Technology 2020

A TECHNOLOGY PLAN FOR
Minneapolis Public Schools
2015-2020
TABLE OF CONTENTS

Executive Summary
Needs Assessment
  Current Practices: Instructional Technology
  Current Practices: IT Hardware, Infrastructure, and Governance
Needs Assessment Summary
Alignment with District Strategic Plan - Acceleration 2020
Goals and Strategies
  Category 1: Infrastructure
  Category 2: Devices
  Category 3: Staff Readiness
  Category 3: Staff Readiness
  Category 3: Staff Readiness
  Category 3: Staff Readiness
  Category 4: IT Governance
  Category 5: IT Support
  Category 6: Learning Spaces
Professional Development Plan
Evaluation
APPENDIX A: Technology Committee Charge Statement
APPENDIX B: Clarity Survey
APPENDIX C: District Staff Survey
APPENDIX D: District Leadership Survey
APPENDIX E: Academic Leadership Team Focus Group
APPENDIX F: Teacher Listening Sessions
APPENDIX G: Principal Interviews
APPENDIX H: Inventory & Infrastructure Audit
APPENDIX I: Organizational Successes and Opportunities for Improvement
APPENDIX J: District Strategic Plan - Acceleration 2020
References
Executive Summary

Acceleration 2020, Minneapolis Public Schools (MPS) strategic plan, was adopted September 9, 2014. This big and bold plan sets the vision for every child college and career ready, and the IT Technology Plan seeks to support Acceleration 2020. This plan was submitted to the Minnesota Department of Education (MDE) to fulfill state mandated technology plans to be in place by July 1, 2015. While MDE only requires a three year plan, this plan is a five year plan aligned with Acceleration 2020 and was board approved on June 9, 2015.

A comprehensive needs assessment engaging students, teachers, administrators, district leaders, parents, and community members was made. Substantial efforts aimed at assuring both equitable and diverse responses occurred beginning in October 2014. Upon completion of various needs assessments, a data review committee comprised of library media specialists, instructional technology teachers, and members of the Teaching and Learning department engaged in the initial data review. This data was also reviewed by district-wide stakeholders serving on the IT Strategic Planning Committee (APPENDIX A). As a result of the needs assessment review sessions, measurable goals and research-based strategies were identified. A timeline for strategy implementation and key performance indicators (KPI) for each goal were also identified. These goals, strategies, and KPIs provided the foundation for the professional development and evaluation plan.
Needs Assessment

During the 2014-2015 school year, Minneapolis Public School (MPS) conducted a comprehensive technology needs assessment using a nationally normed technology based survey tool (APPENDIX B) for principals, teachers, students and parents. Locally developed surveys collected information from other district employees (APPENDIX C & APPENDIX D). System-wide academic-based interviews (APPENDIX E & APPENDIX F) and comprehensive listening sessions (APPENDIX G) occurred across the district using the Intel BluePrint resources. Additional community outreach was facilitated through the Office of Equity and Diversity, as well as the Office of Student, Family and Community Engagement. Each of these needs assessments sought to review current practices, identify organizational successes and opportunities for improvement, and evaluate best practices and scalability structures. In addition to conducting an academic needs assessment, a comprehensive review of technical services was conducted. A summary of each of these assessments follows.

Current Practices: Instructional Technology

Current instructional technology practices were reviewed through surveys, interviews, and listening sessions.

Clarity Survey. The Clarity Survey is a research-based survey tool which uses four components: Classroom, Access, Skills and Environment (CASE) “to determine the effectiveness of technology in improving student achievement” (Clarity 3.0). Students in grades 3-12, teachers, and principals were all invited to complete the survey.
Within the Clarity survey there are five levels of proficiency with corresponding scores: Basic (800-899), Emerging (900-999), Proficient (1000-1099), Advanced (1100-1199), and Exemplary (1200-1299). The district’s aggregate CASE score of 1051 fell in the proficient range, but the individual CASE components ranged from emerging to advanced. Figure 1, below, contains an overview of each district level component and the associated level of proficiency. While, holistically Classroom and Environment scores fall below proficient, there are areas of proficiency and even advanced levels in the subcategories. Likewise, both Access and Skill holistic scores fall in the advanced range, although within each of these categories subcategories fall below advanced. For a comprehensive review of each CASE area, see APPENDIX B.

Figure 1. Minneapolis Public School District 2015 CASE Data.
In general, three significant needs emerged from the Clarity data:

- Professional development for *teacher technology skills and integration practices* in the 4Cs (communication, collaboration, critical thinking, and creativity), digital citizenship, online creation and multimedia use;
- Increased college and career readiness skills and dispositions for students through proficient use of the 4Cs (communication, collaboration, critical thinking and creativity) and digital citizenship;
- High quality infrastructure, hardware, software, and technology services aimed at increasing students’ college and career readiness skills and dispositions.

**Davis Service Center Staff Survey.** IT Services generated an internal survey for staff at the district office to communicate technology use, needs and opinions. One hundred forty-seven staff members completed the survey. When questioned about basic digital skills such as creating emails, documents and spreadsheets within Microsoft Office or Google Docs, 78% of the staff found the tasks to be moderately easy to very easy. The most significant requests for professional development were for cloud-based productivity tools (Google Drive: Docs, Sheets, Forms, Slides), the district’s learning management system (MyMPS), digital video content creation and technology integration skills.

Individuals were also asked to rate the quality of IT services, Internet speed, hardware, and software. The quality of services and Internet speed were rated considerably higher than hardware and software solutions. The quality of services and Internet speed were rated as
average, above average, or excellent by 82% and 79% of respondents respectively. On the other hand, the quality of hardware and software was rated as average, above average, or excellent by 54% and 52% of respondents respectively. Consideration should be given to phasing out custom-built web applications and moving towards more vendor supported applications as well as implementing a cycle of refresh for hardware devices. A review of the data from this survey can be found in APPENDIX C.

Academic and Operational Leadership Survey. IT Services utilized the Consortium of School Networking (CoSN) District Leadership Team Assessment which aims to “determine [our] readiness to provide effective technology leadership in our district” (CoSN). The full district leadership survey findings are found in APPENDIX D. Findings indicate the need to address readiness to support technology professional development and communities of practice. District and building leaders need technology skills and integration training so they better understand how teachers should be utilizing technology, as well as how to support teachers who are not using it appropriately.

Focus Groups, Interviews and Listening Sessions. During the fall of 2014, focus group discussions involving over 20 district academic leaders, 19 principal interviews, and 11 teacher listening sessions with 83 teachers were held by IT Services. Several themes emerged including the need for adequate resources (hardware, software, and IT services), professional development for technology skills and professional development for technology integration practices. Additional detailed information for each group can be found in APPENDIX E, APPENDIX F, and APPENDIX G.
**Equity and Diversity Impact Advisory Committee.** The Equity and Diversity Impact Advisory (EDIA) Committee is made up of representatives from several community groups who advise district leaders as they engage with the community to develop new plans and policies. On March 5, 2015, IT Services gave a presentation describing the need and process for developing the IT Technology Plan. The presentation included an overview of the strategies that IT Services used in order to obtain feedback from the various community and parent groups affiliated with MPS. IT Services, with the support of the Office of Student, Family and Community Engagement (OSFCE), put together a plan to get greater response rates by reaching out to the community through digital and paper surveys. The presentation given to the EDIA committee and a survey were translated into Hmong, Somali and Spanish.

**Current Practices: IT Hardware, Infrastructure, and Governance**

**Security Audit.** School districts house confidential student, family and district employee data. Assuring compliance with federal laws such as the Child Online Privacy Protection Act (COPPA) and the Child Internet Protection Act (CIPA) are two of many significant security considerations. A security audit was conducted that assessed Minneapolis Public Schools’ policies and practices around securing our confidential data. This audit included an evaluation of administrative controls, workstation security including antivirus and other security vulnerabilities, an external assessment of our network security from the Internet, and the physical security of our data centers, server rooms, and general building access.

**Spectrum Analysis.** IT Services provides network infrastructure and applications to support Minneapolis Public School’s business and educational needs. As a part of the needs
assessment, a district wide spectrum analysis of the network infrastructure and wireless network occurred. As a result of this analysis, the infrastructure team determined that in order to support the number of devices used in schools, we would need to increase the number of access points across the district. In addition to increasing the number of access points per building, we will also need to update data closets at each school to support an increase in the local area network (LAN) and the wide area network (WAN) due to increased traffic throughout the building as well as increased bandwidth use into and out of the buildings.

**Inventory & Infrastructure Audit.** As a part of Minnesota Department of Education (MDE) requirements, the district completed the Minnesota Education Technology Task Force (METT) Technology Infrastructure Inventory Tool. IT Services audited the number and age of devices throughout the district, the wireless coverage via access points across all district sites and the number and details around the supported applications used by the district. There are three key findings:

- Opportunities for improvement regarding the age of teacher and student devices
- Opportunities for improvement regarding wireless access coverage and bandwidth
- Opportunities for improvement regarding integration, interoperability and consolidation of MPS applications and systems

**Needs Assessment Summary**

After reviewing the comprehensive needs assessments, six broad categories were identified which align to the district’s strategic plan with a focus on accelerating student college and career readiness. The categories fall under school-level and district-level focus areas.
● School-Level Technology Focus Areas
  ○ Infrastructure
  ○ Devices
  ○ Staff Readiness

● District-Level Technology Focus Areas
  ○ IT Governance
  ○ IT Support
  ○ Learning Spaces

Figure 2. Technology Plan Illustration

The broad categories identified above are based on findings related to staff capacity, student needs, and infrastructure and hardware opportunities. Best practices in addressing instructional integration findings include the use of the Substitution, Augmentation, Modification and Redefinition (SAMR) model and use of the 4Cs (Critical thinking, Communication,
Collaboration and Creativity). A brief description of the SAMR model and the 4Cs is provided within the best practice section below.

**Organizational Successes and Opportunities for Improvement.** After reviewing all the data collected throughout the needs assessment, organizational successes and opportunities for improvement were identified. Some of the successes identified were collaboration, drive, and resiliency of staff across the district. Some of the opportunities for improvement were noted as more investment in staff digital skills, alignment, and technology resources. A full overview of this organizational review can be found in [APPENDIX I].

**Best Practices and Scalability Structures.** The intent of this plan is to utilize best practices and scalable structures to attain the goals of the plan and address the opportunities for improvement. The use of research-based practices and collaborative relationships with both the Operations and Academic divisions will be necessary to attain these goals. The Teaching & Learning Team will continue to partner with IT Services to support implementation of best practices such as the technology integration model, SAMR, ongoing job-embedded professional development opportunities related to 4Cs, and the design of end-to-end technology solutions supporting students in becoming college and career ready.

**Teaching & Learning Team (T&L).** T&L will lead technology integration professional development efforts. A focus on developing innovative and scalable solutions to address MPS opportunities for improvement while capitalizing on organizational strengths will be achieved by this team. Innovative practices could include:
- Research and produce “end-to-end” solutions to support schools in addressing equitable access as well as anytime/anywhere learning.

- Implement comprehensive delivery models for professional development based upon individual educator needs (flipped, blended, online, just-in-time through virtual professional development, institutes, webinars, live streaming, etc.).

- Support district efforts to personalize learning and provide authentic learning experiences through challenge-based and problem-based learning opportunities for students by leveraging the district learning management system, MyMPS.

- Develop communities of practice to research promising practices.

**SAMR model.** The SAMR model is designed to assist educators in evaluation of their instructional practice while incorporating technology. Using the four levels educators can move from enhancement of their instruction through substitution or augmentation to transformation of their instructional practice when engaging in modification and redefinition practices. Figure 3 below provides brief definitions for each level.

![Figure 3. SAMR Model](image)
The Partnership for 21st Century Skills identified the 4Cs as one critical component for College and Career Readiness. Figure 4 below illustrates this relationship.

Critical thinking is defined as the ability to analyze, interpret, evaluate and solve problems. Communication skill development involves the capacity to share information, express thoughts, listen for understanding and engage verbally, through the written word and through multimedia tools. Collaboration is described as the capacity to work with others, be flexible and understand your role within a team. Finally, creativity involves brainstorming, refining ideas, being responsive to other’s ideas and making ideas tangible for others. Effective technology integration practices can support the development of these skills.
Alignment with District Strategic Plan-Acceleration 2020

The Minneapolis Public Schools (MPS) Board of Education approved the district’s strategic plan, Acceleration 2020 (APPENDIX J), in September 2014. The IT technology plan is based upon information from the needs assessment and is aligned to Acceleration 2020’s six broad categories: 1.) Improved student outcomes, 2.) Equity, 3.) Family and community partnerships, 4.) Effective teachers, school leaders and staff, 5.) Stewardship, and 6.) Resources for students and schools.

Improved Student Outcomes. In order for students to graduate ready for college and career with global competencies for the 21st century, learning opportunities must be grounded in the 4Cs: communication, collaboration, critical thinking and creativity. These 4Cs are directly tied to literacy development strategies in Acceleration 2020. Engaging and relevant learning experiences supporting the development of these 21st century skills, improves student “ability to solve problems and challenges [which] enables young learners to develop the skills to enter a flexible workforce and compete in a global market” (Gresham, 2014). An integral part of the technology plan is to improve student competencies in the area of communication, collaboration, critical thinking and creativity as well as ensuring that digital citizenship is woven into their experiences with technology.

Equity. MPS values call for every student to have “equitable access to quality academic programs and the support to be successful, regardless of race, economic status or circumstance” (MPS Office of Communications, p. 8). IT Services seeks to remove barriers to technology access while promoting the school as the “unit of change.” A balance of autonomy and
accountability allows schools to design research-based plans supporting increased access to student devices with the support of the Council of 21st Century Learning.

**Family and Community Partnership.** Technology is a viable resource when improving family and community partnerships. Teaching & Learning will leverage technology based solutions such as our learning management system, MyMPS, to increase interaction with parents. For example, MyMPS provides parents a virtual look into the classroom and 24-7 classroom access to assignments and learning resources. In addition, the Twin Cities area has a rich technology sector and is home to many technology companies and rich interactive, digital and marketing sector companies. As a part of meaningful engagement with families and community, the district will partner with community resources to learn from their innovations and gain insights on how we might collaborate to accelerate student success. Leveraging relationships with these accomplished technology organizations will help bring innovative thought and technology practices directly from industry into the classroom. Utilizing the most current technology practices brings greater access to learning, provides industry perspective and better prepares all students for college and careers.

**Effective Teachers, School Leaders and Staff.** Technology can act as an accelerator when effectively integrated into instructional practice by teachers, library media specialists, school leaders, and staff. Effective integration can be measured by Dr. Rubin Puentedura’s SAMR model. When moving along this integration continuum, technology moves from enhancing learning to transforming learning. The technology plan contains goals and strategies for developing staff skills to effectively use and integrate technology.
**Stewardship.** Responsible use of IT resources requires processes and procedures to be in place to ensure aligned, collaborative decision-making. The “IT Governance” category of this technology plan outlines strategies for implementation and continuous improvement of the IT Governance Model. MPS will continue to develop the IT Governance Model that supports the district technology systems and structures.

**Resources for Students and Schools.** Finally, IT Services supports schools as the unit of change by ensuring “resources and services are allocated transparently and equitably to best meet the diverse needs of all students” (MPS Office of Communications, p.15). IT Services will ensure that devices are available to meet the needs of students and staff through a sustainable, clearly outlined cycle of refresh.

Upon review of the needs assessment information, measurable goals and research-based strategies aligning with Acceleration 2020 were identified. Through collaborative efforts across all divisions, IT services will support the district vision of every child college and career ready.

The next section contains measurable goals and research-based strategies for each category in the technology plan. IT services anticipates additional strategies may be incorporated over time and considers the technology plan to be a working document requiring ongoing review and evaluation of the goals and strategies based upon the needs of MPS students and staff.
Goals and Strategies

The following tables contain a category statement, goal, and a series of research-based strategies which can be used to achieve the goal. These strategies have a timeline for the onset of the work. Finally, each goal has at least one potential key performance indicator (KPI) which will be used to monitor growth towards the goal.

Schools are the unit of change and the district serves the schools. The six categories focus on goals at the school and district level to use technology to accelerate student success.

- School-Level Technology Focus Areas
  - Infrastructure
  - Devices
  - Staff Readiness

- District-Level Technology Focus Areas
  - IT Governance
  - IT Support
  - Learning Spaces
Category 1: Infrastructure

Students and staff have appropriate access to the Internet, wireless, and storage to meet their needs.

**Goal A:** Equitable and sufficient access for students and staff to online resources.

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Timeline</th>
<th>KPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.01 Increase wireless access by 177% to have an access point in every learning space by 2017. Current state is basic coverage (only 70% of space), and minimal device connection capacity.</td>
<td>2017</td>
<td>Bandwidth utilization reports</td>
</tr>
<tr>
<td>1.02 Refresh and upgrade 100% of the core network infrastructure by 2017 to provide sustainable and scalable service</td>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>1.03 Expand bandwidth capacity from 100Mbps/school to sufficiently meet the district need by 2020 up to 1000Mbps/school</td>
<td>2020</td>
<td></td>
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<tr>
<td>1.04 Expand Internet connection capacity from 2000 Mbps district wide up to 20000 Mbps district wide</td>
<td>2020</td>
<td></td>
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Category 2: Devices

Staff and students have reliable, appropriate technology that meets their needs

Goal B: Equitable and sufficient access to devices for students and staff.

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Timeline</th>
<th>KPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.01-Implement a full refresh cycle for all staff and student devices to address the device age as well as the need for repairs and the replacement of damaged devices.</td>
<td>Life of plan</td>
<td>Asset inventory</td>
</tr>
<tr>
<td>2.02- Expand device provision capabilities to accommodate anytime/anywhere device access for each student by 2020</td>
<td>2020</td>
<td></td>
</tr>
<tr>
<td>2.03- Define and implement hardware standards to ensure having fully capable, fit for use - fit for purpose computing devices</td>
<td>Life of plan</td>
<td></td>
</tr>
</tbody>
</table>
Category 3: Staff Readiness

Students consistently produce online content and use 21st century skills, including the 4Cs (creativity, critical thinking, collaboration, communication).

Goal C: Through professional development, the average score of Minneapolis Public School educators will move from the beginning to proficient level when integrating college and career readiness skills (4Cs: creativity, critical thinking, collaboration, communication) into practice as measured by the Clarity Survey tool, SOEI data and SAMR Rubric by the end of the 2017-2018 school year.

Goal D: Through professional development, the percentage of Minneapolis Public School educators indicating they possess the essential online skills needed to create, contribute and collaborate on the Internet will increase from beginning to proficient as measure by the 2017-2018 Clarity Survey.

Goal E: Through teacher professional development and practice, all Minneapolis Public School students will increase from proficient to advanced levels of 4Cs as measured by the 2017-2018 Clarity Survey.

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Timeline</th>
<th>KPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.01-Identify student learning targets and benchmark assessments for proficient use of 4Cs and online skills</td>
<td>2016-2017</td>
<td>MyMPS Use Clarity survey data Percent of Learning Targets embedded in MyMPS Benchmark Assessments</td>
</tr>
<tr>
<td>3.02-Research and develop learning standards aligned resources for online skills and the 4Cs across all grade levels and content areas</td>
<td>2016-2017</td>
<td></td>
</tr>
<tr>
<td>3.03-Collaborate with Teaching and Learning to integrate online skills and 4Cs into curriculum guides</td>
<td>2016-2017</td>
<td></td>
</tr>
<tr>
<td>3.04-Utilize district supported learning management system (MyMPS) to integrate 4Cs into blended and online courses</td>
<td>Life of Plan</td>
<td></td>
</tr>
<tr>
<td>3.05-In collaboration with the special education department, incorporate Universal Design for Learning (UDL) principles into all professional development courses</td>
<td>Life of plan</td>
<td></td>
</tr>
<tr>
<td>3.06-Identify strategies for differentiation to meet the needs of students with disabilities, advanced learners, and English language learners</td>
<td>Life of plan</td>
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</tr>
</tbody>
</table>
Category 3: Staff Readiness

Students know how to use technology appropriately and digital citizenship instruction is integrated into the curriculum.

**Goal F:** Through professional development, the percent of Minneapolis Public School educators indicating they are highly knowledgeable about integrating digital citizenship, a college an career readiness skill set and disposition, will increase from beginning to advanced as measured by the Clarity Survey tool, SOEI data and SAMR Rubric by the end of the 2017-2018 school year.

**Goal G:** Through teacher professional development and practice, all Minneapolis Public School students will increase from emerging to proficient levels of digital citizenship as measured by the Clarity Survey by the end of the 2017-2018 school year.

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<tr>
<th>Strategies</th>
<th>Timeline</th>
<th>KPI</th>
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<tbody>
<tr>
<td>3.07-Identify student and educator learning targets and benchmark assessments for digital citizenship</td>
<td>2015-2016</td>
<td>Clarity survey data</td>
</tr>
<tr>
<td>3.08-Design, develop, and implement blended teacher professional development courses focused on developing integrated instructional practices on digital citizenship using the SAMR Model</td>
<td>Fall 2016</td>
<td>SOEI, SAMR Rubric</td>
</tr>
<tr>
<td>3.09-Collaborate with library media specialists to integrate digital citizenship into curriculum guides</td>
<td>2016-2017</td>
<td>eCompass Courses</td>
</tr>
<tr>
<td>3.10-Utilize district supported learning management system to support integration of digital citizenship skills into all courses</td>
<td>Life of Plan</td>
<td>Exit Surveys from PD, ITEM standards (K-12)</td>
</tr>
<tr>
<td>3.11-In collaboration with the special education department, incorporate Universal Design for Learning (UDL) principles into all professional development courses</td>
<td>Life of plan</td>
<td>Benchmark Assessment</td>
</tr>
<tr>
<td>3.12 Identify strategies for differentiation to meet the needs of students with disabilities, advanced learners, and English language learners</td>
<td>Life of plan</td>
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</table>
Category 3: Staff Readiness

Staff effectively integrate technology into instructional practice, including use of the 4Cs (creativity, critical thinking, collaboration, communication) and multimedia.

**Goal H:** Through professional development, the average score of Minneapolis Public School educators will move from the beginning to proficient level when integrating college and career readiness skills (4Cs: creativity, critical thinking, collaboration, communication) into practice as measured by the Clarity Survey tool, SOEI data and SAMR Rubric by the end of the 2017-2018 school year.

**Goal I:** Through teacher professional development and practice, all Minneapolis Public School students will increase from proficient to advanced levels of 4Cs as measured by the 2017-2018 Clarity Survey.

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<tr>
<th>Strategies</th>
<th>Timeline</th>
<th>KPI</th>
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<tbody>
<tr>
<td>3.13-Identify learning targets and benchmark assessments for proficient use of 4Cs by teachers and administrators</td>
<td>2015-2016</td>
<td>Clarity survey data</td>
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<tr>
<td>3.14-Design, develop, and implement face-to-face, blended, and online professional development courses focused on developing proficient instructional practice with 4Cs for teachers using the SAMR Model</td>
<td>Fall 2016</td>
<td>eCompass Courses Exit Surveys from PD SOEI SAMR</td>
</tr>
<tr>
<td>3.15-Design, develop and implement face-to-face blended, and online professional development courses for instructional leaders and administrators to be proficient in the use of their 4Cs using the SAMR Model</td>
<td>2016-2017</td>
<td></td>
</tr>
<tr>
<td>3.16-Identify educator learning targets and benchmark assessments for multimedia skills (Edit Photo, Record/Edit Audio, Record/Edit Video, Uploading photos from Camera/Phone, Downloading music to MP3 player or Phone)</td>
<td>2015-2016</td>
<td></td>
</tr>
<tr>
<td>3.17-Design, develop, and implement face-to-face, online and blended teacher professional development courses focused on developing integrated instructional multimedia practices using the SAMR Model</td>
<td>Fall 2016</td>
<td></td>
</tr>
<tr>
<td>3.18-Design, develop, and implement face-to-face, online and blended professional development courses for instructional leaders and administrators in multimedia use while using the SAMR Model</td>
<td>2016-2017</td>
<td></td>
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<tr>
<td>3.19-Increase use of district supported learning management system (LMS) to facilitate the development of integrated practices</td>
<td>Life of plan</td>
<td></td>
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<tr>
<td>Action</td>
<td>Life of plan</td>
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<td>-----------------------------------------------------------------------</td>
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<tr>
<td>Revise learning targets and blended and online professional development practices based upon feedback.</td>
<td>Life of plan</td>
<td></td>
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<tr>
<td>In collaboration with the special education department, incorporate Universal Design for Learning (UDL) principles into all professional development courses</td>
<td>Life of plan</td>
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<tr>
<td>Identify strategies for differentiation to meet the needs of students with disabilities, advanced learners, and English language learners</td>
<td>Life of plan</td>
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</table>
### Category 3: Staff Readiness

Staff possess the essential online skills needed to create, contribute, and collaborate on the Internet.

**Goal J:** Through professional development, the percentage of Minneapolis Public School *educators* indicating they possess the essential online skills needed to create, contribute and collaborate on the Internet will increase from beginning to proficient as measure by the 2017-2018 Clarity Survey.

**Goal K:** Through teacher and staff professional development, the percentage of Minneapolis Public School *students* will increase from beginning to proficient of students reporting they engage weekly/monthly in producing online content as measured by the 2017-2018 Clarity Survey.

<table>
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<tr>
<th>Strategies</th>
<th>Timeline</th>
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<tbody>
<tr>
<td>3.23-Identify learning targets and benchmark assessments for online skill development.</td>
<td>2015-2016</td>
<td>Clarity survey data</td>
</tr>
<tr>
<td>3.24-Design, develop, and implement blended professional development courses focused on developing integrated instructional online practices (i.e. Google Drive and MyMPS) using the SAMR Model</td>
<td>Fall 2016</td>
<td>eCompass Courses</td>
</tr>
<tr>
<td>3.25-Design, develop, and implement blended professional development courses for all staff in cloud-based collaborative computing (i.e. Google Drive)</td>
<td>2016-2017</td>
<td>Exit Surveys from PD</td>
</tr>
<tr>
<td>3.26-Utilize district supported MyMPS to support integration of online skills into all courses for classroom instruction</td>
<td>Life of plan</td>
<td></td>
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<tr>
<td>3.27-In collaboration with the special education department, incorporate Universal Design for Learning (UDL) principles into all professional development courses</td>
<td>Life of plan</td>
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<tr>
<td>3.28-Identify strategies for differentiation to meet the needs of students with disabilities, advanced learners, and English language learners</td>
<td>Life of plan</td>
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</table>
Category 4: IT Governance

A clearly defined IT Governance Model supports district technology systems and structures, responsible use of IT resources, and collaborative decision-making.

**Goal L:** Fully functional IT Governance and a defined master data practice applied to district IT systems as well as best practices to address systems integration, interoperability, and mobility features.

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Timeline</th>
<th>KPI</th>
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<tbody>
<tr>
<td>4.01-Establish and fully implement IT Governance Model</td>
<td>2016</td>
<td>Change log</td>
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<tr>
<td>4.02-Establish Master Data Practice/Model.</td>
<td>2016</td>
<td>Software governance log</td>
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<tr>
<td>4.03-Assess and establish action plans for key district systems including:</td>
<td>2016</td>
<td></td>
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<tr>
<td>Financial System (ERP), Student Information System (SIS), and supporting</td>
<td></td>
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<tr>
<td>student data and assessment systems (CFS).</td>
<td></td>
<td></td>
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<tr>
<td>4.04-Kick-off implementation of action plans (enhance/replace)</td>
<td>2017</td>
<td></td>
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</tbody>
</table>
**Category 5: IT Support**

Clearly defined service levels, processes, procedures, and appropriate tools are in place to support the technology needs of the district.

**Goal M:** Implement a fully functional IT Service Management framework and continue momentum towards customer-driven IT.

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Timeline</th>
<th>KPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.01-Continue implementation of the Information Technology Infrastructure Library (ITIL) framework.</td>
<td>Life of plan</td>
<td>Change log</td>
</tr>
<tr>
<td>5.02-Create and publish an IT Service Portfolio, Service Catalog, and Service Level Agreements</td>
<td>2016</td>
<td>Software governance log</td>
</tr>
<tr>
<td>5.03-Full process mapping and implementation of new IT Ticketing system</td>
<td>2016</td>
<td></td>
</tr>
<tr>
<td>5.04-Continue momentum towards the implementation of IT Knowledge Management, creation of knowledge-base articles, and self-service options</td>
<td>Life of plan</td>
<td></td>
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</tbody>
</table>
Category 6: Learning Spaces

21st century learning spaces are designed with an eye towards building for the future.

**Goal N:** Clearly defined 21st century learning space standards that meet the needs of students and staff.

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Timeline</th>
<th>KPI</th>
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<tbody>
<tr>
<td>6.02-Yearly review of space standards.</td>
<td>Life of plan</td>
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</table>
Professional Development Plan

Successful implementation of the IT Technology Plan requires comprehensive support and professional development for staff. Efforts impacting professional development of licensed and non-licensed staff will be coordinated with the Office of Professional Development (PD) and Teaching & Learning (T&L).

**Ongoing, Job-Embedded Professional Development.** Minneapolis Public Schools (MPS) is a member of Quality Compensation (QComp) and currently utilizes a hybrid Professional Development and Professional Learning Community model called PDPLC. Each PDPLC establishes goals based upon the building’s School Improvement Plan (SIP). The SIP goals are developed after reviewing student achievement data, climate data, and a quality review. IT Services will work collaboratively with the PD and T&L departments to create and implement the professional development courses outlined in the goals and strategies section. Multiple modes of professional development delivery will utilized to provide for the needs of all staff. A combination of face-to-face, blended, flipped, and online professional development courses will be developed.

**Enhanced Collaborative Structures.** IT Services staff will work collaboratively with the PD and T&L to assist in developing professional development opportunities for all staff. An increased focus on developing flipped, blended, online professional development opportunities, and use of webinars to develop both integration and technology skills will also be utilized for training.
**Enterprise Architecture.** Currently, there are multiple applications used across the district. Efforts will be made through IT Governance to streamline and focus use of applications which will allow for more focused professional development opportunities.

**Knowledge-Base Articles.** Ongoing job-embedded training of technical support is managed through knowledge-base articles (KBAs) and in-person trainings hosted by IT Managers. KBAs will also be developed for school and department level staff to provide them with the information they need to utilize the applications available at MPS.

**Innovative, Creative Opportunities.** The Teaching & Learning department is tasked with supporting innovative, creative opportunities integrated into classrooms across the district. Examples include solutions for implementing anytime/anywhere access, design and implementation of blended online professional development courses tied to QComp, and design and implementation of flipped professional development for district leaders. Over the course of this plan, professional development efforts will focus on innovative and creative opportunities for all district employees. This includes the use of live streaming video opportunities to provide webinars and additional real-time training opportunities remotely across the district.
Evaluation

The needs assessment section identified six categories tied to the district’s strategic plan. The goals and strategies section outlined goals with research-based strategies to support goal attainment. In addition, an initial timeline for commencing these action items is recorded and suggested key performance indicators (KPI) are included for each goal. These KPIs will serve as evaluation measures.

The KPIs will be recorded and monitored using district dashboards and regular departmental reviews. Rigorous monitoring of KPIs, regular reporting of goal progress, and an annual review of survey data contributes to department capacity to adjust strategies as needed. IT Services and the Instructional Technology Team (ITT) will provide updates to the community and Board on an annual basis. IT Services is committed to Acceleration 2020’s guiding principles, including “keeping what works and abandoning failed approaches” (MPS Office of Communications, p. 5).
APPENDIX A: Technology Committee Charge Statement

Purpose/Objective
Participate in the design and development of the IT Technology Plan aligning with Acceleration 2020 and compliant with state/federal requirements.

Anticipated Time Commitment
- **First Meeting**: Thursday, February 26, 2015 from 3:30pm - 5pm in Davis Center L3-305
- **Second Meeting**: Wednesday, March 4, 2015 from 3:30pm - 5pm in Davis Center L3-305
- **Third Meeting**: Wednesday, March 11, 2015 from 3:30pm - 5pm in Davis Center L3-305
- **Fourth Meeting**: Wednesday, March 18, 2015 from 3:30pm - 5pm in Davis Center L3-305

Scope of Responsibility
1. Review needs assessment data
2. Support development of strategic plan goals and strategies
3. Support design of professional development plan aimed at short-term and long-term goals
4. Support design of evaluation plan for short-term and long-term goals
5. Make fiscally responsible recommendations

Level of Authority
- Recommendation to the CIO, COO, CAO, COS, CEO and Superintendent

Product and/or Results Desired
1. A comprehensive recommendation that identifies district goals, strategies, comprehensive professional development plan and evaluation plan.

Resources
- Gartner Organization
- Information Technology Infrastructure Library (ITIL)
- Minnesota Department of Education Technology Planning Resources
- Acceleration 2020
Membership
Facilitator: Dr. Julie Beddow-Schubert

- Principal Representative - Paul Marietta
- Teacher Representatives (HS/MS, elementary)
- Media Specialist Representative - Ashley Krohn
- IT Leadership Representatives* - Fadi Fadhil, Matt Felt, Justin Hennes
- IT Field Technician Representative - Karen McElroy
- Instructional Technology Teachers on Special Assignment - Chris Roeser, Opal Ehalt, James Stock, Bruce Maeda, Julie Alrai, Dana Nybo and Kevin Keller
- Associate Superintendent Representative - Ron Wagner
- Representative from Professional Development - David Bernard
- Representative from Research, Evaluation and Assessment - Eric Moore
- Representative from Communications - Jennifer Valley
- Representative from Teaching and Learning - Mike Lynch
- Representative from ELL Department - Muhidin Warfa
- Representative from Special Education Department - David Gorke
- Representative from Early Childhood - Maureen Seiwert
- Representative from Office of Equity and Diversity - James Burroughs, Lawrencina Oramalu
- Representations from Budget and Finance - Art Alexander, Audrey Weiler
APPENDIX B: Clarity Survey

**Who is Bright Bytes?**
Brightbytes is a learning analytics company that translates complex data and educational info fast actions to improve learning outcomes.
- We are a company of educators for educators
- We specialize in making data meaningful, engaging, and actionable
- At the core of the BrightBytes company lies its mission

“To improve the way the world learns through the use of data”

**What is the Clarity Platform?**
Clarity translates complex research and data into fast actions that drive student learning outcomes.
- Fully managed age-specific online questionnaires
- Visually-stunning, easy-to-read dashboards that identify strengths and gaps
- Content-rich reports and insights customized for all stakeholders
- Measure and report the impact of educational factors and resources on learning outcomes

**CASE Framework Overview**
Case is a research-based framework outlining the essential factors schools need in order to improve learning

BrightBytes Labs analyzes data and research from 1000’s of sources to inform and improve the frameworks that drive Clarity

Source: BrightBytes, Inc.

**NOTE:** Percentages were converted to Beginning (0-39%), Emerging (40-69%), Proficient (70-79%), Advanced (80-89%) and Exemplary (90%+)
Below are 7 reports generated by BrightBytes to show an overview of the data that was collected from the Clarity Survey that was distributed to students, teachers, and parents during the month of January & February.

**Infrastructure at Home**

*A recent Pew report states that 92% of teachers believe that access to technology and the Internet has had a major impact on instruction.*

Teachers’ and students’ access to technology both at home and at school deeply affects the learning environment. Specifically, a recent Pew report states that 92% of teachers believe that access to technology and the Internet has had a major impact on instruction.

Students who are able to access technology at home can engage in anytime, anywhere learning. However, gaps in technology access often exist. While almost all teens have access to a digital device at home, the number of people with whom the device is shared is important. Devices shared between multiple people may not always be available for learning. According to Pew, although 93% of teens have a computer or have access to one at home, 71% share that access with other family members.

Teachers who are able to access technology at home can better plan transformative instruction. Teachers who have access to computers at home are more likely to use technology frequently and thus have better technology skills. These skills are a prerequisite to the use of digital creativity, digital collaboration, digital communication, and critical thinking in the classroom. According to the 2011 US Census, close to 80% of Americans have access to a home computer, and 98% of all American homes are capable of receiving high speed Internet.

Schools and districts should create and support policies that increase access to technology at home for teachers and students. Anytime, anywhere access to technology fosters anytime, anywhere access to connected learning.
Infrastructure at School

Teachers who have difficulty getting access to high quality computers for students when needed are much less likely to plan and implement classroom activities that include digital communication, digital collaboration, digital creativity, and critical thinking.

Teachers’ and students’ access to technology at school is a prerequisite for 21st Century Learning. According to NCES, the ratio of students to computers in the classroom every day is 5.3 to 1. However, this is often not sufficient for transformative instruction to occur.

Only 48% of all Clarity teachers in the nation report that it is always easy to get access to computers when needed for class. Further only 11% of Clarity teachers across the nation rate the quality of computers and Internet access at their school as excellent. Teachers who have difficulty getting access to high quality computers for students when needed are much less likely to plan and implement classroom activities that include digital communication, digital collaboration, digital creativity, and critical thinking.

Schools and districts should ensure that all students at all schools have sufficient access to technology throughout the school day. Students are digital natives who often have better access to technology outside of school as compared to inside. This results in a digital divide between school and reality for many of today’s youth. Increasing access can bridge this gap.
Supervisory

Marzano’s research on effective schools reports that strong leadership is one of the top five school-level factors impacting academic outcomes for students.

Effective leadership and supportive policies can greatly impact the learning environment. Marzano's Research on effective schools reports that strong leadership is one of the top five school-level factors impacting academic outcomes for students.

In schools that support 21st Century Learning, leaders regularly engage teachers in observations, class visits, and discussions about best practices for teaching with technology. However, many teachers do not feel that their school is making 21st Century Learning a priority. According to a Waldon University study, only 66% of teachers feel that administrators are supportive of new technology use, yet 92% of administrators state that they are supportive of new technology use.

Rewarding and acknowledging teachers’ use of new technologies is a critical piece of the puzzle. Clarity CASE data from thousands of schools reveals that only 29% of teachers feel that they are rewarded for using technology more than half of the time. Furthermore, 17% of all Clarity teachers believe that school Internet filters thwart the learning process more than half of the time.

Creating an environment that supports and acknowledges teachers for their efforts with new technologies is necessary for transformational learning to happen system-wide.
Professional Development

Progress reports that 14 hours of high quality professional development on a single topic is needed before the classroom is impacted to a statistically significant degree.

Effective professional development for teachers can have an enormous impact on teaching and learning in an organization. However, professional development experiences for teachers must be sustained and of high quality for improved learning outcomes to be realized. Specifically, the Center for American Progress reports that 14 hours of high quality professional development on a single topic is needed before the classroom is impacted to a statistically significant degree. However, CASE data collected from hundreds of schools indicates that 79% of teachers report less than 17 hours of school-sponsored professional development around technology in the last 12 months.

Research from the International Society of Technology Education (ISTE) also reveals that high quality professional development is job-embedded, personalized, and designed to promote skill transfer. Professional learning experiences must respond to teachers’ interests, needs, and classroom settings. In many cases, these types of learning experiences can extend beyond the traditional school in-service setting to include webinars, Twitter chats, and other virtual experiences.

This type of dynamic instruction helps both teachers and students alike. A Walden University study reports that teachers who use technology frequently place the highest emphasis on using technology to promote problem-solving, critical thinking, and communication.

Being aware of teachers’ skill profiles and interests with technology can greatly inform the development of a cohesive, integrated professional development plan that will enhance student learning outcomes.
21st Century Learning

A research report from Adobe Education notes that, “In today’s world, a proficient employee needs to be computer literate, visually literate, information literate, media literate, and digitally literate.”

21st Century Learning requires organizations to meet the current requirements of our standardized tests while also striving to achieve the 4Cs: communication, collaboration, creativity, and critical thinking. The skills needed for success in college and career are becoming increasingly complex, and schools must rise to meet new demands.

New academic standards and accountability measures across the nation have broadened the classroom experiences required for proficiency. As expectations rise, students are struggling to keep up. This trend is evidenced by falling preliminary assessment scores across the nation. Traditional instruction may be to blame. In their recent investigation of 21st Century Learning, National Academies Press found that rote learning does not support the educational transfer necessary to tackle the complex problems demanded by intensified academic standards. Students must be exposed to unfamiliar problems and encouraged to design meaningful solutions. Technology is a tool for such problem solving. A national Walden University study reports that teachers who use technology frequently place the highest emphasis on problem solving.

In addition to meeting traditional academic standards, students must also be prepared to tackle the demands of a modern world and modern workforce. A research report from Adobe Education notes that, “In today’s world, a proficient employee needs to be computer literate, visually literate, information literate, media literate, and digitally literate.” According to a report from the Partnership for 21st Century Skills: “Many of the fastest-growing jobs and emerging industries rely on workers’ creative capacity - the ability to think unconventionally, question the herd, imagine new scenarios, and produce astonishing work.” Technology assists with this type of capability. Pew reports that 76% of Advanced Placement and National Writing Project teachers believe that digital tools such as the Internet, social media, and cell phones “encourage student creativity and personal expression.” In addition, the National Writing Project reports that the creation and consumption of multimedia increases the likelihood of deeper learning and longer skill retention.

Technology is a key driver towards instruction that impacts student learning outcomes, both on standardized assessments and for 21st Century Learning skills. Students must have regular opportunities to engage in the 4Cs. In addition, they must have access to the instant feedback enabled by digital assessment and customized assistive technology. Being aware of the classroom setting and the typical learning experiences afforded to students in your organization is the first step towards the cultivation of 21st Century Learning.
Curriculum

Although today’s students are digital natives with many skills in social networking, the majority of them are not social learners with the ability to apply complex technology skills to everyday challenges.

Classrooms that prepare students for college and career seamlessly integrate technology into daily instruction in a way that intentionally scaffolds students’ technology skills. Although today’s students are digital natives with many skills in social networking, the majority of them are not social learners with the ability to apply complex technology skills to everyday challenges.

Furthermore, students’ everyday experiences are seamlessly interwoven with digital devices and instant communication. In order to meet students “where they are,” technology instruction must be infused in every subject area. Teachers are aware of this trend. According to a national Pew survey, 95% of students regularly use the Internet. Given this, a modern curriculum must purposefully include incremental technology-infused skill acquisition. However, the design of every effective curriculum begins by considering the unique needs of the learners. Although students are comfortable tweeting and surfing the web, they still need support to use technology for productivity tasks such as creating spreadsheets and sending professional email.

Being aware of students’ skill profiles with technology can greatly inform the development of a cohesive, integrated curriculum that allows students to build the technology skills sets necessary for college and career.
Technology Support

Seventy six percent of teachers at schools that use Clarity agree that technology use can enhance student learning and that learning is more engaging with the use of technology.

High quality, speedy, educative technology support is the catalyst for teachers trying new instructional techniques that employ technology. These environmental factors can overcome the lack of confidence that teachers have with technology, as expressed in a 2012 LEAD Commission National survey, in which 82 percent of teachers feel they have not received the necessary training to use technology to its fullest potential in the classroom.

However, adequate technology support can assuage teachers’ trepidations. Teachers who perceive that the quality of technology support is high are more likely to try new lessons or learning activities with technology. This is because they feel confident that someone will be able to help them if a problem or disruption occurs. Seventy six percent of teachers at schools that use Clarity agree that technology use can enhance student learning and that learning is more engaging with the use of technology.

Furthermore, organizations can multiply teachers’ access to technology support through the use of student technology support teams. An article in Educational Leadership notes that involving students in teaching technology to their teachers engages “students’ innate interest in technology [and] enables teachers to contextualize technology.”

High quality, speedy technology support is a perquisite environmental factor needed to cultivate classrooms that support 21st Century Learning.
APPENDIX C: District Staff Survey

Davis Center Staff Survey invitation was sent to all educational service center staff via email.

Technology Use

9. I have used a learning management system (LMS)
   - Yes
   - No
   - I don't know what an LMS is

10. I use a social media (Twitter, Facebook, etc.) as a part of my job at the Davis Center.
    - Yes
    - No

19. I have heard of MyMPS.
    - Yes
    - No
Technology Skills

1 = I can’t do this, 2 = hard, 3 = Moderate, 4 = Easy, 5 = Very Easy
On a scale of 1-5, when thinking about your technology skills, how easy is it for you to…
2. send emails?
3. create spreadsheets?
4. use Google Drive?
5. use Google Docs?
6. use Google Sheets?
7. use Google Slides?
8. use Google Forms?

Technology Skills
Question: When thinking about your technology skills, how easy is it for you to send emails, create spreadsheets, and use Google Drive, Docs, Sheets, Slides and Forms?

Average Skill Level Across Technology Activities
Question: When thinking about your technology skills, how easy is it for you to use…

Skill Rating
1: I Can’t Do This, 5: Very Easy
Professional Development

1 = No hours, 2 = 1-8 Hours, 3 = 9-16 Hours, 4 = Average, 5 = Above Average, 6 = Excellent

On a scale of 1-6, over the last 12 months I participated in…

11. FORMAL (in-service days, summer/after school classes, mentoring, peer coaching, New Horizons training, etc.) school sponsored technology PD.

12. FORMAL NON-school (degree programs, conferences, workshops, seminars, etc.) sponsored technology PD.

13. INFORMAL (Blogs, videos, social networks webinars) technology PD.

**Hours of Professional Development**

Question: Over the last 12 months I have participated in…

---

20. Which of these applications/technology solutions would you like training?

**Requested Training**

Question: Which of these applications/technology solutions would you like training?
Quality of Technology

14. When using the school’s Internet, how often does the school’s filter prevent you from accessing websites you need for work?
   1 = All the time, 2 = More than half the time, 3 = Less than half of the time, 4 = Rarely, 5 = None of the time

![Filter Blocking Chart]

15. On a scale of 1-6, rate the quality of the technology products/services at the Davis Center for Internet Speed.
16. On a scale of 1-6, rate the quality of the technology products/services at the Davis Center for support for alleviating problems disrupting day to day work.
17. On a scale of 1-6, rate the quality of the technology products/services at the Davis Center for hardware repair.
18. On a scale of 1-6, rate the quality of the technology products/services at the Davis Center for software upgrades/updates.
   1 = We don’t have this/these, 2 = Poor, 3 = Below Average, 4 = Average, 5 = Above Average, 6 = Excellent

![Quality of Technology Products & Services Chart]
APPENDIX D: District Leadership Survey

IT Services utilized the Consortium of School Networking (CoSN) District Leadership Team Assessment which aims to “determine [our] readiness to provide effective technology leadership in our district”. We had a total of 21 district leaders complete the survey.

Strengthen District Leadership and Communications

Leadership Readiness to Strengthen Ability
to Lead and Communicate
Includes all data from questions 1 - 14 of the survey

1. We are comfortable using technology as a tool to improve our knowledge, skills, productivity and leadership effectiveness.
2. We encourage innovative ideas from principals and teachers for using technology to support student learning.
3. We use technology to communicate and collaborate within our district and beyond.
4. We collaborate to use technology as a tool for communicating, interacting and engaging with students, parents and our school community.
5. We stay abreast of issues and trends in educational technology.
6. We take every opportunity to showcase innovative technology in our work with the staff and community.
7. We benchmark other districts and networks with our peers in other districts to find out how they are putting technology to innovative use for administrative and educational purposes.
8. We have reliable sources of information about technology.
9. We understand the value of technology in terms of its costs and benefits.
10. We consider the role of technology in the educational programs and funding streams we oversee.
11. We know enough about technology to make sound educational, technical, and fiscal decisions or recommendations to the superintendent and school board.
12. Every member of our team belongs to at least one regional, state or national organization focused on technology use in education.
13. We attend at least one regional, state or national conference focused on technology use is education every year.
14. Our annual performance goals include action steps for technology leadership.

Raise the Bar with Rigorous, Transformative, & Innovative Learning & Skills
15. We explore new initiatives calling for deeper and more skillful, active and engaged learning for all students.

16. We are advocates of deeper learning and higher-level skills in our school community.

17. We participate in professional development as a leadership team to learn more about improving rigor in academic programs and developing student skills for college, career and life readiness.

18. We are taking steps to learn how to support innovation and transformative practices in our schools.

19. We are using new understandings of citizenship education and arts education to strengthen our district academic program.

20. A vision of more rigorous and skillful learning drives our decision making.
21. We work together to create innovative learning environments appropriate for the digital age.
22. Our district's curriculum engages students with challenging content, such as interdisciplinary studies, problem-based learning and collaborative projects.
23. Our district leadership team investigates the ways in which technology can help students master content and skills, take ownership of their learning, and overcome setbacks.
24. We support teachers, students and other staff members with policies that allow them to use mobile technology to learn, interact, and share ideas and resources - anytime, anywhere.
25. We offer connected learning experiences, such as “always on” Internet and mobile access to learning resources, expertise and online social learning opportunities.
26. We know where our district is and where it needs to be in terms of developing a technology infrastructure, policies and practices to achieve district goals.
27. We revise our district technology plan annually to ensure that our technology infrastructure and network are “future ready.”
28. We provide principals and teachers with professional development that strengthens their instructional leadership and pedagogical skills to personalize instruction and make learning more relevant.
29. Professional development in our district supports teachers in making instructional shifts and using technology to improve knowledge and skills expected of students.

30. Our district provides teachers with formal and informal time to collaborate and experiment with innovative approaches to teaching and learning.

31. Our district hosts a community (or communities) of practice and requires every educator to participate in one.

32. Every educator in our district participates in an online community of practice to connect and learn from their peers outside.

33. We collaborate as a leadership team to determine whether educators have the digital tools they need to collaborate with their peers.

34. We model compelling pedagogy in face-to-face and online environments.
35. We stay abreast of emerging issues and trends in student assessment.
36. Our district’s assessment system includes formative, interim, summative, and alternative assessments, including digital assessment.
37. We are collaborating with higher education institutions, assessment experts or other districts to create technology-based formative assessments.
38. We encourage teachers in our district to explore ways in which they can incorporate formative assessments into classroom instructions and provide students with meaningful feedback.
39. Educators in our district use assessments that measure both core subject mastery and critical skills.
40. Teachers in our district make the most of digital assessments, such as those embedded in learning or content management systems, digital textbooks, and educational games.
41. We use technology to understand data and inform our decisions.
42. We support teachers in understanding the best uses of different types of assessments.
43. We support administrators and teachers in making sense of assessment data and using it to improve and differentiate instruction.
APPENDIX E: Academic Leadership Team Focus Group

The Academic Leadership Team (ALT) was asked to provide input for the IT Strategic Planning process by brainstorming ideas for improving technology throughout the district. Their ideas fell under six main categories including Human Capital, Systems & Applications, Equity & Diversity, Data, Practice, and IT Support Services.

Practice, Policy, & Processes

- **Governance**
  - Compliance with Federal, Local and State requirements
  - Development of long term processes
  - Prioritization of work
  - Development of work plans/resource needs
  - Strategic plans for software and instructional technology
  - Flexibility
  - Quality Controls
  - Transparent purchase and replacement cycle
  - Site level technology inventory
  - Portfolio review to ensure we have the correct systems/devices for our need
  - Clear roles & responsibilities with funding and redundancy and a transition process

- **Support**
  - Clarity around eTicket expectations
  - Speed up eTicket process
  - Guarantee of a timely response as a norm
  - On call support (human, i.e. programmer) for Discovery, CFS, Destiny, etc.
  - Service Delivery system needs to be 24 hours vs. 8-5

- **Communication**
  - Single point of contact with IT
  - District Tech Committee to break down silos
  - Regular communication for planning between academics and IT

Technology Skills

- Ongoing on-boarding and training opportunities
- Increase the number of devices and training (3-4 computer per classroom)
- The bandwidth to support/allow large scale web based evaluations and professional development
- Increase the amount of online professional development opportunities and training modules
- Training for clerical staff
  - Need more capacity with technology
  - Common practices/up to date
Clear ownership for scheduling support
Clear roles – who owns data integrity
- Student Use policy – Leverage phone, etc. Equity.
- MN common course catalog
- Understanding what is already in place
- Instruction and Technology
- Model classrooms with integrated technology
- Establish standards of effective instruction with technology
  ▪ What is the expectation?
  ▪ What support is available?
- More interactions with families technology wise
  - Right skills for our needs

**Systems & Applications**
- Advanced Capabilities for assessments and benchmarking using data and technology
- Interoperability (within district and beyond district i.e. state and federal entities)
- More technology resources for improved teaching the classroom (hardware, software & infrastructure)
- Scan system for students participating in Gear-Up (Attendance Tracking)
- Enhanced elementary report card
- Adaptive technology
  - Discovery
- Enhanced capabilities for tracking and using data
- Support to fix problems
- Software Updates
- Restore ability to “push” software to devices
- More software system updates
- Hardware/software should be ready to go on Day 1
- Single Sign On
- Equitable software and hardware
- Language Services
- Translation of all report for ESL families
- Fund Language Line and automated translation technology
- World language labs – for listening and speaking
- Labs with parent access to learn English (etc.)

**Data**
Themes in this category include improving upon the collection, storage and use of data across the district.
- Central database to house all district data
- Integration of data across systems and applications
- Ability to utilize real time data
- Sophisticated data analysis
- Clean Data
  a. Edits/Audits
b. Regular data integrity checks/tests

c. Accurate input of data into Discovery
   - LEP and immigration count
   - Improved reporting practices
   - Improved behavior and incident data collection (required by Office of Civil Rights)
     - Title VII Count
     - Special Education DEC 1 counts’
APPENDIX F: Teacher Listening Sessions

The Instructional Technology team opened an invitation to teachers to spend 30-45 minutes discussing technology use and needs within the classroom. The invitation was sent to the principal distribution list and was also included in one edition of the weekly Principal Newsletter. The principals were asked to share the invitation with their staff and reach out to IT Services if their staff is interested in scheduling a listening session. 12 total groups participated in a listening session with input gathered from 86 teachers. The questions asked throughout the interview follow.

1. What grade levels and subjects do you teach?
2. What educational technology resources do you use while planning, teaching and assessing in your classroom?
3. What educational technology resources do you currently use to meet your SIP or PDPLC goals?
4. What educational technology resources do you wish you had to meet your SIP or PDPLC goals?
5. How have your students’ responded to the use of educational technology in your classroom?
6. What kind of PD would you like to participate in as it relates to educational technology?
7. What supports have you been offered to help you learn about and start using technology in the classroom?
8. What kinds of challenges and barriers have you encountered with using educational technology in the classroom?

**Technology**

<table>
<thead>
<tr>
<th>Top Technology Used by Teachers</th>
<th>Top Technology Requested by Teachers</th>
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<tbody>
<tr>
<td>1. CFS</td>
<td>1. iPad</td>
</tr>
<tr>
<td>2. Google Drive</td>
<td>2. Laptop</td>
</tr>
<tr>
<td>3. Destiny</td>
<td>3. Chromebook</td>
</tr>
<tr>
<td>5. Naviance</td>
<td>5. Project Lead the Way</td>
</tr>
<tr>
<td>6. Youtube</td>
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</table>
Challenges

- What kinds of challenges and barriers have you encountered with using educational technology in the classroom?

1. Inadequate Technology
   - a. Devices do not work
   - b. Blocked by disconnect between systems
   - c. Aged Technology; software no longer updated or supported
   - d. Unable to access sites, systems, and/or data
   - e. Too many logins

2. Insufficient Resources
   - a. Not enough devices for students
   - b. Not enough space on ipads
   - c. Not enough infrastructure resources to support the speed needed
   - d. Not enough budget for technology

3. Lack of IT Support
   - a. Not enough IT staff members in building to respond in timely manner
   - b. Frustration with the tediousness of the ticketing system
   - c. Confusion on how to utilize technology
   - d. Confusion on the processes they should use

4. Lack of District Support
   - a. There is a disconnect between the District and Schools
   - b. Confusion on who controls and makes technology decisions

Students Response to technology

- How have your students’ responded to the use of educational technology in your classroom?

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
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</thead>
<tbody>
<tr>
<td>1. Engaging</td>
<td>1. Frustration and time lost when technology is slow or not working properly</td>
</tr>
<tr>
<td>2. Development of Technical Skills for the Future</td>
<td>2. Difficult to monitor use</td>
</tr>
<tr>
<td>3. Teamwork &amp; Leadership</td>
<td>3. Lack of Enough Technology in the classroom</td>
</tr>
<tr>
<td>4. Individualized Learning</td>
<td>4. Lack of continuity of learning for children without access at home</td>
</tr>
<tr>
<td>5. Continuity of Learning for Children with Access at Home</td>
<td></td>
</tr>
<tr>
<td>6. Independence</td>
<td></td>
</tr>
<tr>
<td>7. Deeper Comprehension</td>
<td></td>
</tr>
</tbody>
</table>
Teacher Support

- **What supports have you been offered to help you learn about and start using technology in the classroom?**

When asked about support the teachers have been offered:

- Many stated the technical training opportunities (Google Drive, Discovery, IWB, etc).
- However, there were many statements about confusion around what trainings are offered.
- May stated that they rely on their Media Specialist and wish they had more “experts” in the schools.
- They stated that they are spread thin and do not see any consistency between the “districts wants and just getting through the day”

Professional Development

- **What kind of PD would you like to participate in as it relates to educational technology?**

Overarching theme was to have more training on implementation of technology.

<table>
<thead>
<tr>
<th>Instructional Strategies</th>
<th>Top Categories of PD Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Course Building</td>
<td>1. Interactive White Board</td>
</tr>
<tr>
<td>2. Course Management</td>
<td>2. Google Drive/Google Docs</td>
</tr>
<tr>
<td>3. Station Rotational Behavior Management</td>
<td>3. iPad</td>
</tr>
<tr>
<td>5. Student response system (Formative Assessment)</td>
<td>5. Basic Computer Troubleshooting</td>
</tr>
<tr>
<td>6. Advanced Implementation</td>
<td>6. MyMPS</td>
</tr>
</tbody>
</table>
APPENDIX G: Principal Interviews

The Instruction Technology Team met with 19 School Principals from eight Elementary (or PreK-8), five Middle, and six High Schools. The interview was conducted using the Intel BluePrint Tool.

### Instructional Practices

<table>
<thead>
<tr>
<th>Building Focuses</th>
<th>What’s Working</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. RTI</td>
<td>1. Blended learning in pockets</td>
</tr>
<tr>
<td>2. Differentiation</td>
<td>2. Flipped learning in pockets</td>
</tr>
<tr>
<td>4. Blended Learning</td>
<td>4. Technology resources are in schools and are well utilized in many places</td>
</tr>
<tr>
<td>5. STEM</td>
<td></td>
</tr>
<tr>
<td>6. Project Based Learning</td>
<td></td>
</tr>
<tr>
<td>7. Arts Integration</td>
<td></td>
</tr>
<tr>
<td>8. AVID</td>
<td></td>
</tr>
</tbody>
</table>

### Challenges

1. **Inadequate Technology**
   a. Equity with other schools- particularly those with 1:1 devices (*Most schools indicated desire for 1:1*)
   b. Technology not in place to utilize curriculum guides: need Promethean boards
   c. Special Ed programs lacking technology hardware
   d. Refresh cycle - tech getting old and don’t know where new tech is coming from
   e. Laptops for all staff
   f. eTicket system - needs not always getting met, and not consistent understanding of tech support
   g. Testing needs (MCA, MAP, OLPA, benchmarks)
      i. takes up time that could be used for content and creativity
      ii. Not enough lab space for testing
      iii. benchmarks in CFS time consuming

2. **Curriculum**
   a. Want software access to differentiate: ex. Empower3000, Compass Learning
      i. not sure how to get new apps or access to apps
   b. Curriculum guides needs:
      i. CG strategies for EL not comprehensive
      ii. how to differentiate for advanced learners
   c. Lack of at-home access for FL that requires digital curriculum

3. **Alignment**
   a. tech committee not part of ILT
   b. technology is included in SIP
   c. Many different initiatives coming at schools
   d. Desire for Tech & T&L to be integrated and aligned

4. **Teacher Training**
a. Sometimes technology is placed in buildings without training: Promethean, Smart, Laptops, iPads
b. Technology being used, but not high on SAMR
c. New teachers lacking “basic skills”

5. Principal Professional Development Needs
   a. desire to have principal meetings “flipped” with more electronic resources - too much time spent away from buildings for PD
   b. want to understand SAMR model
   c. How to use technology to accelerate learning

Professional Development
Overarching theme was to have more training on implementation of technology tailored to a building’s individual needs.

<table>
<thead>
<tr>
<th>Instructional Strategies</th>
<th>Software &amp; Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. “how to” integrate technology for: enhanced learning, alignment to standards, assessing student learning</td>
<td>1. Gradebook/Discovery</td>
</tr>
<tr>
<td>2. Awareness of what is “out there” for technology, software, iPad apps, etc</td>
<td>2. CFS</td>
</tr>
<tr>
<td>3. New teachers lacking basic skills</td>
<td>3. eCompass</td>
</tr>
<tr>
<td>4. How to provide “flipped PD” for their building teachers</td>
<td>4. Websites</td>
</tr>
<tr>
<td>5. Technology for differentiation, project-based, standards driven</td>
<td>5. Promethean/SMART</td>
</tr>
<tr>
<td></td>
<td>6. Laptops</td>
</tr>
<tr>
<td></td>
<td>7. iPads</td>
</tr>
</tbody>
</table>
APPENDIX H: Inventory & Infrastructure Audit

IT Services utilized the Minnesota Education Technology Task Force (METT) Technology Infrastructure Inventory Tool provided by the Minnesota Department of Education to capture the amount of devices currently in the district and their approximate age. This tool helps us to meet the state planning requirements for funding opportunities. The inventory tool included information about infrastructure, devices, and funding. In addition to this inventory tool, we also audited our systems and applications.

<table>
<thead>
<tr>
<th>Age of Devices (in Months)</th>
<th>0-36</th>
<th>37-72</th>
<th>73+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Devices</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desktops</td>
<td>5,189</td>
<td>3,168</td>
<td>2,340</td>
<td>10,697</td>
</tr>
<tr>
<td>Percentage of Student Desktops by Age</td>
<td>49%</td>
<td>30%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>Laptops</td>
<td>590</td>
<td>2,210</td>
<td>1,830</td>
<td>4,630</td>
</tr>
<tr>
<td>Percentage of Student Laptops by Age</td>
<td>13%</td>
<td>48%</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>Chromebooks</td>
<td>2,800</td>
<td>0</td>
<td>0</td>
<td>2,800</td>
</tr>
<tr>
<td>Percentage of Student Chromebooks by Age</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Tablets</td>
<td>10,580</td>
<td>3,830</td>
<td>0</td>
<td>14,410</td>
</tr>
<tr>
<td>Percentage of Student Tablets by Age</td>
<td>73%</td>
<td>27%</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

![Student Devices by Age Diagram](image)

Total Student Devices: 15,327
### Teacher Devices

<table>
<thead>
<tr>
<th>Age of Devices (in Months)</th>
<th>0-36</th>
<th>37-72</th>
<th>73+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teacher Devices</strong></td>
<td></td>
<td></td>
<td></td>
<td>3,990</td>
</tr>
<tr>
<td>Desktops</td>
<td>1,810</td>
<td>444</td>
<td>0</td>
<td>2,254</td>
</tr>
<tr>
<td>Laptops</td>
<td>1,146</td>
<td>550</td>
<td>40</td>
<td>1,736</td>
</tr>
</tbody>
</table>

**Percentage of Teacher Desktops by Age**: 80% 20% 0%

**Percentage of Teacher Laptops by Age**: 66% 32% 2%

### Administrative/Staff Devices

<table>
<thead>
<tr>
<th>Age of Devices (in Months)</th>
<th>0-36</th>
<th>37-72</th>
<th>73+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Administrative/Staff Devices</strong></td>
<td></td>
<td></td>
<td></td>
<td>1,991</td>
</tr>
<tr>
<td>Desktops</td>
<td>634</td>
<td>153</td>
<td>40</td>
<td>827</td>
</tr>
<tr>
<td>Laptops</td>
<td>914</td>
<td>250</td>
<td>0</td>
<td>1,164</td>
</tr>
</tbody>
</table>

**Percentage of Admin/Staff Desktops by Age**: 77% 19% 5%

**Percentage of Admin/Staff Laptops by Age**: 77% 23% 0%
Infrastructure

Access Points Across the District
Total number of access points needed: 4,787

- Desired: 64%
- Current: 36%

Applications

Vendor Applications vs. MPS Applications
Total number of applications: 141

- Vendor: 30%
- In House: 70%
### APPENDIX I: Organizational Successes and Opportunities for Improvement

#### ORGANIZATIONAL SUCCESSES

**Themes**

- Student Collaboration at least monthly online
- There is an interest/excitement in technology tools and innovation
- Classrooms have what they need to be successful
- Staff available to lend work for tech vision
- LMS/Content Authoring tool available to all learners
- Collaboration between IT and other departments to help lead technology initiatives
- The staff are resilient & ready for change. They keep pressing on and adapting

**Observations made by Committee Member**

| “At least half of students report monthly online collaboration” | “Fairly responsive system” | “Excitement/interest in using/exploring tech / tech tools.” |
| “Wide variety of systems to support technology needs” | “Organization is resilient & adapts to changes/situation. Ex. sites make their mobile devices work to meet multitude of uses (CFS, MAP, etc.)” | “Integration support” |
| “Good systems support and customer service from IT team” | “Identification of opportunities & challenges” | “Academic and IT team have expertise in technology comparable to other districts” |
| “Ability to PERSEVERE. Keep pressing in the face of challenge” | “Room for innovation” | “ITT has started a collaboration with some content leads to develop blended/flipped learning” |
| “Flexible/adaptable” | “Teacher & staff ready for more PD” | “Strategic collaboration with REA!!” |
| “Content authoring available” | “LMS available” | “We have an LMS” |
| “Great staff (EL, T&L, IT, SPED) to help lead work for MPS tech vision” | “Dedicated staff” | “District desire to move closer to 1:1” |
| “Good infrastructure foundation” | “IT representation on ALT” | “Teacher/admin hardware is up to date” |
| “We provide many labs” | “Plans to improve infrastructure” | |
| | “Classroom package setup is nearly 100%. Each classroom has 5 essential techs” | |
**ORGANIZATIONAL OPPORTUNITIES FOR IMPROVEMENT**

**Themes**
- Clear communication/transparency
- Inadequate devices & technology
- Refresh cycle
- PD & teacher skill development
- Alignment of strategies across the district
- Sustainable funding

**Observations made by Committee Members**

<table>
<thead>
<tr>
<th>Observations</th>
<th>Observations</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Not leveraging community partnership to increase technology capability/reach</td>
<td>“Labs are often used for testing any may limit access for other needs”</td>
<td>“Inequitable access across district”</td>
</tr>
<tr>
<td>capability”</td>
<td>“Students need better access to up to date technology”</td>
<td>“Our students are not digitally capable. Why? Teaching or Resources?”</td>
</tr>
<tr>
<td>“Student devices are old or locked in labs”</td>
<td>“Funding of devices for students”</td>
<td>“Refresh cycle”</td>
</tr>
<tr>
<td>“Funded refresh cycle”</td>
<td>“Clear funding”</td>
<td>“Sustainability plans”</td>
</tr>
<tr>
<td>“Cycle of replacement need to be more robust &amp; back in place”</td>
<td>“Spots of ‘positive use’”</td>
<td>“No comprehensive plan, strategy of vision that aligns Academic &amp; Technology</td>
</tr>
<tr>
<td>“Communication”</td>
<td>“Lack of coherent tech roadmap/vision (where is it in Acceleration 2020?)”</td>
<td>roadmaps”</td>
</tr>
<tr>
<td>“Alignment across departments on what, when &amp; how to deploy tech &amp; applications”</td>
<td>“System integration”</td>
<td>“Comprehensive plan &amp; direction. → Roadmap”</td>
</tr>
<tr>
<td>“Get aligned with school schedules &amp; predictable patterns of need”</td>
<td>“General apprehension of district provided tech &amp; tools”</td>
<td>“Not enough support from district leadership”</td>
</tr>
<tr>
<td>“the framework &amp; Discovery system for data is not flexible for adding fields or updating new requirements”</td>
<td>“76% of teachers spend less than 3 hours/year on digital citizenship. Suggests lack of understanding/impact.”</td>
<td>“Rebuild our expert technology pool to help ensure equipment is ready &amp; used as soon as its purchased”</td>
</tr>
<tr>
<td>“Need more PD and onboarding for apps like Discovery &amp; CFS”</td>
<td>“Teacher integration skills”</td>
<td>“Teachers tech skills need to be improved”</td>
</tr>
<tr>
<td>“Not enough int. support”</td>
<td>“Gap - huge deficit with PD for teachers &amp; building leaders on how to maximize technology to improve student learning &amp; increase teacher efficiencies”</td>
<td>“Teacher 4C skills lacking”</td>
</tr>
<tr>
<td>“Ongoing PD for all groups”</td>
<td>“Many do not know what an LMS is may not be using it”</td>
<td>“PD aligned to what teachers/staff need”</td>
</tr>
</tbody>
</table>
APPENDIX J: District Strategic Plan - Acceleration 2020

The district Strategic Plan was approved by the Minneapolis Public Schools Board of Education in September of 2014.

**Acceleratio**

**2020**

**Our Mission**
We exist to ensure that all students learn. We support their growth into knowledgeable, skilled and confident citizens capable of succeeding in their work, personal, family, and community lives into the 21st century.

**Our Vision**
Every child college and career ready

**Our Values**
- Children first
- Right to quality education
- Importance of family
- Equity
- Diversity
- Respect for employees
- Partnership for youth
- Transparency and accountability

**Our Theory of Action**
Schools as the Unit of Change

- 5 percent annual increase in students meeting or exceeding state standards in reading and math
- 8 percent annual increase meeting or exceeding standards in reading and math for our lowest performing students
- 10 percent annual increase in the 4-year graduation rate
References


Common Sense Media. Introduction to the 4Cs. Video retrieved from https://www.commonsensemedia.org/videos/introduction-to-the-four-cs


MPS Communications documents