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Cohort 17 – Entry: Summer 2014

Capstone Proposal

Leveraging iPads to Increase Student Engagement in the Elementary Classroom

**Setting/Context:**

The proposed capstone will occur at Buford Elementary School, which is located in the northern part of Gwinnett County. The Buford City School system has a long-standing reputation as one of the premier school systems in the state of Georgia. Part of the success of Buford City Schools can be attributed to the foundations afforded to students at Buford Elementary School. Serving approximately 630 economically and culturally diverse kindergarten and first grade students—with 51% of the student population qualifying for free and reduced lunch—the primary mission of Buford Elementary is to ensure that all students leave poised to become productive and lifelong learners (BES School Profile, 2014, p. 3).

The administration of Buford Elementary places high importance on technology in the classroom, and a diverse selection of technology can be seen in all classrooms. The teachers of Buford Elementary are fortunate to have three to five student desktops, one teacher laptop, Mimio Teach Interactive Systems, and a black and white laser printer in every classroom. To supplement this technology rich classroom environment, the administration of Buford Elementary sought to provide all classroom teachers with five iPad minis in the fall of 2014. The intended goal of this capstone project is to educate the teachers of Buford Elementary School through a targeted professional development series, the emphasis of which will be teaching best practices and utilization strategies for using the iPad minis to reach the greatest classroom potential. The intended outcome of this series is to increase levels of student engagement in the classroom. The leadership of Buford Elementary is aligned with the goals of this capstone project and its associated professional development series. The shared hopes are that students, teachers, and daily classroom instruction will be positively affected as a result of its implementation.

**Capstone Problem and Rationale:**

The iPad saw widespread commercial release in the spring of 2010 (Costello, 2012). A seamless union of form factor, software design, and hardware, the iPad quickly ushered in the age of mobile computing. Soon after its release, school systems were anxious to put these devices in the hands of students and teachers. Among those systems was Buford City Schools.

In the fall of 2010, Buford City Schools' leadership orchestrated a site visit to Greater Atlanta Christian School—a nearby private school in Gwinnett County—to begin developing an understanding of the union of Apple technologies with existing network infrastructures. Through collaboration with the Buford City Schools Board of Education and the team at Apple, the leadership of Buford City Schools was able to begin integrating limited iOS device access into the schools in the fall of 2011. Several different iterations of iOS devices have cycled through Buford Elementary; over the course of the last four years, teachers have seen the gradual shift from iPod touches to the iPad 1 and iPad 2 models. Access to these devices has been predominately a one cart per pod basis. In the fall of 2014, the leadership of Buford Elementary was able to provide each classroom teacher with five iPad minis.

There is a common tendency for teachers to use technology in minimalistic drill and practice ways, or worse, as a reward or privilege (Creighton, 2003, p. 16). In the last four years, Buford Elementary has seen four different iterations of iOS devices. The multiple device iterations, limited access, and the lack of a mobile device management system have been contributors to the minimal use of iOS devices at Buford Elementary. With increased classroom device access, a newly developed functioning mobile device management system, and a finalized volume purchasing program plan, Buford Elementary is poised to begin reaching the full potential of the iPad and begin moving towards new levels of student engagement.

Much can be said about the educational benefits of using iPads in the classroom. One of the key affordances that iPads offer classroom teachers is the ability to quickly differentiate learning opportunities. Milman, Carlson-Bancroft and Boogart (2014) state that iPads allow “teachers to capitalize on their students’ different learning styles” (p. 125). Additionally, Fisher, Lucas and Galstyan (as cited in Falloon and Khoo, 2014) found that a key advantage of the iPad is that it supports “transition back and forth from private to public work spaces” (p. 14). The mobility of the iPad and the ability of apps to quickly differentiate content based on user ability level allow students with a diverse set of learning needs to “receive differentiated content without the stigma that might be associated with it” (Milman et al., 2014). A strong argument can be made that leveraging a well selected iPad app’s quick ability leveled content delivery with the mobility of the iPad undoubtedly increases differentiated learning opportunities in the classroom.

Another key benefit that the iPad brings to the classroom is that it opens the door to increased student collaboration. According to Kadel (2008), “student collaboration in the use of technology is more effective in influencing student achievement than strictly individual use” (p. 3). The implications here suggest that if your school falls short, as many do, when it comes to full 1:1 device implementation, that this isn’t a hindrance. In fact, according to Kearney, Burden, and Rai (2015), “whilst relatively few teachers are working in contexts where every student has a personal device, the shared use of such technologies still supports relatively high levels of conversation, content creation, and sharing” (p. 56). Further, the work of Simpson, Walsh, and Rowsell (2013) suggests that in the case of reading instruction, the use of iPads promotes collaboration of students with mixed reading ability levels (Simpson et al., 2013, p. 128). This finding alone is an indicator of the iPad’s collaborative affordances. Finally, the work of Murray

and Olcese (2011) suggest the skill of socially constructing and negotiating knowledge through collaboration is a key skill for 21<sup>st</sup> century learners and that, “collaboration in ways that take advantage of the iPad hardware and operating system capabilities could support 21<sup>st</sup> century skills” (Murray & Olcese, 2011, p. 48).

The evidence suggests that the collaborative, mobile, and differentiation affordances that the iPad grants teachers are a powerful set of tools. Further, Kucirkova, Messer, Sheehy, and Fernandez (2014) assert, “that if iPad apps can support activities in which children participate at various levels of difficulty and also allow them to be self-expressive and creative, then these apps have the potential to be highly engaging and educationally powerful tools” (p. 183). Kucirkova et al. (2014) go on to recommend that teachers should utilize apps with open-ended content accomplishments and recommend, “that teachers focus on selecting apps that facilitate children’s creativity and collaboration with peers” (p. 183). They suggest that teachers’ use of these types of apps can raise engagement levels and are indicators of increased educational value.

In the five years since the iPad’s commercial release, the teachers of Buford Elementary have seen multiple iOS device types, multiple iPad iterations, and the gradual transition from a small handful of pilot classrooms to a fully implemented mobile device management system aligned with a volume-purchasing plan; I believe these factors and this continuous change have contributed to the teachers’ use of the iPads in primarily drill and practice and reward capacities. Further, a recent study conducted by Kearney et al. (2015) suggests, “that regardless of experience teaching with mobile devices, professional development is needed to help tailor teachers’ pedagogical thinking to new mobile learning environments” (p. 56). The findings here validate the importance of this capstone project. The primary goal of this project is to stimulate a

more Constructivist approach to utilizing classroom iPads. Through a targeted series of professional development sessions, underpinned by turnkey activities and an easy to use support webpage, I want to begin encouraging teachers to explore the collaborative aspects and the differentiation and project-based learning opportunities that the iPad can afford their classrooms, thus ultimately raising their students' levels of engagement with the curriculum.

### **Project Description**

The goal of this capstone project is to produce a series of professional development sessions to help teachers move away from drill and practice and reward usages of their classroom iPads. Throughout the 2015-2016 school year, both embedded professional development and optional before school professional development sessions will be provided for both teachers and paraprofessionals at Buford Elementary. The professional development series will consist of four different themes, and each of these topics will be further subdivided into basic and advanced level classes. In addition to the professional development sessions, the offer of optional individual coaching sessions will be extended to teachers in need of additional assistance. The basics sessions will be a beginner's overview of the classroom tool, while the advanced sessions will delve further into the classroom tool and have a turnkey classroom activity or classroom strategy to put into play. For teachers needing additional support, or those who find group sessions and/or individual coaching sessions a poor fit for their learning style, a supplemental support website will also be created for teachers to utilize in their learning. In order to gauge the impact of the professional development series, multiple pre- and post-assessment surveys will be created and delivered to faculty to evaluate the project's effectiveness and determine project outcomes.

**Objective:**

In the spring of 2015, [Osmo](#) virtual manipulative kits were purchased with Title 1 funds and provided for all of the first grade team at Buford Elementary and a handful of kindergarten teachers. These teachers have expressed interest in the exploration of the content creation aspects of the [Osmo](#). The session objectives are to familiarize teachers with the basic concepts of [Osmo](#) and to begin exploring creative ways to produce content for daily classroom use to increase classroom engagement and collaboration. Additionally, recent 2015 Saturday School student evaluation survey data supports the need of the [Osmo](#) sessions. Of the 73 distributed surveys, 20 students (27%) indicated that the iPad or use of the [Osmo](#) kit was their favorite thing about Saturday School. Further, 6 out of 23 (26%) distributed surveys to a Saturday School classroom with [Osmo](#) access indicated that the [Osmo](#) over the iPad was the students' favorite thing about Saturday School. Teacher and student feedback indicate a need for increased [Osmo](#) professional development. See Appendix A for sample Saturday School student responses.

| PLC Session Theme/Focus  | Deliverables/Artifacts   | Additional Information  |
|--|--|---|
| <p><b>Osmo Basic Concepts</b><br/>(Teacher Session) (1 Hour)<br/>(i.e. account creation and exploration of the various Osmo apps)</p> <ul style="list-style-type: none"> <li>- <a href="#">Words for Osmo</a></li> <li>- <a href="#">Tangrams for Osmo</a></li> <li>- <a href="#">Newton for Osmo</a></li> <li>- <a href="#">Masterpiece for Osmo</a></li> </ul> | <p>Draft PLC Agenda and Proposal to Administration and (15 minutes)</p> <p>Coaching Journal Reflection(s) (30 minutes)</p> <p>Google Slides Presentation Materials</p> <p>Quick Start Handout</p> <p>Support Webpage</p> <p>Pre- and Post-Assessment Surveys and Survey Data</p> | <p>Optional Individual Coaching Sessions extended to teachers (1 hour minimum)</p> <p>The design of the class, presentation materials, quick start handout, screencast editing, and webpage programming will take approximately (5 hours).</p> <p>The assessment and synthesis of pre- and post-survey data will take approximately (1 hour).</p> |

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| <p><b>Osmo Advanced Concepts</b><br/>(Teacher Session) (1 Hour)<br/>(i.e. content creation and classroom activity suggestions and examples)</p> <ul style="list-style-type: none"> <li>- Public versus private gallery content</li> <li>- Synonyms and antonyms</li> <li>- Word problems and spelling</li> <li>- Number words</li> <li>- Fill in the blank</li> <li>- Using story vocabulary</li> <li>- Collaboration suggestions</li> </ul> | <p>Draft PLC Agenda and Proposal to Administration and (15 minutes)</p> <p>Coaching Journal Reflection(s) (30 minutes)</p> <p>Quick Start Handout</p> <p>Google Slides Presentation Materials</p> <p>Support Webpage</p> <p>Pre- and Post-Assessment Surveys and Survey Data</p> | <p>Optional Individual Coaching Sessions extended to teachers (1 hour minimum)</p> <p>The design of the class, presentation materials, quick start handout, screencast editing, and webpage programming will take approximately (5 hours).</p> <p>The assessment and synthesis of pre- and post-survey data will take approximately (1 hour).</p> <p>Eligible 2015-2016 School Year Dates for embedded professional learning:<br/>09/04/15, 10/15/15, 10/16/15, 02/18/16, 02/19/16, 03/14/16, 03/17/16, 03/18/16</p> <p>Eligible 2015-2016 School Year Dates for before school optional professional learning: to be determined.</p> |
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**Objective:**

On January 6, 2013, I delivered a [Nearpod basics professional development session](#) to teachers that piqued their interest in utilizing [Nearpod](#) in their classrooms. At the end of the session, teachers expressed interest in having an advanced class to further explore [Nearpod](#) strategies in the classroom. Much time has passed, and my new objective is to repackage the [Nearpod](#) basics class and create an advanced class. This will introduce [Nearpod](#) to new faculty members, reacquaint teachers who had the 2013 training, and also fulfill the teachers’ request for an advanced [Nearpod](#) class.



| PLC Session Theme/Focus   | Deliverables/Artifacts   | Additional Information   |
|---|--|--|
| <p><b>Nearpod Basic Concepts</b><br/>(Teacher Session) (1 Hour)<br/>(i.e. free account creation, exploring different response types, mechanics of logging students onto an active session)</p>  | <p>Draft PLC Agenda and Proposal to Administration and (15 minutes)</p> <p>Coaching Journal Reflection(s) (30 minutes)</p> <p>Google Slides Presentation Materials</p> <p>Quick Start Handout</p> <p>Support Webpage</p> <p>Pre- and Post-Assessment Surveys and Survey Data</p> | <p>Optional Individual Coaching Sessions extended to teachers (1 hour minimum)</p> <p>The design of the class, presentation materials, quick start handout, screencast editing, and webpage programming will take approximately (5 hours).</p> <p>The assessment and synthesis of pre- and post-survey data will take approximately (1 hour).</p>  |
| <p><b>Nearpod Advanced Concepts</b><br/>(Teacher Session) (1 Hour)<br/>(i.e. image and PowerPoint importing, exporting, etc.)</p> <ul style="list-style-type: none"> <li>- Designing open-ended discussion questions</li> <li>- Guided Reading 2.0 strategies</li> <li>- Above and beyond with the ‘Draw It’ feature i.e. KWL charts, what do we want to know</li> <li>- Above and beyond with polling i.e. students rate their understanding, assessment strategies, etc.</li> </ul> | <p>Draft PLC Agenda and Proposal to Administration and (15 minutes)</p> <p>Coaching Journal Reflection(s) (30 minutes)</p> <p>Quick Start Handout</p> <p>Google Slides Presentation Materials</p> <p>Support Webpage</p> <p>Pre- and Post-Assessment Surveys and Survey Data</p> | <p>Optional Individual Coaching Sessions extended to teachers (1 hour minimum)</p> <p>The design of the class, presentation materials, quick start handout, screencast editing, and webpage programming will take approximately (5 hours).</p> <p>The assessment and synthesis of pre- and post-survey data will take approximately (1 hour).</p> <p>Eligible 2015-2016 School Year Dates for embedded professional learning:<br/>09/04/15, 10/15/15, 10/16/15, 02/18/16, 02/19/16, 03/14/16, 03/17/16, 03/18/16</p> <p>Eligible 2015-2016 School Year Dates for before school optional professional learning: to be determined.</p> |

**Objective:**

In the fall of 2014, a colleague discovered that Buford City Schools had [Mimio Mobile](#) lite access for up to three student devices. This application will allow three of the five classroom iPad minis at Buford Elementary to utilize new and exciting collaborative classroom opportunities. Informal professional development has occurred primarily through word of mouth. I propose to fill the professional development coverage gaps by providing a [Mimio Mobile](#) basics and advanced session.

| PLC Session Theme/Focus   | Deliverables/Artifacts   | Additional Information  |
|---|--|---|
| <p><b>Mimio Mobile Basic Concepts</b><br/>(Teacher Session) (1 Hour)<br/>(i.e app navigation and session creation, screen notating concepts)</p>  | <p>Draft PLC Agenda and Proposal to Administration and (15 minutes)</p> <p>Coaching Journal Reflection(s) (30 minutes)</p> <p>Google Slides Presentation Materials</p> <p>Quick Start Handout</p> <p>Support Webpage</p> <p>Pre- and Post-Assessment Surveys and Survey Data</p> | <p>Optional Individual Coaching Sessions extended to teachers (1 hour minimum)</p> <p>The design of the class, presentation materials, quick start handout, screencast editing, and webpage programming will take approximately (5 hours).</p> <p>The assessment and synthesis of pre- and post-survey data will take approximately (1 hour).</p> |
| <p><b>Mimio Mobile Advanced Concepts</b><br/>(Teacher Session) (1 Hour)</p> <ul style="list-style-type: none"> <li>- Common Core Math strategies i.e. show your work, demonstrate your understanding</li> <li>- Exploring flipped lesson ideas</li> </ul> | <p>Draft PLC Agenda and Proposal to Administration and (15 minutes)</p> <p>Coaching Journal Reflection(s) (30 minutes)</p> <p>Quick Start Handout</p> <p>Google Slides Presentation Materials</p>  | <p>Optional Individual Coaching Sessions extended to teachers (1 hour minimum)</p> <p>The design of the class, presentation materials, quick start handout, screencast editing, and webpage programming will take approximately (5 hours).</p> <p>The assessment and synthesis</p>  |

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|  | <p>Support Webpage</p> <p>Pre- and Post-Assessment Surveys and Survey Data</p> | <p>of pre- and post-survey data will take approximately (1 hour).</p> <p>Eligible 2015-2016 School Year Dates for embedded professional learning: 09/04/15, 10/15/15, 10/16/15, 02/18/16, 02/19/16, 03/14/16, 03/17/16, 03/18/16</p> <p>Eligible 2015-2016 School Year Dates for before school optional professional learning: to be determined.</p> |
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**Objective:**

Teachers at Buford Elementary need to explore simple, user-friendly ways to begin undertaking project-based learning strategies for the classroom. I believe the easy-to-use presentation app [Shadow Puppet](#) is a perfect solution to this objective. In conjunction with the [Shadow Puppet app](#), I would like to introduce teachers' to [Padlet](#) as an option to save digital student artifacts. Further, I believe that the union of these two classroom solutions can afford teachers' an easy entry point into project-based learning in their classrooms.

| <b>PLC Session Theme/Focus</b>  | <b>Deliverables/Artifacts</b>   | <b>Additional Information</b>  |
|---|---|--|
| <p><b>Shadow Puppet Basic Concepts</b><br/>(Teacher Session) (1 Hour)<br/>(i.e. account creation, importing content from the camera roll, accessing presentations on the web, etc.)</p> | <p>Draft PLC Agenda and Proposal to Administration and (15 minutes)</p> <p>Coaching Journal Reflection(s) (30 minutes)</p> <p>Google Slides Presentation Materials</p> <p>Quick Start Handout</p> | <p>Optional Individual Coaching Sessions extended to teachers (1 hour minimum)</p> <p>The design of the class, presentation materials, quick start handout, screencast editing, and webpage programming will take approximately (5 hours).</p> <p>The assessment and synthesis</p> |

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|  | <p>Support Webpage</p> <p>Pre- and Post-Assessment Surveys and Survey Data</p>   | <p>of pre- and post-survey data will take approximately (1 hour).</p>  |
| <p><b>Padlet Basic Concepts</b><br/>(Teacher Session) (1 Hour)<br/>(i.e. account creation, copying image links, copying streaming media embed codes, exploring various content posting types, etc.)</p>                          | <p>Draft PLC Agenda and Proposal to Administration and (15 minutes)</p> <p>Coaching Journal Reflection(s) (30 minutes)</p> <p>Quick Start Handout</p> <p>Google Slides Presentation Materials</p> <p>Support Webpage</p> <p>Pre- and Post-Assessment Surveys and Survey Data</p> | <p>Optional Individual Coaching Sessions extended to teachers (1 hour minimum)</p> <p>The design of the class, presentation materials, quick start handout, screencast editing, and webpage programming will take approximately (5 hours).</p> <p>The assessment and synthesis of pre- and post-survey data will take approximately (1 hour).</p> <p>Eligible 2015-2016 School Year Dates for embedded professional learning:<br/>09/04/15, 10/15/15, 10/16/15, 02/18/16, 02/19/16, 03/14/16, 03/17/16, 03/18/16</p> <p>Eligible 2015-2016 School Year Dates for before school optional professional learning: to be determined.</p> |
| <p><b>Shadow Puppet and Padlet Advanced Concepts</b><br/>(Teacher Session) (1 Hour)<br/>(i.e. exploring the use of these two resources together)<br/>- Begin exploration of easy project-based learning classroom strategies</p> | <p>Draft PLC Agenda and Proposal to Administration and (15 minutes)</p> <p>Coaching Journal Reflection(s) (30 minutes)</p> <p>Quick Start Handout</p> <p>Google Slides Presentation Materials</p> <p>Support Webpage</p>   | <p>Optional Individual Coaching Sessions extended to teachers (1 hour minimum)</p> <p>The design of the class, presentation materials, quick start handout, screencast editing, and webpage programming will take approximately (5 hours).</p> <p>The assessment and synthesis of pre- and post-survey data will take approximately (1 hour).</p>  |

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|  | <p>Pre- and Post-Assessment Surveys and Survey Data</p> | <p>Eligible 2015-2016 School Year Dates for embedded professional learning: 09/04/15, 10/15/15, 10/16/15, 02/18/16, 02/19/16, 03/14/16, 03/17/16, 03/18/16</p> <p>Eligible 2015-2016 School Year Dates for before school optional professional learning: to be determined.</p> |
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**Objective:**

In an effort to extend professional learning to support staff, I intend to provide at a minimum of two professional development sessions for exclusively paraprofessionals. The Osmo basics and Shadow Puppet basics classes will be modified accordingly to leverage paraprofessionals' understandings of the apps in order to assist teachers in the implementation of these two apps.

| <b>PLC Session Theme/Focus</b>   | <b>Deliverables/Artifacts</b>   | <b>Additional Information</b>  |
|--|---|--|
| <p><b>Shadow Puppet Basic Concepts</b><br/>(Paraprofessional Session) (1 Hour)<br/>(i.e. account creation, importing content from the camera roll, accessing presentations on the web, etc.)</p> | <p>Draft PLC Agenda and Proposal to Administration and (15 minutes)</p> <p>Google Slides Presentation Materials</p> <p>Quick Start Handout</p> <p>Support Webpage</p> <p>Pre- and Post-Assessment Surveys and Survey Data</p> | <p>The modification of the class content to paraprofessional needs will take approximately (1.5 hours)</p> <p>The assessment and synthesis of pre- and post-survey data will take approximately (1 hour).</p> <p>Eligible 2015-2016 School Year Dates for embedded professional learning: 09/04/15, 10/15/15, 10/16/15, 02/18/16, 02/19/16, 03/14/16, 03/17/16, 03/18/16</p> |
| <p><b>Osmo Basic Concepts</b><br/>(Paraprofessional Session) (1 Hour)</p>  | <p>Draft PLC Agenda and Proposal to Administration and (15 minutes)</p>   | <p>The modification of the class content to paraprofessional needs will take approximately</p>   |

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|--|---|--|
| <p>(i.e. account creation and exploration of the various Osmo apps)</p> <ul style="list-style-type: none"> <li>- <a href="#">Words for Osmo</a></li> <li>- <a href="#">Tangrams for Osmo</a></li> <li>- <a href="#">Newton for Osmo</a></li> <li>- <a href="#">Masterpiece for Osmo</a></li> </ul> | <p>Google Slides Presentation Materials</p> <p>Quick Start Handout</p> <p>Support Webpage</p> <p>Pre- and Post-Assessment Surveys and Survey Data</p> | <p>(1.5 hours)</p> <p>The assessment and synthesis of pre- and post-survey data will take approximately (1 hour).</p> <p>Eligible 2015-2016 School Year Dates for embedded professional learning:<br/>09/04/15, 10/15/15, 10/16/15, 02/18/16, 02/19/16, 03/14/16, 03/17/16, 03/18/16</p> |
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**GaPSC Instructional Technology Standards:**

**Element 1.2 Strategic Planning**

Candidates facilitate the design, development, implementation, communication, and evaluation of technology-infused strategic plans.

**Element 1.4 Diffusion of Innovations & Change**

Candidates research, recommend, and implement strategies for initiating and sustaining technology innovations and for managing the change process in schools.

**Element 2.1 Content Standards & Student Technology Standards**

Candidates model and facilitate the design and implementation of technology enhanced learning experiences aligned with student content standards and student technology standards.

**Element 2.2 Research-Based Learner-Centered Strategies**

Candidates model and facilitate the use of research-based, learner-centered strategies addressing the diversity of all students.

**Element 2.3 Authentic Learning**

Candidates model and facilitate the use of digital tools and resources to engage students in authentic learning experiences.

**Element 2.4 Higher Order Thinking Skills**

Candidates model and facilitate the effective use of digital tools and resources to support and enhance higher order thinking skills (e.g., analyze, evaluate, and create); processes (e.g., problem-solving, decision-making); and mental habits of mind (e.g., critical thinking, creative thinking, metacognition, self-regulation, and reflection).

**Element 2.5 Differentiation**

Candidates model and facilitate the design and implementation of technology-enhanced

learning experiences making appropriate use of differentiation, including adjusting content, process, product, and learning environment based upon an analysis of learner characteristics, including readiness levels, interests, and personal goals.

**Element 2.6 Instructional Design**

Candidates model and facilitate the effective use of research-based best practices in instructional design when designing and developing digital tools, resources, and technology enhanced learning experiences.

**Element 2.7 Assessment**

Candidates model and facilitate the effective use of diagnostic, formative, and summative assessments to measure student learning and technology literacy, including the use of digital assessment tools and resources.

**Element 2.8 Data Analysis**

Candidates model and facilitate the effective use of digital tools and resources to systematically collect and analyze student achievement data, interpret results, communicate findings, and implement appropriate interventions to improve instructional practice and maximize student learning.

**Element 3.1 Classroom Management & Collaborative Learning**

Candidates model and facilitate effective classroom management and collaborative learning strategies to maximize teacher and student use of digital tools and resources.

**Element 3.2 Managing Digital Tools and Resources**

Candidates effectively manage digital tools and resources within the context of student learning experiences.

**Element 3.5 Basic Troubleshooting**

Candidates troubleshoot basic software and hardware problems common in digital learning environments.

**Element 3.6 Selecting and Evaluating Digital Tools & Resources**

Candidates collaborate with teachers and administrators to select and evaluate digital tools and resources for accuracy, suitability, and compatibility with the school technology infrastructure.

**Element 4.1 Digital Equity**

Candidates model and promote strategies for achieving equitable access to digital tools and resources and technology-related best practices for all students and teachers.

**Element 4.2 Safe, Healthy, Legal & Ethical Use**

Candidates model and facilitate the safe, healthy, legal, and ethical uses of digital information and technologies.

**Element 5.2 Professional Learning**

Candidates develop and implement technology-based professional learning that aligns to state and national professional learning standards, integrates technology to support face-to-face and online components, models principles of adult learning, and promotes best practices in teaching, learning, and assessment.

### **Element 5.3 Program Evaluation**

Candidates design and implement program evaluations to determine the overall effectiveness of professional learning on deepening teacher content knowledge, improving teacher pedagogical skills and/or increasing student learning.

### **Element 6.1 Continuous Learning**

Candidates demonstrate continual growth in knowledge and skills of current and emerging technologies and apply them to improve personal productivity and professional practice.

### **Element 6.2 Reflection**

Candidates regularly evaluate and reflect on their professional practice and dispositions to improve and strengthen their ability to effectively model and facilitate technology-enhanced learning experiences.

### **Element 6.3 Field Experiences**

Candidates engage in appropriate field experiences to synthesize and apply the content and professional knowledge, skills, and dispositions identified in these standards.

## **ISTE Standards-C**

- 1.d.** Implement strategies for initiating and sustaining technology innovations and manage the change process in schools and classrooms
  
- 2.a.** Coach teachers in and model design and implementation of technology-enhanced learning experiences addressing content standards and student technology standards
  
- 2.b.** Coach teachers in and model design and implementation of technology-enhanced learning experiences using a variety of research based, learner-centered instructional strategies and assessment tools to address the diverse needs and interests of all students
  
- 2.d.** Coach teachers in and model design and implementation of technology-enhanced learning experiences emphasizing creativity, higher-order thinking skills and processes, and mental habits of mind (e.g., critical thinking, metacognition, and self-regulation)
  
- 2.e.** Coach teachers in and model design and implementation of technology-enhanced learning experiences using differentiation, including adjusting content, process, product, and learning environment based upon student readiness levels, learning styles, interests, and personal goals
  
- 2.f.** Coach teachers in and model incorporation of research-based best practices in instructional design when planning technology-enhanced learning experiences



**3.a.** Model effective classroom management and collaborative learning strategies to maximize teacher and student use of digital tools and resources and access to technology-rich learning environments

**3.b.** Maintain and manage a variety of digital tools and resources for teacher and student use in technology-rich learning environments

**3.e.** Troubleshoot basic software, hardware, and connectivity problems common in digital learning environments

**3.f.** Collaborate with teachers and administrators to select and evaluate digital tools and resources that enhance teaching and learning and are compatible with the school technology infrastructure

**4.b.** Design, develop, and implement technology rich professional learning programs that model principles of adult learning and promote digital age best practices in teaching, learning, and assessment

**4.c.** Evaluate results of professional learning programs to determine the effectiveness on deepening teacher content knowledge, improving teacher pedagogical skills and/or increasing student learning

**5.a.** Model and promote strategies for achieving equitable access to digital tools and resources and technology-related best practices for all students and teachers

**5.b.** Model and facilitate safe, healthy, legal, and ethical uses of digital information and technologies

**6.a.** Engage in continual learning to deepen content and pedagogical knowledge in technology integration and current and emerging technologies necessary to effectively implement the Standards•S and Standards•T

**6.b.** Engage in continuous learning to deepen professional knowledge, skills, and dispositions in organizational change and leadership, project management, and adult learning to improve professional practice

**6.c.** Regularly evaluate and reflect on their professional practice and dispositions to improve and strengthen their ability to effectively model and facilitate technology enhanced learning experiences

**Evaluation Plan:**

According to Haslam (2010), as outlined in The Teacher Professional Development Guide, “evaluation planning, like professional development planning, is an iterative process, with the evaluation plan evolving as the professional development plan evolves” (p. 22). The proposed capstone will consist of an approximate 83 hours of invested time. The remaining 17 hours will be allotted for project synthesis, outcome reporting, and allowing room for class sessions and/or optional individual coaching sessions to compress, expand, or evolve. A large part of the project synthesis will be devoted to the analysis of pre- and post-assessment survey data. The utilization of [Google Forms](#) in conjunction with [Flubaroo](#) will aid in the generation of quantitative survey data. Additionally, opened-ended questions will also be used to qualitatively evaluate the overall outcome of the capstone project. See Appendix B for sample assessment survey questions.

### References

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Appendix A

**Student Evaluation**  
**Saturday School 2015**

Teacher: Logan, McQuilken, & Laws

1. Saturday School has helped me learn new things.
2. I liked coming to Saturday school.
3. My teacher was prepared and helped me with my work.
4. The activities were fun and enjoyable.
5. I would like to attend Saturday School again.

My favorite thing about Saturday School was math.

**Student Evaluation**  
**Saturday School 2015**

Teacher: Logan, McQuilken, & Laws

1. Saturday School has helped me learn new things.
2. I liked coming to Saturday school.
3. My teacher was prepared and helped me with my work.
4. The activities were fun and enjoyable.
5. I would like to attend Saturday School again.

My favorite thing about Saturday School was the OSN.

**Student Evaluation**  
**Saturday School 2015**

Teacher: Logan, McQuilken, & Laws

1. Saturday School has helped me learn new things.
2. I liked coming to Saturday school.
3. My teacher was prepared and helped me with my work.
4. The activities were fun and enjoyable.
5. I would like to attend Saturday School again.

My favorite thing about Saturday School was computer.

**Student Evaluation**  
**Saturday School 2015**

Teacher: Logan, McQuilken, & Laws

1. Saturday School has helped me learn new things.
2. I liked coming to Saturday school.
3. My teacher was prepared and helped me with my work.
4. The activities were fun and enjoyable.
5. I would like to attend Saturday School again.

My favorite thing about Saturday School was reading.

**Appendix B**

## Sample Assessment Survey Questions (subject to change)

1. The training enhanced my ability to teach the curriculum.
  - strongly agree
  - agree
  - neutral
  - disagree
  - strongly disagree
  
2. I am planning on applying the strategies and content presented in the training with my students.
  - strongly agree
  - agree
  - neutral
  - disagree
  - strongly disagree
  
3. Briefly explain how you plan to utilize the strategies learned in the training to impact daily instruction.
  
4. Briefly explain any ideas about instruction that may have been triggered by the training session.