Review of Idaho’s Educational Technology and Data Systems in Support of Student College and Career Readiness

Produced for the J.A. and Kathryn Albertson Foundation

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Acknowledgments

The Institute for Evidence-Based Change is pleased to deliver this report about Idaho’s educational technology and data systems in support of students’ college and career readiness. We are proud to inform the J.A. & Kathryn Albertson Foundation’s efforts. We would like to thank the many stakeholders who gave their time to assist us by providing their professional expertise and considered opinions about the topics. We are deeply indebted to the many Idaho school district administrators, faculty, and staff who took the time to be interviewed by our team of researchers and to respond to the online survey. We believe the findings in this report will help the Foundation and education stakeholders to continue to address the needs of Idaho’s educational systems and promote success for all students.

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Review of Idaho’s Educational Technology and Data Systems in Support of Student College and Career Readiness

Executive Summary

The Institute for Evidence-Based Change (IEBC) conducted this review of Idaho’s Educational Technology and Data Systems in Support of Student College and Career Readiness, with funding from the J.A. & Kathryn Albertson Foundation (JKAF). The purpose of this review is to assess the degree to which these efforts are doing what they are intended to do, continue to be state of the art, and ultimately, are leading toward improved college and career readiness for Idaho’s students.

Method

Our data collection methods are designed to build statewide buy-in for a plan to ensure Idaho’s educational data and technology systems fully support student college and career readiness. Our plan includes tasks designed to build buy-in; describe the current educational data and technology landscape, including identifying gaps; and support the development of a plan to move forward to ensure Idaho remains at the forefront of national efforts to enlist technology and data in the service of student success. The IEBC team engaged in six key tasks:

- Reviewed the completed work plan with the Foundation.
- Reviewed the literature to place this work in the national context.
- Identified and interviewed key stakeholders (two rounds).
  - Landscape and gap analysis: interviewed administrators, information technology staff, and others among 34 districts stratified across Idaho’s six education regions, large and small, and rural/urban. This also included an online teacher survey across all Idaho school districts.
  - Convened two small groups of 12 to 15 stakeholders for deeper discussions in two areas: (a) college and career readiness metrics and (b) technology.
- Conducted in-depth interviews with primary educational technology service providers (e.g., Idaho Education Network, Idaho Digital Learning Academy).

National Context

Idaho, and the nation, is at a critical juncture for technology in education. The technology era is upon us—electronic communications, content, and instruction—and is advancing rapidly; and this seems to have shifted beliefs about technology, increasing its acceptance as an important educational tool for students at all levels.

Project Tomorrow by Speak Up tracks attitudes and behaviors among educators and parents in an annual national survey (Tomorrow, 2013):
Educators are realizing the importance of digital tools to address the new Common Core State Standards.

Educators and parents are using mobile devices more than ever and their “personal and professional lives are dependent upon internet connectivity and online collaborative learning environments” (p. 3).

Funding challenges over the last several years has kept new plans on hold, and now districts are in a position to refresh their technology plans; and they are innovating with technology to be savvy users and consumers to reduce costs and, possibly, raise revenue.

Parents are more digitally literate and expect that they will get electronic communications and their children will experience technology in their education.

The demand for a higher skilled workforce is encouraging higher technical skills and better student outcomes.

Speak Up also identified three critical challenges to sustained success from districts across the nation that also largely mirror Idaho findings. These national challenges are:

- Increasing internet capacity and bandwidth;
- Funding challenges related to infrastructure and maintenance; and,
- “Teacher capacity to adopt and adapt new technologies to personalize student learning” (p. 15).

IEBC found that Idaho educators are clearly grappling with all three of the issues noted in the national study.

Many K-20 educators struggle to use data effectively. Our own work around the country has led us to focus on this often overlooked area. Recognized as a leader in helping institutions maximize their use of data IEBC’s expertise is around effective data use, “Educational institutions nationally are struggling with issues related to data. There is an abundance of data, but turning it into information that can be used remains elusive” (Phillips, 2014).

The goal of college and career readiness extends throughout the nation, fueled largely by economic forecasts that report most jobs will require a higher level of skill in the near future. The national context does not call out major gaps in Idaho’s experience. Idaho is grappling with the same issues that others have identified as national concerns—particularly problems maintaining technology in schools and teachers’ lack of experience effectively using technology to enhance learning. As in other states, it is clear that Idaho is still in its infancy in authentic technology use to positively impact student achievement.

**Findings**

We present findings from our data collection efforts organized by the major themes that emerged from our interviews with key stakeholders, school districts, and two small group convenings. These themes are:
• **Accessibility**: access to technology at the district and classroom levels, as well as access to technology outside of school, including bandwidth, hardware, software, and services.

• **Technical assistance**: support related to difficulties and issues using the technology, which is different from professional development.

• **Professional development**: training related to the use of hardware and software for instructional and other purposes.

• **Mapping available resources**: identifying and creating easy access to the educational technology resources available to educational stakeholders in Idaho.

• **Policies**: state and local policy development related to the use of educational technology, system growth, and sustainability.

• **Data use**: the availability, accessibility, and usefulness of state and local data systems and their contents.

• **College and career readiness**: Idaho’s definition—its relationship to available data, how technology supports readiness, and its use to drive instruction.

**Accessibility**

We found accessibility to be a salient issue at three levels: district access to technology; classroom access; and access outside of the school.

Districts in Idaho have strong access to technology. However, district and classroom access varied greatly among school districts related to the resources they have available to dedicate to technology. Additionally, we found that charter schools typically lagged behind other public schools.

Districts are very concerned about maintenance and sustainability. They rarely budget beyond the costs of obtaining technology hardware and software. They find the costs of technical assistance, maintenance and updates, and training are becoming an issue for them. They are concerned this issue will only get worse with time as upgrades to new technology are available.

Time and again we were told that technology is just a tool and technology in the classroom, “cannot come at the expense of curriculum and other student skills.” That is, these respondents are concerned that the method of instruction cannot be primary and the content of instruction secondary.

Access to technology outside of school is framed as an equity issue. Not all homes and communities have internet access; and for many the library is not an option. Districts are using a variety of solutions to address this issue, but many do not have the resources.

**Technical Assistance**

Technical assistance was differentiated from professional development (*below*) by respondents. Technical assistance was defined most often as the assistance provided to educators who are experiencing difficulties using the technology. It occurs in real time and often has a sense of urgency about it. As one respondent noted, “It’s a lonely place in the classroom when technology starts to break down.”
Many respondents replied that districts lack technology support and capacity, especially smaller districts (one respondent noted districts with less than 2500 students). There also are not enough technically skilled people to manage technology. In small districts teachers are pulled out of the classroom, superintendent’s assistants are pulled away from their jobs, and secretaries are expected to go beyond their job description and manage the information technology system.

Almost without exception the district administrators, faculty, and staff with whom we spoke credited their internal technical assistance provider with making technology easy to use. This tended to be a home-grown individual who began providing technical assistance because of personal interest, knowledge, and/or skills; and who then was formally assigned with the work.

Professional Development

Key stakeholders noted a great need for professional development to bolster teachers’ use of technology, continuing the conversation that technology-related issues are more a people problem than a technology problem. However, districts had a more nuanced view. Typically, they did not attribute lack of technology integration in the classroom to teacher or administrator unwillingness. Rather, these respondents believe that low levels of effective use of technology in the classroom is due to lack of awareness of what is possible, lack of training about how to do so, and lack of time and other resources.

Respondents identified many ways professional development could improve the ways technology is used in the classroom. One example was using technology to meet identified student learning outcomes. Another was to improve teachers’ use of technology. Respondents also noted that professional development could improve teachers’ awareness that there are many resources available to increase their repertoire or expand the classroom beyond four walls.

Another common theme is the need to respect teachers’ focus on their students and their already full days and weeks. Districts are extremely concerned about wasting resources and teacher time on professional development. District administrators have great confidence in their teachers’ ability to know what they need, find a solution, and share it with their fellow teachers. Many district respondents reported considerable professional development is offered internally. District respondents preferred a blended approach to professional development. They see the most effective model as one in which, “teachers identify a problem and identify a solution, often with assistance from others. If necessary, teachers are sent to a training or other professional development service they identify and then return with a solution to present to their peers.”

Mapping Available Resources

Key stakeholders we interviewed saw value in mapping the educational technology and data use resources available in Idaho to support students’ college and career readiness. Many interviewees believed this guidance is needed to move forward. It also was noted that this mapping effort could help to coordinate work, which could level the playing field across the state.
District respondents echoed the need for mapping resources expressed by the key stakeholders. However, in addition to coordinating efforts, filling gaps, and avoiding duplication district respondents, “feel bombarded by information and want to make sense of the chaos.” There is a need for a way to filter and focus from among the resources and supports available. District respondents also noted they are not sure how to share their experiences with their peers and others.

Policies

A succinct summary was offered by one respondent, “Rising back up to the top level: both Idaho State Board of Education and SDE—neither one has someone whose sole focus is digital or distance education policy. [They] spend a lot of time focusing on curriculum or graduation requirements, but right now nobody is looking at it from the highest point. Not from one type of technology, but a statewide level saying, ‘This is the policy that is going to foster increased use of technology at the state level.’ [It is] desperately needed, not sure where it should reside. At some point it might go away, but really needed now until it becomes embedded somewhere or fully infused. Right now there are no policies being made regarding anything regarding technology, distance education, or digital education.”

One of the key policy areas for districts is the move away from firewalls and filters. Many districts started by removing barriers for teachers trying to access websites for their own use and use by their students. The next step was to remove filters to student access. Districts have begun to identify, “the need for students to be good digital citizens.” For some districts this is framed as a college readiness issue. That is, if students will need to use technology effectively in their postsecondary education they need to understand the differences between using technology in school and general use of technology.

Another policy area district respondents noted is in the area of ownership. District respondents noted that when students are provided with tablets, they take ownership of these devices and care for them well. One respondent stated, “It’s a culture of if you have it, it’s your responsibility.” Entrusting students with the technology is possible with a clear, thought-out plan, and well communicated expectations that align with the school culture.

Finally, a number of district respondents noted that the State is making policies without considering district needs or desires. They want site visits from the Idaho SDE and they want to be trusted as leaders. A few respondents thought a needs assessment and status survey related to policy would be helpful. However, other respondents expressed concern this could lead to broad-brush state policies that would supersede their own effective local policies.

Data Use

Many respondents commented on data use at multiple levels and acknowledge the links between technology and data. A number of subthemes emerged: (a) type and amount of data; (b)
Idaho System for Educational Excellence (ISEE); (c) ways data are used; (d) teachers as users; and (e) trusting the data.

Respondents commented on the types and amount of data collected. This currently is seen as a moving target by many. District respondents echoed the comments from key stakeholders that they collect a considerable amount of data for many reasons. The most salient reasons driving data collection, however, remains accountability, reporting, and compliance. Respondents also note considerable overlap in the kinds of data requested from them. However, the myriad formats and forms required to submit the data makes this an onerous process requiring considerable staff resources.

Data use was identified as problematic by many because of the data submission and delivery systems. The Idaho System for Educational Excellence (ISEE) was perceived as unwieldy and difficult. Another respondent noted the scientific rigor (validity and reliability) of the data in ISEE is questionable.

District respondents also had considerable concerns about ISEE, implementation of the Common Core State Standards (CCSS), and the new standardized tests linked to the CCSS. Many are concerned about the coming switch from ISEE assessments to the Smarter Balanced Assessment Consortium (SBAC) assessments, which are linked to the CCSS. Many district respondents are unaware of the new data submission (five file format) possibilities, improvements made to the system, and reporting and output functions available to them from Idaho SDE.

Data are used and can be used in many ways around Idaho. Most respondents focused on the issues and problems with data use. Many addressed the mismatch between user needs and system functionality. Some respondents identified ways data availability and use are having a positive impact, for example the ability to link high school to postsecondary data.

There is a lot of variance among districts regarding using data. The issue is not so much resistance to use as a more nuanced difference related to valuing data. Generally, the many smaller districts in Idaho do not see the value in data. They know their students and believe it is easy to respond to issues, whether with an individual student or a group of students. At the other end of the spectrum, medium and large districts would like data disaggregated in many ways. They see little value in district-level data, as it is not actionable for them. District respondents expressed a need for more formative data.

Many respondents identified a need to ensure teachers have access to the data in a useful and useable format. This was extended to all users of educational data in Idaho. However, teachers continue to be the group most in need of data and least likely to obtain what they need from formal data systems. There was an expressed need for local data on demand. There was great need locally for professional development to assist teachers in relating data to the CCSS.

Trust in the data and issues of privacy and security were noted by a number of respondents as obstacles to using data. It is believed that a culture of suspicion and mistrust is an obstacle to data use at multiple levels—it affects willingness to provide data, trust in data, and
Ultimately data use. Among district respondents issues of trusting the data were related more to their ISEE submissions than general concerns about privacy.

**College and Career Readiness**

Most respondents were aware that Idaho had adopted a definition of college and career readiness. However, a number of respondents believed that, although it is an appropriate vision statement, it does not provide a lot of information about how to define and track the data required to assess the extent to which the vision is realized in Idaho. District respondents tended to echo stakeholder views of Idaho’s definition of college and career readiness. They noted that it defines college and career readiness, “as ready for college and career but doesn’t give us much direction.”

Some respondents expressed a need for a system to track students from high school to college to understand transitions and progress. Although it was acknowledged that Idaho is working on this, it is not keeping pace with the needs in the field who are trying to act on the adopted definition.

Many respondents noted the positive impact of the Idaho Education Network (IEN) and Idaho Digital Learning Academy (IDLA) on the availability of courses to students and resources to teachers around Idaho. A number of districts have close links to local colleges, especially when these colleges are nearby. They have partnerships that allow their students to take courses at the college or online using IDLA resources. In fact, many districts have students graduating from high school with college credits; and a handful have earned associate degrees by the time they graduate high school.

As with the other themes that emerged in this review, there is wide variation among districts in their expectations, understanding, and actions related to college and career readiness. As in most states, the focus of the discussions turned to college readiness instead of career readiness. This is likely due to the dearth of data systems for tracking and reporting career related experiences and outcomes.

The group of stakeholders who came together to discuss metrics agreed that an ipsative system, which tracked similar metrics over time, was desired. Furthermore, there was a preference not to add assessments but to identify indicators and benchmarks from currently available data, if possible. There is a need to define college readiness so it is measurable and actionable. Identifying soft skill metrics is important to business and postsecondary success; and a way to track and measure these is needed. Finally, there is a desire to assess student’s interest in higher education and middle school is the preferred point of impact to address this.

**Summary**

Although many perspectives were represented in our review of Idaho’s technology and data use in support of college and career readiness, a number of themes can be identified. Generally, there is a need for more information about technology and data use at the district level. Idaho Leads recently conducted a technology needs assessment of their member...
districts, which could be expanded statewide. Because of the often repeated refrain from districts that plans are developed statewide with little consideration of their local needs and desires, we caution against moving forward without a needs assessment.

However, a few actions could be undertaken immediately based on the consensus among respondents: (a) developing a comprehensive calendar of professional development offerings (that includes the target population’s skill level); (b) exploring regional solutions to local issues; (c) using the International Society for Technology in Education (ISTE) standards (for teachers, students, administrators, and others) and necessary conditions, which the Doceo Center at University of Idaho already is using, to promote effective use of technology in support of student success; (d) operationalizing the definition of college and career readiness in a way that supports metrics at each level of student’s academic progress; and (e) simply making more information public and accessible, including new reports available to school districts from the Idaho SDE.
Review of Idaho’s Educational Technology and Data Systems in Support of Student College and Career Readiness

The Institute for Evidence-Based Change (IEBC) conducted this review of Idaho’s Educational Technology and Data Systems in Support of Student College and Career Readiness, with funding from the J.A. & Kathryn Albertson Foundation (JKAF).

This document is a summary of the findings from this project. We open with an overview of the purpose of the project. We follow this with a presentation of the data collection methods we employed. Third, we provide a brief discussion of the national context into which this work fits. We next present findings in seven key areas, which emerged from the information we collected: (a) accessibility; (b) technical assistance; (c) professional development; (d) mapping available resources; (e) policies; (f) data use; and (g) college and career readiness. Each section includes responses from key stakeholders, district respondents, and the two small group meetings we held related to technology and metrics. After the key findings, we present results of the statewide teacher survey. We close with a concluding section that includes some suggested next steps.

Overview

The Institute for Evidence-Based Change (IEBC) is pleased to partner with the J.A. and Kathryn Albertson Foundation (JKAF) to review educational data and technology programs and projects in Idaho. In addition to the Foundation’s efforts, this review is designed to explore the broader issues of educational data and technology in the State. The purpose of this review is to assess the degree to which these efforts are doing what they are intended to do, continue to be state of the art, and ultimately, are leading toward improved college and career readiness for Idaho’s students.

Questions Driving the Project

IEBC identified a list of questions to drive the data collection efforts including interviews and surveys. These are:

- What are the needs among stakeholder groups for educational data and technology related to college and career readiness in Idaho?
- What educational data and technology systems, programs, and projects are available in Idaho?
- What is the local capacity for using educational data and technology?
- Which educational data and technology systems, programs, and projects currently are being used by teachers, administrators, and other stakeholders; how are they being used; and to what end?
- What are the gaps in successful use of educational data and technology in Idaho?
- What are the sources of resistance to using educational data and technology in Idaho?
- What systemic barriers are in place that hinder statewide educational data and technology development, implementation, and use?

Method

Our data collection methods are designed to build statewide buy-in for a plan to ensure Idaho’s educational data and technology systems are designed to support student college and career readiness. Our plan includes tasks designed to build buy-in; describe the current educational data and technology landscape, including identifying gaps; and support the development of a plan to move forward to ensure Idaho remains
at the forefront of national efforts to enlist technology and data in the service of student success. The IEBC team engaged in six key tasks.

**Review the Completed Work Plan with the Foundation**

This task was designed to ensure the proposed scope of work would meet the expectations of the JKAF.

**Identify and Interview Stakeholders**

IEBC partnered with the Foundation to convene an initial group, identified by the Foundation, to introduce the project and build support. IEBC staff later contacted these stakeholders by telephone and interviewed them about their experiences with educational technology and data use systems in Idaho. We also contacted a second group of stakeholders who were recommended by the initial cadre.

Ultimately, IEBC interviewed 31 stakeholders from around the state. These included representatives from the Idaho State Department of Education, technology service providers (e.g., Idaho Digital Learning Academy, Idaho Education Network, Doceõ), knowledgeable school district representatives, Idaho Senate and Assembly education subcommittee members, and members of the Governor’s Education Task Force.

In addition to gathering information from stakeholders, this task helped inform stakeholders about Idaho’s definition of college and career readiness. We also included an introduction to the concept of educational metrics that will serve as leading and lagging indicators to assess Idaho students’ college and career readiness.

Based on these interviews, we identified two groups to invite to meet in two areas: technology and metrics. IEBC integrated the work of these two stakeholder groups into our findings and used the information we gleaned from the meetings to explicate and further understand information from the landscape and gap analysis (below). There were approximately a dozen stakeholders in each group, with considerable overlap—participants who attended both meetings. The groups included representatives from Idaho education support groups (IDLA, IEN, etc.), school districts, the Idaho State Department of Education, and Idaho State Board of Education. Each group met for a half day and shared lunch between the two meetings.

**Landscape and Gap Analysis**

This was the largest task and included a multi-method approach to data collection designed to address a number of questions about Idaho’s current educational data and technology landscape.

We first interviewed Foundation staff to ensure we were aware of all the educational data and technology projects they fund and other projects around. We also used these interviews to: (a) understand how these efforts come together and act individually to support the broader technology related educational goals; (b) gather information about where these efforts can be improved; and (c) review the ways these organizations expect to move forward to improve educational data and technology in Idaho.

IEBC then identified respondents from school districts around the state for interviews. We used a stratified purposive sample to ensure we included districts from each of the Idaho State Department of Education (SDE) six regions (Exhibit one, below), rural and urban districts, large and small districts, and charter schools and online academies. These interviews addressed respondent’s perspectives on the current status of educational data and technology efforts in Idaho; and included a focus on local technology, data,
and college and career readiness issues. We gathered information about local pipeline capacity, hardware and software, and plans for enhancement; how educational data and information currently is used; and knowledge and skills among district staff, as well as planned and needed professional development. In addition to the interviews, we conducted an online statewide teacher survey, which garnered over one thousand responses. In addition to Idaho-specific issues, the survey included items from a national survey conducted by PBS Media (and in the public domain) that provided national comparisons.

**Exhibit one**
*Idaho’s six educational regions*
Context and the National Scene

Idaho, and the nation, is at a critical juncture for technology in education. The technology era is upon us—electronic communications, content, and instruction—and is advancing rapidly; and this seems to have shifted beliefs about technology, increasing its acceptance as an important educational tool for students at all levels.

IEBC reviewed national trends in technology and data use that informs the Idaho findings. In this section, we discuss the national scene for educational technology: the identified critical components for successful technology use, online learning trends, and the key areas of forecasted future developments. Last, we provide some context about new trends in data use nationally regarding readiness indicators.

The Time for Technology is Now

Project Tomorrow by Speak Up tracks attitudes and behaviors among educators and parents in an annual national survey (Tomorrow, 2013). Speak Up chronicles how educators are grappling with how best to integrate rapidly changing technology in a meaningful way, and many of their findings parallel Idaho’s experience. Even more importantly, insights about issues not yet apparent in Idaho, may be gained from this national perspective.

Speak Up (Tomorrow, 2013) identified five “transformative factors” that exist today in education making this a decisive time for technology:

1) Educators are realizing the importance of digital tools to address the new Common Core State Standards
2) Educators and parents are using mobile devices more than ever and their “personal and professional lives are dependent upon internet connectivity and online collaborative learning environments” (p. 3).
3) Funding challenges over the last several years has kept new plans on hold, and now districts are in a position to refresh their technology plans; and they are innovating with technology to be savvy users and consumers to reduce costs and, possibly, raise revenue.
4) Parents are more digitally literate and expect that they will get electronic communications and their children will experience technology in their education.
5) The demand for a higher skilled workforce is encouraging higher technical skills and better student outcomes.

Online Learning Trends

As parents and teachers have become more technology literate, demand for online learning has increased across the country for both young students and adults. Three variations of online learning have emerged: online courses, blended learning, and flipped learning (Blackboard K-12 and Project Tomorrow, 2013). The traditional online courses are those held exclusively online. Two innovations have become popular, including blended learning that mixes online and face-to-face instructions, and flipped classrooms that provide lecture videos for homework with project-based learning or personal remediation during class time (Blackboard K-12 and Project Tomorrow, 2013).

Regardless of the type of online learning, teachers across the nation are reporting many positive benefits to these approaches, such as high levels of student engagement and problem-solving. The benefits of
blended learning and online learning compared to traditional face-to-face classes also were cautiously reported in a national meta-analysis of online learning studies (Means, 2010).

Research on technology integration is not widespread. Companies that are selling the online learning products have generally conducted their own research. Independent, larger scale studies have been more difficult to conduct because little data currently exists on these learning opportunities and technology is changing at such a rapid pace (Education Week, 2011).

**Critical Components of Sustained Technology Integration**

Speak Up also identified three critical challenges to sustained success from districts across the nation that also largely mirror Idaho findings. These national challenges are:
1. Increasing internet capacity and bandwidth;
2. Funding challenges related to infrastructure and maintenance; and,
3. “Teacher capacity to adopt and adapt new technologies to personalize student learning” (p. 15).

In the current Idaho review, IEBC found that Idaho educators are clearly grappling with the second and third issues noted in the national study. Maintenance and teacher capacity for meaningful integration are key challenges in Idaho at this time. As teachers integrate more sophisticated technology, and more and more schools open their doors to student-owned devices (Bring Your Own Device; BYOD), it is expected that Idaho will again contend with an increasing need for internet capacity and bandwidth.

**Future Expectations**

In 2011, the NMC Horizon Report (Johnson, 2011) identified oncoming technological advances that would have a major impact on education. Already a few years old, we have seen some of these innovations at play, such as cloud computing and the influx of mobile devices, particularly tablets. Other innovations that are intermediate or longer term include:

- **Game-based learning** uses online games to increase collaboration and learning
- **Open content** is open, cost-free sharing of curriculum and resources
- **Learning analytics** “loosely joins a variant of data gathering tools and analytic techniques to study student engagement, performance, and progress in practice, with the goal of using what is learned to revise curricula, teaching, and assessment in real time.” (p. 7)
- **Personal learning environments** “refer to student-designed learning approaches that encompass different types of content—videos, apps, games, social media tools, and more – chosen by a student to match his or her personal learning style and pace.” (p. 8)

**Data Use Trends and College and Career Indicators**

Many K-20 educators struggle to use data effectively. Our own work around the country has led us to focus on this often overlooked area. Recognized as a leader in helping institutions maximize their use of data IEBC’s expertise is around effective data use, “Educational institutions nationally are struggling with issues related to data. There is an abundance of data, but turning it into information that can be used remains elusive” (Phillips, 2014). Our work supports districts as they struggle to determine which metrics are important and to get access to data in the right manner and timeframe to support decision making. Districts engage in a reflection process on their own organizational habits as they relate to data use and work to identify best practices that can be modeled and integrated into their district context. Finally, IEBC’s data use
approach also takes into consideration human behavior and habits that increase educators’ capacity to process data and make decisions (Phillips, 2014). School districts and postsecondary institutions with which IEBC has worked have improved their understanding of how program and policy changes affect student success; and they are able to use this information to increase the effectiveness and efficiency of their interventions.

The goal of college and career readiness extends throughout the nation, fueled largely by economic forecasts that report most jobs will require a higher level of skill in the near future. The National High School Center completed a scan of 70 organizations throughout the country devoted to college and career readiness (Gheen, 2012). This investigation identified three threads of outcomes: predictive indicators that assess whether students are on-track to graduate from high school; attainment and authentication indicators that validate if students were college or career ready; and accountability reporting systems that provide information on a system’s (school, district, state) performance in preparing students for college and career (Gheen, 2012). Appendix B provides components and examples of these indicators.

The national context does not call out major gaps in Idaho’s experience. Idaho is grappling with the same issues that others have identified as national concerns—particularly problems maintaining technology in schools and teachers’ lack of experience effectively using technology to enhance learning. As in other states, it is clear that Idaho is still in its infancy in authentic technology use to positively impact student achievement. There is evidence of emerging use—virtual schools, individual district policies to implement technology projects only if teachers can articulate the enhancement to student learning, a few teachers reporting use of a flipped classroom. However, there are still low levels of students participating in online, blended, or flipped classrooms. Further, there is an overarching sense among key stakeholders that improving in-depth skills at integrating technology into instruction is not happening systematically or systemically in Idaho.
Findings

As with most efforts of this type some findings confirmed general beliefs, other findings raised new issues, and some findings challenged the common wisdom. Seven key themes emerged from the analysis of respondents from the initial stakeholder interviews, which we used for the remaining data collection efforts: (a) accessibility; (b) technical assistance; (c) professional development; (d) mapping available resources; (e) policies; (f) data use; and (g) college and career readiness. We address each of these in the following sections. We close each section with action steps.

We include statements from respondents that are representative of the opinions, attitudes, and responses from across the state. These actual quotes help to illustrate the perspective of multiple respondents with a single comment.
Accessibility

We found accessibility to be a salient issue at three levels: district access to technology; classroom access; and access outside of the school.

District Access to Technology

The first area we address is district-level access to technology. This includes the ability to access the internet, availability of bandwidth, access to state systems, and access to courses for students and professional development for faculty.

Key Stakeholder Responses

Respondents believe that districts have strong access to bandwidth to support their needs. The Idaho Education Network (IEN) has brought internet access and high bandwidth to every district in the state except one. IEN also monitors district bandwidth use. When they notice a district bumping up against their allotted limit, they contact the district and increase the bandwidth. There is considerably more bandwidth available in Idaho than currently is being used. However, problems were identified. For example, one respondent noted that although IEN supplies high speed broadband to the districts, it stops just outside the district and then there’s a handoff, “Here’s all this bandwidth, they [the districts] need to integrate it and support it. They need the technical expertise to manage it adequately. Like so many state level programs, there is a gap. Especially with rural communities to manage the bandwidth—policies are lacking, distribution is uneven. Schools/districts struggle to have their own building getting access and developing the local area network infrastructure to support the bandwidth they’re getting, right down to routers.”

The Idaho Regional Optical Network (IRON) also provides optic fiber networking among postsecondary institutions (and other non-education entities beyond the scope of this project); and it is widely used at that level. IRON is still working on solving access issues in many parts of the state. In some cases, they have limited inroads at the K-12 level due to classroom access issues (below).

The Idaho Digital Learning Academy (IDLA) provides course work, asynchronous and for blended learning, to Idaho. They started with a small program designed to primarily provide courses for students unable to take them in their home district, “[It] was used really mostly by football players who could not take the courses they needed due to conflicts with practice.” IDLA has now expanded to provide many hundreds of courses, including a large dual enrollment set of courses and online courses for small schools that do not have the capacity to provide these to their students—that cannot schedule courses into their academic year and dedicate faculty to teaching a class with very low enrollment, for example. IDLA is the largest provider of online advanced placement (AP) courses in the state. The distribution of IDLA course taking across the state is unclear. Teachers reported in the survey that they knew of few students who took courses through IDLA, and at least one of the large districts reported that they did not use IDLA resources because they had the course offering available to their students. In addition, they commented that the implementation could be stronger—the classes are structured with a screen and camera at the front of the room and students sometimes have a hard time following the instruction in this structure.
**District View**

The reported ability to access technology varied greatly among Idaho’s K-12 school districts. The primary contributor to this variance is available resources. For example, one district is completing an effort to install wireless access in their school buses while their neighboring district cannot afford to replace desktop computers for teachers with newer, more portable models. Although many districts are aware of the technology available to their administrators, staff, and faculty, few have the resources to take full advantage of what is available. Some districts and institutions are able to draw upon other funds to support access to technology. Some use their general funds to support their needs. Others are able to justify the use of Title I funds, for example. However, a vast majority of districts do not have the financial resources available to access, support use, maintain infrastructure, and teacher training. Furthermore, they predict increasing difficulties. Almost all districts noted they received considerable support to setup their systems; and they greatly appreciated this. But their districts do not have the resources for maintenance; and certainly not for growth.

Many districts are concerned about maintenance and growth. For example, a number of districts bemoaned the fact that they have difficulty replacing expensive bulbs in interactive white boards (e.g., SMART Boards), which makes district access to technology irrelevant. That is, if the technology cannot be used there is little reason to bring it to the district. Almost all districts are concerned about growth in the use of personal devices, which will lead to greater demands for bandwidth. Although districts confirmed that IEN does an excellent job monitoring their bandwidth needs and responding, they are concerned about the ability to continue to meet those needs with growth in bring your own device (BYOD) programs, increases in the amount of available devices in the schools and other access points provided by the district, and increased faculty use of web-based resources as professional development increases and faculty members become more comfortable with the technology in their classrooms.

Another interesting finding was that charter schools, for the most part, are far behind other districts and schools in their access to technology. It was not unusual for our interview to be the first time a charter school administrator heard about the IEN. They are unaware of available technological resources and supports to make use of them.

**Technology Subcommittee**

The technology subcommittee addressed three topics related to accessibility: cost, pace of technology, and organization of support structures.

The technology group agreed that the costs are greater than most districts can afford; and certainly greater than districts plan for. It was noted that technology often is not a fixed cost—these are variable costs and income is unreliable, “So they plan for the fixed costs and hope for the variable cost. So now you’re in a situation where a bulb goes out and we need to cover the costs. For a large district, they tend to be okay. For the small district, there is a lot of pressure and makes for hard planning.” Participants also noted that the costs increase exponentially, “We decided to put iPads in elementary school. We didn’t plan on the extra professional development for using iPads or the technical support required.” It was agreed that districts need to understand the total cost of ownership, but the skills to do so are not on the radar for most districts.

“We decided to put iPads in elementary school. We didn’t plan on the extra professional development for using iPads or the technical support required.”
The changing pace of technology was identified as an issue, “It used to be easy to say we are on a desktop model and get on a five-year rotation. But now there are all different kinds of costs. If a $200 Chromebook fails, is that disposable?” It was noted that there is a greater need, now, to match the technology with the classroom needs, “It seems like we used to be able to have a standardized piece of equipment in every classroom. Now the complexity of the environment is growing, we no longer can simply drop a desktop into a classroom and there you go. Now, we have to ask what is the appropriate level for a Chromebook or other device. Kids in architecture or graphic design need more than just a Chromebook.”

One participant compared the situation to the business situation, “twenty years ago.” It was noted that there is a move from a local support model to a matrix support model to a centralized support model. It was noted that the cost of managing technology in a small district is a losing proposition, “we don’t have the scale to deal with. We’re not looking at 75,000 desktops. We’re all fighting scale here. Local support cannot be replaced by centralized support. It goes beyond relationship to include local context. It’s a battle I understand, but don’t have a solution for.”

**Classroom Access to Technology**

Access to technology inside Idaho’s K-12 districts varies greatly. Some districts are highly wired and can access technology in all buildings and for all purposes. Other districts have the bandwidth brought to their door by IEN, but do not make use of the technology. More often than not, this is a resource issue. That is, districts do not have the resources to invest in the hardware required to make use of the access available to them. One example is the IRON EduCloud program, which is designed to provide virtual desktops to students. IRON piloted EduCloud in a district, and it was well-received. However, to date it has served under 750 students. Respondents noted that school districts don’t have the information technology resources to put in a desktop realization system—too much money ($20/month per desktop), license management, overall management and system administration.

**Key Stakeholder Responses**

Many respondents were of the mind that the issues related to classroom access to technology, “is a people issue not a technology issue.” One respondent noted that there needs to be a change in the locus of control for technology use from external to internal. This requires a culture change so educators think, “I’m in control and I’m excited about it.” Technology needs to be viewed as something the educator uses and not something that happens to them. We address these issues in greater detail below (see Professional Development).

Many respondents noted there is a culture that does not support integrating technology into education. A common theme was around change issues. There was general agreement of the, “need to go into this with an understanding of the cultural impact around these issues as well. There’s a certain amount of fear-based resistance to change. Everyone seems to like the idea of bringing hardware into the classroom as long as you don’t forget about the teachers. But one of the things that comes with the hardware is access to the world.” This relates to issues of local control. Most respondents indicated a need to respect local control issues. It was suggested that any efforts start with willing districts who can demonstrate success.
and communicate that to their less-willing peers. One respondent noted a desire to, “see the handcuffs taken off local control. Let the local solutions rise to the surface because there are a lot of good ideas out there.”

Recent history also was identified as an obstacle. The political landscape in the state is a big part of it. As one respondent noted, “We’ve gone through three years, maybe longer of egregious fighting about teacher performance, how teachers are perceived, so I think that will also play a part in all of this. My inbox is full of letters indicating that teachers feel as though they’re being diminished as people. Intentional or not, this has impacted the landscape. We have a lot of trust to rebuild, and I think that’s going to be critical. We come up with all these great wonderful ideas, and give it to teachers to implement. There has to be buy-in. It’s going to take more than communication. We need to reinvigorate our relationship and stand in support of teachers. We realize that this can’t happen without them. We could make unbelievable strides if we were all on the same team.”

A few respondents referred to the bring your own device (BYOD) movement as a good approach. However, all were concerned about what happens to the have-nots. One respondent identified this local experiment, “We are starting down the road of BYOD. For families [who] can’t afford a device, we’re looking to charge parents a certain amount, then after three years they’ll own it.” It was also noted that BYOD is demanding of teachers because they need to have familiarity with multiple devices.

**District View**

The first issue related to classroom access that many respondents wanted to discuss was the statewide wireless initiative. Many district respondents were dissatisfied with the process and results. They noted three different problem areas. First, a number of districts noted they received the equipment but ended up doing the installations themselves or contracting locally. They could not wait for the installation schedule to meet their needs. Second, some districts already had wireless systems installed. This meant the new system was installed in parallel or as a replacement. Most of these districts would rather have received the funding to put toward other technology needs. Third, there was a group of districts that felt loyalty to their local internet service provider. They want to support their local businesses and many had contracts already in place. This was not framed as an issue of local control in the same way other issues might be. Rather, it was seen as poorly planned and that a bit of input from districts about what would work best for them would have identified alternatives for districts instead of the (perceived) one-size-fits-all approach.

Almost without exception, districts had a basic technology setup in their classrooms. Teachers have access to the internet and there are projectors available. However, the available technology varied greatly here, too. Some schools had desktop computers for their teachers and others had tablets linked to interactive white boards with various student-linked technology (e.g., instant response or “clicker” technology for formative assessment). In other districts teachers still had desktop computers to access the internet, student information systems, etc.

Bring your own device (BYOD) for students is increasing everywhere and increasing rapidly. However, there are equity concerns being raised in many districts and these are being resolved in different ways. Some districts are providing devices during school hours to students who do not have their own. Other districts are providing devices to students who do not have their own and charging parents a nominal fee or offering payment plans. Because district respondents believe that college students must use technology as part of their education, in and out of the classroom setting, accessing technology in the classroom is an advantageous and necessary skill for college readiness.
District respondents take a more nuanced view to the issue of teacher acceptance of technology in the classroom. They acknowledge that classroom technology is highly teacher dependent, “students get wildly different experiences from room to room.” However, this is not framed as resistance as much as related to comfort levels. They point to improved, consistent, professional development as a means to increase comfort levels and, in turn, technology use. While some respondents noted the more experienced classroom teacher is less likely to embrace new technology, other respondents expressed disappointment at novice teachers’ discomfort with technology. These respondents noted that teachers just out of their preservice programs, surprisingly, did not have access to or instruction about making effective use of technology in the classroom.

District respondents also were quick to note that technology is, “just another tool.” Technology in the classroom, “cannot come at the expense of curriculum and other student skills.” That is, these respondents are concerned that the method of instruction cannot be primary and the content of instruction secondary.

Finally, there is a broad spectrum of what it means to effectively use technology in the classroom. More than one respondent pointed to the SAMR continuum for embracing technology in the classroom: Substitution, Augmentation, Modify tasks, Redefine tasks. That is, simply substituting the internet for using the encyclopedia is not an indicator of resistance. Rather, it reflects a lack of teacher awareness of how to best make use of the new technology. Using this continuum to gauge the use of classroom technology, and using professional development to move teachers along this continuum, seems to be gaining traction.

**Access to Educational Technology Outside of School**

Another access issue that arose was the use of technology outside of schools—among students at home and elsewhere.

**Key Stakeholder Responses**

One respondent noted, “Everyone talks about this being a wired generation. Our district has many students whose only access to the internet is at school.” For many respondents, the lack of access to technology outside of school represents an equity issue. This will become increasingly salient as more education work is dependent upon technology. The use of computers for assessment purposes, for example, could disadvantage students who have little to no educational technology experience. Educational innovations, such as the flipped classroom, increasingly rely on access to technology at home. Limited access to educational technology at home could be due to a number of reasons including economics, access issues such as poor or no signal strength, and personal discomfort with technology among adults in the household. One respondent noted, also, that public libraries often are identified as an additional resource for accessing educational technology outside the home, but many live far from libraries or cannot be there during regular library hours.

Another respondent continued the theme, “There are many assumptions that students know more than they actually do. Some students are on dial-up connection. Ten miles outside that community, broadband...”
isn’t available. Wireless doesn’t always work. Rural students have very limited access to basic technology. For some students, the only internet available is by traveling into town. If they need to go home and write a report for school, that’s a gap.”

District View

District respondents echoed the issues identified by the key stakeholders. They note wide variation in access to technology outside the school. Furthermore, they perceive this to be a growing equity issue. However, district respondents seem more likely to accept the role of the education community in ameliorating the technology divide between the haves and have-nots.

District respondents also were more likely to identify issues related to the lack of access to technology among parents. As the districts move toward electronic notifications to parents for all manner of items—school closures, report cards, test results, homework assignments, and more—there is concern that a group of parents will remain unaware. The recent development of parent backpacks linked to student information systems, which are designed to provide parents with one-stop online access to their children’s educational data, is exacerbating these concerns. Some districts have held informational sessions for parents. Although these help parents to navigate the system, these workshops do not ameliorate the technology gap.

Action Steps

- Conduct a comprehensive statewide needs assessment (focusing on access, professional development needs, and technical assistance/on-going maintenance capacity, and data use knowledge among districts to gauge the technology level of each individual district, identify needs, and solicit recommendations that meet district needs. It may be possible to build upon the needs assessment established by Idaho Leads to expand the focus and the scope of district participation beyond a subset of districts.

- Ensure the Doceō Centers are identifying and meeting the technology needs of Idaho’s school districts as they work to address issues among pre-service and in-service teacher programs. Doceō is creating outcome measures to assess the knowledge and skills gained by teacher candidates. These outcomes should be a focus of continued reporting to the field. IEBC will continue to work with the Doceō centers to ensure that the outcomes are collected, analyzed, and shared in an actionable way.

- Periodically provide resources to districts struggling to maintain their current technology hardware.

- According to this review, only a few districts seem to be implementing a bring your own device (BYOD) program, but they are gaining momentum in Idaho and across the country. A future study should explore implications of the movement and creative solutions to the equity gaps in access.

- Ensure the Idaho Education Network continues to have the capacity to meet the growing needs among Idaho’s school districts. As districts expand their technology use it becomes more sophisticated, and implement online standardized tests, the broadband need with inevitably increase. All stakeholders need to invest in this critical resource.

- Develop a strategic plan for educational technology in Idaho that addresses current and emerging issues for the next three to five years.
Technical Assistance

Technical assistance was differentiated from professional development (below) by respondents. Technical assistance was defined most often as the assistance provided to educators who are experiencing difficulties using the technology. It occurs in real time and often has a sense of urgency about it. As one respondent noted, “It’s a lonely place in the classroom when technology starts to break down.”

Key Stakeholder Responses

Many respondents replied that districts lack technology capacity, especially smaller districts (one respondent noted districts with less than 2500 students). There also are not enough technically skilled people to manage technology. In small districts teachers are pulled out of the classroom, superintendent’s assistants are pulled away from their jobs, and secretaries are expected to go beyond their job description and manage the information technology system. And one respondent succinctly summarized a frustration identified by others, “Bigger districts – they have technical people, but they do not understand education. Information technology people have an inflated urgency for security and keeping the data safe. Teachers then can’t get to the resources. We have to balance and we need that conversation at the table.”

This concern—that information technology staff are not educators—also was mentioned in relation to Idaho’s State Department of Education (SDE), specifically that it is comprised of too many business people and not enough educators, “At the state department, they lack educational staff – most at state department of education came from business not education. This holds them back because you need to know how your customers operate in order to meet the customer’s needs.” It also was noted that the staff SDE hired to go out to the field did not have the background or knowledge required, “ISEE navigators were great in theory. But they hired the wrong people. Should take some of the best superintendents, testing coordinators, folks who were successful working through the first couple of years—buy out some of the their contract (which would help districts in financial distress, many districts have gone to four day work week).” Although the ISEE Navigators were re-organized in January 2014, they have not had enough time or successes to overcome the field’s first experience that has left lasting mistrust.

One respondent suggested a regional hub approach to providing technical assistance, similar to the Boards of Cooperative Educational Services (BOCES) model. A number of regional technical assistance centers would be developed around Idaho with representatives from various systems (IDLA, IEN, etc.) available to respond to questions or travel to the trouble spot. They also could house computer laboratories for students to access online courses, educators to receive professional development, community members to access massive open online courses (MOOCs), and myriad other uses.

District View

The greatest gap related to technical assistance among districts is low district capacity. There is great need, but priorities for where to expend resources are elsewhere. It is the rare district that can afford a dedicated technical assistance person; and even rarer still multiple providers who do not have to travel among schools and offices.
Almost without exception the district administrators, faculty, and staff with whom we spoke credited their internal technical assistance provider with making technology easy to use. This tended to be a home-grown individual who began providing technical assistance because of personal interest, knowledge, and/or skills; and who then was formally assigned with the work. However, this model depends on a number of factors. First, the person needs to be available and identified in the school or district. Second, this person frequently fulfills this role only part-time and also continues to fulfill their original role as physical education teacher, student services coordinator, math teacher, etc. Third, there rarely are resources available to support this person. Many districts noted they have technology budgets under $20,000, if any; and this is supposed to cover the technical assistance person, as well as purchasing and maintenance. Finally, the technical assistance provider most often is at one building and needs to travel to assist in other district locations.

District respondents also indicated that the ideal technical assistance provider has a skill set that goes beyond technology. They note this person must have an understanding of how teachers operate and classrooms function. This is why the home grown technical assistance person, who started in another role in the district, can be effective. One district that had the resources to hire a dedicated technical assistance person noted that establishing relationships with the teachers, really listening to them and giving them what they need and want, made a considerable difference in teacher’s use of technology. The superintendent noted, “I had this guy talk to my teacher who was the most resistant to using technology. She just was not comfortable and when she tried to use the technology, it didn’t work for her. He listened to her, over coffee, for about two hours. He became her best friend. He helped her figure out her issues and now she is using technology as much and as well as the teachers in the rooms on either side of hers.”

Another technical assistance issue noted by district respondents is related to the available equipment. Some districts are hand-me-down districts with outdated hardware and software. This complicates attempts to provide technical assistance because external help often is no longer available.

A number of districts commented on the excellent technical assistance provided by IEN. They also greatly appreciated the benefits of the e-rate assistance IEN provides.

**Technology Subcommittee**

The technology group noted that most districts want to have technical expertise internally. However, they want their district technical assistance provider to have access to external expertise. It was noted that IDLA also provides technical assistance to a number of small districts that cannot afford their own staff member; and IDLA also steps in when a district loses their technical assistance expert and cannot find someone to fill the position. However, IDLA is an online service provider and although they establish strong relationships with districts they try to limit their technical assistance to issues related to the services they provide—IDLA provides technical assistance to ensure districts are able to take advantage of the services they offer.
**Action Steps**

- Conduct a comprehensive statewide needs assessment to inform new technical assistance plans/services.
- Develop a plan for providing technical assistance to districts unable to set aside resources for their own.
- Develop criteria for technical assistance providers to ensure they have technical expertise as well as experience with K-12 educators. Develop a list of TA providers who meet criteria and provide information on a best practices clearinghouse website.
Professional Development

As noted above, professional development is distinct from technical assistance. Technical assistance relates to issues with available hardware and software functioning. Professional development, on the other hand, relates to the use of technology to address teaching methods and student outcomes.

Key Stakeholder Responses

Respondents noted a great need for professional development to bolster teachers’ use of technology, continuing the conversation that technology-related issues are more a people problem than a technology problem.

Respondents identified many ways professional development could improve the ways technology is used in the classroom. One example was using technology to meet identified student learning outcomes, “Technology can be better used in the classroom to meet learning objectives (for college and career readiness) and help teachers develop lessons. It goes beyond simply putting a laptop in their hands—often times both students and teachers don’t understand how to effectively utilize technology to support learning goals.”

Multiple respondents noted that teachers are not prepared to integrate technology in ways that take advantage of technology’s power, “asking students to look up information about volcanoes on the internet is simply substituting a computer for the Encyclopedia Britannica. That’s not making the best use of technology.” Another interviewee gave this example about how teachers can benefit from professional development related to using technology to support learning, “The idea that you can give people devices and all will be well isn’t accurate. We got netbooks and gave them out, removed the text books. When we started, teachers would darken the rooms, students faces were lit up with the computer screens, and the rooms were quiet, so we assumed learning was going on. But students weren’t doing what they were supposed to.”

Respondents also noted that professional development could improve teachers’ awareness that there are many resources available to increase their repertoire or expand the classroom beyond four walls, “[There is a] need for more innovative teaching approaches, particularly in STEM disciplines there is a real need for the blended learning approach that enables hands-on learning experiences without students actually having to physically be in class necessarily.” Another respondent stated, “Lack of awareness among teachers of what’s available and how to use it. Need to make it easier for educators to be aware of resources that are available. It is a communication and an education piece—they may not know how to use it or they simply don’t even know it’s available to them for use.” Another respondent indicated there are teachers who have figured out how to integrate technology successfully in their classrooms, but many teachers are unaware of this, “The biggest struggle most teachers have, though, is being exposed to the many ways other teachers have integrated technology in the classroom.”

Another common theme is the need to respect teachers’ focus on their students and their already full days and weeks. It was stated that, “Teachers don’t have the time or ability to learn how to successfully integrate technology into the curriculum on their own. Train the trainer didn’t work. So in a typical district you now have a small percentage who are good with technology and will figure out how to do these things.” In spite of the increased burden, a number of respondents noted that teachers are interested, “The culture
among teachers is definitely not the concern or issue standing in the way. There is no resistance—it’s lack of awareness and lack of resources. In fact, teachers are jumping at opportunities for professional development. There is an overwhelming enthusiasm among teachers to learn of available resources and the how-to as far as implementing new innovative strategies to teaching and learning.”

**District View**

As with technical assistance, district respondents had a more nuanced view of professional development needs. Typically, they did not attribute lack of technology integration in the classroom to teacher or administrator unwillingness. Rather, these respondents believe that low levels of effective use of technology in the classroom is due to lack of awareness of what is possible, lack of training about how to do so, and lack of time and other resources.

Most district respondents believed that mandated professional development was a waste of resources. They noted these offerings, “have to play to the lowest level of expertise.” This makes them unnecessary for many teachers in the audience. Additionally, teachers are very busy and school calendars are full, “fitting more into the teachers’ schedule just can’t be done.” Further, respondents noted that teachers would gain more from professional development in the classroom with someone coaching them to more effective technology use. This coaching could be informed by the Docebo centers and be based upon the Intentional Standards for Technology in Education (ISTE).

District administrators have great confidence in their teachers’ ability to know what they need, find a solution, and share it with their fellow teachers. Many district respondents reported considerable professional development is offered internally. District respondents preferred a blended approach to professional development. They see the most effective model as one in which, “teachers identify a problem and identify a solution, often with assistance from others. If necessary, teachers are sent to a training or other professional development service they identify and then return with a solution to present to their peers.”

Districts are extremely concerned about wasting resources and teacher time on professional development. They are wary of, “pulling teachers out of the classroom for possible, unknown benefits.” Additionally, there are, “so many options, it’s hard to tell what is good.” Occasionally external professional development offerings are brought into the district, but there had to be a compelling reason to do so. External professional development, “tends to be hit and miss.” Therefore, districts tend to be extremely conservative when it comes to expending resources on external professional development. A frequent complaint was that these offerings, “did not make clear how to apply in the classroom what was being presented.”

With the exception of professional development related to the common core state standards (which, admittedly, was not related to technology), district respondents were critical of professional development offered by the State Department of Education (SDE). This was noted as, “the real problem.” Many respondents bemoaned the lack of coordination among professional development offerings. One respondent noted, “I registered for a professional development workshop a few weeks in advance. Then, the week before it was offered I received an invitation to another workshop by a different group in the state about the same topic on the same date. What a waste of resources.” The need for a comprehensive statewide professional
development calendar was noted by many respondents. They noted that topics did not have to be identified at
the start of the academic year but, “it would help to know that one group is holding professional development
the second Wednesday of each month or another group had a two-day institute offered the third week in
January.” The professional development calendar provided by the Doceō Center at University of Idaho is a
good example of how to move forward with a comprehensive statewide calendar.

District respondents spoke highly of the professional development offered by Idaho Leads and
DiscoveryEd. IDLA’s networking capabilities received extremely high marks from teachers who use it for
professional development to exchange ideas and find solutions. Respondents noted that professional
development for using instant response formative assessments (student clickers) was valuable. Another
example of valuable professional development was around using technology for individualized instruction.
Teachers also found valuable professional development that demonstrated how to, “get free of my desk.”
That is, how to use tablets and other technology so the teacher could get around the room to support students
while they work. Finally, teachers appreciated the benefits of the virtual field trip. Many were excited about
experiences that supported live interaction between their students and professionals conducting research,
working in careers of interest, and in interesting locales such as marine biology sites, laboratories, and
environmental services.

Technology Subcommittee

The technology group opened with a discussion about professional development. It was noted there is
a balance between cost savings with professional development delivered statewide and the need for an
awareness of the local context and local needs—the issue of relationship. It was believed among the
participants that the latter, relationships, is shortchanged most of the time; and that is a considerable failure
of most technology professional development. Hence, there is a move among a few professional
development providers, such as IDLA and IEN, in Idaho to figure out how to deliver technology related
professional development in a regional model. In fact, the superintendent organizations in some regions are
providing regional professional development for their districts. This could keep costs down and ensure local
context and needs are met, while building relationships. However, the group was not sure the six regions set
up in Idaho are the best way to divide the state for delivery of professional development services.

A need for a statewide professional development calendar was noted in this group as an important
addition to these services in Idaho. The need to identify the level of expertise for professional development
offerings also was suggested as important, “When there is a mismatch between what they’ve already
received, or not, and the level of professional development, it becomes extremely frustrating, at both ends.”

**Action Steps**

- Conduct a statewide needs assessment among districts to gauge the professional development needs of
each individual district, identify needs, and solicit recommendations that meet district needs.

- Create a coordinated, comprehensive statewide calendar of professional development offerings.

- Capitalize on current systems for peer to peer support by introducing mechanisms to make these easier
  (web-based discussions, publicly accessible frequently asked question sites, etc.).
Action Steps (continued)

▪ Develop a system for vetting and rating professional development providers.

▪ Implement a professional development approach, in which the audience expertise level is designated, to improve technology use among Idaho’s educational institutions.

▪ Explore with Doceō centers about how to expand professional development opportunities for in-service teachers, potentially providing continuing education credits, and using existing infrastructure (e.g., IRON network) to implement this professional development.

▪ Develop a clearinghouse website and conference to showcase best practices for technology integration around the state.

▪ Work with a professional development provider, perhaps Idaho Leads or Doceō centers, to create a classroom coach model. This strategy may be replicated in districts across the state.
Mapping Available Resources

Respondents saw value in mapping the educational technology and data use resources available in Idaho to support students’ college and career readiness.

Key Stakeholder Responses

Many interviewees believed this guidance is needed to move forward. Typical of the comments we received is this, “There isn’t a good comprehensive picture of what is needed. Even for me, I’m working on a lot of work that I think will make a difference, but it is hard to say. Some sort of overview, coordinating effort would be helpful.”

It also was noted that this mapping effort could help to coordinate work, which could level the playing field across the state, “We have a fractured and disparate landscape, strong need to coordinate among the various entities. There also are a spectrum of services and desired outcomes.”

The mapping effort also could be used to confirm or disprove anecdotal evidence, “[We need a] cohesive data set that says this is what we have and this is how it’s being used. And without that it’s kind of hard to say where the gaps are. It is known anecdotally, for example, that some of the low-income communities and rural income communities don’t have technology meanwhile some of the Boise schools do but there really isn’t any data to back up what types of technology exist in which schools and how it’s being used.”

District View

District respondents echoed the need for mapping resources expressed by the key stakeholders. However, in addition to coordinating efforts, filling gaps, and avoiding duplication district respondents, “feel bombarded by information and want to make sense of the chaos.” There is a need for a way to filter and focus from among the resources and supports available. A typical response was, “the resources are out there, [you] just need to be creative in how you get them and use them.”

Respondents noted there is a lot of content available, but it is difficult and time consuming to sift through. A number of respondents made this comment specifically when speaking about Schoolnet.

District respondents also noted they are not sure how to share their experiences with their peers and others. This echoes a concern noted in the section about professional development (above). There were some bright spots of collaboration. Several respondents noted an “unconference” put on and supported by educators in Blaine County. This grassroots effort provided a place for educators to share ideas and strategies in a safe environment.

Technology Subcommittee

The technology subcommittee argued that small districts are struggling more than other districts. They cannot find the person with the skills to hire, “consequently they have a teacher doing both part-time. And the teacher cannot do justice to both. If they’re in the classroom and someone has a problem, they’re just stuck.” The discussion came back to a regional approach. It was noted that in Oregon they have a lot of rural districts and they use a regional services district approach. However, the quality varied depending on
who was managing the regional service district. One participant stated that 45 states have regional service districts of some kind, called different things. Idaho is one of the five states that do not.

The discussion also addressed postsecondary technology. Postsecondary participants noted that technology at their level had a completely different funding model. IRON provides a common infrastructure for the universities because of a need to share these resources for the work they do. The National Science Foundation (NSF) provides grants to support this work. One participant noted that agreements between IEN and IRON allow K-12 districts to tap into these resources—to share best practices and negotiate costs, “remember the state agreements are ceilings and not floors. You usually can negotiate lower costs.”

### Action Steps

- Building upon those identified in this review develop a comprehensive map of technical assistance, professional development, student courses, networking, and other educational technology resources available in Idaho. Ensure grassroots efforts such as the Blaine County “unconference” are included.

- Create an educational technology advisory council to develop and coordinate these resources and clearinghouse website that houses information and data reports.

- Consider a regional approach to providing resources, such as technical assistance and professional development, where these are of limited availability or not meeting local needs (identified through the needs assessment).
Policies

Respondents who commented on policy-related issues lamented the dearth of policies related to technology and data use.

Key Stakeholder Responses

A succinct summary was offered by one respondent, “Rising back up to the top level: both Idaho State Board of Education and SDE—neither one has someone whose sole focus is digital or distance education policy. [They] spend a lot of time focusing on curriculum or graduation requirements, but right now nobody is looking at it from the highest point. Not from one type of technology, but a statewide level saying, ‘This is the policy that is going to foster increased use of technology at the state level.’ [It is] desperately needed, not sure where it should reside. At some point it might go away, but really needed now until it becomes embedded somewhere or fully infused. Right now there are no policies being made regarding anything regarding technology, distance education, or digital education.”

Earlier issues related to the disconnect between the technology and data use discussion and educators arose related to policies as well. One respondent noted, “There is a disconnect: people are setting policies and they don’t actually understand the realities of the classroom…. There is a disconnect between policy and practice.”

District View

District respondents, on the other hand, focused on local policies and not state-level policies.

One of the key policy areas for districts is the move away from firewalls and filters. Many districts started by removing barriers for teachers trying to access websites for their own use and use by their students. Teachers, too often, had to request permissions to visit sites they believed would be useful for instruction. Districts realized they could trust their faculty to identify appropriate material for their students and started eliminating filters. With verification, this trust in faculty was confirmed.

The next step was to remove filters to student access. Districts have begun to identify, “the need for students to be good digital citizens.” For some districts this is framed as a college readiness issue. That is, if students will need to use technology effectively in their postsecondary education they need to understand the differences between using technology in school and general use of technology. One respondent stated that, “blocking policies in K-12 run counter to postsecondary attitudes.” Districts and schools are finding that, as with teachers, their trust in students to use educational technology in ways appropriate for the school setting is not misplaced. Furthermore, they are dealing with student misuse as they would any other disciplinary issue—on an incident by incident basis and not with broad policy strokes. As with most concerns, student filter blocks are not unique to Idaho. Project Speak Up found that student filtering was a major complaint across the country.

Another policy area district respondents noted is in the area of ownership. District respondents noted that when students are provided with tablets, they take ownership of these devices and care for them well.
One respondent stated, “It’s a culture of if you have it, it’s your responsibility.” Districts are realizing that fighting student ownership of devices, whether their own or provided by the district, is a losing battle. Districts have come to accept this as a way of life for their students and encourage use in a responsible way. We do know that this type of policy can backfire. For example, there was an infamous mishap when many tablets disappeared or were hacked during a poorly planned technology project in Los Angeles Unified (Blume, 2013). Entrusting students with the technology is possible however—districts in Idaho are already proving it is possible—with a clear, thought out plan, and well communicated expectations that align with the school culture.

Finally, a number of district respondents noted that the State is making policies without considering district needs or desires. They want site visits from the Idaho SDE and they want to be trusted as leaders. They would like to see a trust and verify approach taken by the State toward districts, in the same way the districts do with their teachers. A few respondents thought a needs assessment and status survey related to policy would be helpful. However, other respondents expressed concern this could lead to broad-brush state policies that would supersede their own effective local policies.

Technology Subcommittee

The technology group discussion concluded with the statement that the top priority related to technology is funding, “to get our infrastructure up where it needs to be and maintain the level we need to be at.” Participants noted that lottery funds used to support technology, but in the financial downturn they were diverted to replace general funds in the districts. A participant from a rural district noted the need to improve the pipeline to schools from the central office. As they bring on more wireless devices it is difficult to keep up. They need support for intra-district connectivity and bandwidth.

The primary source of resistance, according to the group, is the legislature’s reluctance to deal with funding issues. Also, efforts to encourage districts to all adopt the same model or fit the same mold will meet with resistance.

Finally, to better understand educational technology funding priorities, participants were asked, “If you were the J.A. and Kathryn Albertson Foundation, what would you do?” Group participants returned to the need for funding in support of technology infrastructure, technical assistance, and professional development. However, this funding could easily further entrench survival policies and continue to release districts from developing sustainability policies, which are sorely needed.
Action Steps

- Survey Idaho school districts about their local educational technology policies including who was involved in policy development, history of policy development, and perceived impact of policies. This information would help state policy development align with local district policies.

- Identify recommendations for effective educational technology policies for Idaho school districts with examples and suggestions for development and implementation.

- Encourage state-level educational technology policies and funding that support effective district policies.

- Showcase case studies of successful experiences providing students with devices on the Idaho resources clearinghouse website.
Data Use

Many respondents commented on data use at multiple levels and acknowledge the links between technology and data, “Educational technology holds the potential to be used not only as a means by which educational data are collected and analyzed, but also to provide real-time information regarding student performance toward achieving certain learning goals.” A number of subthemes emerged and we address these separately: (a) type and amount of data; (b) Idaho System for Educational Excellence (ISEE); (c) ways data are used; (d) teachers as users; and (e) trusting the data.

Type and Amount of Data

Key Stakeholder Responses

Respondents commented on the types and amount of data collected. This currently is seen as a moving target by many. One of the more optimistic comments was, “One problem is knowing what is important and relevant data. Consequently we keep changing what data we collect and turn into the state right now. They don’t have the expertise to know what to ask – keep coming back as they get more information to ask more. Not a shortcoming, just a learning process.” Others were less positive, “Can we narrow down the amount of data collected? It seems so much is collected and there is little rationale given. They keep adding what needs to be reported, but nothing is ever dropped. It’s totally driven by compliance and reporting required by feds and others for grants and funding.” In fact, the drivers of data collection are seen as having a negative effect on output and use, “From a data use perspective, we’re not getting data out of the system yet. I’m just barely starting to deliver data back. Data wasn’t gathered for this purpose.”

District View

District respondents echoed the comments from key stakeholders that they collect a considerable amount of data for many reasons. The most salient reasons driving data collection, however, remains accountability, reporting, and compliance. That is, according to district respondents they collect most data, “because we have to.” Districts collect data to submit to the Idaho SDE and U.S. Department of Education, as well as for any funded programs and projects they might have in their districts. Respondents also note considerable overlap in the kinds of data requested from them. However, the myriad formats and forms required to submit the data makes this an onerous process requiring considerable staff resources.

Idaho System for Educational Excellence (ISEE)

Key Stakeholder Responses

Data use was identified as problematic by many because of the data submission and delivery systems. The Idaho System for Educational Excellence (ISEE) was perceived as unwieldy and difficult, “ISEE is the elephant in the room. Nobody gets this information back in a useful and useable way. Can’t get it right. Constant data upload errors. Need to hire someone with the skills or take this person away from elsewhere. ISEE just is not fulfilling the vision, it is the roadblock to data use rather than becoming more skilled at using
it.” Another respondent noted the scientific rigor (validity and reliability) of the data in ISEE is questionable, “ISEE has been a huge source of concern and frustration among professional and technical education stakeholders, particularly regarding the trustworthiness of data that come out of this system.” Another respondent stated, “We don’t use ISEE. For the money spent, it’s sad. It’s clunky, old, and not user-friendly—too many steps to log on. Need a streamlined, easy, user-friendly system to access student scores. Right now, it’s quicker for me to call another district when we get a new student than to try to use Schoolnet.” Typical of many around the state (and as noted in a previous report by IEBC), this respondent does not distinguish between ISEE, which is the data system, and Schoolnet, which is the interface to access and make use of the data system (as well as other resources for teachers such as lesson plans and assessments).

District View

District respondents had considerable concerns about ISEE, Schoolnet, implementation of the Common Core State Standards (CCSS), and the new standardized tests linked to the CCSS. Many are concerned about the coming switch from ISEE assessments to the Smarter Balanced Assessment Consortium (SBAC) assessments, which are linked to the CCSS. They are concerned they are not going to receive student data for one, maybe two years while the assessments are benchmarked. Additionally, there is concern that ISEE assessments will not be linked to the SBAC assessments so student progress can continue to be measured uninterrupted. It should be noted, however, these concerns are not unique to Idaho—many in states switching to the CCSS and linked standardized assessments are expressing the same concerns.

Many respondents continue to comment on their negative experiences with ISEE and Schoolnet. Historical complaints continue, although the system has changed. For example, one respondent noted, “the processing time in Boise to turn data around is extremely long—weeks.” Another respondent stated that districts, “use ISEE for compliance, it uses a lot of resources, and we get nothing back.” These types of comments that districts are unaware of the new data submission (five file format) possibilities, improvements made to the system, and reporting and output functions available to them from Idaho SDE. It was noted that, “there needs to be a major relaunch to build back trust.”

Ways Data are Used

Key Stakeholder Responses

Data are used and can be used in many ways around Idaho. Most respondents focused on the issues and problems with data use. Many comments, such as this one, addressed the mismatch between user needs and system functionality, “It’s not a system that can generate the type of data I am talking about where a principal can sit at a computer and break down areas of curriculum and compare year to year. The state is moving in that direction but it’s not here—it’s not ready.” Others addressed the perception of the system and the impact of perception on use, “[The] assessment piece of data use tends to have a very punitive, negative connotation and it is hard to convince people that we want to use the information to make the program better not to beat up on you or negatively rank the performance of any one particular program.”

Some respondents identified ways data availability and use are having a positive impact. One respondent lauded the ability to link high school to postsecondary data “The data system plays a role in identifying students ready to go on. In the past we never looked at data across segments.” Another respondent noted positive impact on partnerships between postsecondary institutions and their ability to
provide support and technical assistance to K-12 partner districts, “Data also informs K-12 interventions. For example, if data reveal that students are consistently requiring remediation in entry level math courses then there is a need for intervention at the K-12 level to better equip high school math teachers with skills necessary to adequately prepare students for success in STEM discipline.”

**District View**

There is a lot of variance among districts regarding using data. The issue is not so much resistance to use as a more nuanced difference related to valuing data. Generally, the many smaller districts in Idaho do not see the value in data. They know their students and believe it is easy to respond to issues, whether with an individual student or a group of students. As was noted in a prior report, yet relevant here, one respondent stated, “We’re real small here and we know each other really well. We have lunch together. We’ve worked here a long time. We know the families. If I have a student with a problem, I knock on their front door. If it’s a bigger issue, we have a pancake breakfast and get everyone down here. We use Power School to keep track of things. We don’t really need an information system.”

At the other end of the spectrum, medium and large districts would like data disaggregated in many ways. They see little value in district-level data, as it is not actionable for them. District respondents expressed a need for more formative data. They would like to see item analyses from standardized tests. Respondents noted that they liked the Measures of Academic Progress (MAP) system because it showed growth, deconstructed items, and also individual student progress. These respondents were disappointed that MAP no longer was available to them; and they did not know why it was discontinued.

With one or two exceptions, districts had no formal process in place to review and use data. Even those districts with a process in place are stuck in an old model of data use and could not get beyond, “we get those reports and we talk about data.” Where data reports are distributed they tend to be unwieldy; and it is left up to the administrator or faculty member to make sense of the data—to find the actionable story. There is little to no follow-up on the data discussion from report to report. Many respondents noted a need for data use training.

**Teachers as Users**

*Key Stakeholder Responses*

Many respondents identified a need to ensure teachers have access to the data in a useful and useable format, “If we can’t get useful information into teachers’ hands so they can make informed decisions about what they are doing with individual students, this is just a huge technology project. We can spend money on technology and collecting data but if it is not a useful group of data that a teacher can use to inform instruction, then we have missed the mark considerably.” Another respondent stated, “[We] need data in a user-friendly format. Easy to use, makes sense, and hones in on what folks need to make instructional decisions. Data are needed to support two areas: instructional and systemic decisions.” One interviewee stated this as a general issue, beyond teachers, “We have data, what we need to do is transform the data into information and provide it to the people who make decisions. The data are there, or is more accessible than it has ever been, but now it is about the consumption of that data and how it is used.”
Finally, one respondent nicely summarized comments about recent history and its impact on teachers’ trust in Idaho’s technology systems as part of a larger cultural issue, “The political landscape in the state is a big part of it. We’ve gone through three years, maybe longer of egregious fighting about teacher performance, how teachers are perceived, so I think that will also play a part in all of this. My inbox is full of letters indicating that teachers feel as though they’re being diminished as people. Intentional or not, this has impacted the landscape. We have a lot of trust to rebuild, and I think that’s going to be critical. We come up with all these great wonderful ideas, and give it to teachers to implement. There has to be buy-in. It’s going to take more than communication, but even if that language existed it would help. We need to reinvigorate our relationship and stand in support of teachers. We realize that this can’t happen without them. We could make unbelievable strides if we were all on the same team.”

District View

Teachers continue to be the group most in need of data and least likely to obtain what they need from formal data systems. There was an expressed need for local data on demand. Many saw this deficiency as the greatest disappointment related to Schoolnet. They believe they were promised local data on demand as a feature of Schoolnet that has yet to be realized.

There was great need locally for professional development to assist teachers in relating data to the CCSS. According to many respondents, “teachers do not know how to use data to improve instruction.” A few district respondents were able to identify teacher leaders who tried to do so. However, they noted these faculty were stymied by the lack of data available in a useable and useful format.

In contrast to the stakeholder view, the issue of faculty trust in the system was not raised as locally salient. Locally, the issue was framed as faculty are resigned to not receiving what they need from data systems and rely instead on trusted methods. Most often this method is ongoing formative assessment at the student and classroom level, which is designed as much to inform the student about progress as it is to inform the teacher.

Trusting the Data

Key Stakeholder Responses

Trust in the data and issues of privacy and security were noted by a number of respondents as obstacles to using data. One respondent stated, “People lack confidence that the data will be trusted and used. How do we get buy in when decisions are being made based on emotions rather than fact? It makes people mistrustful of the process.” Another respondent expressed considerable frustration with the local perspective in many regions, “Too many folks think collecting data is the equivalent of loss of control. They think privacy is equivalent to security.” It is believed that this culture of suspicion and mistrust is an obstacle to data use at multiple levels—it affects willingness to provide data, trust in data, and ultimately data use, “Misunderstanding of what the systems are, their purposes, hinders their usefulness. As people are afraid to provide information to the system, it makes utilizing them much more difficult.”
District View

Among district respondents issues of trusting the data were related more to their ISEE submissions than general concerns about privacy. That is, many districts have a history of submitting their data and receiving error notices in return. Yet the errors are identified by these respondents as showing up in data sets returned to them by Idaho SDE that do not match the data set submitted. They expressed frustration at the lack of responsiveness at SDE who, according to respondents, simply blame the local data system and are not interested in providing technical support to address the data issues. It should be noted, however, that these complaints seem to be historic traces of past experiences.

A few district respondents noted concerns similar to those of stakeholders. However, they linked these to community concerns and not concerns among district personnel.

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<th>Action Steps</th>
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<tr>
<td>- Conduct a statewide needs assessment among districts to gauge the professional development needs related to the availability, access, and use of data at each individual district, identify needs, and solicit recommendations that meet district expectations.</td>
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<tr>
<td>- Encourage the Idaho SDE to continue with their outreach and messaging to districts about changes, adjustments, and improvements to statewide data systems. Include testimonials from folks at districts for whom the system is working and who have noticed improvements.</td>
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<tr>
<td>- Develop a CCSS SBAC update and regular notifications about progress and expectations. Ensure these communications are being received at districts and given the high profile they deserve and require.</td>
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<tr>
<td>- Review state and federal data submission expectations and develop a consolidated data submission system that could be used for multiple accountability and compliance requirements.</td>
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<tr>
<td>- Support district’s efforts to ensure teachers have scientifically rigorous formative data they require to improve instruction at the classroom and student levels by providing professional development in support of using data, encouraging inter-district collaboration, and continuing to respond to district student data requests from state data systems.</td>
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<tr>
<td>- Implement a professional development approach, in which the audience expertise level is designated.</td>
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College and Career Readiness

College and career readiness emerged as our final theme from these initial interviews. Linked to most other themes, there are issues distinct to college and career readiness.

Key Stakeholder Responses

Most respondents were aware that Idaho had adopted a definition of college and career readiness. However, a number of respondents believed that, although it is an appropriate vision statement, it does not provide a lot of information about how to define and track the data required to assess the extent to which the vision is realized in Idaho. One respondent’s statement represents some of the confusion related to the definition, “I’m really interested in what we mean by career readiness – is this for someone with a high school diploma or a college diploma? It is important to understand what entry-level skills are at what level. What is our goal for K-12 education? What is the common definition? There is no common definition, trying to move beyond the industrial-historical model. Or are we trying to prepare students for college. Or, are we looking for a liberal arts experience? Or, are we trying to prepare students to be valuable citizenry. We talk about something different through each of these lenses.”

Respondents mentioned how current systems support student college and career readiness. For example, “Last year IEN delivered the equivalent of 425 years of college to high school students, with 97% completion rate.” Stakeholders also noted the dual enrollment offerings of IDLA as advancing college readiness because students understand the demands of college level work, which includes soft skills (e.g., time management) as well as the academic rigor.

The data about college and career readiness is considered important. Some respondents noted local efforts to track postsecondary metrics, “My superintendent has worked at tracking our own students. It’s a difficult process. Not aware of a statewide system, but heard it’s available. We use information produced by JKAF. I know, for example, our district has one of the highest postsecondary enrollment rates and persistence. This was told to everyone in the district. Not sure where the information came from, though.” College and career readiness data also were seen as necessary to improving service delivery, “There is a huge amount of peer reviewed data that shows that if a high school student completes a certain number of hours of college level courses, it increases the probability of going on to postsecondary and even completing a degree. What these studies lack, though, is what kind of dual credit or college credit coursework provides that kind of success. I would like to know that to check on the courses offered via IEN.”

Some respondents expressed a need for a system to track students from high school to college to understand transitions and progress. Although it was acknowledged that Idaho is working on this, it is not keeping pace with the needs in the field who are trying to act on the adopted definition, “Something is needed in the state regarding college readiness and to follow it across the state. Need a standardized system. The universities will have to carry it through with standardized IDs and someplace to house it all. What state is working on—we are in the infant stages right now.”

Many respondents noted the positive impact of the Idaho Education Network (IEN) and Idaho Digital Learning Academy (IDLA) on the availability of courses to students and resources to teachers around Idaho. One respondent noted that, “IDLA provides course work, asynchronous and for blended learning, to Idaho. They started with a small program designed to primarily provide courses for students unable to take them in their home district. It was used really mostly by football players who could not take the courses they needed due to conflicts with practice, have now expanded to providing many hundreds of courses, including a large
dual enrollment set of courses and courses for small schools that cannot provide them to their students. They are the largest provider of AP courses in ID, for example.” IEN, perceived as another successful model for content delivery in Idaho, “installs video teleconferencing classrooms. Now have one in 270 classrooms. There’s at least one in every high school. We use them to exchange content from have-schools to have-not-schools. It is designed to increase access to a high quality public education in Idaho.”

For some respondents Go On Idaho is seen as having been closely aligned to “Luna’s Laws” and therefore has negative connotations attached to it. For others, Go On Idaho is seen as a positive resource in support of college readiness, “Go On Idaho is a huge program that really blossomed. We have a high school counselor who is now taking kids around the Pacific Northwest using Go On Idaho funds, making sure they apply to colleges, scholarships, etc. We try to have no barriers to help a kid get to college.”

**District View**

As with the other themes that emerged in this review, there is wide variation among districts in their expectations, understanding, and actions related to college and career readiness. Many districts see technology as one necessary link between K-12 districts and postsecondary education for students. That is, student preparedness in technology is believed to be essential for postsecondary success. One respondent noted that, “for something so important, I’m not sure this should be entirely a locally driven response.”

District respondents tended to echo stakeholder views of Idaho’s definition of college and career readiness. They noted that it defines college and career readiness, “as ready for college and career but doesn’t give us much direction.”

A number of districts have close links to local colleges, especially when these colleges are nearby. They have partnerships that allow their students to take courses at the college or online using IDLA resources. In fact, many districts have students graduating from high school with college credits; and a handful have earned associate degrees by the time they graduate high school.

Some districts have a graduation requirement that students complete the Free Application for Federal Student Aid (FAFSA) and apply to at least one postsecondary educational institution. Few district respondents noted any efforts toward tracking their graduates into postsecondary education. One respondent remarked that their federal Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) grant supports tracking students into college. However, because this is a middle school program few cohorts have graduated and have yet to be tracked. As an example of the variation in college and career readiness data among districts, some districts obtain their National Student Clearinghouse (NSC) data to track where their graduates attend college and their persistence to degrees, while other districts respondents were unaware of the NSC or services they offer—even though the state picks up the cost of NSC data for districts.

A number of district respondents noted the difficulties they experience tracking students into postsecondary education due to the two-year religious missions in which their student participate. However, there are districts that have successfully resolved this issue (e.g., using NSC data to “find students who were missing for a few years”).

As in most states, the focus of the discussions turned to college readiness instead of career readiness. This is likely due to the dearth of data systems for tracking and reporting career related experiences and
outcomes. No district respondent noted any data related to obtaining workforce recognized certificates, non-academic (soft) skills that business leaders claim are lacking among graduates, work-based learning experiences, and other career readiness issues. One respondent desired increased access to vocational training and opportunities for students in her district.

**College & Career Readiness Metrics Subgroup**

The metrics subgroup addressed a number of issues related to college and career readiness metrics. Some discussion items were related directly to the issue at hand and others were related peripherally.

Participants were disappointed by the lack of meaningful metrics or indicators of educational progress. They noted that the data are not actionable at the student level, “If we say 60% of our kids are not proficient, we’re not really saying much. It would be more useful to have actionable data at the student level.”

Participants also noted the ones that were used were not appropriate. For example, much discussion took place around the Idaho Reading Indicators (IRI). It was agreed that the third grade benchmark was too late in a student’s career to allow teachers to make meaningful changes and by the third grade, “it’s too late—these students already are far behind and playing catch-up.” It was suggested the first grade IRI would be a better choice, allowing greater opportunity for meaningful and effective intervention. When asked if metrics should be developed as early as kindergarten, the group noted that Idaho does not have mandatory kindergarten.

Participants also noted that this is an extremely difficult time to establish metrics. The introduction of the Common Core State Standards and associated standardized testing, “has everything in flux.” Many districts are creating their own benchmarks, with a few working together. But nothing systematic or systemic is known to be happening in Idaho.

The current five-star system for rating schools was perceived as ineffective. It is unclear how stars are calculated. In fact, there was disagreement in the group as to what is included in the calculations. This was echoed in the field. One school we visited moved from a five star to a three star rating, with little understanding about why this drop occurred. Furthermore, the subgroup was disappointed that the star system did not correlate with postsecondary entry and progress, “I think that’s a problem [with the system]. There are four- and five-star schools but they have a poor record with students getting into college. I’d be looking for some metric beyond high school.” It was noted that the Idaho SDE is now able to produce postsecondary progress and success reports for districts, including college remediation levels, and they would be announcing the availability of these reports soon.

There was considerable discussion about using metrics and that, “the data are just one piece of the puzzle.” The group agreed the metrics were rarely meaningful or actionable for teachers. Furthermore, there is no time to develop an improvement cycle, “teachers need to have the time and resources to get the data, make sense of it, and develop a plan to do something about deficiencies.” One respondent noted that, “teachers are interested in doing this, but there simply is not the time. There is so much more for teachers to do yet the calendar remains the same.”

Parents’ use of the metrics also was deemed important. There was an agreed-upon need for parent education about the data that is collected and how it is used, “too much parent concern about what is being collected about their students is based on simple misunderstandings.” Then, parents need to know how to
interpret the information and what they can do to help, “…we have a lot of poverty and a high Latino population. Once they see the potential, they’re interested.” One participant had seen a website in Massachusetts, “…with indicators and parents could see—at first grade, third grade—what a student needed to be college-ready and they included where each district was in achieving these. It was really neat.”

The group agreed that an ipsative system, which tracked similar metrics over time, was desired. Furthermore, there was a preference not to add assessments but to identify indicators and benchmarks from currently available data, if possible. There is a need to define college readiness so it is measurable and actionable. Identifying soft skill metrics is important to business and postsecondary success; and a way to track and measure these is needed. Finally, there is a desire to assess student’s interest in higher education and middle school is the preferred point of impact to address this.

### Action Steps

- Create a report from the SLDS about college and career readiness in Idaho. Select measures from current recommended college and career readiness indicators (see appendix), their definitions, and measurement. Vet the report indicators with key stakeholders.

- Develop a formal partnership structure to encourage pipelines and pathways between high schools and colleges and businesses. These pipelines can focus on local curriculum alignment and challenges in their regions. The local focus of these partnerships also can be informed by the local economy’s needs and resources. Finally, this local relationship can be informed by the newly available SLDS K-12 to postsecondary transition data reports.

- Develop a data use clearinghouse for a one-stop shop for data use best practices, successful case study evidence, and resources available to Idaho educators.

- Explore the potential benefits of a statewide college readiness conference that would build momentum for local districts to develop common operationalized definitions of college readiness, which various stakeholders (students, teachers, parents, businesses, et al.) could use to assess student progress toward the identified metrics.
Primary Educational Technology Providers

Many funders have invested in several educational technology resources in Idaho that support student success and address the state’s educational technology needs. This reality has never before been more crucial with the current implementation of the Idaho Core Standards and standardized testing requirements, which necessitate a strong technological foundation in schools. IEBC has learned a lot about these resources over the last several months, and in this section provides a summary of these services and potential areas for leverage and collaboration. IEBC’s effort, however, is not designed to be an in-depth evaluation of these providers and services. In this section we describe each organization’s current partnerships, services, potential services, and ways these organization’s measure their success.

Exhibit two (below) provides an overview of the services provided by each of the primary service providers with whom we spoke.
Exhibit two

*Statewide educational technology providers by key activities*

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<th>Virtual Courses</th>
<th>PD/TA about their services</th>
<th>Broad PD</th>
<th>Virtual Desktop</th>
<th>Virtual fieldtrip</th>
<th>Broadband/ Fiber Optic Network</th>
<th>Tech needs assessment</th>
<th>Research/ resource center</th>
<th>Blended learning</th>
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**Doceō Centers**

University of Idaho (UI) and Northwest Nazarene University (NNU) each host a Doceō center funded by JKAF. Although unique efforts, these centers both provide instruction, professional development, and research about technology integration in the classroom to increase student learning. As the UI Doceō Center’s mission reads on its website, Doceō leads technology integration for teacher education candidates, school administration candidates, early-career teachers, practicing teachers and administrators, university faculty, and K12 school districts and by providing resources and research to state and national audiences.

**Reach**

The Doceō centers have the potential to inform practice across the state and dramatically improve student learning with technology.

While UI focuses its work in the northern region of Idaho, NNU services the Boise area (or areas involved in the Idaho Khan Academy initiative), and both centers perform limited outreach to other parts of the state. Both centers have found a great need for their services in K-12 districts throughout Idaho, but have limited capacity to expand beyond current efforts.

Doceō centers train pre-service teachers or teaching candidates through required coursework about technology integration. In-service teachers are either provided direct professional development or may participate in open conferences. For example, the UI Doceō center offered a Google Apps workshop in February 2014 open to educators across the state.

Both Doceō centers report overlap with services in their education department that is hard to unwrap from center activities. University of Idaho Doceō offers 500 preservice teachers support each year, while NNU serves 150. In the field, UI supports 21 school districts serving about 1,000 teachers, and NNU is in approximately 35 districts serving over 9,000 in-service teachers.

Much of the Doceō training is in-person, which limits their capacity to reach more educators, especially in the more rural parts of the state. This limitation is due to the level of implementation—both centers are relatively new and have been focused on development and at capacity with the staff they currently have. Further, school districts prefer in-person consultation, rather than a purely online experience. However, both Doceō Center leaders noted intentions to grow the online delivery method with targeted marketing to identify the benefits and best users of this method.

Interestingly, although both centers cited a high level of need, UI noted there is a wide spectrum of need. Some districts that UI Doceō expected to work with, really are more resource-rich and “connected” than expected and do not need as much Doceō support as others do. There does not seem to be any patterns to the need—it really is a district by district assessment.
Partnerships

Both Doceō centers are partnering with other agencies in the state and beyond, and they are partnering with each other—sharing ideas, planning conferences, and sharing school district contacts. Partnerships are important for the Doceō centers in two key areas: professional development and research.

Professional Development. UI’s key current professional development partnerships are with Common Core and Northwest England Writing Workshops. Northwest Inland Writing Project (http://www.niwp.org/) and UI Doceō are hosting a Summer Institute to address writing standards in the common core and “purposeful integration into technology.”

A potential partnership with IDLA and UI Doceō has not yet gained momentum; however, there are several ideas that we have discussed. First, IDLA may host an online introduction to teaching course. IDLA also may help Doceō implement the online teaching endorsement. Finally, when UI preservice students need to complete a practicum, IDLA may have online class options to tap into to complete that requirement.

Doceō centers are already sharing contacts, and other partnerships also support this networking. For example, UI’s relationship with the Northwest Council for Computer Education has provided “additional meaningful connections in the K12 schools in northern Idaho.”

NNU Doceō partnered with Idaho Leads this year supporting a school district that needed multiple levels of support. Idaho Leads conducted its Clarity survey needs assessment, and advocated with the leadership to better support technology integration. Meanwhile, NNU Doceō worked with teachers and administrators in schools to focus on classroom practice and change within the schools.

NNU Doceō also worked with the Idaho Education Network (IEN) to implement some of its online training using IEN broadband.

Research. UI is also partnering with several other postsecondary institutions to conduct research about technology integration and provide outside evaluation expertise for K12 research proposals. NNU also has key partnerships with other postsecondary institutions. For example, Paula Kellerer is leading a state initiative that keeps her constantly working with the other nine universities.

In addition to the postsecondary partners, the UI Doceō center considers each K-12 district that they work with to be a research partner. These districts receive professional development from Doceō, but also participate in action research in the classroom to support the field of knowledge. In this way, UI Doceō is conducting “authentic” research that will directly inform educators in the state. At the same time, these participating districts are gaining the use of new technology or other resources just by being a part of the study. For example, UI received a discount on Chromebooks from Lenovo to use with districts.

IDLA and NNU Doceō have forged a successful partnership in research on blended learning (part online and part traditional instruction). Whereas previous studies had a small study size, IDLA and NNU Doceō, in partnership with the International Association of K12 Online Learning, conducted a study about the outcomes of blended learning that included 600 high
school level teachers. IDLA and NNU Doceō hope to continue their collaboration this year focusing on blended learning instruction for elementary and middle school teachers.

Services

The Doceō centers provide the field with a host of services focused on instruction, professional development, and research about technology integration.

UI Doceō is providing a Master certification for online teaching to educators and postsecondary faculty.

UI Doceō also performs informal needs assessments with each district for which it provides professional development. Once the content of the professional development is determined, the districts submit a formal proposal with the professional development request. UI Doceō usually conducts sessions with about 15 teachers, and the workshops cater to the district’s individual needs. However, a common theme throughout this spring, not surprisingly, has been about technology and the common core and Smarter Balance Consortium exams.

Districts value the informal needs assessment and it provides basic information that helps districts make important decisions. For example, UI Doceō makes a judgment about how a district should spend limited resources. It is common for a district to say, “We have $10,000 to invest in technology. What should we do with it? Who should we talk to?”

UI Doceō also hosts an impressive online public portal. In an effort to be transparent, UI Doceō logs their activities and posts many resources for public use on this comprehensive site. This website may be a natural fit for the recommended clearinghouse website recommendation in this report.

NNU Doceō has forged a partnership with Khan Academy through its work with JKAF. Most of its work with districts is part of the Khan Academy partnership—Doceō is helping teachers talk through the common core process and helping them find the right applications to support common core implementation. NNU Doceō only works with three districts outside of Khan, and they are hard to maintain. It is clear that there is more need too—the Doceō centers simply do not have capacity to meet the need in the field for their services.

NNU Doceō is tackling teacher mentorship for new teachers using technology, especially in rural areas of the state, “this is a rural state and it is very difficult to mentor new teachers because rural districts do not have the resources to do it. We are attacking the problem about what is needed in induction and how technology can help with this problem.”

The Doceō centers also are involved in many research and other efforts out of state and country, which is fulfilling one of their shared objectives to become national leaders in technology integration. These research efforts in collaboration with celebrated researchers also “improve the rigor and impact” of the work.
Potential Services

Although the Doceō centers are operating at capacity, neither is short on ideas for potential services. Below are descriptions of some of the enhancements planned or dreamed by the UI and NNU Doceō leadership.

The Doceō centers would like to better support districts to evaluate technology with a vetting system and resources that help the field better understand the pros and cons of their investments. To avoid “blind decision-making,” UI Doceō will present easy-to-use information about hardware to improve investments in technology to better meet district needs. NNU Doceō is interested in vetting software, “Software is overwhelming to our high schools. They get overwhelmed with the information and don’t make a decision. Narrowing the options would be helpful.”

UI Doceō is interested in scalable solutions for K-12 educators involving open educational resources. Open textbooks created by Idaho educators, linked to common core standards, would be free to access by anyone (no intellectual property concerns). Using Utah as a model where they have “driven down costs dramatically,” UI Doceō is using its summer conference to test the appetite for this idea. Technology would be a key component of sharing and implementing open textbooks, and Doceō could help manage this development and potentially provide an area to house such resources. Another area to house the content is in Schoolnet.

NNU Doceō also is concerned about scalability of innovations, and would like to establish master teachers at technology integration beyond the university team. NNU Doceō can identify these individuals, invest in them, and then send them back to their districts to train their colleagues.

The Doceō centers are young and have been focused on building relationships and early services. However, it is anticipated that these centers will build a reputation in the state as an important research and content source that will support not just practice, but also statewide decision making. For example, Doceō can play a key role in outlining 1 to 1 implementation guidelines and articulating the value-add of this approach to state policy makers.

NNU also is investigating Mass Open Online Courses (MOOC) for professional development needs in Idaho and beyond. They are starting this effort around Khan Academy needs, but hope to expand it to other courses too. NNU will partner with Arizona State University in this work.

NNU Doceō would like to support charter school authorizing for schools that are technology rich.

Finally, NNU Doceō cited an audacious goal about systemic change. The idea is to create a reform model based upon a total transformation of an existing school. The idea is to change the operations to implement and support a technology–rich, mastery-based, competency-based learning model, “We would love to work with a middle or high school to change the way their system of grading works, moving students through their grade levels, into competency….it would take a lot to make this happen, but it would be a game changer.”
Assessing Reach and Impact

UI Doceō tracks their work on an “impact dashboard” on their public website. This dashboard counts the faculty that the center supports, maps where they are working, and posts the results of their pre/post professional development evaluations.

The Doceō centers consider their research efforts and publications to be a measure of their success. Each project undergoes an Internal Review Board (IRB) assessment, and all journal or conference presentation are peer reviewed for rigor and importance to the field. As one Doceō leader noted, “research is a way to raise Idaho’s profile and learning/feedback loop to help people improve their processes.”

The courses affiliated with the Doceō center are rated by students at the end of each term. NNU Doceō also noted that sustained efforts demonstrate the impact of their work. For example, after working with a district to implement 70 Chromebooks, the district was so excited about the usefulness of the tools that they purchased 300 more.

Idaho Leads

Idaho Leads is an educational professional development provider in Idaho. The Idaho Leads professional development is built upon the professional learning community model, pulling key district and school leadership together with classroom teachers. These participants meet in regional teams to identify needs and solutions to current challenges. Idaho Leads has also provided key resources to participating districts to help inform their work (e.g., Clarity Survey).

Opinion in the field about Idaho Leads services has been very positive, which can be attributed to their expertise and also their proactive approach to determining and supporting local need.

Reach

Idaho Leads has worked with 66 districts across the state, representing 397 schools and 8,000 teachers and 175,000 students. Currently, they are working directly with about 1,000 educators from across the state.

Partnerships

Idaho Leads has partnered with the Boise State Writing Project and the Mathematical Thinking Initiative groups to deliver educator training to their learning communities. They also engage with a number of association partners like Idaho Businesses for Education (IBE), Idaho Association of School Administrators (IASA), and the Idaho Middle School Association.

Although not a formal, on-going partnership, work with NNU Doceō (described above) leveraged concurrent professional development at two levels (i.e., district administration and school building educators) that resulted in relatively fast-paced culture change within one district.
Idaho Leads also offered the Clarity for Schools survey, developed by BrightBytes, to participating districts. This survey, “tracks data and offers a customized-plan for school improvement. Clarity provides a data-driven view for educators to see their strengths and their gaps in teaching and learning.” (Swindell, 2013)

Services

Idaho Leads creates professional learning communities made up of a superintendent, board member, and a principal and teacher from every building across the 66 districts. These educators participate in regional meeting to “define priorities, identify and celebrate successes, and determine areas where improvements can be made.” (Boise State University, 2014)

Through the professional learning communities, Idaho Leads provides professional development and resources to participating districts. Idaho Leads professional development largely focused on the common core during the past year as districts identified this a priority need.

Potential Services

Idaho Leads leadership believe they could always do more for the field, but that additional services and content should be driven by local need, “The content of the support we provide is driven by the needs of our learning community. We are open to providing services in any area, and building/expanding the expertise of our group to meet the expressed needs of the communities we serve.”

Assessing Reach and Impact

Idaho Leads assesses both the impact of their training, and more importantly, the implementation that happens between meetings. In other words, Idaho Leads tracks and tries to better understand which content has been important enough to share with others in participants’ districts. For example, Idaho Leads asked key implementers who participated in their professional development modules, “What Idaho Leads content has your school district used: 32% cited the ELA module, 28% the math, and 23% the SBAC. When asked if they plan to use this content, 39% of participants said they would use the SBAC module in their district in the future.

Idaho Regional Optic Network

The Idaho Regional Optic Network (IRON) is a cooperative effort between universities located in the Northwest region of the United States, the State of Idaho, the Idaho Hospital Association, and the Idaho National Laboratory (INL) to establish a high-performance Regional Optical Network (RON) within the State of Idaho. IRON also enables effective collaboration among research, education, nonprofit healthcare, and other institutions, as well as nationally and
internationally. IRON also is becoming Idaho's voice to other regional optical networks in the West, Northwest, and Midwest.

Reach

IRON works directly with 18 institutions including the two-year and four-year postsecondary educational institutions in Idaho, Idaho Commission for Libraries, and Idaho hospital systems. IRON provides services to the state’s K-12 districts via the Idaho Education Network (IEN). IRON also is part of the national fabric of regional optic networks such as CNET in California, New York Regional Network, and others.

Partnerships

IRON is working with IDLA to expand the virtual desktops, but that is a lengthy implementation process. They also work with IDLA to provide access, via IEN, to Internet2 when high speed bandwidth is required.

The IEN is using Internet2, which they access via IRON, whenever they require a high speed system. For example, IEN uses this system for virtual tours and field trips. IRON leaders meet every other week with the leaders at IEN to identify services to provide and opportunities for collaboration.

IRON partners with the Idaho Telemedicine Working Group (convened by state legislator John Rusche). Originally an informal group, the current legislature approved convening a telemedicine council. In addition to the teleconferencing educational opportunities this group can explore, there is interest in providing telemedicine services, a growing field.

Services

IRON’s services are open to those institutions they serve per their charter. They are not an independent service provider (ISP), though. They do not charge for their services. IRON provides fiber optic connectivity which is faster than the internet. They use Internet2, which runs parallel to the internet and is dedicated to education and research. Much of IRON’s work is to provide the network for scientists in myriad fields to work together on joint projects and communicate with each other. This collaboration also support Idaho’s postsecondary institutions to develop joint research proposals, each playing to their strengths, instead of competing with each other.

In addition to the connectivity, which is used by their member institutions, IRON provides technical assistance to their users. They run a network operating center (NOC) that is monitored 24/7. They use this NOC as the hub for technical assistance.

IRON also works with their partner institutions and others to develop virtual field trips. For example they developed a virtual tour of the microelectronic grid for the Energy Systems Technology and Education Center (ESTEC) at Idaho State University.
IRON partnered with Shane Paynter at Eastern Idaho Technical College to develop and offer the student virtual desktop. Paynter developed a virtual desktop system, which allows EITC’s 700 students to have their desktops at their fingertips regardless of where students are or what hardware (computers, tablets, smartphones, etc.) students are using to access them. IRON currently is working with the Idaho Digital Learning Academy (IDLA) to bring this system to Idaho’s high schools. However, there are some technical connectivity issues requiring long-term solutions that need to be addressed (e.g., moving away from a Java platform).

IRON is not currently providing services directly related to the Common Core State Standards (CCSS).

**Potential Services**

IRON currently is building a cloud computing center that would offer compute and storage services to their constituents, including the K-12 districts. They also provide cloud-based backup services (which requires far less time than conventional backup) and Box, which is a file sharing service. K-12 also is starting to use IRON’s identity management services to control access and for cross-institutional identity management.

IRON also hopes to provide video collaboration services and make digital content increasingly available in a high speed format. As services such as Blackboard move to cloud storage, it becomes expensive for districts. IRON is looking into storing recorded lectures and other resources at a lower rate for postsecondary educational institutions and high schools. IEN and the State Board of Education have requested these services.

Another current goal is to develop a repository for education and healthcare regional infrastructure information. This would provide a single location for information about network availability, storage space, etc. and how to access it. It notes what is currently available and what remains to be done related to a K-20 cyberinfrastructure inventory.

IRON also hopes to increase their reach into K-12 in partnership with IEN and IDLA. They want more students involved in research. INL is interested in more students in the field of power analysis because it is highly specialized and high paying. IRON developed a game that involves managing a power grid simulation to encourage student interest. IRON also is working with partners to develop virtual tours in support of transitions from high schools to college.

As noted above, IRON partners with the Idaho Telemedicine Working Group. The Affordable Healthcare Act has considerable funding available for school-based services and medical educators are interested in providing mental health services in schools via telemedicine by providing remote connections for K-12 schools and districts to qualified psychologists. With 27 out of Idaho’s 44 counties having no registered psychologists in practice, this could be an important service.

IRON also is in the process of obtaining a service provider identification number (SPIN), which would allow them to provide services at the e-rate established by the federal government.
Assessing Reach and Impact

IRON has an annual strategic planning process to set goals and objectives. They report progress on these goals and objectives quarterly to their board. For example, IRON currently has objectives related to creating their private cloud, promoting adoption and use of those services, and increasing the number of associates using cloud services.

Idaho Digital Learning Academy

The Idaho Digital Learning Academy (IDLA) is a state-sponsored, accredited, online school created to provide students with greater access to a wide variety of courses taught by highly qualified faculty. Their goal is to provide choice, accessibility, flexibility, quality, and equity in curricular offerings for students in Idaho. Their mission is to serve the students, school districts, and the State of Idaho by providing a high quality public school education, aligned with state achievement standards, utilizing innovative e-learning methods of delivery.

IDLA works in partnership with Idaho school districts to offer online choices that would not otherwise exist. This increases access and equity for students statewide. They provide innovative education methods through digital learning, creating access and opportunity for all Idaho students.

Idaho Digital Learning works in partnership with Idaho school districts to offer online choices that would not otherwise exist. This increases access and equity for students statewide.

IDLA:

- Provides access for underserved areas, such as rural communities
- Increases access to highly qualified faculty
- Challenges students with rich and rigorous coursework
- Increases access to Idaho universities and approved college faculty by offering Advanced Placement and dual credit courses
- Alleviates scheduling conflicts and creates opportunities to increase electives
- Prepares students for online coursework in high school, college, and industry
- Leverages state resources and lowers expenses by offering courses statewide

Reach

IDLA works with all K – 12 districts in Idaho except for two, which do not have high schools (Prairie and Three Creek). However, with their current efforts to provide services to lower grades, these districts are expected to join the list of constituent districts. IDLA also works with all postsecondary universities and colleges in Idaho to develop and provide dual enrollment courses.

Partnerships

IDLA partners with many public and private entities to provide services to their constituent districts; and to improve and expand their services.
IDLA is open to postsecondary students and they are actively pursuing relationships with postsecondary institutions. Willingness to participate varies among institutions. Some postsecondary institutions have considerable capacity and willingness to participate, while others are more wary. Typically, this is related to capacity issues. At one point IDLA wanted to offer a course through multiple institutions but received push back due to accreditation challenges. There also are critical mass issues: IDLA offers calculus as a dual enrollment course at two institutions; but the enrollment rates were so different they ended up cancelling one of them (and this is a situation IDLA tries to avoid for the students’ sake).

IDLA works with the State Board of Education (SBE) to fill needs and gaps they identify or hear from the field. Much of this work is linked to Complete College Idaho. They are developing a badging project in collaboration with the Professional Technical Education (PTE) division at the state level. They also are collaborating with GOGO Labs on their City of Learning and Summer of Learning efforts.

IDLA works in partnership with the Idaho Association of School Administrators, Idaho State Department of Education (SDE), Idaho Association of School Boards, GO ON Idaho, and Idaho Department of Labor (to link to the web-transfer portal). Part of the partnership with SDE is a project with Boise State and NASA to support the Idaho Aerospace Scholars Program. This is a multipartner program for junior high school students that includes a one-semester course via IDLA that includes interactions with experts (engineers, scientists, et al.). Top ranking students get the opportunity to attend a two-week internship camp partly in Idaho and the remainder at the NASA facility in Ames, CA.

IDLA also partners with the Treasure Valley Education Partnership. The Partnership’s director is trying to expand their work and efforts with IDLA. They have been holding monthly meetings on a variety of topics (e.g., last month focused on how to use digital content in the classroom and ensure the content is reaching the upper levels of Bloom’s taxonomy; next month the focus is on developing formative assessments).

Finally, IDLA works extensively with the nonprofit organization Teach Idaho. They work together to reach out to teachers and provide as much professional development as possible, in response to teacher requests.

Services

IDLA’s services are open to all students in Idaho’s high schools. Although any student can enroll, some postsecondary courses have specific enrollment requirements (e.g., prerequisite courses). Until recently a student had to be on campus to take a course if they were under 16 years of age, but with advanced opportunities the State Board of Education removed that rule.

IDLA offers a considerable amount of dual enrollment courses and this year registered over one thousand enrollments in dual credit courses. IDLA cross-referenced state enrollment data and found that 46% of dual enrollment courses offered via distance learning were from IDLA.
IDLA provides virtual courses for students. They also provide technical assistance and professional development to support use of their services. In addition, IDLA provides professional development for educators on a broad variety of topics. IDLA offers teachers materials and resources to support blended learning in the classroom; and broadband access to myriad online resources.

IDLA also provides a service to districts that cannot offer courses for any number of reasons. If they need a special section—a Spanish class for which they do not have a teacher—they can request a teacher, curriculum, and support for a specific time slot in their schedule (e.g., Monday, Wednesday, Friday at 11 a.m.). IDLA will provide the course if the district has a minimum of 12 students enrolled.

Recently IDLA is responding to demands for application development. IDLA developed their own student information system (SIS) for the virtual learning environment. Through this experience they developed expertise in developing scalable systems. So they received a contract with the State Board of Education (SBE)—as part of Complete College Idaho—to develop a transfer portal for college credits to give a student who wishes to transfer from one college to another an easy way to determine which course credits transfer and which will only be accepted as electives. They have now expanded this for high school students to address transferability of dual enrollment credits.

IDLA provides considerable support for blended learning models. In addition to providing digital content, IDLA has a blended learning consortium of districts. After a visit from IDLA, districts are invited to join the consortium for a reasonable fee (based on number of students and teachers), purely for cost recovery. IDLA provides professional development to consortium members in support of strategic planning and effective blended learning strategies—how to start at point A to get to their end goal. IDLA provides: (a) full blended learning courses for districts to access and use; (b) learning objects teachers can assemble into courses (searchable in many ways such as by Idaho State Standard, grade level, subject); and (c) development of custom blended learning courses at a teacher’s request (which then becomes part of the library of available courses).

IDLA provides services related to the Idaho Core (Common Core State Standards) through their professional development. Regardless of the topic, it is included in some way. They also provide just-in-time professional development (synchronous, instructor-led, on topic) for principals and teachers about the Idaho Core. Finally, IDLA ensures all its courses are aligned with the Idaho Core.

Finally, IDLA is developing a skills stack badging system to transition Idaho’s PTE from course completion to competencies.

Potential Services

IDLA is planning to expand the high school student portal, which allows students to check on how their dual enrollment credits transfer to postsecondary institutions. They plan to
build in a step-by-step guide to applying to college. They hope to link this to Complete College Idaho, under contract from the SBE.

Most significantly, IDLA is exploring the best way to provide services to K – 8 students. They currently are researching and developing the best way to accomplish this.

Assessing Reach and Impact

IDLA uses their own student information system (SIS) to identify opportunities to learn and grow. Teacher and course quality reviews are fully integrated into the regular annual evaluation system. Customers and faculty are surveyed formally annually and informally monthly.

IDLA also partners with doctoral students and others to conduct research about specific aspects of their program. This year four projects are underway. One example is the University of Idaho is examining student motivation and self-regulation to identify how students are progressing through a course, respond to different notices from IDLA, and take recommendations. IDLA also is participating in a study at Purdue University exploring social presence in the online environment.

Based on recent data, IDLA currently offers approximately 230 online courses. Approximately 20,000 students (duplicated count) took an IDLA course in 2012-13 and the average student took 1.7 courses. This represents 115 districts plus charter schools. Charter school enrollments are slim, but IDLA has started meeting with Terry Ryan, executive director of the Idaho Charter School Network, hoping to increase use. Finally, 84% of students passed their course with a grade of D or better.

Idaho Education Network

The IEN is a statewide initiative supported by the Department of Administration and offers high-speed broadband and video teleconference systems to high schools across the state. These two components provide students, schools and communities access to collaboration with, and opportunities for quality educational resources. Over two hundred high schools throughout Idaho have been equipped with affordable high-speed internet and at least one video teleconference room where hard-to-find courses and content experts are accessed. The overall mission of the IEN is to connect all Idaho schools and educational entities in order to provide equal opportunities throughout the state, regardless of geographic barriers.

The state has attempted to bring more advanced technology to Idaho schools in the past. However, these projects met unforeseen limitations due to connectivity issues. The main priority of the IEN was to build connectivity first to overcome any geographical barriers. Many states across the nation, including Utah and Wyoming, have already built similar networks that utilize distance learning, video conferencing, and online curricula. In addition, the technology that is a part of the IEN has come much further, much faster and is much less expensive today than it was in the past. Idaho is using the cutting-edge technology to improve education for all students.
Reach

IEN serves all but one school district in Idaho. It is unclear why this district opted out of services. It is not due to technology or access issues. IEN also serves seven public postsecondary institutions. Four of these are connected via IRON and the other three have only a data connection. An eighth postsecondary institution, Northwest Nazarene University, purchased an IEN connection so their content does not go over the public internet.

IEN recently was awarded two grants from the U.S. Department of Agriculture to improve their service provision in rural counties.

Partnerships

IEN has many partnerships that allow other entities to take advantage of their broadband network. They partner with IDLA to be the conduit for all of IDLA’s course provision and other online offerings (e.g., professional development, blended learning). They assist IDLA to create a hybrid definition of video and online courses. IEN also partners with IRON to access Internet2 and also for IRON to provide offerings to K – 12 districts.

IEN also partners with the State Board of Education, Association of Idaho School Boards, Idaho School Superintendent Association, Idaho Association of School Administrators, State Department of Education, and Idaho Education Technology Association. They also provide workforce training units at postsecondary institutions. Communities can access IEN after school hours for learning initiatives.

Additionally, IEN has a growing partnership with Step Ahead to provide college access and preparation resources to Idaho’s middle and high school students.

Idaho’s Professional Technical Education (PTE) and Cisco Academy offer certificate training. IEN works with these organizations and monitors their offerings to ensure they are reaching the far-flung rural communities and not focusing on the metropolitan areas.

Services

IEN’s services are open to every publicly funded school district in Idaho, including charter schools and juvenile incarceration facilities. They are open to private schools, but they need to pay for services. IEN charges purely for cost recovery. There are two vendors through which non-public entities access IEN. Education Networks of America provides the connection, 224/7 technical support, e-rate filings, etc. Century Link typically acts as an ISP. They are a tier one provider (required by IEN), which, according to a recent study conducted by Blackboard for IDLA leads to a 21% increase in performance.

IEN’s broadband products only apply to schools connected to the network. But anyone connected gets the full range of services. That is, videoconferencing services, 24/7 equipment support, teacher professional development training, and infrastructure (e.g., bridges, content services) are more widely available. For example, IEN trains any institution that would like to use broadband video, whether connected to IEN or not (e.g., Idaho Department of Labor, Idaho
Department of Commerce, universities). The only requirement is that they, “will be providing education to the citizens of Idaho.” For example, if an institution wants to conduct a seminar to provide four schools with training about writing grants, they can use the IEN bridge at no cost.

IEN’s professional development services are tied to successful integration of videoconferencing in the curriculum. They allow SDE, the Foundation, and others to deliver myriad services to schools. Thousands of hours each month are used to provide professional development such as nutrition training to school kitchen staff, special education training, and other content.

IEN provides support to schools searching for virtual tours. There are thousands of tours available nationally. They provide professional development to schools about how to locate, identify, and arrange virtual tours. Most are free. IEN also awards virtual tours to schools that are excelling in some way (e.g., use of IEN services, drawings at state school board meetings). Community Interactive Learning Center is one large clearinghouse for virtual tours and IEN will help a teacher connect with the Center to find the tour they want.

IEN provides online coursework. This is differentiated from IDLA because IEN’s are fully synchronous. A teacher in one school has their own classroom and classrooms in other schools. Students interact as though they are in the same room. As their tagline states, “It feels like you’re there because you are.” They offer approximately 140 courses per year. They design rooms from the ground up to simulate everyone being in the same classroom. Their goal is for the technology to be invisible and always work. Other entities are interested in the classroom development work and partner in these efforts (e.g., Qualcomm, Cisco).

Finally, as noted in the partner section (above), IEN partners with Step Ahead. Step Ahead is a volunteer organization based in Boise that works to improve student’s awareness of all aspects of preparation for, access to, and applications to postsecondary education. IEN partners with Step Ahead to bring their services, virtually, throughout Idaho. Due to the volunteer nature of their staff, Step Ahead cannot get out to many of the rural areas and IEN is their means for doing so.

Potential Services

Because IEN is governed by statute they are cautious about extending and expanding their services. They do not engage in professional development related to pedagogy, for example. Instead they provide access to the organizations providing these services.

IEN would like to partner with a postsecondary institution to improve the professional development, teacher in-service training, and other offerings that colleges and universities struggle to provide effectively and efficiently.

IEN also would like to expand their reach into schools and communities by moving into middle and elementary schools. They recently received a grant from the U.S. Department of Agriculture (their fourth award out of four applications) to buy 131 videoconferencing systems for K – 5. IEN hopes that by starting earlier in student’s academic career they will be less likely to fall behind.
IEN noted that, “with $10 million we could put videoconferencing in every classroom in the state and fund a study to assess impact and revolutionize rural learning.”

Assessing Reach and Impact

IEN monitors bandwidth utilization, lost packets, etc. to ensure they are providing the highest quality of service. They monitor use and will increase a district’s bandwidth before the district notices they need it.

IEN has electronic tracking information about their video services. This allows them to generate reports about usage per week, connections made, and allows them to quantify usage.

IEN monitors quality by tracking the success rates of students taking their courses. They receive reports about all classes that originate in one IEN school that are taken by students at another IEN school. They send out reports about the number of students enrolled, successful course completion, and dual credit awarded. IEN also conducts annual surveys of teachers and students.

Summary

These primary service providers address many of the needs around Idaho to bring education to underserved populations. They also work to ensure teachers and others have the professional development they need to do their jobs well and improve the likelihood of successful outcomes for students. They connect schools within segments (high schools to high schools) and across segments (high schools with universities). They also connect Idaho to the larger educational and technology world. Finally, they provide educational technology services to entities outside the typical reach of education services including department of labor, department of commerce, healthcare providers, libraries, and others. Although there is some overlap of services, each has its niche. They also collaborate in some areas and utilize each other’s resources and services.

Communication of available resources and offerings seems to be an issue for some of these providers of educational technology. Although if awareness increases considerably, issues could arise related to the capacity of these providers to meet the demand.

Most of these providers partner or coordinate with each other. They do this directly and also indirectly via mutual funders, state associations, and shared systems. However, an additional way these providers could work together is to identify funding opportunities for which they could submit applications and proposals as a consortium or team. IRON has facilitated joint applications among postsecondary institutions and this could be a model for moving forward.

None of these providers mentioned a formal mechanism for all of them to come together regularly. An Idaho Educational Technology Council could provide a forum for updates, coordination, communication, and collaboration. It also could better link Idaho’s educational technology efforts to the business community. The Idaho Education Technology Association exists, however its membership is limited to, “any Idaho K-12 public school employee or public
school district appointed representative who is desirous of promoting the interest of the IETA and sharing in its work.” It is not intended to be a council of educational technology providers.

Finally, a number of potential services were identified by these providers. Many would like to expand current services and also to offer new services to meet the needs of Idaho’s teachers and students. Some of these could benefit from inter-provider discussions and collaboration.
Statewide Teacher Survey

As part of this lay of the land description of educational technology and data use in Idaho, IEBC conducted a web-based teacher survey across the state. We developed a survey instrument based on a national survey of teachers’ use of technology conducted by PBS Media. This allowed us to include some items for which we have national comparisons, as well as customized items to address state and local concerns in Idaho.

Survey Respondents

The Institute for Evidence-Based Change (IEBC) surveyed teachers in all six regions of the state. IEBC requested 30 districts participate in the study, with 17 ultimately agreeing to administer the survey to their teachers. Among all the teachers who received the survey, approximately 20% of teachers (n = 1,190) responded to the survey request, producing a statistically valid sample.

Teachers at all grade levels responded to the survey, from Kindergarten to 12th grade. Teacher respondents spanned several age ranges, see below.

Exhibit three

Age of teacher respondents

Just over half of the respondents (56%) received their teaching credential by the millennium, leaving less than half who qualified for a credential after 2000. Age and time of credential are important because they reflect the likelihood that teachers might have used technology in their own education.
Most respondents believe they work with mostly middle income (50%) or low income (41%) students. A majority of respondents (52%) said their school was located in a suburban area.

**Access**

Almost all teachers reported having access to the internet; with less than 1% of teachers responding that they did not have access to the internet at school or at home in some capacity. Better than eight out of ten teachers (86%) have access to a strong internet connection in their classroom. The same proportion of teachers has access to the internet in their homes.

The largest proportion of teachers reported that access to equipment is their biggest barrier to using technology in their classrooms. In fact, seven of ten teachers reported (71%) that they wished they had more technology in their classrooms and had asked their administration for it. One-quarter of respondents (25%) believed reliability of technology was their biggest challenge, while 20% believed their own knowledge about how to use technology was their biggest hurdle.

**Exhibit four**

*Biggest challenge to using technology in the classroom*

This finding is somewhat surprising in that interview findings suggested that reliability and teacher knowledge about how to use technology are key barriers to using technology effectively. Further several superintendents reported that they had all the equipment they can handle, and their main focus was on maintaining what they have in place. This suggests that teachers and administration have different perspectives on devices and the maintenance responsibility is not a classroom-level responsibility. Further, while only one in five teachers
believe their own knowledge about how to use technology is a barrier, key experts in technology integration discuss the differences in teachers simply using technology versus higher-level integration. Teachers responding to the survey about their knowledge how to use the technology on a basic level, but not consider the further integration, without more exposure to best practices and training.

**Technology Tools in Use by Teachers and Their Students**

Nine out of ten teachers are most often using a personal computer or laptop in the classroom on a daily basis (89%), while 25% of teachers report using a tablet each day. Eight out of ten teachers are using a projector at least once per week. It is not surprising that these resources are the most used, as the national study by PBS found that teachers believe computers, white boards, tablets, and projectors have the greatest potential for enhancing education. A majority of Idaho teachers say they do not have access to other types of devices, such as tablets (39%), Interactive white boards (e.g., SMART Board; 68%), handheld devices (e.g., smartphones, iTouch; 56%); Interactive tables (90%), or game devices (89%).

Idaho educators’ access to technology resources differs somewhat from the national sample. Whereas in Idaho the access is largely in laptops and projectors, the national survey found televisions among the highest accessed resources along with laptops and projectors. Few national respondents had access to other types of devices. It would be telling to see how the access changes over time.

It is believed that game-based learning is going to quickly expand in the school environment. Although some educators identified this type of use, it was not yet on a large scale.

Overwhelmingly, teachers are using their computer as an administrative tool (83%) and as a teaching tool (77%). Tablets are most often used as a teaching tool (61%) and as a student self-learning tool (62%). If a teacher has the following types of technology, they are used as a teaching tool—interactive white board (96%), television or DVR (88%), projector (94%), and interactive table (62%).

Among the few that report having these technologies, a majority use tablets for student self-learning (62%), handhelds (67%), and game devices (76%).

Eight out of ten teachers use online images (80%) and video content (83%) to support their teaching efforts-- this was most often cited online resource, which is not surprising considering the overwhelming teacher appreciation for Discovery Education content. Other important resources that a majority of teachers are using are online lesson plans (69%), web-based interactive games (66%), and online articles tied to instruction (62%).
Exhibit five
A majority of teachers report using select technology resources as teaching tools

Teacher knowledge about student use of Idaho Distance Learning Academy (IDLA) and Idaho Education Network (IEN) resources varied. A lower response about usage is expected, as many IDLA or IEN opportunities for students may be coordinated by others in the schools (e.g., counselors). Twenty percent of high school teachers reported that they knew their students had taken an IDLA dual enrollment course, while 32% (almost 1 in three) said their students have taken an IDLA high school course. Only 7% of teachers reported knowing that their students have taken an IEN course. Few high school teachers report using IDLA professional development (7%) or integrating IDLA content into curriculum (3%). Likewise, few teachers report providing course material to IEN (2%) or designing IEN courses (1%).

There are a number of possible reasons for low rates of teacher awareness. First, IDLA only recently (2013-14 academic year) has begun venturing into the K-8 system and a majority of respondents were not high school teachers (36.5% taught in a high school). IEBC limited the analysis of IDLA to only high school teachers for this reason. Second, many students take IDLA courses outside the regular school day (at home, in the evening, etc.). Third, students register for IDLA courses with their academic counselor and not through the standard district system. Finally, if a high school English teacher is responding to the survey it is unlikely they are aware of a student taking AP Chemistry, for example, via distance learning.

From the interviews, IEBC collected a list of technical resources available and used in Idaho. It is clear that districts are generally using disparate systems, as many of these resources were “unknown” by a majority of the respondents.

Teachers across districts consistently use their own district’s Student Information System (53%), Google Docs/Drive (58%), and not surprisingly, Discovery Education (57%)—an obviously very important content provider to Idaho educators. Other resources of importance are
Schoolnet—used by 35% of the respondents and Khan Academy cited by 31% of respondents. Many of the respondents were unaware of other software programs, applications, or programs used by others in the state. This evidence suggests that these resources are not used systematically, and a guidebook of resources may be helpful to increase awareness about types of resources available to schools. Further, this finding about a low awareness of many resources underscores the need for a vetting system recommended by the Doceõ respondents that will provide a means for districts to better understand what software, applications, and hardware are available and the pros and cons for each option.

**Impact on Student Success**

There is a high level of buy-in among teachers about the benefits of technology in their classrooms for student success. Two-thirds of teachers (64%) report that they need to use all the tools available, as they help deliver a 21st century curriculum that will prepare kids for the real world. Forty-five percent (45%) of teachers believe that technology has a noticeable impact on student learning, while only 5% reported that technology is a distraction.

Overwhelmingly, teachers believe they are using technology to improve student success. Teachers reported they can provide additional content and engage students more effectively when they integrate technology, see figure below. These positive beliefs are slightly higher than the national sample completed by PBS Media.

Despite the positive feelings about technology’s impact on students among teachers, there are still areas that students need to strengthen. Sixty-nine percent (69%) of teachers believe students do not understand how to document sources from the internet, and 62% of teachers do not believe students know how to communicate appropriately/understand social interactions on the internet.

Interestingly, despite the positive reviews about the impact of technology, when asked how often students use technology in the classroom, students are using traditional technology resources. A majority of teachers said that students use personal computers or laptops (53%) and projectors (52%) at least once a week, and about one-third (30%) of teachers say students use tables at least once a week. However, teachers also report that students use less than once a month or never use tablets (58%), interactive white boards (76%), television/DVRs (67%), handhelds (64%), interactive tables (95%), and game devices (96%).
Exhibit six

Proportion of teachers reporting changes to practice with technology: Idaho sample and national sample (if available)

There is considerable variance across the state regarding how many personal computers or laptops are available in classrooms. A majority of classrooms do not have handhelds (71%), tablets (56%), and game devices (97%).

Teachers believe that approximately eight out of ten students have access to a computer or tablet (84%) and the internet (81%) in their home. Of the remaining students who do not have access in their home, almost all have access to a computer/tablet (13%) and the internet (16%) at a public library. Three to four percent (3-4%) of students do not have access to these resources. Although the proportion is small, this inequality is still relevant when considering student success. In addition, 45% of teachers report that they do not believe students have equitable access to technology in school, and 56% believe they do not have equitable access to technology at home.
Many of the findings in this section echo the findings of the study of blended learning in Idaho’s classrooms conducted by the Doceō Center at Northwest Nazarene University, in partnership with IDLA and International Association for K-12 Online Learning (Werth, Werth, & Kellerer, 2013). Teachers are hungry for more support to use technology well. Fifty-three percent report that they wish they had more direction about how to use technology, and 86% would like more professional development to support their use of technology in their classrooms.

Teachers also report that technology supports teacher collaboration (45%), and they actively collaborate with their peers about how to use technology to improve student learning (55%). However, they still report that they lack the proper amount of time to work with other teachers in their schools about how to best integrate technology into their instruction (58%). Teachers also report that technology is a motivating and useful tool but can’t be relied upon (45%), and when they have a problem it takes a long time to fix (61%).

The school leadership and environment does not seem to be viewed as a barrier by teachers. Most teachers (85%) say that their principal prioritizes technology in their school, when they have trouble with technology, there is someone to help them (76%), and their school’s physical environment can support technology integration (80%).

Teachers reported that they do have time to integrate technology into their instruction (64%); however, many also reported that competing priorities keep them from doing so (60%). Seven out of ten teachers (72%) report that they know how to use technology to differentiate instruction—a challenge for all teachers and especially those with a large or diverse group of students. In addition, six out of ten (61%) reported that they use technology to identify areas in
which their students require additional instruction. It is unclear, however, how teachers use technology to do so and the effectiveness of the methods they use.

**Access to Student Data**

Technology has greatly increased teachers’ access to student data—84% of teachers report that technology has provided better access to student data. This is not to say the access could not be better, and as the stakeholder and interview findings suggest, access has greatly improved and the focus needs to be on training teachers to better making meaning of these data. An encouragingly high rate of teachers report having access to data; however, that does not mean they have access to all the data they need (e.g., benchmark assessments, data linked to an intervention, data about specific knowledge or skill deficiencies.

Eighty-eight percent (88%) of all teachers say they have access to student-specific data, while 81% have classroom level data that they need to inform their teaching. Only about half (52%) have data for their school as a whole—however, these data may not be necessary for teachers to address instructional improvement issues. A considerable majority of teachers (84%) believe they have access to student data when they need it.

**Exhibit eight**

*Proportion of teachers who access student data by source*

![Chart showing access to student data](image)

A majority of teachers believe they know how to interpret student data most or all of the time (56%) or some of the time (37%). Seven out of ten teachers (69%) analyze how their current students are doing on key assessments to determine teaching content and methods most or all of the time. However, it is unclear how effectively teachers are using data.
Almost all teachers believe the student data they access is very useful (33%) or somewhat useful (59%).
Summary

Although many perspectives were represented in our review of Idaho’s technology and data use in support of college and career readiness, a number of themes can be identified.

Generally, there is a need for more information about technology and data use at the district level. Idaho Leads recently conducted a technology needs assessment of their member districts, which could be expanded statewide. Because of the often repeated refrain from districts that plans are developed statewide with little consideration of their local needs and desires, we caution against moving forward without a needs assessment. However, a few actions could be undertaken immediately based on the consensus among respondents: (a) developing a comprehensive calendar of professional development offerings (that includes the target population’s skill level); (b) exploring regional solutions to local issues; (c) using the International Society for Technology in Education (ISTE) standards (for teachers, students, administrators, and others) and necessary conditions, which the Doceō Center at University of Idaho already is using, to promote effective use of technology in support of student success; (d) operationalizing the definition of college and career readiness in a way that supports metrics at each level of student’s academic progress; and (e) simply making more information public and accessible, including new reports available to school districts from the Idaho SDE.

In addition to these immediate first steps, we present overall general findings from this study. Then, we present a collated list of the action steps identified throughout this report with suggested priorities noted.

First, districts are struggling with the costs of technology. These costs include maintaining current levels of technology, obtaining new technology that is available, supporting technical assistance and repair, and other fixed and variable technology-related items. Districts across the state already are in a tough situation and do not see it improving.

Second, there is a need for coordinated professional development. Coordination means better identification of district needs, addressing the identified gaps, and reducing duplication of services. There was general agreement among all respondent groups and the various data collection methods that a statewide coordinated, comprehensive calendar of professional development offerings would be a great step forward. Furthermore, the skill level of the target audience for professional development needs to be identified for all offerings.

Third, there is a considerable technical assistance gap to effective technology use in the state. Many districts cannot find a skilled person to hire. Districts employ a patchwork of solutions, which rarely fulfill the technical assistance and support needs they face. A regional approach to technology technical assistance was identified by more than one group as a model to provide these services.

Fourth, due to the rapidly changing technology—hardware and software—available to districts, and the evolving needs of students and teachers, districts are having a difficult time keeping up. The first three concerns (above), which seem immediate and overwhelming to most districts, further complicate the situation. This also is becoming an equity issue, which likely will
grow. Students with access to new technologies, whether at school or home, will benefit while those who do not will fall further behind.

**Fifth, districts are ahead of the state regarding policy development.** Most districts are pragmatic and forward looking (and some perceive the state policies as regressive). These districts are eliminating firewalls and blockages. They focus, instead, on digital citizenship as a skill necessary for students to succeed in the postsecondary world—whether college or career.

Sixth, Idaho’s definition of college and career readiness is general and not useful to districts and other stakeholders; and few districts have operationally defined these terms and tracking student readiness. As in most states, the definition of college and career ready is intended as a policy driver and rallying point. This is not sufficient for setting goals for students, groups of students, schools, or districts. There is a need for common metrics from kindergarten through high school graduation for various stakeholders (teachers, policymakers, parents, students, et al.) to use to assess student progress. There also is a need for postsecondary metrics so high schools can assess the impact of their practices.

**Seventh, administrators, teachers, and other educational stakeholders are not skilled at using data.** Few districts have a way to ensure available data get into the hands of those who need it and can act on it. Even fewer districts understand how data can be used to improve education outcomes. Although teachers are skilled at using student-level formative data from classroom assessments, there is little to no use of aggregate data at multiple levels for understanding the impact of curricula, programs, and policies. There is a need for professional development related to using data, encouraging use by individuals, and establishing a culture of data use at the school and district levels.

**Eighth, investigate how to expand Idaho Leads needs assessment** to other districts and beyond hardware/software access. In addition to the needs assessment draw upon the many resources already available in Idaho to fill needs.

**Finally, invest in coordinating activities that will increase shared ideas and transparency across Idaho.** Support and/or replicate the Blaine County camp, DOCEÔ additional in-service teacher training, integrating the ITSE standards into professional development (DOCEÔ) and coaching models within districts. There also is a need for a formal forum for the primary educational technology service providers to come together for communication, collaboration, and coordination.
**Action Steps Summary**

Below we present a collated list of action steps with an assessment of leveraging existing resources and priority level.

We designate a number of action steps as immediate priority, such as a comprehensive statewide needs assessment, a statewide strategic technology and data use plan, and convening an advisory committee. These include actions that will help to guide other subsequent interventions and innovations.

We designate a comprehensive needs assessment throughout the state as an immediate priority. As noted above, we caution against taking actions before understanding what school districts need and want. Too often resources are not used to their greatest advantage because they duplicate existing resources, are not useful to the recipients, or do not fulfill needs that are of higher priority or upon which the new resources depend. As noted, expanding the recent Idaho Leads Clarity Survey from their member districts to statewide and ensuring it addresses the multiple technology and data use areas in this document could be the place to start.

A second immediate priority is developing a statewide strategic plan for maintaining technology at the local level and addressing data use needs. As with the needs assessment, we caution against moving forward with steps that are not part of a three to five year plan that responds to local concerns.

A third immediate priority is convening a statewide technology advisory committee. This will help to ensure multiple perspectives on these issues and actions are available to groups and organizations working to improve educational technology in Idaho. An advisory committee also helps to involve current service providers in creating solutions that build upon their current work, potentially increasing efficient use of resources. Finally, an advisory committee distributes decision making and responsibility.

Other action steps classified as immediate are those related to ensure organizational goals, objectives, and activities are addressing concerns raised in this document. These recommendations are easy to implement, capitalize on existing resources, and start to align current activities with broader plans.

Immediate action steps also include those that are likely to have high impact on high need areas, based on findings from this effort: developing a comprehensive statewide professional development calendar; creating a system to provide technical assistance for small and rural districts; continuing to improve communications from SDE to the field about a variety of topics; and ensuring education stakeholders have access to the data they need to improve individual student success in the classroom and schools, improve programs at the school and district levels, and create effective policies at the district and state levels.

This report also includes mid-range and long-term action steps that will be informed by immediate steps. It is important to have a long-term vision that communicates to the field continuing commitment and an understanding about the quickly changing nature of technology and resulting implications for education.
### Exhibit nine

*Action steps summary, with priorities*

<table>
<thead>
<tr>
<th>Action Steps</th>
<th>Area</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct a comprehensive statewide needs assessment (focusing on access, professional development needs, and technical assistance/on-going maintenance capacity, and data use knowledge among districts to gauge the technology level of each individual district, identify needs, and solicit recommendations that meet district needs.)</td>
<td>All</td>
<td>Immediate</td>
</tr>
<tr>
<td>Ensure the Doceō Centers are identifying and meeting the technology needs of Idaho’s school districts as they work to address issues among pre-service and in-service teacher programs.</td>
<td>Accessibility</td>
<td>Immediate</td>
</tr>
<tr>
<td>Explore with Doceō centers about how to expand professional development opportunities for in-service teachers, potentially providing continuing education credits, and using existing infrastructure (e.g., IRON network) to implement this professional development.</td>
<td>Accessibility, professional development</td>
<td>Immediate</td>
</tr>
<tr>
<td>Periodically provide resources to districts struggling to maintain their current technology hardware. This could be done with a request for proposals to describe how districts would use funds to sustain existing hardware.</td>
<td>Accessibility</td>
<td>Long-term</td>
</tr>
<tr>
<td>Through RFP process, identify Idaho best practices for technology integration. Showcase Idaho educators in a clearinghouse website and conference hosted by JKAF.</td>
<td>Accessibility</td>
<td>Mid-range</td>
</tr>
<tr>
<td>Through this review, only a few districts seem to be implementing a bring your own device (BYOD) program, but they are gaining momentum in Idaho and across the country. A future study should explore implications of the movement, and creative solutions to the growing equity gap.</td>
<td>Accessibility</td>
<td>Long-term</td>
</tr>
<tr>
<td>Ensure the Idaho Education Network continues to have the capacity to meet the growing needs among Idaho’s school districts. As districts expand their technology use, become more sophisticated users, and implement online standardized tests, the broadband need with inevitably increase.</td>
<td>Accessibility</td>
<td>Long-term</td>
</tr>
<tr>
<td>Develop a long-term strategic plan for educational technology in Idaho that addresses current and emerging issues for the next three to five years.</td>
<td>All</td>
<td>Immediate</td>
</tr>
<tr>
<td>Develop a plan for providing technical assistance to districts unable to set aside resources for their own.</td>
<td>Technical Assistance</td>
<td>Immediate</td>
</tr>
<tr>
<td>Develop criteria for technical assistance providers to ensure they have technical expertise as well as experience with K-12 educators. Develop a list of TA providers who meet criteria and provide information on a best practices clearinghouse website.</td>
<td>Technical Assistance</td>
<td>Mid-range</td>
</tr>
<tr>
<td>Action Steps</td>
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<tr>
<td>Create a coordinated, comprehensive statewide calendar of professional development offerings.</td>
<td>Professional development</td>
<td>Immediate</td>
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<tr>
<td>Capitalize on current systems for peer to peer support by formalizing a moderated system for professional development.</td>
<td>Professional development</td>
<td>Mid-range</td>
</tr>
<tr>
<td>Develop a system for vetting and rating professional development providers. Provide this information to all districts on the clearinghouse website</td>
<td>Professional development</td>
<td>Mid-range</td>
</tr>
<tr>
<td>Implement a professional development approach, in which the audience expertise level is designated, to improve technology use and/or data use among Idaho’s educational institutions.</td>
<td>Professional development, data use</td>
<td>Mid-range</td>
</tr>
<tr>
<td>Through RFP process, identify Idaho best practices for technology integration. Showcase Idaho educators in a clearinghouse website and conference hosted by JKAF.</td>
<td>Professional development</td>
<td>Mid-range</td>
</tr>
<tr>
<td>Work with a professional development provider, perhaps Idaho Leads or Docē centers, to create a classroom coach model. This strategy may be replicated in districts across the state.</td>
<td>Professional development</td>
<td>Immediate</td>
</tr>
<tr>
<td>Building upon those identified in this review (see appendix), develop a comprehensive map of technical assistance, professional development, student courses, networking, and other educational technology resources available in Idaho. Ensure grassroots efforts such as the Blaine County “unconference” are included.</td>
<td>Mapping resources</td>
<td>Immediate</td>
</tr>
<tr>
<td>Create an educational technology advisory council to develop and coordinate new resources, information, and a clearinghouse website that houses information and data reports.</td>
<td>Mapping resources</td>
<td>Immediate</td>
</tr>
<tr>
<td>Consider a regional approach to providing resources, such as technical assistance and professional development, where these are of limited availability or not meeting local needs (identified through the needs assessment).</td>
<td>Mapping resources</td>
<td>Mid-range</td>
</tr>
<tr>
<td>Survey Idaho school districts about their educational technology policies including who was involved in policy development, history of policy development, and perceived impact of policies. This information would help state policy development that will align with where districts are headed.</td>
<td>Policy</td>
<td>Immediate</td>
</tr>
<tr>
<td>Identify recommendations for effective educational technology policies for Idaho school districts with examples and suggestions for development and implementation.</td>
<td>Policy</td>
<td>Long-term</td>
</tr>
<tr>
<td>Encourage state-level educational technology policies and funding that support effective district policies.</td>
<td>Policy</td>
<td>Long-term</td>
</tr>
<tr>
<td>Showcase case studies of successful experiences providing students with devices on the Idaho resources clearinghouse website.</td>
<td>Policy</td>
<td>Long-term</td>
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<tr>
<td>Action Steps</td>
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<td>Priority</td>
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<tr>
<td>Encourage the Idaho SDE to continue with their outreach and messaging to districts about changes, adjustments, and improvements to statewide data systems. Include testimonials from folks at districts for whom the system is working and who have noticed improvements.</td>
<td>Data use</td>
<td>Immediate</td>
</tr>
<tr>
<td>Develop a CCSS SBAC update and regular notifications about progress and expectations. Ensure these communications are being received at districts and given the high profile they deserve and require.</td>
<td>Data use</td>
<td>Immediate</td>
</tr>
<tr>
<td>The lessons learned document IEBC currently is writing about the SDE/Schoolnet facilitation effort will capture the need for a managing partner who can prioritize teacher needs and not be resistant to communicating about the project and priorities to the field at large.</td>
<td>Data use</td>
<td>Immediate</td>
</tr>
<tr>
<td>Review state and federal data submission expectations and develop a consolidated data submission system that could be used for multiple accountability and compliance requirements.</td>
<td>Data use</td>
<td>Immediate</td>
</tr>
<tr>
<td>Support districts’ efforts to ensure teachers have scientifically rigorous <em>formative</em> data required to improve instruction at the classroom and student levels, by providing professional development in support of using data, encouraging inter-district collaboration, and continuing to respond to district student data requests from state data systems.</td>
<td>Data use</td>
<td>Immediate</td>
</tr>
<tr>
<td>Create a report from the SLDS about college and career readiness in Idaho. Select measures from current recommended college and career readiness indicators (see appendix), their definitions, and measurement. Vet the report indicators with key stakeholders and align with Go On! Data publications.</td>
<td>College &amp; career readiness</td>
<td>Immediate</td>
</tr>
<tr>
<td>Develop a formal partnership structure to encourage pipelines and pathways between high schools and colleges and businesses. These pipelines can focus on local curriculum alignment and challenges in their regions. The local focus of these partnerships also can be informed by the local economy’s needs and resources.</td>
<td>College &amp; career readiness</td>
<td>Mid-range</td>
</tr>
<tr>
<td>Develop a data use clearinghouse website for a one-stop shop for data use best practices, successful case study evidence, and data or technology resources available to Idaho educators.</td>
<td>College &amp; career readiness</td>
<td>Immediate</td>
</tr>
<tr>
<td>Explore the potential benefits of a statewide college readiness conference that would build momentum for local districts to develop common operationalized definitions of college readiness, which various stakeholders (students, teachers, parents, businesses, et al.) could use to assess student progress toward the identified metrics.</td>
<td>College &amp; career readiness</td>
<td>Mid-range</td>
</tr>
<tr>
<td>Action Steps</td>
<td>Area</td>
<td>Priority</td>
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<tr>
<td>Encourage educational technology providers in Idaho to work together to explore and respond to funding opportunities related to using technology, data use, research and practice as a way to support their individual efforts, develop a community of practice, and increase available resources.</td>
<td>All</td>
<td>Mid-range</td>
</tr>
</tbody>
</table>
Appendix A
Rubric for Effective Technology Use
# Rubric for Effective Teacher Technology Use  
(Organized by the Four Domains of Danielson’s Framework for Teaching)

## Domain 1: Planning and Preparation

<table>
<thead>
<tr>
<th></th>
<th>Basic</th>
<th>Proficient</th>
<th>Distinguished</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The teacher uses online resources, including professional social networking sites, to stay current on the latest research and best practices in his or her field.</td>
<td>The teacher reviews information online, discusses it with colleagues, but practice is minimally affected.</td>
<td>The teacher interacts in online networks with professionals. Teaching reflects what has been learned from those interactions.</td>
<td>The teacher creates and shares innovative content and teaching practices with other professionals online.</td>
</tr>
<tr>
<td>2. The teacher is aware of the characteristics of “next generation” learners and their relationship with technology and uses this information to design engaging activities.</td>
<td>The teacher uses technology to present information in a one-to-many learning environment.</td>
<td>The teacher uses technologies to offer students a variety of resources to learn and solve problems.</td>
<td>The teacher asks students to use technology resources of their choosing to learn and solve problems every day in class.</td>
</tr>
<tr>
<td>3. The teacher determines the technology skill level of students, knows the expected competencies for productivity and research, and finds means of remediation of individual students when needed.</td>
<td>The teacher knows individual skill levels, but moves on according to predetermined lesson plans.</td>
<td>The teacher has appropriate expectations of students based on their technology skill levels. Creates separate predetermined pathways for low and high skilled students.</td>
<td>The teacher uses formative assessments to gauge student skill development and provides flexible pathways, including student choice, for all learners.</td>
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<td></td>
<td>Basic</td>
<td>Proficient</td>
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<tr>
<td>4</td>
<td>The teacher uses adaptive and adoptive technologies with students with special needs.</td>
<td>The teacher uses technologies based on IEP requirements.</td>
<td>The teacher empowers students with special needs to be independent.</td>
</tr>
<tr>
<td></td>
<td>The teacher uses technologies to meet the special needs of students with and without IEP requirements.</td>
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</tr>
<tr>
<td>5</td>
<td>The teacher establishes technology goals that are not related to curricular content.</td>
<td>The teacher establishes clear quality criteria that apply the technology in a context. Students know what is expected of the products they create with technology.</td>
<td>The teacher asks students to create quality criteria related to technology use.</td>
</tr>
<tr>
<td>6</td>
<td>The teacher uses school-provided technology for learning during technology units during the school year.</td>
<td>The teacher uses school-provided technology for learning in all units during the school year and complements school-provided resources with carefully chosen external resources.</td>
<td>The teacher provides leadership in the use of school-provided technologies.</td>
</tr>
<tr>
<td>7</td>
<td>The teacher creates learning activities with technology that focus on lower-order thinking skills.</td>
<td>The teacher creates learning activities with technology that enable students to learn independently, to be creative, and to think critically.</td>
<td>The teacher creates learning activities with technology that enable students to learn independently, to be creative, and to think critically about issues relevant to their own lives.</td>
</tr>
<tr>
<td></td>
<td>Basic</td>
<td>Proficient</td>
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</tr>
<tr>
<td>8.</td>
<td>The teacher uses online resources to provide instructional materials at differing levels and subjects to meet individual student abilities, needs and interests.</td>
<td>The teacher uses some online resources that meet the needs of students with special needs.</td>
<td>The teacher asks students to find and assess online resources that can meet their abilities and needs.</td>
</tr>
<tr>
<td>9.</td>
<td>Assessment criteria of student work include qualitative indicators of effective technology production.</td>
<td>The teacher addresses technology use in summative assessments.</td>
<td>The teacher and students collaboratively create qualitative indicators of technology use.</td>
</tr>
<tr>
<td></td>
<td>The teacher clearly lists qualitative indicators of technology use and shares these indicators with the student when the assignment is given.</td>
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</tr>
</tbody>
</table>
## Domain 2: The Classroom Environment

<table>
<thead>
<tr>
<th></th>
<th>Basic</th>
<th>Proficient</th>
<th>Distinguished</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>The teacher interactions online follow the same guidelines as face-to-face interactions.</td>
<td>The teacher follows rules of professional conduct when online.</td>
<td>The teacher models positive interactions face-to-face and online. Students can formulate and articulate their own set of online communications rules.</td>
</tr>
<tr>
<td>2</td>
<td>The teacher demonstrates an enthusiasm for educational technology and its uses.</td>
<td>The teacher participates in the required educational application of digital tools.</td>
<td>The teacher, in addition to demonstrating district-offered and district-trained digital technologies, finds resources to use on his or her own and seeks ideas from students.</td>
</tr>
<tr>
<td>3</td>
<td>The teacher uses technology to provide a wider audience for student work. Appropriate safety and privacy efforts are made.</td>
<td>The teacher periodically publishes student work according to district guidelines.</td>
<td>The teacher helps students build portfolios of published work and understand digital reputation management.</td>
</tr>
<tr>
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<td>Basic</td>
<td>Proficient</td>
<td>Distinguished</td>
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<tr>
<td>4.</td>
<td>The teacher helps students use technology in the revision process of their creative efforts.</td>
<td>The teacher allows students to revise digital versions of their work, adding suggestions for improvement in comments.</td>
<td>The teacher requires students to revise digital versions of their work on the basis of the teacher’s online review and comments.</td>
</tr>
<tr>
<td>5.</td>
<td>The teacher uses technology to facilitate peer editing of student work.</td>
<td>The teacher allows students to revise digital versions of their work on the basis of online peer review and comments.</td>
<td>The teacher encourages students to find ways to help improve each other’s work.</td>
</tr>
<tr>
<td>6.</td>
<td>The teacher has rules and expectations for productive technology use in the classroom, including the use of personally owned technology devices.</td>
<td>The teacher’s expectations of technology use in the classroom is stated.</td>
<td>The teacher gives students input into classroom technology rules.</td>
</tr>
<tr>
<td>7.</td>
<td>The teacher uses the student information system efficiently, resulting in minimum use of class time for management tasks.</td>
<td>The teacher accurately and regularly inputs data into the student information system.</td>
<td>The teacher demonstrates leadership by sharing effective practices with fellow staff members to help them improve their student information system efficiency.</td>
</tr>
<tr>
<td></td>
<td>Basic</td>
<td>Proficient</td>
<td>Distinguished</td>
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</tr>
<tr>
<td>8.</td>
<td>The teacher monitors student technology use and responds to misbehavior if it occurs.</td>
<td>The teacher monitors and responds to student technology use as needed.</td>
<td>The teacher creates a classroom environment in which active, positive uses of technology result in a minimal need for monitoring.</td>
</tr>
<tr>
<td></td>
<td>The teacher can easily view the screens of classroom technologies that are permanently installed.</td>
<td>The teacher can move around the room easily, view the technology, and interact with students face-to-face. Classroom rules enable the teacher to view personal technologies (laptops, tablets, cell phones).</td>
<td>The teacher arranges the classroom for flexible movement, group collaboration, and independent work with technology.</td>
</tr>
</tbody>
</table>
## Domain 3: Instruction

<table>
<thead>
<tr>
<th></th>
<th>Basic</th>
<th>Proficient</th>
<th>Distinguished</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>The teacher gives students alternate means of discussion and asking questions using technologies to bring out the ideas of all students.</strong></td>
<td>The teacher allows students to e-mail or post comments and questions related to classroom content from outside class.</td>
<td>The teacher regularly uses technology tools during class to stimulate discussion and feedback. Students initiate thoughtful discussions with their peers.</td>
</tr>
<tr>
<td></td>
<td>The teacher allows students to e-mail or post comments and questions related to classroom content from outside class.</td>
<td>The teacher allows students to use teacher-created online forums (website, blog, wiki, Facebook group) as an option for reflection and discussion.</td>
<td>The teacher requires students to use teacher-created online forums for reflection and discussion. Students initiate thoughtful discussions with their peers.</td>
</tr>
<tr>
<td>2</td>
<td><strong>The teacher allows students to initiate discussions in online forums such as classroom blogs, discussion lists, and social networking sites.</strong></td>
<td>The teacher encourages students to use teacher-created online forums for reflection and discussion.</td>
<td>The teacher encourages students to use teacher-created online forums for reflection and discussion.</td>
</tr>
<tr>
<td></td>
<td>The teacher establishes basic guidelines for online interactions on the basis of the school’s acceptable use policy and shares these with students.</td>
<td>The teacher establishes basic guidelines for online interactions, shares these with students, regularly discusses the guidelines, and responds when the guidelines are not followed.</td>
<td>The teacher works to create online environments in which are self-regulating and develop personal standards of appropriate use.</td>
</tr>
<tr>
<td>3</td>
<td><strong>The teacher expects and reinforces appropriate student interaction when using online tools.</strong></td>
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<td>Basic</td>
<td>Proficient</td>
<td>Distinguished</td>
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<tr>
<td>4.</td>
<td>The teacher uses technology to create and project visual and auditory data that help explain content and concepts.</td>
<td>The teacher uses a LCD/LED projector to show slideshows with images.</td>
<td>The teacher demonstrates sound theories of visual and auditory design in lessons that use these media.</td>
</tr>
<tr>
<td></td>
<td>The teacher uses technologies to passively disseminate information, to ask low-level questions, to practice only low-level skills or for rewards.</td>
<td>The teacher uses the interactive whiteboard in ways that engage students, including student use of the board, gaming applications, actions based on student responses, and polling.</td>
<td>The teacher uses a range of technologies to engage students by asking for student responses and differentiated self-directed activities.</td>
</tr>
<tr>
<td>5.</td>
<td>The teacher uses technologies such as interactive whiteboards, student response systems, and computer games to engage students.</td>
<td>The teacher encourages students to use online resources and helps build online research skills, resulting in quality information obtained.</td>
<td>The teacher requires students to use online resources and asks for student self-reflection on the efficacy of their research.</td>
</tr>
<tr>
<td>6.</td>
<td>The teacher encourages students to use online resources to answer questions and explore concepts during class and teaches search and information evaluation strategies.</td>
<td>The teacher allows students to use online resources without providing guidance on effective searching and evaluation techniques.</td>
<td>The teacher requires students to use online resources and asks for student self-reflection on the efficacy of their research.</td>
</tr>
<tr>
<td>7.</td>
<td>The teacher uses technology in ways that make students productive and meet the instructional goals of the lesson.</td>
<td>The teacher asks students to use technology to complete assignments that ask for problem solving and creativity on a regular basis.</td>
<td>The teacher asks students to use technology to complete assignments, investigate new means of using technology to meet class requirements, and to share those uses with the teacher and class.</td>
</tr>
<tr>
<td>Domain 4: Professional Responsibilities</td>
<td><strong>Basic</strong></td>
<td><strong>Proficient</strong></td>
<td><strong>Distinguished</strong></td>
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</tr>
<tr>
<td>1. The teacher uses online grading and reporting system to maintain information on student completion rates and shares this information through student and parent portals in real time.</td>
<td>The teacher uses the online grading and reporting system to meet minimum district requirements.</td>
<td>The teacher uses the online grading and reporting system in a timely manner that enables students and parents to effectively monitor student progress.</td>
<td>The teacher uses the online grading and reporting system to communicate student status, with scores having meaningful links to standards and other information.</td>
</tr>
<tr>
<td>2. The teacher uses online grading system portal to inform students and parents of upcoming assignments, projects, and assessments.</td>
<td>The teacher uses the online grading and reporting system to meet minimum district requirements.</td>
<td>The teacher communicates upcoming assignments, projects, and assessments well ahead of completion deadlines.</td>
<td>The teacher communicates upcoming assignments, projects, and assessments at the beginning of the term for the entire term, adjusting as needed.</td>
</tr>
<tr>
<td>3. The teacher uses the district website to provide a wide range of up-to-date information to students and parents.</td>
<td>The teacher posts the minimum information required to meet district requirements.</td>
<td>The teacher posts information that, in the past, might have been sent to student homes on paper, including newsletters, permission slips, supply lists, class expectations, and so on.</td>
<td>The teacher posts information about online resources that support classroom goals that parents can work with their children on at home.</td>
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<td>Distinguished</td>
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<tr>
<td>4.</td>
<td>The teacher uses online communication tools such as e-mail, blogging, and social networking to keep students and parents informed on a regular basis.</td>
<td>The teacher answers e-mails from stakeholders in a timely fashion.</td>
<td>The teacher explores and uses new forms of communication with students and parents.</td>
</tr>
<tr>
<td>5.</td>
<td>The teacher uses collaborative online tools to communicate and work with colleagues.</td>
<td>The teacher uses e-mail to collaborate and communicate with his or her peers.</td>
<td>The teacher uses online tools such as Google Docs to share, create, and edit materials with peers.</td>
</tr>
<tr>
<td>6.</td>
<td>The teacher volunteers to share effective uses of technology at staff meetings and in-service trainings, through professional writings and presentations, and through demonstrations to parent-teacher and community organizations.</td>
<td>The teacher shares information and personal best practices when required.</td>
<td>The teacher uses online tools to share, create, and edit materials with peers so successfully that paper printouts are rarely used.</td>
</tr>
<tr>
<td>7.</td>
<td>The teacher participates in both organized and personal learning opportunities online.</td>
<td>The teacher participates in assigned learning opportunities.</td>
<td>The teacher proactively communicates effective technology uses to his or her building, district, and other professionals beyond the district.</td>
</tr>
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<tr>
<td>8.</td>
<td>The teacher honors and learns from students who have technology competencies and knowledge.</td>
<td>The teacher uses students to help troubleshoot and solve classroom technology problems.</td>
<td>The teacher actively seeks information about and input regarding the use of technology from students.</td>
</tr>
<tr>
<td></td>
<td>The teacher uses technologies after other teachers in their building have demonstrated their successful use.</td>
<td>The teacher accepts information about and input regarding the use of technology from students.</td>
<td>The teacher is a leader in the building in selectively adopting new technologies that have the potential for improving learning.</td>
</tr>
<tr>
<td>9.</td>
<td>The teacher keeps an open but critical mind about technology uses.</td>
<td>The teacher uses technologies after other teachers in their building have demonstrated their successful use.</td>
<td>The teacher is willing to explore new technologies when requested and shares his or her successes and failures with other teachers.</td>
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</table>
Appendix B
National High School Center
College and Career Indicator Recommendations
<table>
<thead>
<tr>
<th>Threads</th>
<th>Components</th>
<th>Examples</th>
</tr>
</thead>
</table>
| On-Track Indicators          | Academic/Technical Performance and Engagement  | Credit accumulation and recovery  » Attendance, grade point average, and suspensions  
Participation in accelerated learning programs and/or college- and career-ready courses of study  
Performance on aligned assessments of high school core content (e.g., Partnership for Assessment of Readiness for College and Careers and Smarter Balance assessments, high school end-of-course and exit examinations)  
Performance on career and portfolio assessments |
|                               | Postsecondary Access and Enrollment             | Free Application for Federal Student Aid (FAFSA) and postsecondary applications completed  
Postsecondary program enrollment  
Employment applications completion |
| Attainment and Authentication | Secondary Certification                          | High school diploma (standard, alternative, college and career readiness) or GED  
College credits in dual enrollment, Advanced Placement, or International Baccalaureate courses  
Postsecondary degree(s)  
Awarded industry-recognized credential or certificate |
|                               | Postsecondary Success                           | Postsecondary education graduation certificate  
Postsecondary training certification  
Earning wage in “middle-skills” (e.g., jobs that require an associate’s degree, a vocational certificate, on-the-job training, or some college) or higher skills job  
Postsecondary remediation not needed |
| Accountability and Improvement Feedback | Accountability Reporting Systems | High school and district report cards, reporting college and career readiness measures  
Performance-based assessments |
|                               | Data-Informed Improvement Cycles                | High school and district diagnostic assessments  
State and district improvement plans  
Early warning systems for dropout and college and career readiness  
National High School Senior Survey and school climate surveys |
References


Blume, H. (2013, September 13). *71 iPads issued to students have gone missing, LAUSD says*. Retrieved March 10, 2014, from latimes.org: lat.ms/1ftZIFM


