary outcomes?
    b. Math remediation – what is course history in K-12 or postsecondary? How long was last class?
- Are students shut out of college because of funding?
- What is the impact of counseling on understanding school programs, financial aid options?
- What is completion rate for those who receive financial aid? Time to completion?
- What are patterns and pathways over time? Impact over time on enrollment, persistence, and graduation?
- Is financial aid a motivation to completion or just to enrollment?
- Look at contextual issues facing student: children, family circumstance, traditional age, etc.
- Is student participating in an academic enhancement program?

6. **How effective are specific interventions and strategies to increase the rate at which students/citizens, particularly those from low-income families, progress through an education program/system to achieve college, workforce, and life readiness?**

Example Research Questions:

- How many remedial credit hours were taken by first-year postsecondary students? How many and what percentage of students required remedial classes?
- Are there socioeconomic or demographic differences among secondary students who qualify for and receive Alaska's performance based scholarship? Alaska's needs-based grant?
- When student outcomes differed, differences exist in the attributes of those students?

Discussion Points from Stakeholders

- "Intervention" is a value-laden word to some; might rephrase it.
- K-12 data system probably does not track "interventions or strategies"
- Mat-Su study: looked at athletics, GPA compared to what they did after high school
- Include bridging or enhancement programs to get complete picture
    a. Go back to 7th or 8th grade to know performance prior to high school
- What is remedial education pattern? Number of students, when taken, number of credit or non-credit remediation courses, look at remediation participation in conjunction with Accuplacer.
- Track remediation participation and patterns back to high schools for high school feedback report. Also look at K-12 patterns (coursework, demographics, mobility, attendance, GPA, school and district) in relation to percent needing remediation in postsecondary.
- Look at "advanced" prepared in K12 and follow their pattern; that is, those with college credit and dual enrollment)
- Follow middle school student –Alaska Native Science and Engineering Program (ANSEP) – what are they taking? How are they doing? How are they progressing? What are their transfer or mobility rates?
- Need better preschool data
- What is the impact of rural versus urban mobility?
- What is the dropout rate if go back to middle school?

7. **How do Alaska's postsecondary institutions' educational program productivity and capacity align with Alaska's current and anticipated workforce needs?**

Example Research Questions:

- Of those pursuing postsecondary education, how many obtained their degree or certificate?
- How many Alaska secondary students were eventually employed in an occupation requiring licensure or certification?
- Of the teachers teaching in Alaska, how many attended K-12 in the state? Resided in AK before beginning teaching? Do these teachers have higher retention/less turnover than those who didn't?

Discussion Points from Stakeholders

- Use ANCSA region boundaries
- Demand for training and certification re: UA programs
    a. Who are the training providers?
    b. Connect the demand for training at UA and other locations to subsequent work
- How many students are in programs in a high demand field?
    a. How do UA and DOLWD work together to project high demand areas and plan courses/programs to address them?
- STEM (science, technology, engineering and mathematics) – are there enough completions, enough classes available in the right areas
- K-12 has a Type M teacher certification (a provisional certification). What is the impact of those teachers on students? What is the background and training of those teachers?

8. **What is the private/public return on private/public investment in education?**

Example Research Questions:

- What percentage of high-school graduates pursued postsecondary education? At what level? (Certificate, Associate's degree, Bachelor's, etc)
- How many Alaskans who earned a GED went on to pursue postsecondary education?
- Of those pursuing postsecondary education, how many filled an occupation that was aligned with their postsecondary program of study? Was that program of study available in Alaska? Was that program of study or occupation targeted by a financial aid program?

Discussion Points from Stakeholders

- Conoco Phillips has provided private investment for a new building at UA
- Return <u>and</u> investment are both private and public
- Placement – how do we capture this?
- Demand for training and education program at UA
- What metrics will be used
- Need to think of continuing education and improvement
- This is important for legislature
- Financial aid – can our students and graduates afford the debt level from postsecondary?
- What is public return on investment in education? Why should we care?
    a. Think of investing in education versus cost of incarceration (in dollars spent and in opportunities lost by being incarcerated)
- CTE is industry driven, looks at ROI and has advisory boards
- Business partnerships with hospital might be a good way to place students to work
- Success/value varies by stakeholder
- RTC (Regional Training Center), associated general contractors, health sector – might get help with measurements and analyses from there
- How do we attract more philanthropic investment in Alaska? Being able to report longitudinal outcomes of programs funded by donations is expected to be high value and potentially result in attracting increased funding

9. **How does Alaska attract and retain teachers?**

Example Research Questions:

- What are the turnover and exit rates for teachers? Do certain districts have higher rates than others?
- When teachers stop teaching in Alaska, how many move out of state? Remain employed in Alaska in a different occupation? Remain employed as teachers in a non-public school?
- Do teachers trained in other states have higher turnover and/or exit rates than those trained in Alaska?

Discussion Points from Stakeholders

- Change 'attract' to 'recruit'
- Big cities don't have problems getting teachers
- Teacher retention might be more about community than teacher skills
- It is a benefit to urban city to get teachers with experience in the bush, but retention in the bush is difficult.
- How to attract to UA teacher education program and keep them in the program
- How to get teachers out of Anchorage and elementary education and into high need areas
- Salaries are an issue
- How many teachers are trained at UA versus outside and how effective are different training programs, what is teacher tenure for teachers from different programs and the effectiveness of each
- Face similar issues with training, recruiting and retaining UA professors
- How do we define and measure teacher effectiveness
- What are teacher mobility and migration rates and patterns
- What does teacher attendance look like and what's the impact on students
- Look at teacher demographics, salary, budget, tenure by district
- What teacher data is available and how does it improve
- Need more information on teacher training and teacher preparation programs
    a. Where and when did teachers go through training
    b. Are they teaching in same area they studied
    c. What certifications/endorsements do they have
    d. What professional development is available and what have they taken, from where, how often, via what method
- Issues are limited to teachers, need information on
    a. Principals (where trained, what PD, how effective)
    b. Superintendents
    c. Counselors
    d. Teacher Aides
    e. Para-professionals

- Look at number of different staff in school, not just teacher, and look at training, effectiveness, budget expenditure, mobility, tenure as related to student outcomes
- What about itinerant counselors? What is their role? What services do they provide? What can they provide given number of schools and students? Who else can provide these types of services (either in school or within community)?

Appendix B
Additional Stakeholders and Data Sources

Additional Stakeholders

Economic Development Corporation
UAA Community Development Quota
Center for Alaska Education Policy Research
CIRI, an Alaska Native Corporation
North Slope School District Board
UA -rural development
UAF Alaskan Native higher education
AK Native Education Association
UAF Oral History program
UA Statewide Career and Technical Education Plan
UA Statewide
Office of Senator Click Bishop
Office of Representative Alan Dick
Office of Senator Gary Stevens
Office of Representative Lynn Gattis
Office of Representative Kathy Munoz
Office of Governor Sean Parnell
Kenai Peninsula School District
Petersburg School District
Mat-Su School District
Department of Education- Career and Technical Education
First Alaskans Institute
Alaska Workforce Investment Board
Education Northwest

Additional Data Sources to Consider

State Agencies
Department of Corrections
Health and Social Services
Department of Motor Vehicles

Training and Education Programs
Alaska Native Claims Settlement Act (ANCSA) Education Foundation
Alaska Native Science and Engineering Program (ANSEP)
Alaska Training Centers

Apprenticeship programs
AVTEC, Alaska's Institute of Technology
Best Beginnings
Charter College
Head Start
Future Educators of Alaska (FEA) club
Rural Alaska Honors Institute (RAHI)
Rural Community Action Program

UA Programs
4-H at UA
Alaska Teacher Placement at UAF
Alaska Summer Research Academy (ASRA)

Other Types of Data

Alaska Teacher Placement (ATP) application from outside
Career Path interest starting in middle school
Community engagement (e.g., serves on community or school boards)
Docufide, student transcripts
Extra-curricular programs and other "student engagement"
Fish & Wildlife permit holders
Military connection (family or student)
Online education exposure, by region (eLearning and distance education)
Parent voting patterns
ROTC, Boys and Girls Club, etc