An Engaging Adventure:
A Study to Assess the Engagement and Community-Building Potential of an Online Learning Environment Constructed Using the Adventure Learning Framework

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Abstract

This paper investigates the experiences of elementary school children with *My Great State,* an online learning environment constructed using the adventure learning framework. Through surveys, interviews, direct observation, and focus groups, data was gathered as students explored the *My Great State* site, completed associated inquiry-based activities, and then collaboratively generated a blog about their community. The results indicate that the adventure learning framework is an effective tool for designing and developing an online learning environment that actively engages learners, stimulates a desire to learn, and encourages collaborative and creative problem solving. The study also revealed methods and tools teachers can incorporate in the classroom to help keep students on task and excited about learning.

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CHAPTER 1: INTRODUCTION

The role of engagement in the learning process has been a point of discussion among educators since at least the 1930s, grounded in the work of John Dewey and his focus on the importance of spurring a continuum of learning; of students learning not just from teachers but also from others around them and from their environment; and of the role of collaborative learning and creative problem solving in education (Dewey, 1938/1991; Ehrlich, 1998; Elmborg, 2006; Parrish, 2006). There are, however, few practical models available for designing and developing online learning environments that actively engage learners, stimulate a desire to learn, and encourage collaboration.

This study sought to investigate the learning-engagement and community-building potential of one such model, the adventure learning framework (Doering, 2006), by following the experiences of elementary school children as they explored an adventure learning environment, *My Great State*, and constructed an associated blog about their communities.

In addition to introducing the research questions, method, methodology, and findings of this study, this paper presents a brief overview of adventure learning and the role of engagement and community-building in the learning process.

The Learning Environment

Figure 1. *My Great State* website

Through its grounding in AL principles, *My Great State* (Fig. 1) incorporates into its environment authentic narratives, multiple collaboration opportunities, and a variety of unique media assets specific to the content of the site, with the goal of engaging learners in the content and fostering community building, active learner participation, and collaborative interaction.

The site welcomes learners to the state of Minnesota, which is divided into five regions: southeast, southwest, northeast, northwest, and metro. Within each region, learners can explore different content areas and complete associated inquiry-based activities and mysteries, as well as share their own experiences, discoveries, and media files related to that content.

For example, in southeast Minnesota, there are five content areas (farms, towns, bluffs, waterways, and wildlife; see Fig. 2). Each content area includes text about historical and current-day happenings, links to associated media artifacts (Fig. 3), inquiry-based activities (Fig. 4), mysteries to solve (Fig. 5), and a "Share" area for learners to share comments, discoveries, and artifacts of their own.

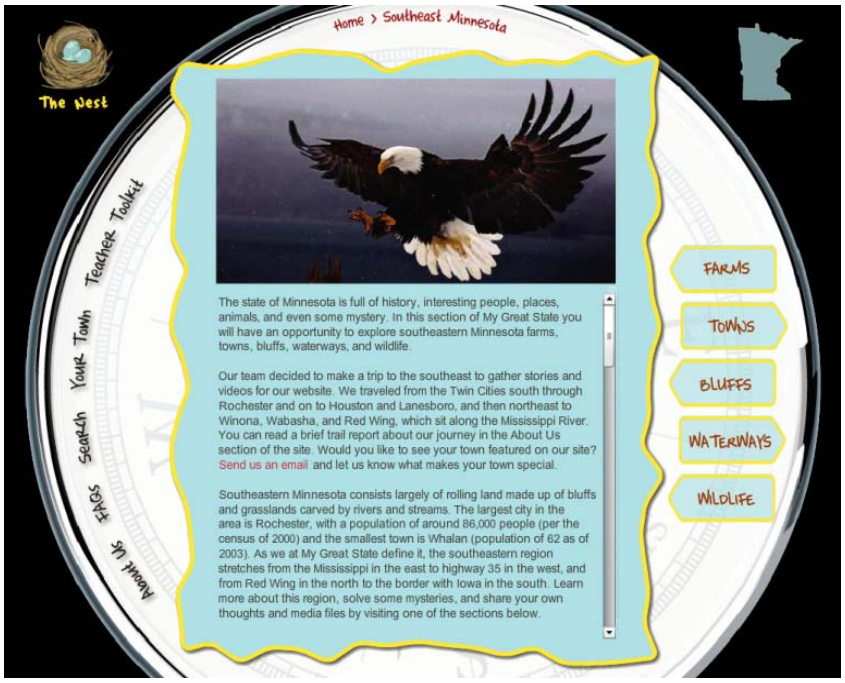

Figure 2. Southeast Minnesota content areas

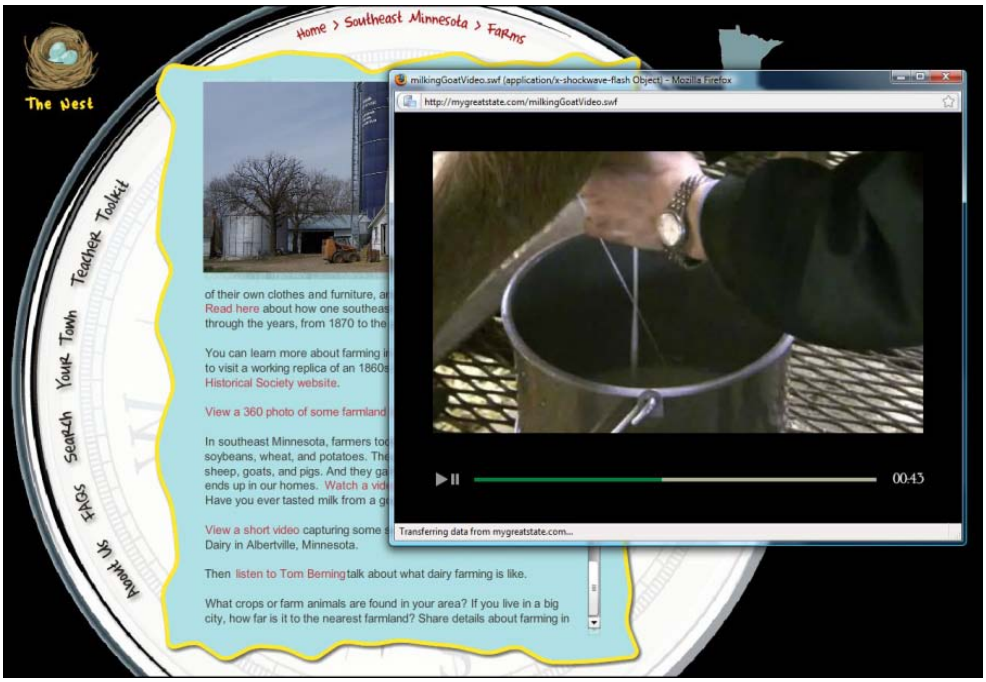

Figure 3. A media artifact (a video) linked to the "Farms" area

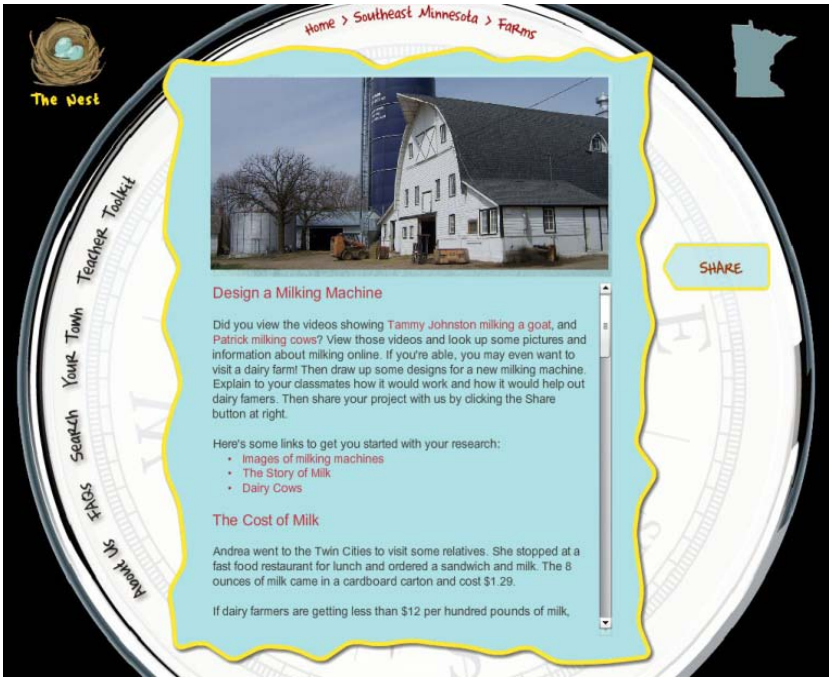

Figure 4. Inquiry-based activities for the "Farms" area

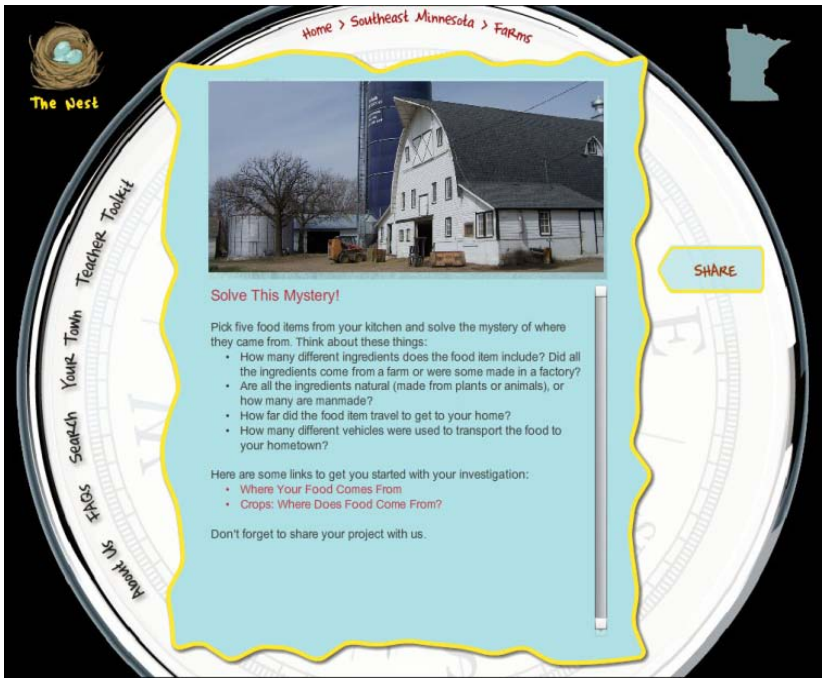

Figure 5. Mystery to solve for the "Farms" area

Learners can also read "The Nest," an overarching blog that introduces new content in the form of a fun narrative written in the voice of a young eagle named Talon (Fig. 6). Here, learners are able to nominate their town to be featured on the site and can create a blog where they can share media artifacts and other content about their community.

Figure 6. The Nest

The site scaffolds teachers as well as students by providing a resource area for educators (Fig. 7) that includes an introduction to the site, a suggested curriculum, technology tips and tutorials, pedagogical resources, a teacher forum area, and FAQs. In the curriculum area, teachers can find themes that are related to each content area. For example, for southeast Minnesota, classrooms could explore the theme of traditional knowledge by going through the media and text in the “Farms” section and then completing the related activities on the site.

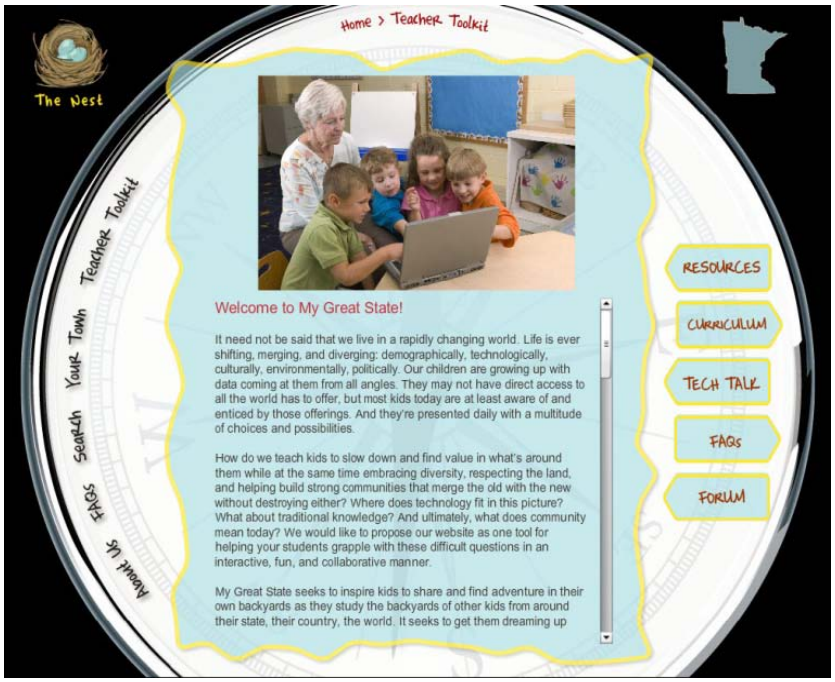

Figure 7. Teacher toolkit

The core principles of the AL framework were adhered to closely in designing the *My Great State* site, which began as a project in Dr. Aaron Doering's *Adventure Learning* course in spring 2009. Structured around nine core principles (Fig. 8), the AL framework is anchored in experiential and inquiry-based learning and blends an online learning environment with teacher-led classroom activities (Doering, 2006; Doering, Miller & Veletsianos, 2008).

Figure 8. Guiding principles of the AL 2.0 framework (Doering & Miller, 2009)

Table 1 illustrates how the core AL principles were used in the design of *My Great State*.

Table 1. Correlation of the core AL principles with the *My Great State* site design

AL Principle	***My Great State* Site Design**
A defined issue and place	The place is the state of Minnesota. The issue is the changes happening in society today (geography, communities, people, wildlife, architecture, businesses, schools, etc.) and where/how kids fit in. The goal of the site is for learners to find value in community-building and collaboration while embracing diversity, respecting the land, and merging old practices with new in innovative ways, even as they strengthen and enrich their inquiry, observation, literacy, and creative-thinking skills.
Authentic narratives	Woven into each content area of the site are authentic narratives that were gathered specifically for the site by interviewing people in the region of the state being discussed who are practitioners or experts of that particular content topic. For example, in the "Farms" area

	of the site for southeastern Minnesota, an interview was done with a farm family that lives in a small southeastern Minnesota town. Video clips from that interview, along with clips of various scenes from around their farm, such as that of a goat being milked, are woven into the text in the "Farms" area of the site. The majority of media artifacts included on the site were gathered this way, by traveling to different towns and cities, interviewing local residents, and visiting local sites of interest. This authentic narrative capturing the actual voices and stories of the people and places related to the site's issue and location is critical to engaging participants in the learning process.
An element of adventure	A virtual trip around the state and into the lives of other Minnesotans with interesting stories to tell forms the basis for the adventure on this site. The intrigue of the land and the wildlife around Minnesota also add adventure, as does the central figure of Talon, the young bald eagle who provides an overarching narrative for the site as a whole.
A sound curriculum grounded in inquiry	The curriculum for the site is tied to Minnesota state education standards that dictate the study of the history, geography, and current issues of one's home community, state, and country. Each content area of the site includes inquiry-based activities, as well as mysteries to solve, that are tied to that content. All of the activities and mysteries are situated in authentic scenarios and foster the development of problem-solving skills.
Collaboration and interaction opportunities between learners, experts, teachers, and content	There are multiple collaboration opportunities within the site. For each content block, there is a "Share" area where learners can share their own personal comments, discoveries, and media artifacts. Teachers can interact with learners within these "Share" areas, or with other teachers within a discussion forum that is linked to the "Teacher Toolkit" for the site. Expert chats are also an important feature of the site, and are designed as forums where

	learners and teachers can interact directly with experts in a given content area, either through an audiovisual tool such as Skype, or in a text-based environment such as Adobe Connect Meeting.
Synched learning opportunities that tie together content with curriculum	For the *My Great State* site, there are synched opportunities associated with each topic within each community in the site. These are important components that learners need to draw on to complete the curricular activities. The text, multiple media, hyperlinks, expert chats, activities, and mysteries all tie together and relate to desired learner outcomes. These components are interconnected, they enhance each other. Such synched learning opportunities allow for a deeper awareness of a topic. They not only enhance the topic, but also inspire learners to form links and connections to other topics and form broader connections. They ideally also inspire action.
An online venue to deliver content	The site resides entirely online, but components of it may be printed or extracted for individual use within the classroom. The site was built using Flash, HTML, CSS, WordPress, bbPress, and Ning. In addition, Skype was used for some of the expert chats.
Multiple media that enhance the curriculum	The site weaves text with photographs, illustrations, video, audio, hyperlinks to online games and other websites, interactive maps, blogging technology, and other media.
A scaffold for teachers as well as learners	The content and activities were designed with different levels of learners in mind, and many activities are structured to allow varying degrees of learner participation and effort. There is a "Teacher Toolkit" that introduces teachers to the site, the curriculum, the technology, and the various learning concepts woven into the curriculum and the design of the site, such as adventure learning, experiential learning, and inquiry-based learning.

The Research Questions

The learning environment of *My Great State* was tested in a design-based research study involving the implementation of the site in eight elementary school classrooms to determine to what extent its AL environment engages students in learning and spurs community building. Specific research questions that were investigated are:

- In what ways did the online learning environment, content, and associated projects actively engage students in the learning process and why?
- In what ways did the online learning environment, content, and associated projects spur community building and why?

Through surveys, interviews, direct observation, and focus groups, data was gathered as students explored the *My Great State* site, completed associated inquiry-based activities, and then collaboratively generated a blog about their own community. It is hoped that this study may contribute in a small way to better understanding methods and tools that are effective in instigating learner engagement, and the learner-engagement and community-building potential of AL environments.

CHAPTER 2: REVIEW OF THE LITERATURE

Though, as discussed in chapter 1, the concept of engagement as an important component of the learning process can be found as early as the 1930s, engagement did not emerge as a theoretical framework until the late 1990s, with a focus on technology-based teaching and learning (Kearsely & Shneiderman, 1999). Authentic activities, meaningful learning, collaboration, and experiential learning are all key components of engagement theory.

In the early twenty-first century, engagement took on prominence in academia with the creation and growing adoption of the National Survey of Student Engagement, as well as in the work of George Kuh (2001, 2009), Brent Wilson (2007, 2008), and Patrick Parrish (2006, 2009), who discuss, among other things, the importance of engagement in creating meaningful learning environments, stimulating a desire to learn, helping learners retain and better understand content, and generating transformative experiences that leave an enduring imprint on learners and enhance their ability to creatively and collaboratively solve problems.

As already noted, however, there are few practical models available for designers and developers to guide them in creating online learning environments that can achieve such a meaningful level of engagement and collaboration. The adventure learning (AL) framework is unique in this respect. It offers a method to situate and personalize the learning experience, actively engaging participants in the learning process while fostering collaboration and anchoring students in a targeted curriculum and learning objectives.

Many online learning environments use generic or stock media and text to feed content to the learner, are focused largely on cognitive elements, and offer no venue for learners to interact with each other or to share their questions, stories, and discoveries, thus missing the opportunity to generate a more meaningful, personalized, and engaging experience (Parrish & Botturi, 2009). As Bruckman (2002) aptly notes:

> In the realm of online learning initiatives, we need to focus on developing learning technologies that foster creativity and independent thinking. Preparing our children to answer fact-based, multiple-choice questions is not adequate training for life. . . . A thoughtful combination of technology, pedagogy, and social practices can make new kinds of learning experiences not only possible but easy to achieve in real classrooms. (p. 63)

This is precisely what the AL framework enables: seamlessly merging a sound pedagogy and authentic content with a variety of participatory media to create a collaborative learning environment that sets the stage for enhanced learning, motivation, engagement, and creativity.

Studies of AL environments, such as those conducted on classroom uses of the *GoNorth!* program (www.polarhusky.com), have shown that when content is authentic and situated and when the learner has opportunities to actively participate in the learning environment, the learner is more likely to be engaged in the content and to advance along a path of continual learning (Doering, 2007; Doering et al., 2008; Veletsianos & Doering, 2009). Doering and Miller (2009) observed, for example, that "student engagement often

escalates to unparalleled levels due to the authentic narrative that unfolds throughout each project."

Authentic learning immerses students in real-world scenarios, seeking to engage them both in complex, inquiry-based problem solving and to make things meaningful by presenting learners with people, stories, and issues they might encounter or could envision encountering in everyday life. Such learning is "inherently multidisciplinary" (Lombardi 2007).

The authentic and collaborative components of AL make environments based in this framework particularly conducive to community building, which can foster deeper engagement in the learning process if learners feel a sense of belonging to that community and a desire to contribute to its knowledge base. While the definition of community continues to evolve, spurred in recent years by the emergence of the communities of practice framework (Lave & Wenger, 1991) and by continuing developments in online technologies, communities are often said to "focus on a common practice" and construct knowledge in a "persistent and sustained" social network, sharing knowledge, "beliefs, values, history, and experiences" (Barab, MaKinster, & Scheckler, 2003, p. 238). Sharing and collaboration are, in fact, key characteristics that define online communities (Whittaker, Isaacs, & O'Day, 1997; Hiltz, 1998; Bruckman, 2006).

If, as has been shown in previous studies, higher engagement levels truly equate to a greater learning desire among students, better retention and understanding of content, and the generation of transformative experiences that leave an enduring imprint on the learner and enhance their ability to creatively and collaboratively solve problems, then

more online learning designers and developers should be incorporating into the design of their environments qualities that stimulate engagement. The AL framework can serve as one model to do just that.

CHAPTER 3: THE METHODOLOGY

Design-Based Research

Design-based research is a collaborative process that involves researchers and practitioners working together to study and refine theories of learning in naturalistic contexts such as real-world classrooms. It often includes a cycle of design, implementation, study, redesign, and reimplementation that can advance through multiple iterations; this study, however, focused only on the initial implementation. According to Amiel and Reeves (2008), "the ultimate goal of design-based research [is] to build a stronger connection between educational research and real-world problems" (p. 34), with one outcome being "a set of design principles or guidelines . . . which can be implemented by others interested in studying similar settings and concerns" (p. 35).

Participants/Setting

Classrooms with third-, fourth-, or fifth-grade students from elementary schools in the Twin Cities metro area of Minnesota were invited to participate in this study. Students and teachers from eight classrooms in three different elementary schools in three different school districts in the Twin Cities metro area of Minnesota chose to participate. The total project population of students was 123, comprised of 110 fourth graders and 13 fifth graders. The split of boys to girls was close to even (approximately 53 percent girls to 47 percent boys). Three teachers participated in the study.

Only one student (a fifth grader) dropped out of the project once it began, and she did so after participating for only one week. As reported by the teachers, there were a number of students who had initially declined participation who then asked to join the

project after it had already begun; these students were, however, denied participation since the project was already underway.

The classroom at school 1 consisted of fourth-grade students who had been identified as gifted and talented (GT) and who met regularly in special pullout classes throughout the year with the GT coordinator for the district. The GT coordinator was also a second-grade teacher. She will be referred to as "teacher 1" for the remainder of this paper. Most of the fourth-grade participants had worked with teacher 1 since third grade in the GT program.

Twenty of the twenty-six fourth graders involved in the GT program chose to participate in this research project. For the purposes of this project, they met weekly with teacher 1 over the course of five weeks in the multipurpose room at their school, using school-provided laptop computers. There were no breaks in their participation in the project (that is, they continued consecutively through on a weekly basis, from start to finish, over the course of the five weeks).

There were two participating classrooms at school 2. One class consisted of fourth-graders, and the other of fifth-graders. Both classes were made up of kids who, as at school 1, had been identified as GT and participated in regular pullout classes with the GT coordinator for the district (referred to hereafter as "teacher 2"). Teacher 2 is a former classroom teacher whose main focus now is on district-wide assessments and working with GT kids.

Ten of the eighteen fourth-graders opted to participate in this project, as did thirteen of the twenty fifth-graders. For the purposes of this project, they met weekly with

teacher 2 over the course of six weeks in one of two computer rooms in the media center at their school, using desktop computers. There were no breaks in these classrooms' participation in this project (they continued consecutively through on a weekly basis, from start to finish over the course of the six weeks).

All the fourth-graders at school 3 were given the opportunity to participate via their weekly classes with the STEM teacher (hereafter referred to as "teacher 3"). Eighty of the one hundred thirty-nine students opted to participate in the project. They participated during their regular classroom time with teacher 3, and, due to normal classroom interruptions, including field trips, state testing, and spring break, their meetings and participation in the project were not consecutive, but rather broken up over the course of seven to nine weeks (depending on the day of the week the class met), with six of those weeks being focused on the project. The students who opted not to participate in the project were given a separate assignment by teacher 3, one that they completed in the same classroom and over the same course of time as the students who opted into the project. The students met in the STEM classroom and used desktop computers.

The participant base was restricted to classrooms in the Twin Cities area because the content in the online learning environment being studied centers on the state of Minnesota, and because the researcher, who is based in the Twin Cities, conducted classroom observations and face-to-face interviews as part of the study and therefore needed easy access to the study participants.

Procedure

Classrooms were given the task of exploring the *My Great State* website and completing the activities. Their greater task was to create a collaborative blog about the community in which they live. Six of the eight classrooms also participated in a Skype chat with an eagle expert at the National Eagle Center (NEC) in Wabasha, Minnesota. Through surveys, interviews, direct observation, and focus groups, both quantitative and qualitative data was gathered as students explored the *My Great State* site, completed the associated inquiry-based activities, and then collaboratively generated their blog.

The *My Great State* site includes its own blog area, where students can share website-based activities they completed. The blog technology used there was WordPress. For the classroom blogs, Ning sites were set up prior to the project start. Each classroom had its own Ning site, to which students logged in using the same user name and password. Gmail accounts were set up for each classroom and were then used for the user name, since Ning requires an email and students did not have their own email accounts at school. Each teacher had their own login to all sites associated with their students. Ads were blocked from all the sites, “create links” were removed, and links to invite friends or to create separate networks were disabled. The ad blocking and “create links” removal required a monthly fee. The disabling of links to invite friends was managed by altering code in several areas of each Ning site.

The specific blog content to share on the classroom sites was left up to the students and their teachers, but classrooms were encouraged to include text along with a variety of media files (photos, videos, audio files), and historical as well as present-day

details. Teachers were given a list of potential information the students might include and projects the students might complete, as well as some initial links to sites where students could find information about their communities. The researcher provided several brief video clips for students on each of the blog sites, instructing students how to post both to the WordPress and Ning sites and providing minimal introductions for different aspects of the project. The researcher also set up weekly polls for the students to participate in on their Ning sites.

Students completed a survey prior to exploring the *My Great State* site and beginning work on the project. Interviews were conducted with the teachers at this time as well. During the period of site exploration and project creation, classroom observation took place, consisting of at least two visits to each classroom over the course of the five to six weeks of research. At school 1, the researcher was present at all five classroom meetings. At school 2, the researcher was present at four of the six meetings. At school 3, the researcher was present in each of the five classrooms at least twice over the course of each classroom's participation in the project.

At the conclusion of the research, students again completed a survey, and a focus group consisting of six to nine students from each classroom was convened. One-on-one interviews with teachers were again conducted at the end of the study.

The research occurred between February and April 2010. The overall study length lasted between five and nine weeks per classroom, with three classrooms meeting weekly across consecutive weeks, and five meeting weekly with breaks of varying lengths mid-project. Classrooms spent between 30 and 45 minutes per week on the project.

A week-by-week curriculum for each classroom is included in appendices G through I.

Researcher's Role/Background

The researcher, a graduate student in learning technologies in the department of Curriculum and Instruction at the University of Minnesota, conducted this study to gather data for her master's thesis. One of the schools that participated in the study is an elementary school that two of the researcher's children attend. The researcher had not met the school's principal nor two of the decision makers involved prior to approaching them about participating in this study. The GT coordinator who participated was known to the researcher but the researcher had had little prior contact with her. Neither of the researcher's children participated in the study and were not friends with, nor in the same grade with, the children who participated. The researcher was familiar with several of the children who participated in the study and was distant friends with the parents of two of the children.

Prior to the start of the project, the researcher did not have any contact nor familiarity with any of the children, teachers, or decision makers at the other two schools that participated.

Potential Risks and Benefits

The risk to participants in this study was minimal, as any risks encountered during the research were no greater in and of themselves from those risks ordinarily encountered in the classroom. The activities the teachers and students engaged in were typical learning and teaching activities: reading, watching videos, viewing photos, doing research,

writing, using a variety of online technologies, etc. The content of the learning and teaching activities was content ordinarily encountered in the classroom. The content on the *My Great State* site is about farms, towns, bluffs, waterways, and wildlife. The students and teachers used this content as a model to generate similar content about their own communities.

Children and teachers were given the opportunity to opt out of the study; are not identified by name, classroom, or school in this study; and photographs of individuals or any identifying characteristics are not included in the study.

The only identifying information that was collected about students or teachers was the students' grade level and gender. To aid the researcher in her note taking, audio files were recorded during interviews and focus groups, but no identifying information is included on those files.

Survey and interview questions asked of participants in this study were not personal in nature and were not about sensitive information.

The paper (consent and assent forms, researcher notes) and electronic files (audio files) were stored securely in a locked file at the researcher's home. Electronic files were stored in a password-protected area of the researcher's personal computer, a computer to which only the researcher has access. Files will be kept for the required three years and then destroyed.

Specific goals and potential benefits both for the schools involved and the researcher included:

For the School

There may be no benefit to participants in this study. However, teachers and student may:

- Meet some National Educational Technology Standards identified by ISTE
- Meet some Minnesota state standards identified for language arts and for social studies
- Learn about blog technology and other online technologies utilized in this study and how they might be used in other classroom or personal projects
- Learn about what adventure learning is and how it might be used in the classroom or elsewhere

For the Researcher

- Gain insight into the value, assets, and deficiencies of the *My Great State* online learning environment
- Gain insight into the role of engagement and community building in the learning process
- Gain insight into the role that adventure learning can play in the learning and teaching processes

CHAPTER 4: ANALYSIS OF THE DATA

The data informing this study consist of 2 student surveys, 17 classroom observations, 6 focus groups with participating students, and 6 personal interviews with participating teachers, conducted over periods of five to nine weeks.

The researcher used an interpretive approach, coding the data and assessing it for themes and patterns. The various data types were analyzed independently and then in comparison with each other, with a specific focus on engagement and community building. The data collected was largely qualitative, with some select quantitative data gathered via the student surveys and blogs.

Student Background

Of the 123 research participants, 117 participated in a pre-project survey. All the survey respondents reported they had access to a computer, with 98 percent of them having access at home as well as at school. Sixty-three percent said they knew what a blog was, 56 percent reported they would like to create something on the computer for a class project, and 86 percent were interested in creating their own website.

When asked to respond to the open-ended statement "I think I would learn things easier at school if …" the majority of the 108 responses fell into several broad categories: more use of examples and hands-on activities (21), more use of technology/computers (17), more use of books/reading (12), more fun learning activities and/or more use of learning games (9), changing the pace of teaching and learning (8), more class discussion about topics (7), class sizes were smaller or there was more teacher help available (7).

It was interesting as though only nine respondents in the pre-project survey specifically reported desiring more use of learning games, in the post-project focus groups, it was overwhelmingly the number one suggestion that kids had for their teachers for how to make learning more exciting for them.

Engagement

This study looked at the following components as measures of a student's learning engagement, based on qualifiers noted in the work of Parrish and Botturi (2009), Kuh (2001, 2009), and Wilson et al. (2007, 2008), and on the responses gathered from teachers participating in this study regarding how they define engagement and how they know if a student is engaged in learning:

- Focus: How focused were the students on the content and activities in the *My Great State* website and on the creation of their classroom blog and how independently did they work?
- Desire to Learn/Excitement Level: What types of responses did the students share with each other, with their teacher, and with the researcher as they worked on the various aspects of the project? Were they interested in pursuing the project beyond classroom hours and in sharing the project with their family or friends?
- Problem Solving: Were the students actively engaged in problem solving during the activities and blog creation, or did they easily give up on one activity and move on to another?
- Personalization: Were the students personalizing the experience, or, in other words, were they taking items that they learned about and expressing their own

opinions about them and sharing their own experiences related to the topic or were they simply regurgitating facts they had heard or read about?

- Active Participation: Were students actively participating in asking questions, seeking answers, and sharing experiences through written or oral means?

Focus

Based on observations and student responses, what best held the students' focus throughout the study was the *variety* of components found in the online learning environment (text, videos, photos, games, links to outside resources, activities, mysteries, and blog); the opportunity to share their thoughts, create something relevant to their lives, and interact with others; the novelty of getting to work online and with technologies new to them; and the fact that they had choices in terms of what area or activity to focus on, rather than having a teacher dictate that focus.

In the post-project survey and focus groups, the students reported such things as:

- "I loved bloging [sic]! It was fun to let other people know about what I learned and see what others think."
- "It was fun because you got to research about it and then share what you learned."
- "What makes websites fun to explore are like lots of activities like videos, cause some things you can't really explain in writing."
- "It would have gotten really boring if you just said Talon is a three year old eagle blah blah blah, but because it was from Talon's perspective, it was really cool."
- "I liked that I got to do things on my own without a parent or adult helping me constinly [sic]."

When the kids first explored the *My Great State* website, they were given two simple tasks to complete: find a video created by kids, and find a town that is mentioned that does not really reside in the southeastern portion of Minnesota (the area of the site that they were exploring). This was done through a video introduction the researcher posted to the classroom blog site. The students were diligent about searching for these two items and showed excitement when they found them. Then they just freely explored the site.

The students were then asked to each complete at least one activity or solve one mystery found on the *My Great State* website, and to post their findings in the "Share" area of the site. From the researcher's observations and those of the teachers, the students were independent and focused about pursuing this task, but only a few students from each classroom had enough time to post their findings or project once done (some did not have time to fully complete the activity they chose). Lack of time was an issue during this research project, as classrooms only had 30 to 45 minutes per week to devote to the project. Teachers 1 and 2 expressed this in the post-project interviews, stating, respectively, "had we allowed them at least an hour, I think it would have been better," and "I think with more time we could have done even more."

When the students first began work on their classroom blog, the students remained fully focused, but, intrigued by the new technology and the opportunity to test things out, some students initially deviated from posting things specific to their community, which is what had been asked of them, instead asking questions of each other

like “Do you think the word muffin sounds funny backwards?” “What was the weirdest thing that ever happened to you?” or “What is your favorite subject in school?”

However, once the novelty of working online and being able to ask and gather responses from classmates wore off, the students settled in to posting items that focused on their community, such as facts and photos related to their community, their opinions about different aspects of their community, scavenger hunts within their community, and mysteries about their community for other students to solve. The quality and depth of the posts varied from student to student, but given that the students had limited time and resources for this project, were given few guidelines as to what they should work on, and knew they were not being assessed on this project, the fact that they stayed on task and focused on the project indicated a solid level of engagement with the project.

Teacher 3 reflected some of these findings in the post-project interview: The students “loved with the *My Great State* [site] . . . all the links to either other websites or the videos and I think it’s because they’re so used to having to take information by reading it that having the visual areas as well, they really enjoyed that.”

Desire to Learn/Excitement Level

During focus groups, students shared what types of things got them excited about learning. In summary, they said:

- ***If it’s interactive.***
    - “Make things more interactive so it’s not just reading out of a textbook for something.”

- "I wish like instead of so many worksheets every day there would be more projects, like you would do more like PowerPoints like at home or like posterboards and stuff because that would be a little more fun than just sitting there doing like 16 math problems or like 20 other things."
- "[I wish] we did more hands-on things like building things."
- "[I wish] we read more and do things with our hands like knit, needle felt, sew, etc."
- "If you have to search for it, it makes it more interesting and pizazzy."

- ***If another student, especially a friend, recommends it.***
  - "When it's kind of like everybody's talking about it and saying like, say Morgan said 'the mall of America is new' just for an example, and Morgan says, 'wow it's awesome, you should go there.' That would get me really excited just to go there or learn something about it on the computer."
  - "I have an example, like Lyndsey and some other people were talking about Greek mythology stuff so I wanted to get some books on it at the library."
- ***If it's presented in a way that makes it more interesting and easier to understand.***
  - "[Teachers] could make learning into a game, let's just say wordmaster bingo, so then it's like you learn the definitions and synonyms and stuff but it's like a bingo which is fun for everybody."

- "Our teacher, like whenever like we do math, he always does a bunch of online games and that's really fun. That helps us a lot."
- "Maybe when they're teaching it to us, [teachers] can give us more examples."
- "[I wish] we had more projects, like instead of watching the teacher, the teacher can make an experiment, or show us on the Smartboard, instead of just explaining it while talking."
- "If you have separate resources like instead of just doing a lesson every day like playing games and going on websites and stuff like that."

- ***If it uses technology.***
  - "I would kind of have this lab on the side of the room, like a little computer lab, but I know that would never happen, so instead of every kid just using pencil and paper every day, just pencil and paper and answering questions, I would have maybe some free time in the lab and maybe typing instead of just writing so that kids can improve their typing skills and learn more about cooking or something."
  - "I would have every kid have like a laptop and then I would say like go to this website and then would have a whole bunch of stuff on the subject."
  - "Maybe just have four or five computers on the side of the room and then every day kids can switch off using the computers for different tasks and stuff."

- "I would want to try to use the Smartboard to show the students better how to work things out."
- "I would use iPod touches because on iPod touches you can order like buy music games or like a game that would involve learning in technology or in other types of like math or something."
- "[I wish] each of us could have our own laptop."

It was observed that when one student found an item that excited them, they would verbalize that excitement, grabbing the attention of other students, who were eager to know what was so intriguing. The students commented how much they enjoyed sharing findings with each other in an online environment, and noted how the blog reminded them of such venues as Facebook or MySpace, which they observed their older siblings and parents using.

Eighty-four percent of the 112 post-project survey respondents indicated that after exploring the *My Great State* website they wanted to learn more about the people, places, or animals they discovered there. One teacher observed, "[The students] seemed excited to come [to work on the project]. They loved the [polls] and games initially. Then they were pleasantly surprised that the 'work' part of the project was fun too." Another teacher noted the students "were engaged the entire time" and "loved communicating with each other . . . even when it was about the state of Minnesota." A third teacher observed: "It was very motivating for them. As a whole I saw them have that intrinsic motivation to work independently through things. I also think that the number of choices

they had, each day they were all, you know, had an overarching goal but they had choices within that goal and that really kept them engaged as well."

In terms of kids accessing the website and their classroom blog from home and sharing the site, activities, blog, and/or what they were learning during the project with their family or friends, this is more difficult to accurately assess. The kids at school 1 were actively encouraged to go online from home and were given site addresses and passwords to take home. At school 2, they were given the site addresses and passwords to take home, but were told it was not expected of them that they would do work from home. At school 3, they were not given the information to take home and the expectation was that all work would be done in the classroom. However, teacher 3 shared with the researcher that there were some kids who asked for the information to take home and that it was provided to them if they asked.

The researcher was able to track when the kids posted things to their classroom blog from home, but could not track when they were accessing the *My Great State* website, nor when they were accessing the blog site but not posting there. About half the students from school 1 posted items from home, and a handful of kids from schools 2 and 3 posted from home. Students from all the schools were accessing the website from home as many of them shared with the researcher that they had done so or that they had showed the site to their family or friends.

Problem Solving

The students appeared to genuinely enjoy problem solving, whether it came in the form of completing an activity, solving a mystery, or figuring out how to achieve a

technological task. For example, there is an activity in the “Wildlife” area in the southeastern section of the site that requires students to pair up to try to determine why we have two eyes and two ears (Fig. 9). This was one of the more popular activities chosen by students. They were observed finding a partner on their own and then setting about following the instructions for the activity and vigorously discussing the results, often grabbing the attention of students working on other activities and drawing them into the discussion.

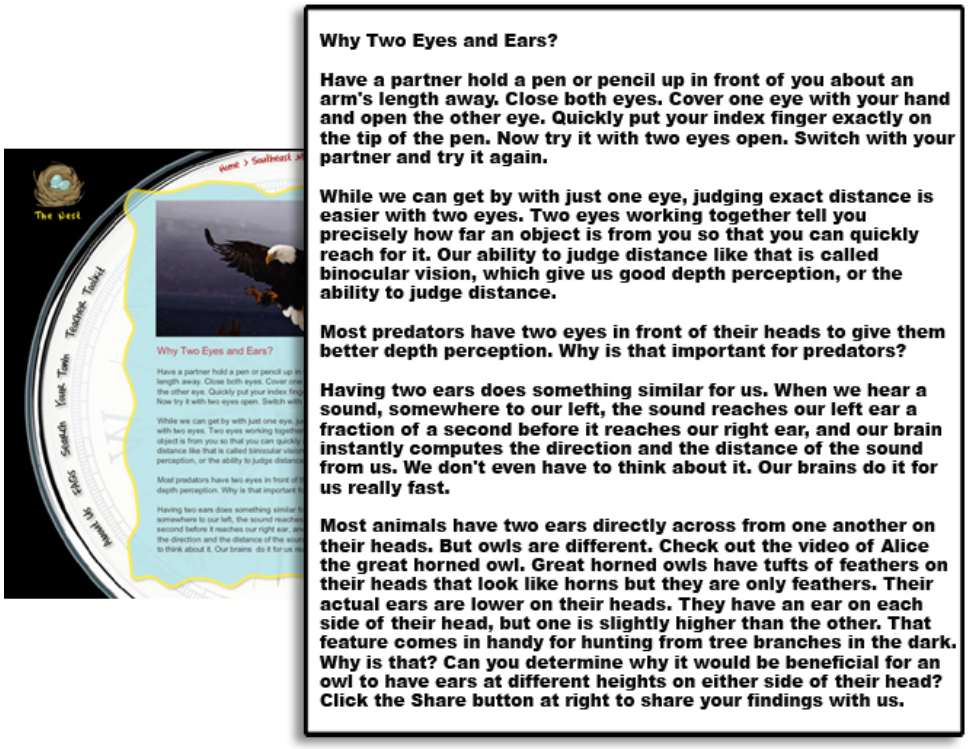

Figure 9. Sample activity that required collaboration and problem-solving

One teacher noted: “During the activities and mysteries . . . [the students] took it upon themselves to do what the activity was asking them, whether it was further research or getting themselves grouped how they needed to get grouped.” Students were frequently observed sharing findings and discussing potential solutions to activities and

mysteries with each other, as well as sharing tips for where to find solutions or for how to, for example, post an item such as an active hyperlink to the classroom blog site. They appeared to sincerely enjoy and become deeply engrossed with seeking out answers and testing out theories. As summed up by one student during the focus groups, “If you have to search for it, it makes it more interesting and pizazzy.”

Personalization

When students made a personal connection with something, they were all the more eager to share it. For example, one student lived on a farm. When he discovered the “Farms” area of the *My Great State* website (Fig. 10), he got very excited and watched every farm video on the site. He found his family’s farm using Google maps and posted a link on the classroom blog. He then pulled up the satellite view and wanted to share with the class what all the different areas of his farm held.

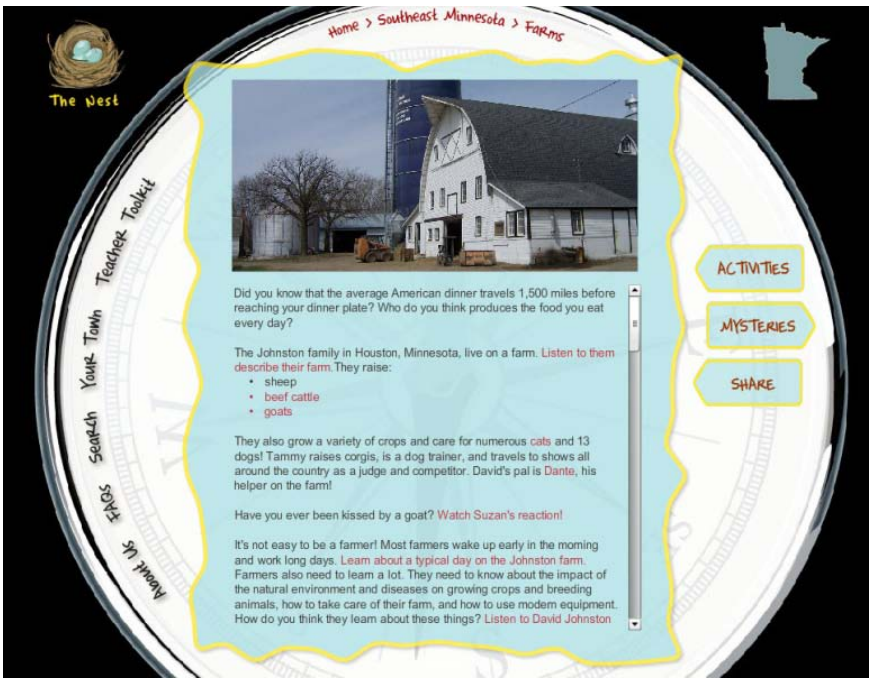

Figure 10. The “Farms” area

The mapping was very popular with several classes. As teacher 2 noted, the students “really seemed to enjoy learning about their own community. They spent a great deal of time exploring the city using Google Maps.”

Seventy-eight percent of respondents to the post-project survey reported they liked to share things about their life and where they live with other people, and almost half (48 percent) replied that their favorite part of the project was creating a blog about their town (Fig. 11). Examples of students’ personalizing the learning could be found in abundance within the blogs, where students posted their opinions about different parts of their community and responded to other students’ postings.

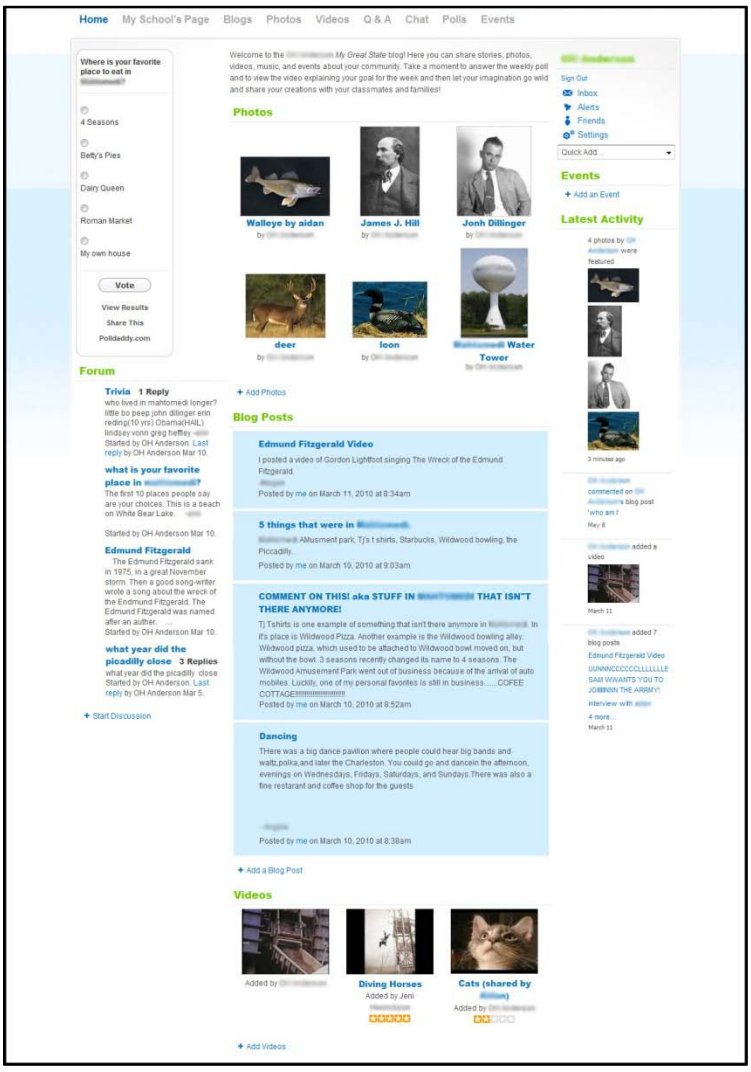

Figure 11. Sample classroom blog site

Active Participation

On the classroom blog site for school 1, over 3 consecutive weeks the 20 participants created 69 blog posts, 17 forum posts, 16 independent photos (most students posted photos within blog posts instead of independently), 2 videos, and numerous comments on posts. At school 2, over 4 consecutive weeks the 23 participants created 45 blog posts, 18 forum posts, 1 independent photo, no videos, and numerous comments on posts. At school 3, over 4 nonconsecutive weeks the 80 participants created 168 blog

posts, 33 forum posts, 28 independent photos, 1 video, and numerous comments on posts. During focus groups, students noted they would like to have had more access to be able to post media files. Students had restricted, or in some cases no, access to photos, videos, and/or audio files.

In addition to actively posting content, students participated in a weekly poll on the blog sites. The students seemed to enjoy responding to this feature as well as checking to see how other students had responded to the question of the week. Ideally this feature would be something that the students themselves could create, but due to the technology being used, only the creator of the blog site was able to craft these, which is why the researcher maintained responsibility for them.

Active participation was also observed during live online chats with the National Eagle Center (NEC) in Wabasha, Minnesota. Six of the eight classrooms participated in these chats, which were conducted using Skype and webcams. Each NEC presenter held a live eagle and provided a variety of eagle facts and stories. Following the presentation, students had the opportunity to ask questions. For every class, there were lots of questions, and for all classes but one, time ran out before all the questions could be asked.

Many students later posted comments or photos about eagles on their classroom blog site (Fig. 12). One teacher expressed, “[The students] LOVED the eagle presentation. That was a highlight for me too.” Another said, “I think [the students] benefitted a lot from it and I feel like they were very much engaged because it was something out of the ordinary for them, a different way of hearing the information and interacting with someone.”

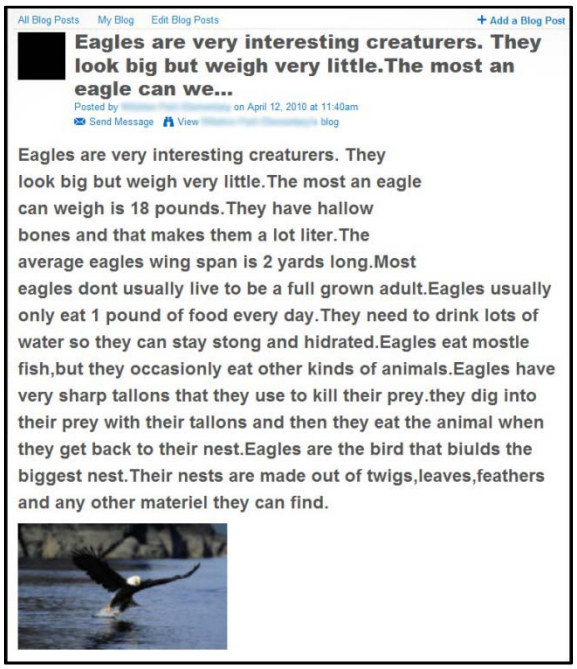

Figure 12. Sample student post following a Skype chat with the NEC

The feedback from students, teachers, media specialists, and IT staff after these Skype chats was unanimously positive. Lots of ideas were being tossed about regarding other ways this technology and forum might be used in the classroom.

Community Building

Along with engagement, this study examined in what ways the project components spurred community building. The number one way it did so was in generating discussion among students, both online and face to face. They shared with each other things they liked about the *My Great State* website. They worked together completing activities and solving mysteries. They helped each other learn the technology. In the blogs, they shared what they had learned and commented on each other's posts.

So even though they were often working independently on projects, research, or exploration, they came together to share and reflect. One teacher noted how she could see

making use of the blogging as a form of community building and formative assessment: "I can see that as a way for me to interact with the kids and their learning and get follow-up information and . . . [do] more formative assessment. I think too it's a way for the kids to . . . learn from each other."

In the pre-project survey, 79 percent of the respondents said they like working on group projects with other kids in their class. While during the focus groups, some of the kids qualified that statement by saying they preferred to choose their workmates, or that there were certain instances when they preferred to work alone, most generally found working with others to make the project more enjoyable. Some of the benefits to working with other kids that were shared by participants in the focus groups include:

- "[You can learn] something new that you don't know about, like from the blog site . . . and you can learn a lot about the community that you don't know about."
- "I like learning about, like, my friend, like if she lives in another town or something, I want to know about her community and see what it's like and might want to go there and visit."
- "You can look and see what other kids wrote and what they thought and you can make up your own mind and say I thought this and this."
- "My parents really forgot grammar and math and all that so I really don't get help that much, but all my friends [help a lot]."

This project also spurred community building in that it generated among students a discussion about what a community is and in what ways it might be important. Students

discussed block parties and other community events and they talked about getting to know neighbors and how once you met people, most of them were nice. The definitions of community they came up with ranged from “A bunch of like people in a town that work together and do stuff” to “Where there’s two types of people, the producers and the consumers” to “I think of it as everyone getting along and everyone’s helping each other along the way to just make everyone’s life happy.”

Overall, the data collected during the course of this study showed the majority of students to be focused, excited about and desiring to learn the content presented to them, actively engaged in problem solving, personalizing their learning experiences, and actively participating in the various components of the project. The data further found the students to be working both independently and in collaboration with each other, and thinking about community and what role it plays in their lives.

CHAPTER 5: SUMMARY, IMPLICATIONS, CONCLUSION, LIMITATIONS

Summary

Across the classrooms and the various schools, the students experienced similarly strong engagement levels with the *My Great State* website and the associated blog project, and were drawn together as a community to solve problems, share findings, and reflect on those findings. Using new technologies, incorporating authentic narratives, being able to go online and communicate with each other, and being able to travel virtually and experience the presentation of content in manners other than just through text grabbed the students' attention and focus and inspired them in their learning.

Looking specifically at the components used in this study to measure a student's learning engagement, based, as noted earlier, on work drawn from Parrish and Botturi (2009), Kuh (2001, 2009), and Wilson et al. (2007, 2008), as well as on responses gathered from teachers participating in this study, the majority of students were found to be focused, excited about and desiring to learn the content presented to them, actively engaged in problem solving, personalizing their learning experiences, and actively participating in the various facets of the project. The data further found the students to be working both independently and in collaboration with each other, and thinking about community and what role it plays in their lives. This data as a whole would indicate that the *My Great State* site and blog project, and as an extension, the adventure learning framework, were effective in spurring engagement and building community in the participating classrooms.

The participating teachers concurred that the kids were engaged in the project. As teacher 1 expressed, “They were engaged the entire time! The fact that it was at their level and on the computer and involved other students made it all right up their alley.” Teacher 2 noted, “They seemed very engaged. . . . They really seemed to enjoy learning about their own community.” And teacher 3 said, “It was very motivating for them. As a whole I saw them have that intrinsic motivation to work independently through things.”

Some items to keep in mind, however, that would serve to strengthen future adventure learning projects include:

- Allowing more time for the project. All three teachers noted that with more time, more could have been achieved, particularly with respect to the substantiality of the blog posts that were generated.
- Trying to maintain the project over consecutive days or consecutive weeks as consistently as possible. At school 3 having some one- to two-week-long gaps in the consecutiveness of the project (due to spring break and/or state-wide testing, with two classrooms experiencing a total of three broken weeks, one for spring break and then two consecutive weeks of testing) was a distracter for some of the kids.
- Implementing some form of identified assessment or accountability with the blog project. As teacher 3 noted: “The way that the curriculum is set up in here is that [the students] are always evaluated, they’ll always have a rubric before they begin in a project and then they get the rubric when

they’re done and there’s always a presentation piece, so that was different for them in here.”

- Providing more resources, time, and/or unrestricted access to students to allow them to be able to better personalize their creations by capturing both already existing and self-generated video, photos, and alternative media. Students communicated during the focus groups that they would like to have been able to do this.

Implications

AL environments can help stimulate learning engagement and community building in the classroom. Teachers can make use of existing AL environments or create their own, using free online resources such as blogging sites or wikis and:

- Creating a classroom adventure tied to the existing curriculum
- Creatively incorporating the use of technology in the classroom
- Reaching out as a class to experts in the local, national, and worldwide community
- Offering students choices
- Traveling virtually
- Turning learning exercises into a game (e.g., solving a mystery, using hands-on experiments)
- Communicating learning content from a unique perspective (e.g., an animal’s perspective, a personal narrative)

- Making learning come to life for students by providing authentic narratives and real-world scenarios that not only draw students into the learning but also concretely demonstrate to them what the learning is all about
- Asking students for their opinions and contributions, thus allowing students to enter into a dialogue with the teacher as well as to share with and teach each other
- Sharing the passion (as one student noted during a focus group: “How am I going to be interested if [my teacher] isn’t?”)

As with the *My Great State* site, the adventure can be focused on ordinary, everyday events with familiar people; it does not have to be large-scale, involve a big budget, or feature an event that few are able to participate in. The most important things are that the content is authentic and meaningful to the students and that the content ties in well with the learning goals and overarching curriculum of the classroom.

Conclusion

The study findings indicate that the adventure learning framework is an effective tool for designing and developing an online learning environment that actively engages learners, stimulates a desire to learn, and encourages collaborative and creative problem solving. The varied components and use of technology helped keep students excited about learning and eager to share their knowledge, while the synched learning opportunities kept the class focused on a targeted curriculum and learning objectives. Such environments can also create formative assessment opportunities for teachers.

Limitations

The *My Great State* website was not fully populated with content nor were all areas fully functional at the time of this study. The state of Minnesota is divided into five regions on the site and only one of those regions, the southeast, was available for the participants to explore, along with "The Nest" (a blog written by a fictional young eagle about his life in Minnesota), a history of the development of the website, and a teacher resource area. Many of the participants expressed the wish that they could have explored other areas of the state besides the southeast, though they had been informed before deciding to participate in the project that this would be the only region available to them during the study. This is notable because the lack of accessibility to other areas of the website could have influenced some participants' engagement with or excitement about the project.

In addition, three of the participating eight classrooms in the study were made up of students who had been identified as gifted and talented (GT). It is possible that the experiences and responses of these students are not representative of the larger population. The identified GT classrooms represented about one-third of the total project population (43 out of 123 students). Presumably some of the students at school 3 also meet the criteria to be identified as GT students.

There was a slightly higher proportion of boys to girls among the GT students at schools 1 and 2 versus the total population at school 3, and the population of schools 1 and 2 included 13 fifth graders mixed in with the fourth graders, whereas school 3 was all

fourth graders. These additional factors of gender and age could also have influenced outcomes in varying ways.

Though it's possible to do so, this study did not analyze the data separately to compare results of, for example, the identified GT classrooms at schools 1 and 2 versus the classrooms at school 3, nor to compare the results of the fourth graders versus the fifth graders, or the girls versus the boys. These would make for interesting comparisons, however, and a more highly detailed analysis of the study results.

Another factor that differentiated schools 1 and 2 compared to school 3 was the fact that schools 1 and 2 completed the project in consecutive weeks, with no breaks. The classrooms at school 3, on the other hand, experienced various gaps or breaks in the project, with gaps of one week for spring break for all classrooms and gaps of two additional weeks for several classrooms due to state-wide testing. Two of the classes ended up completing the post-project survey on a day following a two-week gap due to testing. It would require a separate study, but it would be interesting to observe whether completing a project such as this over consecutive weeks versus with breaks influences the outcomes.

Another factor that would require separate study but that would be important to observe is whether holding the students more accountable for their contributions would have any effect on the outcomes. For the purposes of this study, entire classrooms logged in to the blog site using the same user name and password, and though students were encouraged to include their first name in their posts, not all chose to do so or, in some cases, were prevented from doing so as they did not have permission from their parents

according to school forms that had been filled out for school-wide Internet usage that dictated the child was not allowed to use their name for any online postings.

Students also knew they were not being graded or assessed on this project, and whether that was a positive or negative influence or had any effect at all on student responses to the project is unknown.

Finally, the researcher's children attend school 1 and though they were not friends with nor in the same grade with any of the students who participated in the research project, it is possible that some of the participants knew the researcher's children at least by name and that their participation in the project could have been influenced by that relationship or by knowing that the researcher was the mother of children who attended their school. Teacher 1 could also have been influenced by this fact, especially as one of the researcher's children is a participant in the GT program in another grade. The survey, interview, and focus group results from school 1, however, were in line with that collected from the other schools.

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APPENDIX A
TEACHER CONSENT FORM

An Engaging Adventure: The Evolution of an Online Learning Environment Using the Adventure Learning Framework to Build Community and Engage Learners

You are invited to participate in a research study of *My Great State*, an online learning environment in development for kindergarten through sixth-grade classrooms in Minnesota. You were selected as a possible participant because you are a teacher at a Minnesota elementary school that serves children in kindergarten through sixth-grade, or a portion thereof, and your school has consented to participate in this study. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by Jeni Henrickson in the department of Curriculum and Instruction at the University of Minnesota, in support of her M.A. thesis research.

Background Information

The purpose of this study is to determine what elements of this type of learning environment and its associated activities most interest students and teachers and stimulate learning and community building, and to determine how well the site's technologies can be used by teachers and students in the typical classroom. Specific questions the researcher intends to look at include:

- In what ways does the online learning environment, content, and associated projects actively engage students in the learning process?
- In what ways does the online learning environment, content, and associated projects spur community building?
- What role does the teacher play in facilitating student engagement with the online learning environment, content, and associated projects?

Procedures:

If you agree to participate in this study, you will be asked to do the following:

- Complete two 30-minute interviews with the researcher, one prior to and one at the conclusion of implementing the project in your classroom. These would be held at a time of greatest convenience for you.
- Have your students complete two 15-question online surveys that would take approximately 15 to 20 minutes each to complete, one prior to and one at the conclusion of implementing the project in your classroom.
- Explore the *My Great State* online learning environment and complete some associated activities in your classroom with your students over the course of four

weeks, dedicating approximately 45 minutes per week to the project. The main activity during the four weeks of project implementation will be to have your students develop a group blog about the community where they attend school.

- During the four-week period of implementation, you agree to allow the researcher to visit your classroom up to two times for observation purposes.
- At the conclusion of the four-week period, six to eight children per classroom will be randomly asked to participate in a 45-minute focus group, during which time the researcher will ask the group of children questions about their experiences with the *My Great State* website and with creating a group blog about their community. Some children from your classroom would be asked to participate in one of these focus groups.

The interviews and classroom observations will be audio-taped; however, no identifying information about you, your classroom, or your school will be included. The audio-taping will be to assist the researcher in note taking only. The researcher will also be taking notes by hand and may conduct some videotaping during classroom observation, but will only be recording students' hands and computer screens.

Risks and Benefits of Being in the Study

This study has minimal risks to you as a participant. Potential risks include possible discomfort answering interview questions or being observed in the classroom.

There may be no direct benefits to you as a participant in this study. However, possible benefits could include:

- Some National Educational Technology Standards identified by ISTE may be met
- Some Minnesota state standards identified for language arts and for social studies may be met
- Students and teachers may learn about blog technology and other online technologies that could be used in their classroom in other projects
- Classroom discussion may be stimulated about what makes a community, what makes the students' community special, and what roles students can play within their community

Compensation:

You will not be compensated for your participation in this study.

Confidentiality:

The records of this study will be kept completely private. In written or oral materials that are produced in association with this study, no information will be included that could

link you to this study. Research records will be stored securely and only researchers will have access to the records. After three years, the information gathered will be destroyed.

Voluntary Nature of the Study:

Participation in this study is voluntary. You may refuse to participate in this study as a whole or in part. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota or with your school. If you decide to participate, you are free to refuse to answer any question asked, to complete any activity suggested, or to withdraw from the project at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is Jeni Henrickson. If you have questions or concerns about this study, you may contact her at the University of Minnesota at 612-625-4161, on her cell phone at 651-329-4007, or by email at henr0027@umn.edu. You may also contact her advisor, Dr. Aaron Doering, in the department of Curriculum and Instruction at the University of Minnesota, at 612-625-1073 or adoering@umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

You will be given a copy of this form to keep for your records.

Statement of Consent:

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

Signature: _____ Date: _____

Signature of Investigator: _____ Date: _____

APPENDIX B
PARENT CONSENT FORM

An Engaging Adventure: The Evolution of an Online Learning Environment Using the Adventure Learning Framework to Build Community and Engage Learners

Your child (son/daughter) is invited to participate in a research study of *My Great State,* an online learning environment in development for kindergarten through sixth-grade classrooms in Minnesota. This research study will be conducted during TBD lessons in TBD's classroom. Your child is selected as a possible participant because s/he is a student of a teacher who is participating in this study. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by Jeni Henrickson in the department of Curriculum and Instruction at the University of Minnesota, in support of her M.A. thesis research.

Background Information

The purpose of this study is to determine what elements of this type of learning environment and its associated activities most interest students and teachers and stimulate learning and community building, and to determine how well the site's technologies can be used by teachers and students in the typical classroom. Specific questions the researcher intends to look at include:

- In what ways does the online learning environment, content, and associated projects actively engage students in the learning process?
- In what ways does the online learning environment, content, and associated projects spur community building?
- What role does the teacher play in facilitating student engagement with the online learning environment, content, and associated projects?

Procedures:

If you agree to allow your child to participate in this study, your child will be asked to do the following:

- Complete two 15-question online surveys that would take approximately 15 to 20 minutes each to complete. One survey will be completed prior to the child exploring the online site and completing classroom activities, and the other survey will be completed at the end of this project.
- In the classroom under the direction of the classroom teacher, explore the *My Great State* website and complete some associated activities once a week for approximately 45 minutes per week over the course of four weeks. The main activity during this four-week period will be developing a group blog about the community where the students attend school.

- During the four-week period of implementation, you agree to allow the researcher to visit your child's classroom up to two times for observation and note-taking purposes.
- At the conclusion of the four-week period, six to eight children per classroom will be randomly asked to participate in a 45-minute focus group, during which time the researcher will ask the group of children questions about their experiences with the *My Great State* website and with creating a group blog about their community. Your child may be asked to participate in one of these focus groups.

The online surveys will not record any identifying information about your child other than his/her grade level and gender. The classroom observations will be audio-taped; however, no identifying information about your child, his/her classroom, or his/her school will be included. The audio-taping will be to assist the researcher in note taking only. The researcher will also be taking notes by hand and may conduct some videotaping during classroom observation, but will only be recording students' hands and computer screens.

Risks and Benefits of Being in the Study

This study has minimal risks to your child as a participant. Potential risks include possible discomfort answering survey or focus-group questions or being observed in the classroom. As described below under "Confidentiality," your child can refuse to answer any question or participate in any activity at any time.

There may be no direct benefits to your child as a participant in this study. However, possible benefits could include:

- Some National Educational Technology Standards may be met
- Some Minnesota state standards identified for language arts and for social studies may be met
- Students and teachers may learn about blog technology and other online technologies that could be used in their classroom in other projects or at home
- Classroom discussion may be stimulated about what makes a community, what makes the students' community special, and what roles students can play within their community

Compensation:

Your child will not be compensated for participation in this study.

Confidentiality:

The records of this study will be kept completely private. In written or oral materials that are produced in association with this study, no information will be included that could

link your child to this study. Research records will be stored securely and only researchers will have access to the records. After three years, the information gathered will be destroyed.

Voluntary Nature of the Study:

Participation in this study is voluntary. You may refuse to allow your child to participate in this study as a whole or in part. Your decision whether or not to allow your child to participate will not affect your current or future relations with the University of Minnesota or with your child's school. If you decide to allow your child to participate, your child is free to refuse to answer any question asked, to complete any activity, or to withdraw from the project at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is Jeni Henrickson. If you have questions or concerns about this study, you may contact her at the University of Minnesota at 612-625-4161, on her cell phone at 651-329-4007, or by email at henr0027@umn.edu. You may also contact her advisor, Dr. Aaron Doering, in the department of Curriculum and Instruction at the University of Minnesota, at 612-625-1073 or adoering@umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

You will be given a copy of this form to keep for your records.

Statement of Consent:

I have read the above information. I have asked questions and have received answers. I consent to my child's participation in the study.

Signature of Parent or Guardian: _____ Date: _____

Signature of Investigator: _____ Date: _____

APPENDIX C
STUDENT ASSENT FORM

My Great State Website Study

I'm asking you to explore a new website being created for kids in kindergarten through sixth grade. After you explore the website, you'll be asked to complete some activities and solve some mysteries. You'll also be asked to investigate and share some information about the town where you go to school.

You're being asked to do these things because I'd like to hear from kids like you what things you like and don't like about this website. I want to hear your ideas about how this type of website can be made better to help kids like you have fun learning.

If you agree to be part of this project, you'll be asked to explore the *My Great State* website along with your teacher and the other kids in your class. You'll also be asked to answer some questions on the computer, complete some class projects, solve a mystery, and create a blog about the town where you go to school. The blog will be a special website where you and your teacher and classmates will be able to write stories and share photos and videos about your town.

After your class is done creating its blog, a few kids from your class will be asked to join me in a separate classroom to answer some questions as a group about what you think about the *My Great State* website and how you liked creating a blog about your town. You may be one of the kids that is asked to join me for this talk, but you may not. Only a few kids will be chosen, and it will be random, so I don't want any kids to feel bad if they're not chosen for this extra activity.

You can ask me any questions you have about this project now, or if you have questions later, then you can ask me next time you see me, or, with your parent's or teacher's permission, you can send me a question by email at henr0027@umn.edu.

Being part of this project is up to you, and no one will be mad at you if you don't want to be part of it now or if you decide to be part of it now but then change your mind later.

Signing your name on the line below means that you have read this paper or had it read to you and that you are willing to be part of this project.

Signature of Participant: _____ Date: _____

Signature of Investigator: _____ Date: _____

APPENDIX D
STUDENT SURVEY QUESTIONS

Pre-Exploration of My Great State Site

1. I am a: Girl Boy
2. I am in this grade: 3rd 4th 5th
3. I use a computer at these places (click all the places where you use a computer):
    a. Home
    b. School
    c. The library
    d. My friend's house
    e. I don't use a computer anywhere
    f. Other (fill in the blank)
4. I know what a blog is. Yes No
5. I want to create my own website. Yes No
6. My favorite part of school is (click one):
    a. Being with my friends
    b. Learning new things
    c. Using a computer
    d. Playing on the playground
7. I learn new things best by (click one answer):
    a. Watching someone else do it
    b. Reading about it
    c. Listening to someone talk about it
    d. Trying it on my own, making mistakes, and then trying again
8. I learn the most from (click one answer):
    a. My teachers
    b. My friends
    c. My parents
    d. The computer
    e. TV
    f. My brother or sister
    g. Books
9. For a class project, I would rather (click one answer):
    a. Write a story
    b. Draw a picture
    c. Answer questions my teacher asks me
    d. Create something on the computer
10. Most of the time, I like working on group projects with other kids in my class: Yes No
11. I raise my hand a lot and like answering questions in my favorite class Yes No
12. When I learn about something new in my favorite class (click all the answers that explain how you feel):

a. I want to learn more about it and so check out library books about it or look up information about it online
b. I complete the class activities about it, but then forget about it at home
c. I think about it a lot
d. I talk with other people about it

13. I like to share things about my life and where I live with other people. Yes No
14. When I hear an exciting story about a real person, place, or animal: (click all the answers that explain how you feel):
    a. I imagine what it would be like to part of that story
    b. I think about things I've done or that someone I know has done that are like what happened in the story
    c. I dream about doing something just as exciting as what happened in the story
    d. I want to share stories about the exciting things I've done with my friends or family
    e. I enjoy the story but I don't think about it afterward
    f. Other (fill in the blank)
15. I think I would learn things easier at school if (fill in your own answer):

Post-Exploration of My Great State Site

1. I am a: Girl Boy
2. I am in this grade: 3rd 4th 5th
3. I learn new things best by (click one answer):
    a. Watching someone else do it
    b. Reading about it
    c. Listening to someone talk about it
    d. Trying it on my own and making mistakes
4. For a class project, I would rather (click one answer):
    a. Write a story
    b. Draw a picture
    c. Answer questions on a worksheet
    d. Create something on the computer
5. I know what a blog is. Yes No
6. I want to create my own website. Yes No
7. After exploring the *My Great State* website, I wanted to learn more about the people, places, or animals I discovered there: Yes No
8. After exploring the *My Great State* website, I wanted to share information and pictures about the town where I live: Yes No
9. My favorite part of the *My Great State* project was:
    a. Exploring the website
    b. Completing activities from the website
    c. Solving a mystery on the website

    d. Creating a blog about my town
    e. I didn't enjoy any of it
10. I think the *My Great State* project: (click all the answers that explain how you feel)
    a. Was similar to other projects I have done at school and I learned just as much from it as from other projects.
    b. Was more fun than other projects I have done at school and I learned more from it than from other projects.
    c. Helped me learn new things more quickly than other projects I have done at school.
    d. Was not as much fun as other projects I have done at school and I didn't learn as much from it as from other projects.
11. When I watched a video about a real person, place, or animal at the *My Great State* website: (click all the answers that explain how you feel):
    a. I imagined what it would be like to part of that video
    b. I thought about things I'd done or that someone I know has done that was like what happened in the video
    c. I dreamed about doing something just like what happened in the video
    d. I wanted to share some of the things that I've done with my friends, teachers, or others
    e. I enjoyed the video but didn't think about it afterward
    f. Other (fill in the blank)
12. I would rather (click one answer):
    a. Create a blog with the help of others kids
    b. Create a blog with the help of a teacher or another adult
    c. Create a blog on my own
13. I like to share things about my life and where I live with other people. Yes No
14. The thing I liked best about the *My Great State* website is: (fill in the blank)
15. The things I think should be changed about the *My Great State* website are: (fill in the blank)

APPENDIX E
TEACHER INTERVIEW QUESTIONS

Pre-Exploration of My Great State Site

1. In what ways do you think technology can best be used in the classroom?
2. In what ways have you already integrated technology in your classroom?
3. How have your students reacted to the use of technology in the classroom?
4. How would you define student engagement?
5. How do you know if a student is engaged in learning? Can you provide some examples?
6. What methods do you use to engage students in learning?
7. How much choice do you allow students when working on class projects? Can you provide some examples?
8. How often do you incorporate group activities in your classroom? Do students seem to enjoy working on collaborative projects?
9. Is adventure learning a concept you are familiar with? How would you define adventure learning?

Post-Exploration of My Great State Site

1. What successes and challenges did you and your students face in working with the *My Great State* site and associated blog project? Can you provide some specific examples?
2. How did the students react to the *My Great State* site and blog project? What did they enjoy the most and the least?
3. Relative to other projects you have worked on with the students, how engaged did you feel students were in the *My Great State* project? What components seemed to engage them the most and the least? Can you give some examples?
4. What methods did you use to engage students in learning while working with them on the *My Great State* project?
5. How much choice did you allow students when working on the blog?
6. Did students seem to enjoy working on the blog as a group? In what ways did you notice students collaborating with each other or sharing ideas as they worked on the project?
7. How would you define adventure learning now?
8. How effective of a teaching tool did you feel the *My Great State* site and associated blog project were?
9. In what ways would you recommend changing the *My Great State* site to make it a more effective tool for teaching and learning?

APPENDIX F
STUDENT FOCUS-GROUP QUESTIONS

Post-Exploration of My Great State Site

1. How do you know if you've learned something new?
2. What gets you excited about learning new things? When do you find yourself wanting to explore something on your own outside of school that you first learned about in class?
3. How can teachers make learning more exciting for you?
4. What things can you learn from a website?
5. What makes a website fun to explore?
6. Was the *My Great State* website fun to explore? What new things did you learn from it?
7. Had you ever worked on a blog before? What did you like or not like about working on the blog about your town?
8. What do you think community is? What does it mean? What communities are you part of?
9. What kinds of things do you think you can learn from the other kids in your class?
10. What kinds of things do you think you can learn from your teachers?
11. When do you like working on projects with other people? Who do you like working with best: other kids, teachers, your parents, your siblings, adults in jobs related to what you're learning about?
12. If you were a teacher, how would you use computers, websites, or other technology such as phones or MP3 players in the classroom to help your students learn?

APPENDIX G
WEEKLY CURRICULUM FOR SCHOOL 1

My Great State

4-Week Curriculum (plus final focus group in week 5)

Week 1 (February 12)

- Students take short online survey (10-15 minutes)
- Students begin exploring "The Nest" and the southeast region of Minnesota. Within the southeast region, they choose a topic (farms, bluffs, towns, waterways, or wildlife) and an associated activity to complete and/or mystery to solve. If there's time, students complete an activity or mystery and share it online.

Week 2 (February 19)

- Students finish activity or mystery and share it online, if not completed the week before. If there's time, they begin to discuss the blog about their own community, and decide what they want to include in it and who will play what role (see week 3 for more details).

Week 3 (February 24)

- Chat with a raptor expert live online.
- Continue or start blog planning and begin research/writing/blog creation.
- Some possible things the kids may want to consider including in their blog, using a mix of text, photos, and video:
    - Historical details about their community.
    - An interview with a famous local resident.
    - What makes their community special.
    - What their community is best known for.
    - What wildlife inhabits their community.
    - What the geographical landscape of their community is like.
    - What activities they like to participate in within their community.
    - Create an activity for others to complete that's related to their community.

- Create a mystery for others to solve about their community.

Week 4 (March 10)

- Finish up work on the blog.
- Students take final online survey (10-15 minutes)

Focus Group (March 12)

- 6-8 students participate in a focus group with the researcher.

APPENDIX H
WEEKLY CURRICULUM FOR SCHOOL 2

My Great State

6-Week Curriculum (plus final focus group in week 7)

Week 1 (February 12)

- Students take short online survey (10-15 minutes)
- Students begin exploring "The Nest" and the southeast region of Minnesota. Within the southeast region, they choose a topic (farms, bluffs, towns, waterways, or wildlife) and an associated activity to complete and/or mystery to solve. They will work on the activity/mystery the following week.

Week 2 (February 19)

- Students complete an activity or mystery and share it online. If there's time, they begin to discuss the blog about their own community, and decide what they want to include in it and who will play what role (see week 3 for more details).

Week 3 (February 26)

- Continue or start blog planning and begin research/writing/blog creation.
- Some possible things the kids may want to consider including in their blog, using a mix of text, photos, and video:
    - Historical details about their community.
    - An interview with a famous local resident.
    - What makes their community special.
    - What their community is best known for.
    - What wildlife inhabits their community.
    - What the geographical landscape of their community is like.
    - What activities they like to participate in within their community.
    - Create an activity for others to complete that's related to the details they share about their community.
    - Create a mystery for others to solve about their community.

Week 4 (March 5)

- Continue work on the blog.

Week 5 (March 12)

- Chat with a raptor expert live online. Do more work on the blog if there's time.

Week 6 (March 19)

- Finish up work on the blog.
- Students take final online survey (10-15 minutes)

Focus Group (April 2)

- 6-8 students participate in a focus group with the researcher.

APPENDIX I
WEEKLY CURRICULUM FOR SCHOOL 3

My Great State

6-Week Curriculum (plus final focus group in week 7)

Week 1

- Students take short online survey (10-15 minutes)
- Students begin exploring "The Nest" and the southeast region of Minnesota. Within the southeast region, they choose a topic (farms, bluffs, towns, waterways, or wildlife) and an associated activity to complete and/or mystery to solve. They will work on the activity/mystery the following week.

Week 2

- Students complete an activity or mystery and share it online. If there's time, they begin to discuss the blog about their own community, and decide what they want to include in it and who will play what role (see week 3 for more details).

Week 3

- Continue or start blog planning and begin research/writing/blog creation.
- Some possible things the kids may want to consider including in their blog, using a mix of text, photos, and video:
    - Historical details about their community.
    - An interview with a famous local resident.
    - What makes their community special.
    - What their community is best known for.
    - What wildlife inhabits their community.
    - What the geographical landscape of their community is like.
    - What activities they like to participate in within their community.
    - Create an activity for others to complete that's related to the details they share about their community.
    - Create a mystery for others to solve about their community.

Week 4

- Continue work on the blog.

Week 5

- Chat with a raptor expert live online. Do more work on the blog if there's time.

Week 6

- Finish up work on the blog.
- Students take final online survey (10-15 minutes)

Focus Group

- 6-8 students from three classes participate in three separate focus groups with the researcher.