

What is the Effect of Interactive Technology on Student Interest in Literacy Activities?

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By

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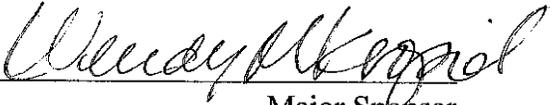
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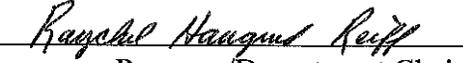
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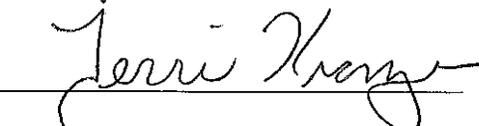
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Lynn Furyk-Levings

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## Chapter 1

### INTRODUCTION

#### The Problem and Its Setting

In the United States, research shows declining percentages of the child, adolescent, and adult population who use reading as a pastime activity (Vogt, 2004). This decline in reading may lead to a society of citizens who are less informed and less educated than other populations in a global community (Beers, Probst, & Rief, 2007). Examining the effects interactive technology may have on the motivation of adolescent students to read, write, and discuss assigned texts in the English classroom may reveal to educators how 21<sup>st</sup> century technology can be used to promote student interest in literacy activities. Increased student interest in literacy activities could serve to create lifelong readers and learners.

#### The Statement of the Purpose

This study was proposed to examine the effects interactive technology may have on the motivation of adolescent students to read, write about, and discuss assigned texts in the English classroom.

#### The Subproblems

The first subproblem. The literature selected and reviewed in support of the thesis, the data analysis, and the discussion of findings for the study needed to examine both the positives and possible negatives of use of interactive technology.

The second subproblem. It needed to be determined if the motivational impact of interactive technologies is negative or positive.

The third subproblem. There may have been unforeseen drawbacks or ways that interactive technologies detracted from student motivation in various areas that may have counteracted the benefits.

### The Hypothesis

The hypothesis. The hypothesis was that adolescent students' motivation to read, write about, and discuss assigned texts in the English classroom increased after lessons involving interactive technology.

### The Limitations

Adolescent students from Ashland High School in Ashland, Wisconsin, were the only students participating in the study; therefore, only the study results of some adolescent sophomore students from Ashland, Wisconsin will be representative of interactive technology and literacy activities/interests of adolescent sophomore students from the U.S.

The study was limited to teacher assigned texts and/or texts with set teacher recommendations/parameters and limited student freedom of choice.

## The Delimitations

The study did not attempt to evaluate adolescent students based on specific year of age (e.g. fourteen-years-old, fifteen-years-old, etc.). This was due to the possibility that not all sophomores involved in the study were of the same age—some sophomores may have been non-traditional age sophomores due to entering the class early, repeating the course, etc. The sophomores in this study were a sample to provide initial suggestion of interactive technology and literacy activities/interests of adolescent sophomore students from the U.S.—it was not intended to be a “cure-for-all.”

The study was limited to teacher chosen texts. This was due to the researcher’s need to be sure all students had access to reading the same material, and access of the same reading material for all sophomores at Ashland High School is through their assigned literature textbooks and/or through assigned photocopied handouts.

## The Definition of Terms

Adolescents. Adolescents are students in their teenage years who take courses at the high school level.

Assigned Texts. Assigned texts are books and other reading materials assigned by a teacher to his/her students to use as the basis for lessons in reading, writing, and discussion.

Forum Discussions. Forum discussions are online discussions where students and teachers can post and receive messages.

Interactive Technology. Interactive technology is technology that incorporates multimedia digital devices to support learning (Mullen & Wedwick, 2008).

Motivation. Motivation is the state of feeling interested to engage in an activity such as reading, writing, or discussing literature.

### Assumptions

The first assumption. The first assumption was that the teacher can teach effectively.

The second assumption. The second assumption was that the students are capable of reading, writing, and using the English language proficiently enough to hold a discussion.

The third assumption. The third assumption was that the English classroom will have access to common 21<sup>st</sup> century digital technologies such as computer and Internet access, a projection device, speakers, etc.

The fourth assumption. The fourth assumption was that the adolescent students at Ashland High School in Ashland, Wisconsin, were representative of the Nation's adolescent students in public high schools.

### The Importance of the Study

Examination of the effects interactive technology may have on the motivation of adolescent students in the English classroom may increase educator and student interest in 21<sup>st</sup> century literacy activities.

## Chapter 2

### REVIEW OF LITERATURE

#### Introduction

In the United States, research shows declining percentages of the adolescent and young adult population who use reading as a pastime activity—in the two decades from 1982-2002, percentages were as follows: ages 18-24, drop from 59.8% to 42.8%; ages 25-34, drop from 62.1% to 47.7% (Vogt, 2004). Researchers investigating the decline discuss a survey called “Reading at Risk” which uses information from both the Census Bureau and the National Endowment for the Arts (Vogt, 2004). The decline is raising alarms among educators and researchers who worry that the downward trend will continue among American readers (Vogt, 2004).

A main component of the job of a high school English teacher is finding ways to motivate adolescent students to read, write about, and discuss assigned texts in the classroom. Teachers work to increase student interest in literacy activities in an effort to create lifelong readers and learners (Beers, Probst, & Rief, 2007). Teachers also work to increase student interest in literacy activities in an effort to inform and educate adolescents who are preparing to enter colleges, careers, and adulthood in an increasingly global community (Beers et al.). The purpose of this chapter is to provide background information about students’ interest in literature when lessons do not include interactive technology and to provide information about the new ways of possibly

using interactive technology to engage adolescent students in reading, writing about, and discussing literature.

### Students' Interests in Literature

#### Lessons With No Interactive Technology

Cady (2007); Hebert and Pagnani (2010); Pitcher, Albright, Delaney, Walker, and Seunarinesingh et al. (2007); Redekopp and Bourbonniere (2009); and Vogt (2004), explore the interests of today's adolescent students with regard to reading, writing about, and discussing literature when Language Arts lessons do not include interactive technology. The discussions include three areas: gender reading preferences; issues with time, space, anonymity, and voice; and disconnectedness between the in-school and out-of-school lives of adolescents.

#### Gender Preferences

First, researchers have found differences in reading preferences among boys and girls. Researchers using The Adolescent Motivation to Read Profile (AMRP) of Pitcher et al. (2007) find that females value reading more and have better self-concepts as readers than their male classmates (Pitcher, Albright, Delaney, Walker, & Seunarinesingh, 2007). Hebert and Pagnani (2010) also report lower enjoyment and self-concept levels in males compared to females with regards to reading and language arts. Hebert and Pagnani (2010) note the reading preferences of boys and girls after conducting a review of prior research. The authors' review included consistent gender-based findings that show males enjoy different types of reading in regard to

genre and purpose than do females. Compared to females, males prefer nonfiction to fiction, and males also prefer genres such as science-fiction, fantasy, comedy, action, horror, and serialized/media-connected fiction. They note that males also prefer utilizing literature to find out about the world; this differs from the female preference of reading for character and dialogue. The authors also cite research which shows an imbalance of genres in language arts curriculums. Hebert and Pagnani (2010) maintain that schools and teachers need to find a way to include variety in the language arts curriculum so that no male or female student is hindered by genre or interest.

#### Time, Space, Anonymity, and Voice

Second, researchers have found that issues with time, space, anonymity, and voice contribute to the interest level of adolescent students when reading, writing about, and discussing literature (Redekopp & Bourbonniere, 2009). The authors categorize adolescent students into four levels of literature discussion participants—level 1 classified as those students who willingly participate in and dominate class discussion, level 4 classified as those students who can almost never be coaxed to participate in class discussion, and levels 2 and 3 fell in the middle of this range of participation. Redekopp and Bourbonniere (2009) state that students who are unprepared, shy, lack ideas, need more time to formulate ideas, are uninterested in content, or are afraid their comments will not be taken seriously by peers may have less interest in whole class and small group traditional literacy activities. According to Redekopp and Bourbonniere, teachers may have difficulties engaging level 2-4 students in class discussions regarding assigned

literature using only traditional classroom discussion methods which may lack change in time, space, anonymity, and voice.

### Disconnectedness

Third, researchers have found that the interests of today's adolescent students with regard to traditional classroom literacy activities is influenced by students' feelings of disconnectedness between their in-school and out-of-school lives (Cady, 2007). Cady (2007) uses The Adolescent Motivation to Read Profile (AMRP) survey of Pitcher et al. (2007) to cite comments (no comments provided in Cady's article discussing the Profile) made by adolescent students concerning their feelings of boredom toward assigned reading in the classroom. Adolescents engage in various and numerous online literacies—such as reading emails, articles, games, etcetera—out of the school environment. These online literature activities can run contrary to the traditional education literacy models. Cady asserts the AMRP survey is a valuable tool that can be used to help researchers and educators find ways to motivate students to read.

### Possible Benefits and Pitfalls of Interactive Technology Resources

#### Vogt

Vogt (2004) maintains that although time spent in book reading has dropped, today's adolescents have replaced it with their own literacies which involve online forms. She proposes that educators recognize new forms of literacies as they attempt to engage students with

traditional forms of literature (Vogt, 2004). Many more researchers--Anderson and Balajthy (2009), Hebert and Pagnani (2010), Mullen and Wedwick (2008), and Weigel and Gardner (2009)--are examining proposals such as Vogt's as they discuss the supports and drawbacks of interactive technology when incorporated into literature lessons.

The new ways of using interactive technology to engage adolescent students in reading, writing about, and discussing literature are numerous; however, educators must determine if the motivational impact of assistive digital technologies is negative or positive. There may be ways in which educators can employ assistive digital technologies to create powerful, engaging literature for adolescents working with assigned English texts. There may be unforeseen drawbacks or ways that assistive digital technologies detract from student motivation in various areas that may counteract the benefits. Anderson and Balajthy (2009), Hebert and Pagnani (2010), Mullen and Wedwick (2008), and Weigel and Gardner (2009) discuss positives and negatives of new interactive technologies available to use in English classrooms.

#### Mullen and Wedwick

Mullen and Wedwick (2008) explain some of the digital tools educators can use to help students become more engaged and effective communicators as they work with interpretation, expression, and creativity in relation to the materials they read in the classroom, and the authors also describe some drawbacks of these digital tools. Mullen and Wedwick mention You Tube, digital stories, and blogs as digital tools teachers at any grade level can use to enhance lessons in Language Arts. Mullen and Wedwick (2008) maintain that the tools are highly effective in engaging students, the tools are easily available to schools, and the tools are simple for students

and adults to understand and use with minimal training. YouTube is a video-sharing website teachers can use to enhance lessons with videos they find online. Teachers can quickly and easily find and save clips/videos and incorporate them into lessons to aid students in understanding literature, according to Mullen and Wedwick. Digital stories are another way to enhance students' learning of literature. Teachers can ask students to use computers, scanners, and microphones to create stories about the literature being studied using words, pictures, sound effects, music, etc. Blogs—online journals with archived Internet postings— can also enhance writing and communication lessons mentioned by Mullen and Wedwick. They note that teachers can set up blogs so that students can discuss literature/lessons with teachers, peers, community members, or people worldwide.

Mullen and Wedwick (2008) point out that the digital tools of YouTube, digital stories, and blogs present some challenges to educators. First, some material found on YouTube is not appropriate for school, and teachers might have to closely monitor student use of this tool by closely watching students at computers and/or by using safe sites such as SchoolTube or TeacherTube. Also, some school districts have banned the use of YouTube due to the inappropriate videos available on the site (Mullen & Wedwick). Second, the authors explain that digital storytelling can present challenges if schools do not have needed equipment, or if they have limited or faulty equipment such as computers, scanners, and microphones. Third, Mullen and Wedwick state that blogs may need to be set up and monitored by teachers to ensure student safety and confidentiality by student use of pseudonyms and safe blog sites such as Blogger, MyBlogSite, edublogs, and LearnerBlog. The authors conclude that teachers can be successful in engaging students with literature if schools carefully utilize the various forms of new digital media.

## Weigel and Gardner

Weigel and Gardner (2009) echo Mullen and Wedwick (2008) with the belief that educators can wisely incorporate interactive technologies in English classrooms by educating themselves regarding the possible benefits and pitfalls of these technologies. Weigel and Gardner also discuss benefits and pitfalls of some new digital tools. In particular, Weigel and Gardner (2009) focus on three ways in which digital technologies can benefit adolescent students as they work with reading, writing, and discussion assignments. Weigel and Gardner first describe the ways in which word processing programs are changing the ways in which students engage in the writing process. Students can write and edit fluently—research; taking notes; writing and merging drafts and outlines; editing; rearranging; adding tables, graphs, and images; self-publishing; and the like. The authors note that these can all be done with the use of word processing programs. Second, Weigel and Gardner note the value of students using technology to create their own Web sites. The authors include examples of ways in which teachers have encouraged students to start their own Web sites following reading or research about a topic of personal interest. The examples do not include Web site assignments given to students from teacher-assigned topics; however, Weigel and Gardner postulate that careful teachers can use student created Web site assignments to increase student engagement with other written texts and literacy assignments. Third, Weigel and Gardner discuss wikis as a promising digital media tool which teachers can use to engage students in discussion of a given topic. The authors mention ways in which students can cultivate writing and social skills through the creation and maintenance of a thematic wiki page.

Weigel and Gardner (2009) point out several potential drawbacks to their above-mentioned new digital tools. The authors address the following possible negatives of the digital tools: students may not find quality in online content, and teachers need to show students how to distinguish/find professional materials for research and reports; when working independently online, students may be distracted from their original task by the “siren calls” of Web links, which use advertisements, visuals, etc. to entice users to browse pages; easily accessible online text and the ability to manipulate text can create issues of plagiarism; online discussions can be misinterpreted when participants cannot use/see facial expression, voice, and body language. Weigel and Gardner assert that educators may guard against the negatives of interactive technologies by being aware of them while working to reap the benefits of the technologies.

#### Anderson and Balajthy

Anderson and Balajthy (2009) also discuss possible pros and cons of some digital media. Similar to Mullen and Wedwick (2008), Anderson and Balajthy examine blogs as a positive way in which teachers can encourage students to write about and discuss classroom texts. The authors discuss projects where students set up blogs using WordPress, text, pictures, and online audio recordings that followed teacher guidelines and suggestions. Anderson and Balajthy also briefly describe PowerPoint and electronic storybooks as positive ways to encourage students, and especially struggling readers, to engage in language experience activities. The authors put forward potential negative experiences teachers may encounter when attempting to blend traditional print materials with digital media. Anderson and Balajthy note that teachers do not always carefully examine, or know how to examine, appropriate use of technologies for their

lessons and individual student needs; this lack of examination can lead to misapplication and ineffectiveness of the technologies.

### Hebert and Pagnani

Hebert and Pagnani (2010) explore two issues in their article: How digital technologies can be employed to engage male students, including gifted male students, in literacy activities, and what specific activities and approaches teachers can use to connect reading, writing, and discussion to these digital technologies. The authors examine these two issues with the purpose of providing teachers with new ideas for literacies that will engage male students in the modern language arts classroom. However, the authors do not provide data showing that these digital literacies have the intended impact, and they do not provide possible drawbacks of these literacies. They support their hypothesis with arguments based on previous findings—in particular, Hall & Coles, 1999; Millard, 1997; Smith & Wilhelm, 2002—showing topical reading preferences of males and their interest in technology-related gadgets.

Herbert and Pagnani (2010) discuss elements of digital technologies that appeal to boys' interests in reading and writing, and then they mention specific activities teachers can use to engage male students in literacy. They state that technology greatly shapes students' lives outside of school, and the authors promote a greater use of technology by male students, and especially gifted male students in the classroom. Hebert and Pagnani describe new web technologies such as podcasts, gaming, online journals, audio recordings, videos, digital photographs, and discussion forums that have a great influence on male students in their daily lives outside of school. The authors propose that these web technologies be used more frequently and in more depth in language arts classrooms. They also suggest that a new literacy

approach which includes digital technologies will yield male students who are more engaged as readers and writers.

Hebert and Pagnani (2010) provide a list of materials which they recommend to support teachers. The list includes reading materials, resource materials, and websites. Hebert and Pagnani add this list as a resource for educators who intend to explore books and new literacies that aim to engage students, and especially male students. The authors do suggest that engaging students may lead to a change in motivation in the English classroom.

### Impact of Interactive Technology on Student Motivation

Examining the effects interactive technology may have on the motivation of adolescent students to read, write, and discuss assigned texts in the English classroom may reveal to educators how 21<sup>st</sup> century technology can be used to promote student interest in literacy activities. Davis and McGrail (2009) and Malin (2010) share research they conducted using interactive technologies to observe change in students' motivation with literature lessons.

Davis and McGrail

Davis and McGrail (2009) first describe the new literacy activity of proof-revising with podcasting. For the research, the authors observed a teacher and her students combining traditional proofreading activities with proof-revising with podcasting. A podcast is an audio recording, and, for this study, it is posted with a classroom blog where teacher and students can record, share, and edit writing. The teacher used the following tools in constructing a podcast: a

computer, a microphone, Audacity recording software, LAME driver, and an export of the project as an MP3. The authors describe how the students' writing was recorded in the podcast, and the students were required to listen to the recorded reading of their writing. The goal was to make students listen to their writing, rethink places in their writing where they, or other readers/listeners may hear errors, and revise any errors.

Davis and McGrail (2009) found that podcasts actively engaged the students in the writing and revision processes. The podcasts at first caused students some confusion if they were not comfortable with computers, if they were distracted by the screen designs, and if they did not know where to begin according to Davis and McGrail. They note that as the teacher guided the students to pay attention, students began to recognize how to listen for errors in their writing, and they began to revise their writing and help others. In a class discussion following the proof-revising with podcasting, students shared advice and discoveries about the process. Davis and McGrail report that a majority of students shared their appreciation of the value of the activity, and the teacher reported that the activity caused carry-over of brainstorming, reading, and revising in other classroom writing assignments.

Davis and McGrail (2009) suggest proof-revising with podcasting be used selectively and occasionally in the classroom due to the amount of effort required on the part of the teacher to incorporate this activity into a literature lesson. However, the authors also provide a suggestion that teachers who wish to conduct this activity sometimes record portions of students' writing rather than the writings in their entirety if time and effort are issues.

## Malin

Malin (2010) describes a digital video reading aid created to help engage adolescents in reading literature, and the purpose of the article is to examine the value of this digital aid in helping to promote student comprehension of literature as well as student engagement and enjoyment with literature. The author asserts that a multimodal device such as a video reading aid will help non-engaged adolescent student readers become more engaged while reading or listening to assigned texts in their English classrooms.

Malin (2010) describes digital video storytelling as an aid which may use sound, graphics, and writing through a screen and speaker to help students engage in literature. The author explains how readers must create the “secondary world” which is necessary for readers to place themselves in to feel connected to the elements (plot, characters, setting, etc.) of a story. The author explains how students lacking imagination and/or skills can have difficulties creating this secondary world. Malin states that students will not feel engaged in a story if they cannot visualize it. The author maintains that the digital video storytelling will help many students—and especially readers who are reluctant, remedial, and ELL—find more purpose and more enjoyment in assigned literature than reading alone. The author points out the various advantages teachers have available to them when using digital storytelling such as including sound, visual writing, and graphics to aid in student comprehension of a read-aloud story and such as controlling the pace of the activity through pause and replay options.

An additional purpose of Malin’s (2010) article was to investigate adolescent response to the value of digital videos as assigned classroom literature aids. The author utilized a questionnaire and guided group discussion as methods and data sources. The author noted that

the questionnaire and guided group discussion yielded five major findings: first, remedial and ELL students reported more benefits from this aid than typical or advanced readers; second, a high sample of students (88%) felt this aid better prepared them for class discussion; third, the on-screen annotations distracted some students; fourth, a high sample of students (88%) found the aid enjoyable and hoped for future experiences with this type of reading; and fifth, a majority of sampled students (96%) claimed positive interest in the filmed literature discussion. Malin uses the student responses data to conclude that many adolescent students can gain meaning and interest regarding assigned classroom texts by participating in digital storytelling.

The study conducted by Malin (2010) includes some prior research related to teacher read-alouds and student reading skills and motivation; however, it fails to include in depth prior research of digital storytelling due to the fact that this solution is at a testing stage. The author does propose ideas for how future research projects might include more detailed studies of various levels of readers. Malin also includes ideas teachers might use to create their own videos if digital video aids are not yet available in their schools. The author explains that teachers need digital video recorders, computers, and creativity to create storytelling that will aid in students' enjoyment of classroom reading.

### Possible Relevance

Davis and McGrail (2009) and Malin (2010) argue for the relevance of proof-revising with podcasting and digital video storytelling as interactive technology aids teachers can use in classrooms to promote adolescent motivation to read write about, and discuss literature. The words of Malmgren and Trezek (2009) and the National Reading Panel (NRP) acknowledge the

possible relevance of these and other technologies: “. . . [D]espite the experimental evidence of its effectiveness, the use of multimedia, hypertext, and hypermedia appear to have great potential, particularly as it relates to motivating students to engage in reading.”

### The Importance of the Review

This review describes some research findings previously explored regarding students’ interest in literature when lessons do not include interactive technology. It also provides perspectives on some new ways of possibly using interactive technology to engage adolescent students in literacy activities.

## Chapter 3

### METHODOLOGY

#### Introduction

The purpose of this study was to examine the effects interactive technology may have had on the motivation of adolescent students to read, write about, and discuss assigned texts in the English classroom. The hypothesis was that adolescent students' motivation to read, write about, and discuss assigned texts in the English classroom would increase after lessons involving interactive technology.

#### Participants

The participants of the study were two groups of high school sophomores at Ashland High School in Ashland, Wisconsin. Ashland is a city in Northern Wisconsin which has Lake Superior as a border to the north. There were six sections/classrooms of sophomores, approximately 25-30 students in each classroom, and approximately 170 sophomores in Ashland High School. The classroom subject was American Literature. American Literature is a required course for sophomores at Ashland High School. One class served as the experimental group, and the second class served as the control group—this is a sample of convenience to the researcher. The demographics of Ashland High School 2009-2010 (the year of this study) were as follows: 747 students; 46% female and 54% male; 21% American Indian, 1% Asian, 1% Black Not Hispanic, 1% Hispanic, and 76% White Not Hispanic; 17% Disabilities, and 83% Without Disabilities; 100% English Proficient; 51% Economic Disadvantage (poverty level) and 49% Not

Economic Disadvantage or No Data; 27% Grade 9, 25% Grade 10, 24% Grade 11, and 28% Grade 12 (Wisconsin Department of Public Instruction, 2010). Of the two sections of sophomores participating in the study, the number of students/parents in the experimental group who gave consent was five of thirty students, and the number of students/parents in the control group who gave consent was six of thirty students.

### Research Design

The design of the study is a control-experimental design with a pre-post data collection model. The experimental group of sophomores was chosen by the researcher because it was a section of sophomores for which the researcher was the classroom teacher; this made the experimental research (assigning the text, setting up Moodle forums) convenient since the researcher had access to curriculum materials and computers for students and convenient since the researcher would do more of the work without imposing more work than necessary on a colleague. The control group of sophomores and its teacher was chosen because the classroom teacher agreed to help with the research and because the classroom teacher of the control group has a master's degree in literacy and volunteered to give the researcher helpful feedback about the study design. The researcher instructed the experimental group and used interactive technology in the form of forum discussions in Moodle as a teaching tool to aid the text and lessons. The researcher's colleague instructed the control group in the same way as the experimental group but did not use interactive technology (Moodle) to aid the text and lessons.

### Instrumentation

The research used questionnaires to examine students' interest in reading, writing about, and discussing an assigned text in their English classrooms before and after the text is studied. Both

groups (experimental and control) received and completed two questionnaires which examined student interest in reading, writing about, and discussing an assigned text in their English classroom; one questionnaire was given before reading the text (Appendix A), and the second questionnaire was given after reading the text and completing lessons (Appendix B). These two questionnaires were used for all students in both groups. The experimental group of students received and completed an additional (third) questionnaire (Appendix C) which questioned their interest level after using interactive technology (Moodle).

The Appendices A, B, and C were developed by the researcher after review of information regarding constructing and administering questionnaires by Leedy and Ormrod (2010). The questionnaires were also approved for distribution to students in the study by the researcher's first advisor for the thesis study and the IRB board of the University of Wisconsin-Superior.

### Procedures

Prior to implementing this research, approval for the project was obtained from the building principal at Ashland High School (Appendix D) and the University of Wisconsin-Superior IRB. The researcher also met with an English instructor/colleague to explain the research to gain the colleague's consent and enlist the colleague's assistance with the control group. The researcher then met with all students in each class to provide informed consent letters to be signed by parents/guardians (Appendix E). Students in the experimental group met with the library media specialist in the LMC at Ashland High School for an informational lesson on online "netiquette" and forum discussions.

The teacher (researcher) in the experimental group implemented the interactive technology of Moodle with reading, writing about, and discussing an assigned text in the classroom. The text used was an essay, “Mother Tongue,” by Amy Tan, which was included in the textbooks which are assigned to all sophomore students in American Literature (Prentice Hall, Inc., 1996). The teacher in the control group did not implement the interactive technology of Moodle while reading, writing about, and discussing the same assigned text in the classroom. The researcher gave to each student (with signed consent forms) in both groups two questionnaires—one prior to starting the unit and one after the conclusion of the unit—to examine student interest in their English classroom. The interactive technology involving Moodle included lessons in which the students from the experimental group read the assigned text and explored their observations/interpretations/insights of the literature through forum discussions with classmates and their teacher (sample discussion prompt—*How would you overcome a language barrier?*). Students responded in the forum to a teacher-set number of teacher-posted questions, and students responded to a teacher-set number of their classmates’ postings. The teacher determined requirements for lengths of responses (1-5 sentences) and reviewed forum discussion etiquette with students (lesson on online safety and forum discussion etiquette given by the teacher with the aid of an AHS Library Media Specialist). The researcher gave the students of the experimental group a third questionnaire—after the unit—to examine their interest level after using interactive technology (Moodle); the control group finished with the study after completing the second questionnaire, and those students moved on to whatever instruction their teacher (the researcher’s colleague) deemed appropriate.

Those adolescents who were students of the researcher but who did not have parental permission through consent forms to participate in the research, read the assigned text and

explored their observations/interpretations/insights of the literature through written questions/answers and small group discussion; they did not participate in Moodle discussions. The students in the control group read, wrote about, and discussed the same assigned text in their classroom, but they did so without the use of interactive technology involving Moodle.

### Data Analysis

To measure the effects interactive technology may have had on the motivation of adolescent students to read, write about, and discuss assigned texts in the classroom, the interest level of two groups of students were compared. Data (from questionnaires to two-dimensional tables) from the control group and experimental group were compared and discussed; due to the small number of participants, straight-tally numbers of responses were used rather than percentages or other statistical means. Similarities and differences in the numbers between the first and second inventory of the experimental instruction group and between all three surveys were listed and discussed. Comparisons were made with findings in the literature. The two classroom teachers considered the other variables that could not be controlled in possible changes or lack thereof in survey results. The researcher discussed the major findings of the data with all interested parties and recommendations for instruction and further research were made.

### The Importance of the Methodology

The researcher used collection procedures as precise as she knew possible to collect data and arrive at meaningful conclusions. The researcher's data collection was influenced by the participants, the research design, the instrumentation, and the procedures of the study.

## Chapter 4

### RESULTS

#### Introduction

The purpose of this chapter was to provide the results of the research involving questionnaires and Moodle technology to examine students' interest in reading, writing about, and discussing an assigned text in their sophomore English classrooms before and after the text was studied.

#### Data Presentation

The students in the control group (McCall-Larson) read, wrote about, and discussed the same assigned text in their classroom as did the experimental group (Furyk-Levings), but the control group did so without the use of interactive technology involving Moodle. From the classroom which was the control group, six students participated in the research with parental consent forms signed; from the classroom which was the experimental group, five students participated in the research with parental consent forms signed.

Both groups of participants filled out a questionnaire (Appendix A) before reading the assigned text, and both groups of participants filled out a questionnaire (Appendix B) after reading the assigned text. The experimental group also participated in a Moodle forum discussion where just the five of them responded to the researcher's question about the text which was posted on the forum. The researcher asked each student to answer the posted question in a typed response and then to respond in typed form to any one of his/her classmate's

responses. The experimental group filled out a questionnaire (Appendix C) after participating in the Moodle forum discussion.

The following is a list of the questions from Appendix A (indicated in present tense question form and green print) and Appendix B (indicated in past tense question form and red print) asked by the researcher to the control group and experimental group and the organization of data regarding the answers given from both groups:

1. Reading assigned literature in the classroom is/was something I like/liked to do.

no	1	
sometimes	2 2	2 2
usually	3 4	3 3
yes		
	McCall-Larson (control)	Furyk-Levings (experimental)
	Appendix A--green	Appendix A--green
	Appendix B--red	Appendix B--red

2. Writing about assigned literature in the classroom is/was something I like/liked to do.

no	2 1	
sometimes	3 2	4 4
usually	1 3	
yes		1 1
	McCall-Larson (control)	Furyk-Levings (experimental)
	Appendix A--green	Appendix A--green

	Appendix B--red	Appendix B--red
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3. Discussing assigned literature in the classroom is/was something I like/liked to do.

no		1
sometimes	1 1	3 4
usually	4 4	1 1
yes	1 1	
	McCall-Larson (control)	Furyk-Levings (experimental)
	Appendix A--green	Appendix A--green
	Appendix B--red	Appendix B--red

4. When my teacher calls/called on me to answer a question about assigned literature, I usually feel/felt. . .

very scared/nervous		
somewhat scared/nervous	1	2 2
neutral	3 2	2 1
comfortable	2 4	1 2
	McCall-Larson (control)	Furyk-Levings (experimental)
	Appendix A--green	Appendix A--green
	Appendix B--red	Appendix B--red

5. When I am/was in a group of peers (teacher assigned) to read, write about, or discuss literature, I usually feel/felt. . .

very scared/nervous		
somewhat scared/nervous		1
neutral	2 2	2 3
comfortable	4 4	2 2
	McCall-Larson (control)	Furyk-Levings (experimental)
	Appendix A--green	Appendix A--green
	Appendix B--red	Appendix B--red

The following is a list of the questions from Appendix C asked by the researcher to the experimental group and the organization of data regarding the answers given from this group:

1. Name two things that you liked about using Moodle to discuss the assigned literature.

\*Student #1:

-I like typing and would rather type than write

-I do not like to talk orally about the book in class

\*Student #2

-No interface with each other

-Socializing with others

\*Student #3

-Nice to see other people's view on the subject

-It's like texting/emailing—quick & convenient!

\*Student #4

-I got to freely talk about what I thought of the assigned literature

-I learned what people really feel when they write it down

\*Student #5

-It's easy to use and communicate with people

2. Were there two things that you did not like about using Moodle to discuss the assigned literature? If so, please list them.

\*Student #1

-I'm just worried if I make a mistake, people will laugh or be rude

-Also if I get a different understanding of the book, it might be embarrassing

\*Student #2

-Show parent button

\*Student #3

-No

\*Student #4

-No

Student #5

-No, it was fine

3. Did you feel comfortable using Moodle to discuss your ideas about the assigned text?

no	
neutral	1
yes	4
	Furyk-Levings (experimental) Appendix C

4. Do you usually feel comfortable discussing an assigned text orally in the classroom?

no	
neutral	3
yes	2
	Furyk-Levings (experimental) Appendix C

5. Would Moodle be helpful to you in your reading?

no	
neutral	2
yes	3
	Furyk-Levings Appendix C

The organization of the data from this chapter was used to explore the effects interactive technology may have had on the motivation of adolescent students to read, write about, and discuss assigned texts in the English classroom. Conclusions of the meaningful aspects of the researcher's findings are discussed in the next chapter.

## Chapter 5

### Conclusions

### Discussion

This study was proposed to examine the effects interactive technology may have on the motivation of adolescent students to read, write about, and discuss assigned texts in the English classroom. Anderson and Balajthy (2009), Hebert and Pagnani (2010), Mullen and Wedwick (2008), Vogt (2004), and Weigel and Gardner (2009) examined the supports and drawbacks of interactive technology when incorporated into literature lessons. The researcher's study supported previous research in the field as it revealed positives and negatives of a new interactive technology (Moodle discussion forum) which may be available to use in English classrooms.

The research involved questionnaires and Moodle technology to examine students' interest in reading, writing about, and discussing an assigned text in their sophomore English classrooms before and after the text was studied. Two-dimensional tables charted similarities and differences in the numbers among the first and second inventories of the experimental instruction group and the control group. A list of questions from the third inventory also revealed similarities and differences in answers among the experimental instruction group. Two-dimensional tables charted similarities and differences in the numbers of the third inventory of the experimental group.

### The First and Second Inventories

Numbers from the experimental group and control group showed minimal changes in answers from the first questionnaire (which questioned student interest in teacher-chosen text before reading) to the second questionnaire (which questioned student interest in teacher-chosen text after reading). The tables for the first two questionnaires and the experimental group and control group revealed students' answers tended more toward middle-range comfort to the negative end of comfort when regarding independent reading and writing about teacher-chosen text. The tables revealed more middle-range comfort to the positive end of comfort when regarding classroom discussion and teacher questions about teacher-chosen text. The tables revealed higher numbers toward student comfort for both groups when reading, writing about, and discussing teacher-chosen text included teacher-assigned peer groups. The tables seemed to suggest that independent reading and writing of teacher-chosen texts was a less than popular form of literacy activities in the classroom; discussion and teacher questions about teacher-chosen text was slightly less uncomfortable to students; and reading, writing about, and discussing teacher-chosen text when it included teacher-assigned peer groups was a method of literacy activities more acceptable to the adolescent students—this may be due to the social nature of adolescents and a level of comfort and support due to proximity with friends and a multitude of ideas/insights shared about a common text.

### The Third Inventory

Numbers from the tables (questions 3-5) of the experimental group showed no negativity toward the use of Moodle forum discussion with regards to reading or discussing teacher-chosen

text. Numbers showed students answers as neutral or positive toward Moodle and reading or discussing, with the numbers for positive answers slightly higher than numbers for neutral answers. The numbers from the tables seemed to suggest students found Moodle forum discussion an acceptable literacy activity to aid in reading and discussion of teacher-chosen text. This reveals a positive effect of interactive technology in this study.

Answers (questions 1-2) of the experimental group showed some positive, some neutral, and some negative comments regarding student comfort with Moodle forum discussion. Students' comments about typing, texting, emailing, and ease of use revealed positive effects of interactive technology in this study. Students' comments about lack of peer interface, fear of mistakes and rudeness, and fear of embarrassing themselves revealed negative effects of interactive technology in this study. Adolescent students enjoy socializing with peers face-to-face and through technology; however, at this age, they may feel self-conscious about their ideas and articulation skills in many situations.

### Study Limitations

There are some limitations to the study. First, adolescent students from Ashland High School in Ashland, Wisconsin, were the only students participating in the study; therefore, only the study results of some adolescent sophomore students from Ashland, Wisconsin will be representative of interactive technology and literacy activities/interests of adolescent sophomore students from the U.S. The number of students from Ashland High School who turned in parental consent forms to participate in the study was low in both the experimental and control groups (5 of 30 students from the experimental group and 6 of 30 from the control group). The study did not have a plan to determine why the number of participants in the study was lower

than expected; the researcher can only speculate that low participation numbers could have occurred due to a number of reasons (e.g. student apathy/anxiety toward the project, parent apathy/anxiety toward the project, students misplacing/losing forms, student illness, etc.). This study limitation brings up the following problem: How reliable will the data be from questionnaires completed by a handful of students in Ashland, WI when representing interactive technology and literacy activities/interests of adolescent sophomore students from the U.S.? Impacts on the results of the Ashland, WI study may have been different if more students had taken an interest in participating in the study, and traits/concerns of those participating in the study may have influenced the results as well.

A second limitation to this study was teacher-chosen texts. The researcher needed to be sure all students had access to reading the same material, and access of the same reading material for all sophomores at Ashland High School is through their assigned literature textbooks and/or through assigned photocopied handouts. The researcher's study does not determine whether the teacher-chosen text was a helpful, hindering, or neutral factor in determining student interest/motivation/participation in the study. As Anderson and Balajthy (2009) note, teachers need to know how to examine appropriate use of technologies for their lessons, or lack of examination can lead to misapplication and ineffectiveness of the technologies. Although the researcher examined student access to materials, material relevance to curriculum, and appropriate use of technology with this lesson/text, before beginning the study, a question arises with the study limitation of teacher-chosen text: Is it possible that students will be more or less engaged in reading, writing about, and discussing literature with the aid of interactive technology if the students have choice in the texts studied?

## Implications

The researcher concludes that teachers can be successful in engaging students with literature. Mullen and Wedwick (2008) suggest that schools carefully utilize the various forms of new digital media to help engage students with literature. The researcher's study suggests positives and negatives of a new interactive technology (Moodle discussion forum) which may be available to use in English classrooms. Schools can examine Moodle and various forms of new digital media, along with student interest in self-chosen versus teacher-chosen texts, to determine effects interactive technology may have on the motivation of adolescent students to read, write about, and discuss assigned texts in the English classroom. Another researcher may be interested in conducting a study looking at the effects of technologies on literacy motivation in relation to student-chosen texts.

Since Vogt (2004) maintains that today's adolescents have, to a degree, replaced book reading with their own literacies which involve online forms, it may be beneficial if educators examine and utilize those 21<sup>st</sup> century technologies which can be used to promote student interest in literacy activities. Increased student interest in literacy activities could serve to create lifelong readers and learners.

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## Appendix A

## Questionnaire for Interest in Reading, Writing About, and Discussing Assigned Literature in the English Classroom.

Circle the answer that best describes your general view.

1. Reading assigned literature in the classroom is something I like to do.

Yes    Usually    Sometimes    No

2. Writing about assigned literature in the classroom is something I like to do.

Yes    Usually    Sometimes    No

3. Discussing assigned literature in the classroom is something I like to do.

Yes    Usually    Sometimes    No

4. When my teacher calls on me to answer a question about assigned literature, I usually feel . . .

Comfortable                      neutral  
 somewhat nervous/scared                      very nervous/scared

5. When I am in a group of peers (teacher assigned) to read, write about, or discuss literature, I usually feel . . .

Comfortable                      neutral  
 somewhat nervous/scared                      very nervous/scared

## Appendix B

## Questionnaire for Interest in Assigned Literature Lesson in the English Classroom

Circle the answer that best describes your general view.

1. Reading the assigned literature lesson in the classroom was something I liked to do.

Yes    Usually    Sometimes    No

2. Writing about the assigned literature lesson in the classroom was something I liked to do.

Yes    Usually    Sometimes    No

3. Discussing the assigned literature lesson in the classroom was something I liked to do.

Yes    Usually    Sometimes    No

4. When my teacher called on me to answer a question about the assigned literature lesson, I usually felt . . .

Comfortable                      neutral  
 somewhat nervous/scared        very nervous/scared

5. When I was in a group of peers (teacher assigned) to read, write about, or discuss literature, I usually felt . . .

Comfortable                      neutral  
 somewhat nervous/scared        very nervous/scared

## Appendix C

## Questionnaire for Moodle

1. Name two things that you liked about using Moodle to discuss the assigned literature.
  
2. Were there two things that you did not like about using Moodle to discuss the assigned literature? If so, please list them.
  
3. Did you feel comfortable using Moodle to discuss your ideas about the assigned text?  
Yes      Neutral      No
  
4. Do you usually feel comfortable discussing an assigned text orally in the classroom?  
Yes      Neutral      No
  
5. Would Moodle be helpful to you in your reading?  
Yes      Neutral      No

## Appendix D

## Building Principal Permission Letter

***Ashland High School***

DAVID ASLYN, *Principal*    PAUL GILBERTSON, *Assistant Principal*  
BRIAN MILLER, *Co-Curricular/Athletic Director & Attendance Officer*

November 30, 2010

Dear Mrs. Levings:

The purpose of this letter is to address your request to carry out work regarding your graduate school project on effects of interactive technology and motivation of adolescent students in the English classroom. I grant you permission to carry out your work related to this project based on the parameters you have shared with me.

Good luck in your work on your project. The topic is interesting to me and I look forward to having an opportunity to view your final product.

Sincerely,

David Aslyn

Principal

## Appendix E

### Parent/Student Consent Form

#### Exploring Student Interest in Reading, Writing About, and Discussing Teacher-Assigned Literature

Your student is being asked to participate in a study exploring student interest in reading, writing about, and discussing teacher-assigned literature.

I am interested in examining the effects interactive technology may have on the motivation of adolescent students to read, write about, and discuss assigned texts in the English classroom. Teachers work to increase student interest in literacy activities in an effort to create lifelong readers and learners. My hope is that we may learn how to increase student interest in literature.

If you agree to allow your student to participate, your student will complete the following research activities with regards to a piece of literature he/she will be assigned to read in the classroom: two questionnaires (5 minutes each) related to student interest in teacher-assigned literature (Ms. McCall-Larson's class); three questionnaires (5 minutes each) related to student interest in teacher-assigned literature and interactive technology (Ms. Furyk-Levings' class); one online forum discussion (30 minutes) in Moodle (Ms. Furyk-Levings' class).

Although all studies have risks, the potential in this investigation is minimal. All activities are similar to normal classroom procedures, and all responses are anonymous. Most students at AHS will have had past experience with Moodle technology, and a library media specialist at

AHS will provide students with a refresher course (15 minutes) on Moodle “netiquette” prior to student use of online discussion in Moodle.

Your student’s participation in this survey is entirely voluntary. If at any time during this study your student wishes to withdraw his/her participation, he/she is free to do so without prejudice.

Students who do not experience the Moodle lesson will be given the option later, if they wish.

If you have any questions prior to your student’s participation or at any time during this study, please do not hesitate to contact me.

Authorization: I have read the above and understand the nature of this study and agree to allow my student to participate. I understand that by agreeing to participate in this study I have not waived any legal or human rights. I also understand that my student has the right to refuse to participate and that his/her right to withdraw from participation at any time during the study will be respected with no coercion or prejudice.

**If you have any concerns as a subject in this study, please call or write:**

Lynn Furyk-Levings, Researcher/Teacher, AHS, 715-682-7089 or [llevings@ashland.k12.wi.us](mailto:llevings@ashland.k12.wi.us)

Joanne McCall-Larson, Teacher, AHS, 715-682-7089

David Aslyn, Principal, AHS, 715-682-7089

Debra Nordgren, Advisor, UW-Superior, 715-394-8233 or [dnordgre@uwsuper.edu](mailto:dnordgre@uwsuper.edu).

Jim Miller, IRB Coordinator, UW-Superior, (715) 394-8396, : [JMILLER@uwsuper.edu](mailto:JMILLER@uwsuper.edu)

Student Signature

Date

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Parent/Guardian Signature

Date

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