SUBJECT
Education to Workforce Alignment

ALIGNMENT WITH STRATEGIC PLAN
Goal 2: Innovation and Economic Development, Objectives A, Workforce Readiness and D, Education to Workforce Alignment.

BACKGROUND/DISCUSSION
The Board’s strategic plan envisions a seamless public education system that results in a highly educated citizenry. Goal 2 of the Board’s strategic plan focuses on an education system that provides an environment that facilitates the creation of practical and theoretical knowledge leading to new ideas, delivers relevant education that meets the needs of Idaho and the region and prepares students to efficiency and effectively enter and succeed in the workforce.

The Idaho Technology Council (ITC) is a member-driven organization made up of partners from companies that range from new startups to large corporations, all committed to the success of Idaho’s technology ecosystem. The ITC, brings together industry, education, research, investment, and government throughout the state with a focus on workforce development and the increasing the talent pipeline with the end goal of growing more high-paying, quality jobs for the people of Idaho. The ITC has been a long standing partner that has supported Board initiatives from higher education research to increased access to computer science education in the K-12 educations portion of the pipeline. Jay Larsen, Executive Director, will discuss technology trends in Idaho, the importance of Idaho’s education system producing an entrepreneurial and prepared workforce for Idaho's growing economy.

The Treasure Valley Education Partnership (TVEP) engages and coordinates community partners and resources across the Treasure Valley in order to align efforts around common goals. TVEP mission is to advance a world class education system in the Treasure Valley. By uniting and focusing the strength of multiple partners, TVEP aspires to achieve systems change and improve student outcomes in a measurable and lasting way, from the cradle to career. The Treasure Valley Education Partnership conducts a senior exit survey, Jessica Ruehrwein, Executive Director will present the results of their survey as a discussion point for areas of collaboration and improvement of Idaho’s education pipeline.

IMPACT
The purpose of the presentations is to generate a discussion around the alignment with Idaho’s education system and Idaho’s workforce needs.
STAFF COMMENTS AND RECOMMENDATIONS
In addition to the presentation and discussion with ITC and TVEP the Board has been provided with the preliminary result of the Secondary Counselor Survey conducted by the Board Office. The survey looks at perceptions of secondary school counselors and their work in supporting students to plan and prepare for college and careers after high school.

ATTACHMENTS
Attachment 1 – Idaho Technology Council Presentation Page 3
Attachment 2 – Treasure Valley Partnership Presentation Page 21
Attachment 3 – Preliminary Findings – School Counselor Survey Page 28

BOARD ACTION
This item is for informational purposes only. Any action will be at the Board’s discretion.
IDaho’s tech scene is a thriving tech landscape, made up of novel startups and towering tech giants. Look closer and you find eager talent, valiant capital and ready paths to market. Oh, and one amazing view.

208-917-5183 • info@idahotechcouncil.org
The New Economy
Idaho kNOWledge Report

• **Today’s economy is:**
  • Knowledge-dependent
  • Is global
  • Is rooted in information technologies
  • Is driven by innovation

In the United States IT was responsible for two-thirds of total factor growth in productivity between 1995 and 2002 and virtually all of the growth in labor productivity.

What is Our Purpose?
Why define and study Idaho’s knowledge based economy?

Knowledge-Based Economies are associated with:

• Knowledge-intensive and high-technology industries
• Highly-skilled, highly-educated and well-paid jobs that carry higher economic impacts.
“Neither RedBox nor Netflix are even on the radar screen in terms of competition,” said Blockbuster CEO Jim Keyes, speaking to the Motley Fool in 2008. “It’s more Wal-Mart and Apple.”

Who is creating disruption in Idaho?
Distruptive Technology Trends

AI Fueled--Bots Usurp Apps
From Augmented Reality to Mixed Reality

Cybersecurity Wars
The Things Are Taking Over the Internet

Self Driving Vehicles On the High Street
Renewables and Clean Energy
Diversify

Idaho kNOWledge Report

- [http://ncstir.com](http://ncstir.com)
Defining the Knowledge Economy
A Simple Taxonomy

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<thead>
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<th></th>
<th>Manual</th>
<th>Cognitive</th>
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<tr>
<td>Routine</td>
<td>26.5%</td>
<td>25.9%</td>
</tr>
<tr>
<td>Complex</td>
<td>11.9%</td>
<td>35.6%</td>
</tr>
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</table>

Share of Idaho Employment
Knowledge Intensity in Idaho

4-Digit NAICS

Share of Employment by Occupation Type

- All Idaho Industries
- High Tech Industries

Routine & Manual: 27% (All), 17% (High Tech)
Routine & Cognitive: 26% (All), 22% (High Tech)
Complex & Manual: 12% (All), <1% (High Tech)
Complex & Cognitive: 36% (All), 61% (High Tech)
Figure ES-2: Methodology

Assessment of academic and industrial R&D base

Publications Analysis → Cluster Analysis → Core Competencies → Technology Platforms and Market Niches

Patent Analysis

Idaho Core Competencies

Power/Energy
- Alternative energy and fuels (High)
- Engines and related devices (Medium)
- Sensors, voltage regulators, and related electrical equipment (Low)
- Thermal devices (Low)

Agricultural/Biosciences
- Ag/Bioscience (High)
- Biochemistry/molecular biology (High)
- Biomedical (High)
- Climatology and earth sciences (Medium)

New Materials/Nanotechnology
- Advanced materials coatings & related applications (High)
- Metallochemistry & powder metallurgy (High)
- Semiconductors, memory & other computer components (Medium)

Imaging
- Imaging (High)

From Research Clusters to Core Competencies
### Kauffman Foundation–The Foundation of Entrepreneurship. Benchmarking EconomicTransformation in the United States

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www.kauffman.org

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### Milken Institute Tech Poles

**Composite Index**

August 11, 1999

[Map of tech poles with major cities and regions labeled.]
Milken institute

North America’s High-Tech Economy: The Geography of Knowledge-Based Industries

2007 rankings: Idaho (BOISE) was not mentioned.

State Technology and Science Index 2010
Milken Institute, January 2011
**MANUFACTURING JOBS IN U.S.**

**PRIVATE JOBS**
- 1960: 15 million
- 2010: 11.5 million

**GOVERNMENT JOBS**
- 1960: 8.7 million
- 2010: 22.5 million

Source: Wall Street Journal

---

**Knowledge Economy**

**Research Paradigm**

- **Industries**
- **Staffing Patterns**
- **Research**
  - High-Tech Industries
  - Routine Jobs
- **O-Net**
- **Occupations**
- **Projections**

**Known Unknowns**
- R&D horizon
- Velocity of change
- Policy variables

**Unknown Unknowns**
- Experience Requirements
  - Skills
- Worker Requirements
  - Knowledge
  - Abilities

**Informed Strategies**
- Legislative
- Business
- Education

---

**WORK SESSION - PPGA**

**FEBRUARY 14, 2018**

**TAB A Page 17**
Idaho kNOWledge Report

Idaho Technology Platforms with Innovation Clusters

<table>
<thead>
<tr>
<th>Industry Verticals</th>
<th>Energy</th>
<th>Environment</th>
<th>Transport</th>
<th>Agriculture</th>
<th>Defense</th>
<th>Healthcare</th>
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Idaho Technology Platforms - Core Competency Areas

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<td>X</td>
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<tr>
<td>Optical</td>
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<tr>
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Note: "X" indicates known existing research capabilities in Idaho

March 26, 2009 - MA
Idaho kNOWledge Report

- Idaho has the second-fastest growing tech sector in the nation!
- Fastest growing Software Industry as a percent of state GDP

Idaho kNOWledge Report

a dashboard to help IWDC and Industry to gain synergies
Idaho kNOWledge Report will Drive Industry

“Drive thy business or it will drive thee.”

-Benjamin Franklin
✓ Connect the community
✓ Address local education needs
✓ Create a shared vision for change
✓ Align resources
✓ Field test practices (that can be scaled)
✓ Use data as a flashlight to guide efforts/track progress
✓ Empower students!

TVEP’s Footprint

- 9 School Districts & Bishop Kelly
- 6 Higher Education Institutions
- Nonprofits
- Government
- Business (IBE partners)
- Early Education
Beyond High School Working Group: Senior Exit Survey

<table>
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<tr>
<th>Class of 2015</th>
<th>Class of 2016</th>
<th>Class of 2017</th>
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<tr>
<td>3,368 total responses</td>
<td>5,433 total responses</td>
<td>3,546 total responses</td>
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<tr>
<td>55% completion rate from participating schools</td>
<td>75% completion rate from participating schools</td>
<td>77% completion rate from participating schools</td>
</tr>
<tr>
<td>6 districts and Bishop Kelly High</td>
<td>All 9 districts and Bishop Kelly High</td>
<td>8 districts Bishop Kelly High (West Ada did not participate)</td>
</tr>
</tbody>
</table>

Students’ Fall Plans

Which of the following BEST describes your plans after high school (Fall 2017)? (n = 3,537)

- Attend a 4-year college, university, or military… \(\checkmark\) 71% plan to attend college / school
- Attend a 2-year college 17%
- Work full-time 11%
- Join the military 6%
- Attend a technical or trade school 4%
- Take a break 4%
- Prepare for a religious mission 4%
- I don’t know 2%
- Work part-time 1%
- Other 1%
- Participate in an internship or apprenticeship 0.5%

\(\checkmark\) ~46% actually enrolled
### Lifetime Education Goals

What is the highest level of education you plan to complete in your lifetime? (n = 3,405)

- **Master’s degree or higher**: 39% (Male), 32% (Female)
- **Bachelor’s degree (4 years)**: 36% (Male), 34% (Female)
- **I don’t know yet**: 15% (Male), 17% (Female)
- **Associate’s degree (2 years)**: 9% (Male), 6% (Female)
- **High school diploma**: 5% (Male), 5% (Female)
- **Certificate (1 year or less)**: 3% (Male), 2% (Female)

- **✓ 80% plan to complete a degree in their lifetime**
- **✓ More females report they plan to obtain a 4 year degree or more**

### Deciding To Go On

When did you decide you were going to continue your education after high school? (n = 2,441)

- **7th grade or earlier**: 64%
- **12th grade**: 10%
- **9th grade**: 8%
- **11th grade**: 7%
- **10th grade**: 6%
- **8th grade**: 4%

**64% in 7th grade or earlier**
Influential People

When deciding what to do after high school how influential were the following people? (n = 3,513)

- **Family**: 77% Influential or Very influential, 15% Somewhat influential, 7% Not influential
- **Teacher**: 55% Influential or Very influential, 24% Somewhat influential, 21% Not influential
- **Friends**: 52% Influential or Very influential, 32% Somewhat influential, 17% Not influential
- **Someone else from my community**: 39% Influential or Very influential, 21% Somewhat influential, 40% Not influential
- **Counselor**: 39% Influential or Very influential, 24% Somewhat influential, 37% Not influential
- **Coach**: 28% Influential or Very influential, 18% Somewhat influential, 55% Not influential

“Other” answers fell mostly into the provided categories, except n=41 indicated “self” or “personal goal”.

Important Factors

How important were the following factors when you were deciding what to do after high school? (n = 3,485)

- **Making money**: 83% Very important or important, 13% Somewhat important, 4% Not important
- **Having a job I love**: 81% Very important or important, 13% Somewhat important, 6% Not important
- **Not wanting to take on debt**: 74% Very important or important, 19% Somewhat important, 7% Not important
- **Expanding my horizons**: 69% Very important or important, 22% Somewhat important, 9% Not important
- **Family responsibilities**: 60% Very important or important, 24% Somewhat important, 16% Not important
- **Being near my family**: 40% Very important or important, 33% Somewhat important, 27% Not important
- **Serving my country/community**: 39% Very important or important, 33% Somewhat important, 27% Not important
- **Being involved in my church**: 23% Very important or important, 17% Somewhat important, 61% Not important
Key Take-Aways

- Discrepancy between what students’ report they plan to do and what they actually do in the fall

- 80% plan on some form of postsecondary education in their lifetime

- Hispanic students are ~ 2x more likely to report the highest level of education they plan to complete is a certificate or two year degree

- 76% are making their education decisions before 9th grade
  - Hispanic students report they are making this decision later

- 77% identified their family as the primary influencer
Future Opportunities

• Continue to collect actionable data to help inform TVEP working groups, schools and policy

• Utilize student data to target interventions, supports and messaging

• Potential to implement statewide and analyze trends

• Deeper analysis of current data (year over year findings, cross tabs, comparisons, etc.)

Beyond High School Working Group: What’s next?

• Implement Senior Exit Survey in 2018

• Assess workforce development landscape
  • Review local/national better practices
  • Create common definitions
  • Look for opportunities to align

• Co-create strategies (industry and education partnerships with a career readiness focus)
Questions?

IMPROVING EDUCATION OUTCOMES, FROM CRADLE TO CAREER

Jessica Ruehrwein, Executive Director
jruehrwein@idahotvep.org
208-364-4609
In late December 2017, Idaho State Board of Education staff members worked with leadership from the Idaho School Counselors Association (ISCA) to design and administer a survey to all association members and all other secondary counselors in the State Board’s scholarship database. In total, emails with a link to the online survey were successfully sent to 632 counselors. By the end of January 2018, 180 responses had been received for a 28% response rate. This exceeded the 10% minimum acceptable response rate for policy analyses. The intent of the survey was to gather counselor input on their work and on their students with a focus on informing the state’s efforts to support the college and career readiness responsibilities of secondary counselors. This report highlights findings from that survey.

Key Findings

Counselor work. Idaho secondary counselors report that supporting students in planning and preparing for college and careers is the fastest growing aspect of their work. Eighty five percent of respondents report that it has grown “some” to “a great deal” in the past three years. Nearly as many counselors report a similar increase in helping school principals identify and resolve student issues, needs and problems and in providing individual and small-group counseling services to students. While helping students plan and prepare for life after high school is a high priority for counselors, they would welcome additional professional development opportunities to do this and related work.

Perspectives on students. Idaho secondary counselors report that new state policies (i.e. state funded Advanced Opportunities, Direct Admissions, Apply Idaho) are making at least some positive impact on student motivation and college and career readiness and making a positive impact on the college-going culture among students and their families. Fewer respondents, but still a sizeable percentage, believe that these policies are motivating students who are on the fence about continuing their educations after high school. Counselors worry about “selling” a costly post-high school education to their non-affluent students. They are also concerned that there is never enough time in their days to meet their students’ academic, social, and emotional needs.

Respondent characteristics

- 78% female
- 94% with master’s or educational specialist degrees or higher
- 61% with master’s degrees in counseling
- 65% with five or more years of experience in school counseling
- One quarter with more than 10 years experience in school counseling
Percentage of counselors reporting these duties have increased “a great deal” over the past three years (top four responses).

- Working with individual students on high school learning plans, eighth grade learning plans, and/or academic program planning (48.3%)
- Helping the school principal identify and resolve student issues, needs and problems (45%)
- Providing individual and small-group counseling services to students (45%)
- Coordinating cognitive, aptitude and achievement testing (i.e. SAT, PSAT, ACT, CLEP) (38.3%)

**Counselor Work**

**College and career counseling tasks are a high priority for me**

<table>
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<tr>
<th>Percentage</th>
<th>Responses</th>
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<tbody>
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<td>Agree</td>
<td>82</td>
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<tr>
<td>Strongly agree</td>
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<td>N/A</td>
<td>7</td>
</tr>
<tr>
<td>Strongly disagree</td>
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**I would like additional professional development on how to help students connect to college and career exploration resources**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Responses</th>
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<tr>
<td>Agree</td>
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<tr>
<td>N/A</td>
<td>7</td>
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<tr>
<td>Strongly disagree</td>
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**I have enough time to accomplish college and career related counseling tasks**

<table>
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<tr>
<th>Percentage</th>
<th>Responses</th>
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<tr>
<td>Agree</td>
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<td>8</td>
</tr>
<tr>
<td>Strongly agree</td>
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“I would like some fresh ideas about promoting a college going culture - I would like to look at other schools' college/career readiness plans to know what other schools are doing to help their kids. What are some best practices going on around the state? Creating a center for that dialog would be great!”
We need many more opportunities for students to experience the CTE occupations and education that dominates the workforce. We need to do more to focus our students on the real and exciting opportunities that are available with a CTE degree or certification.

Money is one of the big issues for students who would like to pursue more education. I don’t know what the answer to that is; but it is a big obstacle.

“Having the college and career advisor has done wonders for our college going rate. Our school has such a high need for actual mental health counseling that having the college and career advisor has freed us up to do more of the mental health side.”
Less than 30% of counselors say that most students who complete an academic dual credit course are better prepared for college-level work. Another 45% say some students are better prepared.

Nearly half of counselors say that most students who complete a CTE dual credit course are better prepared for their careers.

72% of counselors say the Opportunity Scholarship motivates students on the fence about continuing their education after high school to enroll.

[Students’] “own mindset of either being smart or less gets in the way of finding their way in a positive manner.”