LMS Implementation

Jonathan Sabo

Kennesaw State University

January 2018

Dr. Laurie Dias

Fall 2017

**Setting and Context**

The project setting will be North Hall High School, which is located in Gainesville, GA. North Hall serves 9th through 12th grade students and is a part of the Hall County School District. The school is located in a rural part of the county. North Hall is a public school and students have the opportunity to participate in the IB program, STEM program, or take AP courses. The 2017 CCRPI score for North Hall was a 79.6. In the 2016-2017 school year, North Hall employed 67 teachers, 4 administrators, and 7 support personnel. It serves approximately 1,100 students: 85% White, 12% Hispanic, 2% Multiracial, 1% Black and 1% Asian (Governor’s Office of Student Achievement, Table: Attendance by Race and Ethnicity, 2017). Other subgroups include: 27% Eligible for free/ reduced meals, 8.1% Students with Disabilities, and 2% Limited English proficiency (Governor’s Office of Student Achievement, Table: Attendance by Other Subgroups, 2017).

There are one principal and three assistant principals. This is the fourth school year with the current administration. The school also has an IB coordinator, AP coordinator, Graduation Coach, CTI coordinator, and Media Specialist. Each academic department has a chair person that serves on the school cabinet and reports important information back to the teachers in their department. Professional learning communities are organized by department and each team meets twice every month. There is an instructional technology team that draws members from each department, but the school does not currently have a technology coach.

One major initiative throughout the district involves the implementation of a learning management system. Canvas is the learning management system that is used throughout the district. The district expects every teacher to have at least one course created within Canvas by the end of the current school year. There are many benefits of creating these courses including communication with students and parents, collaboration between teachers and increased student achievement.

Teachers have had access to Canvas for several years and have had the option to utilize it. This year training for all teachers will be provided at the school level by the instructional technology team on a professional learning day. Recurring training sessions will continue for the remainder of the year as the need arises.

Another initiative involves effective use of the growing number of Chromebooks in the building. The number of Chromebooks has been growing at a rapid rate and North Hall should have a one to one device to student ratio within several years. Many of these devices are not being used effectively. The instructional technology team is currently gathering resources and strategies that are being used both within and outside of the building.

This project will have the greatest impact on teachers in the math department but has the potential to reach all teachers in the school. Many teachers are reluctant to implementing the learning management system and do not see the benefits of it. This is happening due to a lack of training on the implementation of the system.

**Statement of Problem, Need, and Rationale**

This Capstone Proposal was prompted by the reluctance of many teachers to embrace a Learning Management System (LMS). PotentCoial strengths of incorporating a LMS include increased teacher-student interaction, an asynchronous collaboration between students, and a content repository (Dias & Diniz, 2014). Teachers at North Hall don’t appear willing to incorporate the use of the LMS, even after taking part in an introductory LMS training during the spring of 2018.

There is a need to provide additional support for teachers in the fall of 2018 in an attempt to eliminate reluctance. New teachers will need an introduction as well, and some returning teachers will need a review. Areas of focus for future teacher learning about the LMS include incorporating differentiation strategies, promoting blended learning, increasing student collaboration, and increasing teacher collaboration.

In a study by Tallvid (2014), the effect of one to one initiatives on the transformation of teaching methods was examined. This study investigated the use of technology to transform teaching (Tallvid, 2014). Participants of this study were teachers with more than seven years of experience (Tallvid, 2014). The study discovered five different explanations for teacher reluctance to technology implementation which are: lack of technical competence, not worth the effort, insufficient teaching material, diminishing control, and lack of time (Tallvid, 2014). As I work with teachers these explanations need to be considered continuously.

Benefits of incorporating technology need to be examined. In a study by Cobb (2010), the effect that technology has on differentiation is examined. This study compares differentiated instruction and direct instruction as technology is used in the classroom (Cobb, 2010). Teachers in the Cleveland Metropolitan School District were surveyed (Cobb, 2010). In this study, teachers were able to successfully differentiate instruction using a learning software called Compass (Cobb, 2010). This study shows that similar results could be achieved from other learning software. Differentiation is a component of all teacher evaluations. Teachers need to take advantage of what technology has to offer as they incorporate differentiation in their classes.

Benefits and challenges that lead to a greater understanding of blended learning are outlined in a study by Vaughan, Reali, Stenbom, Van Vuuren, and MacDonald (2017). The purpose of this study is to compare and contrast the development of blended learning in four international programs (Vaughan et al., 2017). The study focused on the rationale for blended learning initiative, benefits, challenges, lessons learned, and recommendations for each program involved (Vaughan et al., 2017). . Based on this study, Vaughan et al. (2017) recommend a three state approach of communicate, learn, and collaborate is recommended for the implementation of blended learning. Benefits of implementing blended learning include providing flexible opportunities for students to learn, supporting diverse needs of students, and encouraging teachers to begin reflecting more on their teaching practice (Vaughan et al., 2017). The challenge of promoting blended learning is getting buy-in from teachers (Vaughan et al., 2017). There is importance for teachers to have time and training of how to implement blended learning in their class (Vaughan et al., 2017). This study shares a great deal of experience of spreading blended learning throughout a school.

In a study by Stoyle and Morris (2017), the effects of student collaboration using technology is measured. The purpose of this study was to investigate the difference between student collaboration in an online environment or face to face (Stoyle and Morris, 2017). This study followed 134 fifth graders as they discussed their knowledge of fractions (Stoyle and Morris, 2017). Students who had access to a blog showed much greater gains than students who collaborated face to face (Stoyle and Morris, 2017). The authors of the study give credit to the blog allowing students to come back and review previous responses and critique others (Stoyle and Morris, 2017). This is another feature that will increase the value of the LMS as I strive to reach buy in from as many teachers as possible.

I feel the need to provide support to teachers and show the benefits of incorporating a LMS. This technology provides teachers with opportunities to provide differentiation and incorporate Web2.0 tools (Smith & Throne, 2009). Teachers are able to collaborate on the creation of course content and share resources (John, 2014).

Through this project, I hope that teachers gain familiarity with the LMS. I would like for each teacher to be able to create a course and share content with their students and parents. Collaborating teachers should be able to build a course where they can share resources and create content for supporting all students.

**Objectives & Deliverables**

Teachers are commonly reluctant to implement new technology tools such as LMS due to many factors such as time and professional learning (Tallyid, 2014). The purpose of this project is to attempt to reduce teacher reluctance that is preventing teachers from implementing technology into their classroom. The goal of this project is to ensure that teachers are aware of available resources and provide support to make them more comfortable with their use.

**Objectives**

The following are goals of the project:

* Teachers in the math department will have a course created in the learning management system by August 2018.
* Most teachers in the math department will have course content available for their students in the learning management system by September 2018: at least one content page, link to outside resource, or uploaded video.
* Most teachers in the math department create at least one assessment or use one collaboration tool such as discussions in the learning management system by October 2018.
* Most teachers in the math department will contribute one resource to the appropriate collaborative master course by November 2018

**Deliverables**

In order to complete the objectives listed above, the following artifacts will be required. These artifacts will continue to grow as teachers become comfortable with the technology.

* Create a course template that teachers can use as they create their first course.
* Create example courses to demonstrate different methods that teachers can use to present their course content to students.
* Create guides for teachers to use as they create quizzes or discussions in their course
* Build a master course shell that can be used to house all resources made available by individual teachers.

**PSC Standards**

Throughout this project, the standards published by the Georgia Professional Standards Commission will be addressed. The second standard is about teaching, learning, and assessment. This standard falls at the center of what I am doing as I work with teachers to incorporate the LMS into their classroom. I will support teachers as they create assignments that promote authentic learning for their students. Differentiation will be promoted through the use of technology. Teachers will be able to use digital assessments that allow them to collect data for future analysis. Some of the specific standards are listed below.

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

The third standard is about digital learning environments. The LMS is a digital learning environment that teachers will be gaining experience with. Through the experience with the LMS I will be showing teachers how to use the system to manage digital resources, promote blended learning, and use adaptive technology to promote differentiation, troubleshoot, and collaborate with colleagues. Some of the specific standards are listed below.

* **3.2 Managing Digital Tools and Resources** Candidates effectively manage digital tools and resources within the context of student learning experiences.
* **3.3 Online & Blended Learning** Candidates develop, model, and facilitate the use of online and blended learning, digital content, and learning networks to support and extend student learning and expand opportunities and choices for professional learning for teachers and administrators.
* **3.4 Adaptive and Assistive Technology** Candidates facilitate the use of adaptive and assistive technologies to support individual student learning needs.
* **3.5 Basic Troubleshooting** Candidates troubleshoot basic software and hardware problems common in digital learning environments.
* **3.7 Communication & Collaboration** Candidates utilize digital communication and collaboration tools to communicate locally and globally with students, parents, peers, and the larger community.

The fifth standard is about professional learning and program evaluation. This addresses how I will determine the needs of my colleagues, how the training is carried out and how the effectiveness is evaluated. The specific standards are listed below.

* **5.1 Needs Assessment** Candidates conduct needs assessments to determine school-wide, faculty, grade-level, and subject area strengths and weaknesses to inform the content and delivery of technology-based professional learning programs.
* **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.
* **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.

The sixth standard is about professional growth and development. As I address this standard I will continue to grow as a professional in order to support my colleagues. I will reflect on what I am learning and apply my knowledge as I work with my colleagues. The specific standards are listed below.

* **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.
* **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.
* **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.

|  |  |  |
| --- | --- | --- |
|  |  |  |

**Project Description**

This project addresses the reluctance of teachers to implement a LMS. The goal of this project is to make teachers in the math department aware of resources that will help them become more comfortable with LMS use. I will be conducting monthly workshops followed by coaching sessions as needed to reach our goals. The first workshop will focus on the basics of the LMS such as creating courses and adding students. The second workshop will focus on adding content to courses. In the next workshop, we will discuss how to create assignments, quizzes, and discussions. The last workshop will be about teacher collaboration and sharing meaningful experiences from this semester. The following is a detailed description of the activities associated with the Capstone Proposal and how they are aligned with the aforementioned objectives, deliverables, and standards.

**First Project Activity**

This project will begin in the fall of 2018. The purpose of the first activity is to familiarize all math teachers with our LMS. During pre-planning several returning teachers will need a refresher while new teachers will need an introduction. The goal of the first activity is for all teachers to create courses within the LMS for the classes they are teaching. Each teacher will also need to be able to import students into their LMS courses. Teachers will be provided with a short Google survey at the conclusion of this workshop. I will use individual coaching sessions to address additional needs that arise from the survey.

**Second Project Activity**

The second activity will take place throughout the month of September. The purpose of this activity is to support all teachers in the math department as they begin providing content to their students through the LMS. Early in the month, I will lead a workshop on the different strategies for presenting material through the LMS. The goal of this activity is for teachers to discover models of blended learning that fit into their classroom. Individual coaching sessions will also be provided through this activity in order to support teachers as they try new methods or present content.

**Third Project Activity**

The third activity will take place throughout the month of October. Teachers will have the opportunity to explore even more tools within the LMS. The purpose of this activity is to support teachers as they use the LMS in order to assess their students. These assessments could take place through quizzes, discussions, or a simple assignment. I will hold another workshop for teachers to become acquainted with the many features available for quizzes and discussions. Individual coaching sessions will be offered for teachers who would like additional help.

**Fourth Project Activity**

The fourth activity will take place throughout the month of November. During this activity, the math department will begin using the LMS to collaborate on common courses. The eventual goal is for master courses to be created where teachers can view and share resources that are available for their courses. During this activity, teachers will begin to utilize the functions in the LMS that allow them to share and receive content from other courses. I will again lead a workshop to introduce teachers to this feature. Individual coaching sessions will be offered to support teachers as they begin using the resources. Each of the problem activities are summarized in Table 1 below.

Table 1.

*Project Activities Alignment*

|  |  |  |
| --- | --- | --- |
| Project Item/Activity | Project Objectives | Deliverable |
| Introduction to basic features of LMS | Teachers in the math department will have a course created in the learning management system by August 2018. | Create a course template that teachers could use as they create their first course. |
| Providing Content through the LMS | Most teachers in the math department will have course content available for their students in the learning management system by September 2018. At least one content page, link to outside resource, or uploaded video. | Create example courses to demonstrate different methods that teachers could use to present their course content to students. |
| Assess Knowledge through the LMS | Most teachers in the math department create at least one assessments or use one collaboration tools such as discussions in the learning management system by October 2018. | Create guides for teachers to use as they use quizzes or discussions in their course |
| Collaborate through the LMS | Most teachers in the math department will contribute one resource to the appropriate collaborative master course by November 2018 | Build a master course shell that could be used to house all resources made available by individual teachers. |

**Evaluation Plan**

The goal of this project is to introduce features that will benefit all teachers. This project will be evaluated by measuring the completion of each goal. This project will be considered successful when teachers create courses within the LMS that are used to share content, assess learning and collaborate with colleagues. Each of the teacher’s LMS courses will be assessed based on a checklist that measures their completion of each goal. A benefit of this project will be realized as standard 2 is addressed and teachers are able to create authentic learning experiences, differentiated instruction, assessment, and conduct data analysis.

The effectiveness of this project will also be measured through surveys completed by the participants involved. Many teachers are hesitant to incorporate the LMS into their classroom.

**First Project Activity**

The goal of the first project activity is for teachers to create a course in the LMS and add students. Data will be collected in order to determine how many teachers have completed this task. The progress of each teacher will be logged on a checklist for this activity. The success of this task will be determined based on the completion of the checklist for each of the teachers. The effectiveness of this activity will be measured through surveys that are filled out by each of the teachers involved. These surveys guide additional help that is needed throughout this activity.

**Second Project Activity**

The goal of the second project activity is for teachers to publish some form of content to an LMS course. Success will be determined based on the completion of this task. The effectiveness of this will be measured by surveys completed by both teachers and students. Teachers will answer questions related to how they feel about how the content is being presented. Students will answer questions about the clarity of the content and have the opportunity to make suggestions for future adjustments.

**Third Project Activity**

The goal of the third project activity is for teachers to create some form of assessment in the LMS. Teachers will fill out a survey about their experience as they create the assessments. This will guide additional coaching sessions as I support teachers in making improvements. Some courses will use the LMS assessments that provide immediate feedback. Other courses will use traditional assessments. A posttest will be given to all classes in order to measure the effectiveness of the LMS assessments.

**Fourth Project Activity**

The goal of the fourth project activity is for teachers to utilize features of the LMS in order to collaborate with each other. The success of this activity will be measured by participation by most teachers in a collaborative course. Teachers will also have the opportunity to answer a survey where they provide feedback on how the LMS is being used to collaborate and share ideas of how the collaboration could be improved.

**Project Timeline**

This project will begin in August 2018 and continue through December 2018. There will be four workshops and several coaching sessions. Between planning for workshops, conducting workshops, coaching teachers and evaluating progress the project will take more than 100 hours. A timeline of the activities can be found in Table 3 below.

Table 2.

*Project Timeline*

|  |  |  |
| --- | --- | --- |
| Month | Project Item/Activity, or Evaluation Item | Hours |
| August | Create a preliminary survey for teachers to fill out before the introductory workshop and evaluate the results of the survey. | 2 hours |
| August | Plan and implement introductory workshop to help teachers create LMS courses and add students. | 5 hours |
| August | Create post workshop survey and analyze results. | 2 hours |
| August | Individual coaching sessions to support teachers as they become acquainted with the LMS | 10 hours |
| August | Meet individually with each teacher in order to evaluate the progress of the department. | 4 hours |
| September | Build a sample course in the LMS that allows teachers to experience the student side of the LMS. The sample course will include a variety of strategies for sharing content with students. | 5 hours |
| September | Plan and implement a workshop where teachers experience the LMS as students. Show teachers methods of publishing content within the LMS. | 5 hours |
| September | Create post workshop survey and analyze results | 2 hours |
| September | Individual coaching sessions to support teachers as they begin publishing content in the LMS | 10 hours |
| September | Meet individually with each teacher in order to evaluate the progress of the department | 4 hours |
| October | Add quizzes, discussions, and assignments to the sample courses for teachers to see the student experience. | 5 hours |
| October | Plan and implement a workshop for showing teachers how to create discussions, quizzes, and assignments within the LMS. | 5 hours |
| October | Individual coaching sessions to support teachers as they begin creating assessment within the LMS | 10 hours |
| October | Meet Individually with each teacher in order to evaluate the progress of the department | 4 hours |
| November | Search for examples of how teachers are using LMS to collaborate with colleagues in order to provide instruction | 5 hours |
| November | Plan and implement a workshop to discuss how the LMS can be used for collaboration. | 5 hours |
| November | Participate in a discussion through the LMS about how a collaborative course should be structured and what is important for each colleague | 4 hours |
| November | Individual coaching sessions for assisting teachers as they post content to a collaborative course. | 10 hours |
| November | Meet individually with each teacher in order to evaluate the progress of the department | 4 hours |
| December | Provide individual coaching sessions for as teachers put everything that they have learned together in order to organize their courses | 10 hours |

Table 3.

*Proposed Resources*

|  |  |
| --- | --- |
| Proposed Resource | Specific Items |
| Materials | Surveys, checklists, and handouts will be created and used throughout this experience. |
| Space | Workshops will be held in my classroom. In the event that a larger space is needed I will reserve the media center. |
| Tools | Teacher laptops, Chromebooks, iPads, Epson interactive projectors, Internet, and the Learning Management System will be used. |
| Human Resources | I will be leading most of the workshops. Teachers will need to give their time before school or afterschool for some of the workshops. |

**References**

Cobb, A. (2010). To differentiate or not to differentiate? Using Internet-based technology in the classroom. Quarterly Review Of Distance Education, (1), 37.

Dias, S. B., & Diniz, J. A. (2014). Towards an Enhanced Learning Management System for Blended Learning in Higher Education Incorporating Distinct Learners’ Profiles. Educational Technology & Society, 17 (x), 307–319.

Georgia Department of Education (2018). K-12 Public School Report Card. <https://gosa.georgia.gov/report-card>

John, R. (2014). *Canvas LMS Course Design*. Birmingham, U.K.: Packt Publishing.

Smith, G. E., & Throne, S. (2009). *Differentiating Instruction with Technology in Middle School* Classrooms. Eugene, Or: International Society for Technology in Education

Stoyle, K. L., & Morris, B. J. (2017). Blogging mathematics: Using technology to support mathematical explanations for learning fractions. Computers & Education, 111114-127. doi:10.1016/j.compedu.2017.04.007

Tallvid, M. (2016). Understanding teachers' reluctance to the pedagogical use of ICT in the 1:1 classroom. Education and Information Technologies, 21(3), 503-519.

Vaughan, N., Reali, A., Stenbom, S., Van Vuuren, M. J., & MacDonald, D. (2017). Blended Learning from Design to Evaluation: International Case Studies of Evidence-Based Practice. Online Learning, 21(3), 103-114. doi:10.24059/olj.v21i3.1252