The action research study described in this report outlines the design and implementation of a unit of blended instruction in a traditional high school English classroom. Twenty technical high school students in an 11th grade Honors English class engaged in a variety of internet-based activities in conjunction with traditional learning activities while studying *The Great Gatsby*, Fitzgerald’s (1925) classic novel set during the Roaring Twenties. Use of internet resources, online discussion forums, and other 21st century learning tools made this old favorite more accessible to modern young minds.

**Keywords:** action research, blended instruction, Coursesites.com, computers in education, high school, technology in education

The Great Gatsby (Fitzgerald, 1925) with its vivid depictions of life during the “Roaring Twenties” seemed a solid choice of novel to study with my eleventh grade Honors English class. But how could I draw my students into Fitzgerald’s exciting world of bootleggers, flappers, fast fortunes, and loose morals (“The Roaring Twenties,” 2010) while also tackling the less scintillating details of the novelist’s master craftsmanship? How could I unite past, present, and future in a meaningful and engaging unit of instruction that would also lead my students toward mastering content standards and further enhance the knowledge base they will need if they are to successfully meet the challenges of post-secondary education? I had been studying the impact of technology in the classroom, and I wondered if I could design a unit of instruction integrating technology that would motivate my students while enhancing their learning experience. Blended instruction using an online component at the post-secondary level has increased in recent years (Banerjee, 2011; Hyo-Jeung & Bonk, 2010; Massoud & Stockley, 2011), and I wondered if high school students could also benefit from this relatively new method of instruction. I decided to conduct an action research study to explore the impact of blended instruction on high school students.

Educators have utilized available educational technologies since before the invention of the chalkboard (Dunn, 2011). As Bonk (2009) points out, “books, crayons, pencils, overhead projectors, tape recorders, and blackboards have not disappeared entirely, but learners are increasingly relying on online resources” (p. 14). Today’s educators have access to far more sophisticated instructional technologies; computers allowing students to access the internet lead current trends (Bonk, 2009; Hyo-Jeung & Bonk, 2010). This report examines the effects of creating a blended instructional environment, in which internet-based learning experiences are combined with face-to-face learning experiences. Guided by a professional educator, students engage in face-to-face or online discussion and problem-solving to further their understanding of content they have interacted with or will interact with through the online instructional mode.

Considering the current emphasis on differentiating instruction and meeting the needs of individual learners, the potential for increased time to better support personalized learning is a compelling argument in favor of blended instruction. Additionally, blended instruction can provide high school students with opportunities to use computers to access the internet for educational purposes rather than as a source of entertainment. Through the online instructional mode,
students can learn how to navigate online learning management systems, how to communicate with others effectively in an online discussion forum, and how to collaborate productively within online groups.

The development of internet communication skills will benefit students whether they choose to continue their education or enter the job market immediately following graduation. As Tucker (2012) points out, modern high school graduates need to be critical thinkers and creative problem solvers who are able to communicate both in person and in the digital world. The integration of computers to access internet resources into traditional classroom instruction supports student acquisition of 21st century communication and learning tools while simultaneously supporting student mastery of content knowledge and skills. According to McKinstry (2012), instructional integration that includes accessing the internet using computers also increases the possibility that students will continue to engage in learning throughout their lifetimes (p. 30).

The National Council for Teachers of English (NCTE) also advocates student acquisition of 21st century computer and internet communication skills. According to the NCTE, to succeed in an increasingly global society, students must develop the following skills:

- “Develop proficiency and fluency with the tools of technology;
- Build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought;
- Design and share information for global communities to meet a variety of purposes;
- Manage, analyze, and synthesize multiple streams of simultaneous information
- Create, critique, analyze, and evaluate multimedia texts;
- Attend to the ethical responsibilities required by these complex environments” (National Council of Teachers of English, n.d.).

These 21st century skills as defined by the NCTE go hand-in-hand with the National Education Association (NEA) “Four C’s” (NEA, n.d.). The NEA considers “critical thinking, communication, collaboration, and creativity” (NEA, n.d.) to be the four most important skills for students today. As students prepare to enter a global workforce, they will need to be innovative thinkers who can engage in culturally sensitive communication, making sound judgments and decisions as they work effectively with others (NEA, n.d., pp. 8-24).

The action research study described in this report details how I designed and implemented a unit of blended instruction for my class of twenty eleventh grade students. I chose Coursesites.com, a free version of Blackboard Learn, for the unit’s online instructional platform. This 21st century educational technology became the portal for my students to travel back in time while studying F. Scott Fitzgerald’s (1925) classic depiction of the Roaring Twenties in his novel The Great Gatsby.

**Literature Review**

While the concept of blending traditional instruction with some technological component is not brand new, advances in technology have literally placed a world of learning within students’ reach. As Bonk (2009) shares, through advances in internet technology learners can now learn “about nearly any topic in any discipline” (p. 12). Learners can connect to the internet virtually any time and place to experience learning when it is convenient for them. This flexibility could potentially allow blended instruction to transform how learning happens both in and out of the classroom. According to Motteram and Sharma (2009), blended instruction could increase learning time and learner time on task by facilitating learning both within and also outside of the walls of the classroom.

No hard and fast rules exist regarding precisely how much of blended instruction should be delivered face-to-face and how much should be delivered online. However, several definitions for blended instruction have emerged in recent years. Perhaps one of the most precise definitions comes from Staker (2011) who claims that blended learning can be defined as:

- a formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, place, path, and/or pace and at least in part at a supervised brick-and-mortar location away from home. (p. 5)

Massoud, Iqbal, and Stockley (2011) describe blended instruction as an environment which involves learners sharing and discussing ideas through a variety of internet-based and face-to-face interactions while the teacher in this environment moderates in both learning modes to support learner development of “critical discussion and reflective thinking” (p. 6) skills.

As Watson (2008) discusses, many definitions of blended instruction currently exist; however, most people generally agree that “blended learning combines the best elements of online and face-to-face learning” (p. 3). Staker and Horn (2012) define in detail four models of blended instruction: the rotation model, the flex model, the self-blend model, and the enriched-virtual-model. Within the rotation model category, Staker and Horn (2012) further define four sub-models of blended instruction: station rotation, lab rotation, flipped classroom, and individual rotation (pp. 8-15).

As Gonzalez and Vodicika (2012) explain, the rotation model involves students rotating “between teacher-led instruction and online computer learning” (p. 9) while the flex model involves students using computers...
to access online instruction. Teachers are available to provide face-to-face support as needed by individual students. The self-blend model allows students to extend their studies by using a computer to access an online course of their choosing, while the enriched virtual model is a “whole-school experience in which students divide their time between attending a brick-and-mortar campus and learning remotely, using online delivery of content and instruction.” (Gonzalez & Vodicka, 2012, p. 9).

Gonzalez and Vodicka’s (2012) descriptions of the four models of blended learning corroborate with Staker and Horn’s (2012). Staker and Horn (2012) further break down the rotation model into four sub-models. Station rotation, according to Staker and Horn (2012) involves students within a particular class or course rotating “on a fixed schedule or at the teacher’s discretion” (pp. 8-9) between online learning using a computer and other classroom activities. In the station rotation model, all students are expected to visit each station; in other words, the rotation schedules are not individually designed for each student. In the lab rotation model, students also rotate on a fixed schedule; however, the computers for the online station are in a physically different location within the school other than the classroom, for example, in a learning lab.

The flipped classroom model is also considered a rotation model as students rotate between teacher directed activities at school, then access a computer to experience “online delivery of content and instruction of the same subject from a remote location (often home) after school” (Staker & Horne, 2012, p. 9). Flipping allows students some control over their learning, as they choose when and where to access the online portion of instruction. The fourth rotation model described by Staker and Horn (2012) is the individual rotation model. Students in this model also rotate on a fixed schedule; however, their schedule is “individually customized” (p. 9). Students in the individual rotation model only visit those stations which are included on their customized schedule. At one of these stations, the student will use a computer to access online instruction (Staker & Horne, 2012, p. 9).

The potential benefits of blended instruction are numerous and well-documented. Pape (2010) describes as an advantage of blended instruction the potential for appealing to “diverse learning styles” (p. 23) for instructional delivery as well as for student demonstration of knowledge. Pape (2010) cites as further benefits a broader learning experience that allows students to construct deeper meanings from their learning experiences (p. 25). Watson (2008) makes similar assertions, stating that blended instruction offers opportunities for meaningful discussion and reflection among students and teachers (p. 3-4). He also explains that blended instruction facilitates differentiation by making personalized instruction possible in classrooms full of diverse students (Watson, 2008, p. 4).

Yapici and Akbayin (2012) identify three components of blended instruction that benefit students: use of multimedia, pre-class preparation provided by online material, and communication both with other students and with the instructor (p. 128). Musawi (2011) identifies three benefits of blended instruction including: flexibility for the learner; content accessibility; and feasibility of use. The latter is true particularly regarding cost, since many internet-based resources are either low cost or free, assuming that computers and internet connections are already in place.

Integrating technology into a traditional classroom setting and creating an effective blended instructional environment requires careful consideration in order to positively impact student learning. As Musawi (2011) points out, factors such as analyzing the needs of learners should be considered when designing any learning environment. Hyo-Jeong and Bonk (2010) acknowledge the positive learning potential of blended instruction methods but simultaneously advocate the critical necessity for careful design of blended instruction along with appropriate use of computers with access to internet resources to enhance student learning.

While careful planning is part and parcel of any good instruction, the purposeful integration of computers with access to internet resources requires that instructors plan in even greater detail. When designing effective blended instruction the instructor strives to create a productive balance between the face-to-face component of instruction and the computer accessed internet component of instruction (Yapici & Akbayin, 2012) aligning these two modes of instruction in a way that will optimize student learning (Hyo-Jeong & Bonk, 2010; Jinyuan, Fore, & Forbes, 2011; Yapici & Akbayin, 2012). Jinyuan et al. (2011) describe the importance of making “classroom teaching relevant to the e-learning content [while using] technologies to further engage students and increase their interaction” (p. 28). Effective blended instruction incorporates access to online instruction as a necessary component. The integration of internet resources delivered via computer technology into traditional instruction means engaging students in active collaboration with the computer, with the internet, with the instructor, or with other learners.

Tucker (2012) explains that collaborative online learning is a powerful application of blended instruction as the collaborative nature of the discussion board provides opportunities for students to build knowledge together. According to Tucker (2012) online discussion potentially gives every learner the opportunity to share his or her thoughts, an opportunity which may not be available for every learner during face-to-face class discussions in part due to learner personalities, and in part due to the dynamics of a classroom. Another benefit Tucker (2012) credits to online discussion is the “time and space to consider a question, articulate a response,
and read the responses by their peers” (p. 31). Tucker (2012) claims that this added time allows learners to develop an awareness of other learners’ positions, cultures and individual experiences, an awareness that is necessary for students to be “college and career ready” (p. 31).

Blackmon (2012) defines the purpose of discussion boards as a venue through which students “interact and discuss components of the course” (p. 2). Blackmon (2012) asserts that online discussion between students can improve student learning by providing students with opportunities for reflection and leading to deeper thinking about the concepts being studied. Meyer (2012) maintains that the discussion board is a “critical component of any learning management system” (p. 117), adding that discussion board discussions are created and intended for instructional purposes (p. 118).

Moreno (2011) mentions convenience as one characteristic of asynchronous (delayed) communication in a discussion forum over synchronous, or real-time communication (p. 161). Asynchronous discussion allows the student to access the discussion board whenever and wherever it is convenient for him or her personally. Further, Moreno (2011) points out that discussion boards provide students with opportunities to practice writing skills (p. 171 & 173) as well as opportunities to collaborate with their peers (p. 162).

Chu and Borsting (2009) found that students appreciate the “ability to continually access course material” (p. 79) in an online learning management system. They believe that the student-centered nature of this continual access increases both student motivation and student learning (Chu & Borsting, 2009, p. 79).

Despite the explosion of using computers to access the internet for instructional purposes at the secondary level, relatively few studies exist documenting the impact of blended instruction on high school students (Hyo-Jeong & Bonk, 2010; Yapi & Akbayin, 2012). While blended instruction has been studied extensively at the post-secondary level, more research is needed into the use of blended instruction in the high school classroom.

Could high school students learn to use an online learning management system, in this case, Coursesites.com, to augment a unit of blended instruction? Would students from a Title I school, the majority of whom live below the poverty level, have a computer and internet access at home from which to enter the online learning management system? And, most important to me as a teacher, would the addition of an online component enhance the learning experience for high school students? Would the online component motivate high school students to take ownership of their own learning? As a novice researcher but a veteran teacher, I set out to conduct an action research study that would attempt to address these questions.

Action research is a natural fit for teachers, being practical (Creswell, 2012) research which allows the researcher to “explore a practical problem with an aim toward developing a solution to a problem” (p. 576). For educators, action research leads to reflection, ultimately improving student learning and teacher professional practice (Creswell, 2012). Cresswell (2012), Blakemore (2012), and Beaulieu (2013) all acknowledge that action research is viewed by some in the research community as nothing more than teacher professional development, an “informal process of research” (Cresswell, 2012, p. 578), not quite scientific or legitimate.

Beaulieu (2013) asserts that whether in an educational or a community setting, “action research is about improving the quality of human life, acquiring knowledge to become better practitioners, and developing strategies to address problems” (p. 33). Blakemore (2012) believes that “research conducted by practicing teachers can be both empowering and illuminating” (p. 59). Action research “is an ongoing process, with each stage or cycle of research informing the next” (Beaulieu, 2013, p. 33), making action research different, and perhaps less “neat, orderly, and linear” (Cresswell, 2012, p. 571) than other, more scientific research designs; however, no less valid.

In choosing the practical action research design (Cresswell, 2012, p. 579), I was seeking to resolve a potential problem by making a difficult text accessible to my students in a brand new way. I was hoping to enhance their learning experience and motivation, and also to better my own teaching practice by trying something neither I, nor my students, had previously done.

Method

Participants

I teach and conducted this action research study in a regional technical high school that is located in a suburban New England community. Because we are a regional state technical high school, students enroll from eight different sending towns. At the time of this study, out of a school population of 491 students, 70.4% were eligible for free or reduced price meals, indicating that students come from communities with a lower socio-economic status. The student population represented the following ethnic backgrounds, as reported on the strategic school profile: 36% African American, 58% Hispanic, 6% Caucasian, and 1% Asian American (About Whitney Tech, n.d.).

The 20 eleventh grade students who participated in this study (8 female and 12 male) were of mixed ethnic backgrounds, with 7 Hispanic students, 12 African American students, and 1 Asian American student. Of these students, 16 students owned smart phones with which they could connect to the internet. 1 of these 15 students chose not to use his smart phone for this unit. 1 student owned an iPod which connected to the internet, and 1 student had access to an iPad in addition to a smartphone, which she brought to school twice during the
course of the unit. 3 students, 1 of whom was absent for the first two weeks of the unit, did not own smart phones.

**Procedure**

**Designing the blended instructional unit.**

In designing this unit, I intended to use what Staker and Horn (2012) would identify as the flex model of blended instruction. In its original conception, I planned to bring my students to the library media center, where each student would use a computer to access the online content and instruction. I had planned to be able to work with individual students as they moved through the online unit at their own pace. I also intended to supplement computer access in the library using the flipped model; I expected students to access the online learning platform outside of the classroom on their own time, either during study hall or after school at home or at the library. In this way, I hoped to be able to maximize my limited resources and extend student learning beyond the classroom as much as possible. As I describe in the implementation section, unanticipated obstacles led to a different delivery of the online content instruction, although I was still able to use a flexible blended learning model.

After researching several online learning platforms, including Edmodo and Moodle, I ultimately decided upon Coursesites.com, a free version of Blackboard Learn as the online learning platform for the blended instruction unit. Coursesites.com is more sophisticated than either Edmodo or Moodle as it allows more flexibility and a higher degree of structure when creating instructional activities for students. Coursesites.com allows the creation of online discussion forums and blogs for student cooperative learning experiences, as well as online quizzes and surveys.

Because Coursesites.com looks and works much like Blackboard Learn, which many postsecondary educational institutions use for their online courses, experience with Coursesites.com would give my students a better opportunity to assess whether or not they might consider online postsecondary courses or programs. While Moodle and Edmodo are also useful online learning platforms, for the purpose of this unit and this study, Coursesites.com seemed a more appropriate choice.

To design instruction in Coursesites.com, I first had to create a course folder. I then created a chapter activities folder for each of The Great Gatsby’s (Fitzgerald, 1925) nine chapters. Using the Common Core State Standards as a guide, I chose appropriate eleventh grade literary concepts to study along with the novel, associating one focus study concept with each chapter of the novel.

For each chapter folder I designed and included the following: a focus concept instructional video; links to the University of Adelaide online text and audio version of the novel, dictionary.com, and chapter vocabulary list; a discussion forum prompt; and vocabulary and content quizzes.

I used the Coursesites.com rubric feature in order to create a rubric for student discussion forum posts. I enabled the feature that allowed students to view the rubric which included 5 areas of assessment: analysis of question or topic; responses to classmates; respect; mechanics; and length. The four levels of mastery on this rubric included novice, competent, proficient and advanced. The rubric can be viewed in Figure 1.

![Figure 1. Discussion Board Rubric.](image)

This figure illustrates how student initial posts and response posts were assessed.

This figure illustrates an example of what students encountered when engaging online with Coursesites.com.

Within the course folder, I also created a pre-reading folder with pre-reading activities to give students a meaningful way to become familiar with using Coursesites.com. Appendix A includes the pre-reading survey. Figure 2 illustrates a student’s view of the pre-reading folder contents.

Additionally, I created a post-reading folder, which included a post-unit reflection survey. This survey was a four-point Likert-type scale allowing students to strongly agree, disagree, or strongly disagree with 14 statements about their experience with the online classroom. Question 15 was open-ended. The survey questions, including responses to question 15, are included in the “Results” section of this report.
Implementing the blended instructional unit.

When I planned this action research study, I anticipated being able to use the Library Media Center computers or to use the laptop cart to supplement my nine classroom computers to provide all students with daily computer access to the online classroom. However, upon approaching the library media specialist to schedule library computer time and use of the laptop cart, I discovered that the class time I needed in the library was already booked by another instructor for the remainder of the year and the laptop cart was defunct.

I had surveyed students prior to beginning the study, and based upon student responses I decided to move forward with the study by supplementing my nine student computers with student smart phones. Of the twenty students in the study, sixteen owned smart phones, although one student did not use the smart phone in class. One student owned an iPod. Three students had neither a smart phone nor an iPod. One student owned an iPad and used it in class although not every day. On the survey, all students indicated that they had internet access at home either with their cell phone, iPod, or iPad, or with a family desktop computer or laptop.

During the first week, which was abbreviated due to the CAPT testing schedule and a snowstorm, students took the online pre-reading survey and tried their first discussion forum. Students varied in their ability to navigate the online classroom; some students spontaneously became teachers, helping their peers to log in and use the online classroom. We soon found that smart phones were adequate for online surveys and quizzes but the screen size was too small for reading or for discussion forum writing. In an attempt to provide all students with enough classroom time in the online classroom, I divided students into two groups. Each group participated in 25 minutes of online instruction and 25 minutes of traditional instruction during each class session.

By the end of the second week, which was also shortened due to the CAPT testing schedule, students had completed chapter one online activities and finished reading through chapter two of The Great Gatsby (Fitzgerald, 1925). Following our school schedule, students left academics to attend shop classes for two weeks. During this two week period, I made two changes to the online course in response to student requests. One change involved lengthening quiz time limits as students expressed frustration when they were in the middle of a quiz and the class ended or the internet became disconnected. The second change involved allowing students to edit their discussion forum posts; once students realized that their writing would “published” for all of their peers to read they were more conscientious with their writing.

When the students returned from shop, the librarian suggested that we try the iPod cart; however, the iPod’s small screens proved to be as unsuitable as the smart phone screens had been. At this point, the librarian suggested the netbook cart. Though slightly smaller than laptops, the netbooks have a significantly larger screen than the iPods and they provided portable, individual internet access to the online classroom. The combination of my nine classroom computers and internet access using the netbooks provided all students with equal in-class time in the online classroom.

Procuring the netbook cart for class presented some difficulties, though. The library is upstairs, halfway down the main hallway so the cart had to be picked up in the library, wheeled down the hallway away from my classroom in order to use the elevator and then wheeled across the school back to my classroom. At the end of class, the cart had to be returned to the library, a reverse odyssey.

Nine students could begin working in the online classroom immediately upon entering class, with a tenth student working on my computer. However, students who were going to use netbooks had to wait for the cart to be brought from the library, then wait for me to unlock the netbook cart, turn on and check each netbook then assign the netbooks to each individual. The fact that the netbooks were individually numbered helped when I assigned and collected the netbooks.

At first the process of distributing the netbooks was cumbersome, but it became easier as two things happened. First, I created a list of functioning netbooks
so that I did not have to turn on and check each netbook as I assigned them. Second, students very quickly developed a preference for either the classroom computer or the netbook, which facilitated the distribution process.

Using the netbooks was not without its frustrations. They were not equipped with mice, which kept some students from trying them. Additionally, the netbooks disconnected more frequently from the wireless network connection, and on more than one occasion students lost work due to the interruption of the internet connection.

Despite these obstacles, by Week Four the blended classroom was running smoothly. Students had developed their own patterns of working either individually or in small groups. When the unit was completed, students shared their mixed reactions to their experience with blended instruction. While some expressed a desire to work in the online classroom again, others expressed relief that the unit was over.

Results

Student time spent in the online classroom data, quiz data, discussion forum data, and end of unit survey data collected by the Coursesites.com tracking feature proved useful in analyzing the impact of using blended instruction with my class of high school students. The tracking feature collected data about exact dates and times students accessed the online classroom to take quizzes, to write in the discussion forum, or simply time logged in to Coursesites.com.

The student engagement data shows a gradual increase in the number of minutes students spent logged in to Coursesites.com from week one to week four of the study. This increase most likely reflected the increased number of minutes that computers or netbooks with access to the internet were available to students within the classroom as the student engagement data shows that students did not log in regularly outside of school despite their having reported having internet access outside of school.

One area of further study might be to examine why my students did not make use of the online classroom outside of school. While motivation could play a factor, another plausible concern lies in students’ inability to access the online classroom from home.

### Table 2

**Student Engagement, Quiz, and Discussion Forum Data**

<table>
<thead>
<tr>
<th>Student</th>
<th>Total Minutes Engaged</th>
<th>% Quizzes Taken</th>
<th>Quiz Average</th>
<th>% Discussion Forum Participation</th>
<th>Discussion Forum Average</th>
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</tbody>
</table>

Note: data provided by the tracking feature of Coursesites.com
Note: students 19 and 20 were absent and had no access to Coursesites.com during weeks 1 & 2
Note: averages of quiz & discussion scores are based on a 100 point scale

### Quiz Data

I analyzed student quiz data collected through the tracking feature of Coursesites.com to determine how consistently and how well students were able to take online quizzes in Coursesites.com. As presented in Table 2, the quiz data showed a wide disparity from student to student in quiz score averages and the number of quizzes attempted. The data shows that only six students completed at least eighty percent of the online quizzes in the unit. This raised concerns anew about student computer and internet access outside of school. Although students indicated in the pre-unit survey that they could access the internet from home, they had anticipated being able to use their smart phones or iPods, which turned out to be unsuitable for use with the online classroom.

Another concern lay in my not having established firm deadlines by which students should complete the various online activities. I have to wonder if students would have made more efforts to use local community center or library computers to access the internet in order to complete online activities had they been given firm deadlines to meet, rather than relying on time within the physical classroom.

### Discussion Forum Data

I analyzed the discussion forums data collected from the tracking feature in Coursesites.com to discern
each student’s ability to communicate within an online discussion venue. I hoped to learn whether or not the use of a written discussion forum would encourage less vocal students to share their ideas more freely with their classmates than they would during traditional classroom discussion.

As with the quiz scores, and as presented in Table 2, participation in the discussion forums varied considerably from student to student. Only five students completed at least sixty percent of the discussion forums. The question of why students were unable to complete the online activities has been raised already in this report; what is important to note here is that the lack of completion is not limited to only one activity or type of activity, but seems to have affected all online activities.

One of the questions guiding this study involved the potential for student engagement in online collaboration and discussion. While student participation may not have occurred with anticipated frequency, all students did demonstrate at least one time the ability to communicate effectively in an online discussion forum.

Table 3
Student Responses to the End of Unit Survey

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree</th>
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<th>Strongly Disagree</th>
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</table>

End of unit survey questions.
1. The online content presentations (videos, Power Points) helped me to understand the literary concepts we studied in The Great Gatsby.
2. Participating in the discussion forums allowed me to deepen my understanding of the novel.
3. I accessed the online classroom when I was outside of school.
4. The design of the final project gave me the opportunity to creatively express my thoughts about the novel while also learning to use a new technology.
5. I enjoyed interacting with my classmates in the online classroom.
6. I like learning online more than learning from my teacher.
7. I enjoyed working on the final project.
8. The online unit was organized and easy to use.
9. I would like to use the online classroom again.
10. The online classroom gave me more opportunities to share my ideas than when we have discussion in the classroom.
11. I prefer taking quizzes online rather than with paper and pencil.
12. The discussion forum rubric was fair and it helped me improve my initial posts and my responses to my classmates.
13. When I go to college, I will feel confident about choosing classes that are offered partly or completely online.
14. I would have liked more computer time during class.
15. This is your chance to share about anything you particularly liked or disliked about using Coursesites.com.

Responses to question 15 (student misspellings maintained).
“The online site was easier to use than it is to do classwork with a pencil and paper, I would like to work online more often”
“I Dislike………”
“I didn’t like this online classroom thing. It wasn’t that it was the work that made it hard its just that it being online made it harder to get the work done, it made me feel like i could procrastinate and not do it when I was supposed to and u would say & quot; i can do it at any time & quot; i just feel like if i had a physical paper, i would have done more and one time. Truthfully i don’t ever want to take an online class ever again.”
“Coursesites is a great site for online learning. What I like most about it, is the organization within the format, that makes it easier to learn, use and understand. I will say however that this site is the best used on a solid connection. I find that sometimes this website doesn’t save your answers like it claims it does. All in all it’s a great site.”
“AWESOME!!!!!!!!!!!”
“I have no real reasons not to like using the courtesites it was straight.”

Three of the students who took the survey did not answer Question Fifteen.

I analyzed anonymous student responses to the end of unit survey to determine student reactions to the blended learning experiences and to using Coursesites.com. I designed the end of unit survey questions to elicit responses from students that would provide clear direction regarding whether or not to attempt future blended instructional experiences, and what changes would improve future attempts at blended instruction. The survey was a simple four point Likert-type scale allowing students to strongly agree, agree, disagree, or strongly disagree with each of fourteen
states about the blended learning experience. Question fifteen asked students to write a final comment about their experience with blended learning and Coursesites.com.

While some students reported that they enjoyed the challenge of learning in an online classroom, there were students who did not enjoy the experience at all. Two students expressed a dislike for the online learning; one expressed a dislike of any kind of reading; two did not verbally express their dislike, but their lack of participation could be interpreted as a negative perception of the blended instruction experience.

In designing future blended instruction units, I will take into account those students who may not appreciate blended instruction using an online learning management system. Different activities, or a menu of activity choices; improved computer availability; closer monitoring during activities; direct instruction in using the online classroom; even a different reading assignment all could affect the experience of an individual student.

I would encourage students who are reluctant to embrace online learning to keep trying, as the necessity of building 21st century computer communications skills is so vital to today’s learners. However, I could differentiate, making changes to accommodate each student’s individual learning preferences. There is no real reason why differentiation in such a manner could not occur in the modern classroom. Some students could use the online classroom while others, who prefer traditional methods, could be involved in more teacher-directed activities not incorporating the online classroom. These latter students could still be expected to use the internet for various activities; however, their responses and assessments would be with paper and pen, and their discussions would occur face-to-face.

The third comment for question fifteen is a valid complaint:

“I didn’t like this online classroom thing. It wasn’t that it was the work that made it hard its just that it being online made it harder to get the work done, it made me feel like I could procrastinate and not do it when I was supposed to and u would say & quot; i can do it at any time & quot; i just feel like if i had a physical paper, i would have done more and one time. Truthfully i don’t ever want to take an online class ever again.”

I had no idea how to pace students while working in the online classroom therefore set no strict deadlines for activity completion. While some students were able to self-monitor their pace and complete activities independently in a timely manner, clearly other students required more structure. This is not surprising; even in the traditional classroom students tend to have preferences toward more or less structure in completion of assignments, and it is something to take into consideration for my next blended instruction adventure.

One response gave cause for concern about the reliability of the results of the survey; only one student actually finished the unit during the time allotted for the study, and actually began working on the final project. However, questions four and seven, which asked about student perceptions of the final project, had five and four positive responses, respectively. It is possible that students responded based upon their reactions to reading about the final project, rather than actually completing it. Overall, student responses seemed genuine, and thoughtful.

**Effect of the Digital Divide**

There are several possible reasons for students not completing all online activities; I did not use the deadlines feature in Coursesites.com, so students had no sense of needing to finish by a particular date. Firmer deadlines might have increased student participation.

During the course of the study, one problem became crystal clear. Too many students could not access the internet from home on a suitable device, such as a laptop, desktop computer, or tablet. Although students all indicated on the pre-unit survey that they could access the internet from home, they had anticipated being able to work on their smart phones or iPods, which later proved unsuitable for working in the online classroom.

When access to information and communication technology (ICT) interferes with student learning, we realize that the digital divide does indeed still exist in America. Salpeter (2006) cites a 1995 U.S. Department of Commerce NTIA report to define the digital divide as “gaps in the levels of technology available to different households in the U.S.” (para. 1). In this same report, Salpeter finds evidence that ethnicity and educational level both affect the likelihood of a family having access to ICT. As Salpeter (2006) writes, the 2003 NTIA report evidenced a continued inequity in access to ICT based on ethnicity, with white households most likely to have ICT access, and Latino households least likely to have ICT access. African American households were less likely than white households and more likely than Latino households to have ICT access (Salpeter, 2006, para. 8). Salpeter (2006) also refers to the 2005 Pew Internet and American Life Project, which corroborates the finding that white households were more likely than African American households to have ICT access (para. 8) and which also demonstrates that college graduates are far more likely to have ICT access than high school graduates, with those lacking a high school diploma least likely to have ICT access (para. 8).

Smith (2014, p. 2) and Lopez, Gonzalez-Barrera, and Patten (2013, p. 1) report that the ethnic divide in ownership and usage of ICT has narrowed from 2009 to 2012, although white households still lead in ownership of a desktop or laptop computer and use of said ICT
device to access the internet, perhaps as a result of more white households having internet access at home. One trend Lopez et al. (2013) report is that persons from all ethnicities aged 18-29 with some college experience and higher income were more likely to report owning a desktop or laptop, having broadband in the home, and accessing the internet more frequently (p. 1).

Lopez et al. (2013) also discern inequities in the Latino population based upon country of birth and dominant language. Latino computer or desktop owners and ICT users were more likely to be U.S. born and bilingual or English dominant, young and highly educated. Latinos without high school diplomas who were Spanish dominant, regardless of being native or foreign born, were less likely to own computers or desktops (Lopez et al., 2013, p. 1).

Ono and Zavodny (2008) also find that “disparities in informational technology access and use persist along racial and ethnic lines” (p. 1455), expressing concerns that these disparities negatively affect immigrant families both economically and socially. According to Ono and Zavodny (2008), while increased ownership of computers along with “availability of computers in libraries and computer centers” (p. 1456) have been steps toward bridging the digital divide between natives and immigrants, “substantial gaps” (p. 1456) in ICT use between these two groups remain.

Greenhow, Walker, and Kim (2010), whose research specifically addresses low-income urban high school students and their use of technology, determine that although families of low-income students may own computers, those computers are usually shared by other members of the family, therefore the individual student is limited in his or her use of the computer. Greenhow et al. (2010) further point out that while a computer may be available in the home, the family may be unable to afford internet connection (p. 66).

The factor that most affected my research study lay in student lack of access to the internet at home. 95% of the students in my study were Latino or African American. Their inability to use ICT at home, whether due to lack of access to a tablet, desktop or laptop computer or due to an inability to access the internet in 2013 makes plain that the digital divide still exists in the U.S. The basis of this divide is both ethnic and economic. Lack of access to ICT continues to create inequity in opportunities for students from low-income, ethnically diverse schools, perhaps now more than ever as U.S. education embraces the necessity for students to learn digital communications skills.

A last thought about the digital divide in the U.S., particularly as it is exacerbated by issues of income and ethnicity, comes from Reinhart, Thomas, and Toriskie (2011), who claim that “there exists a second level digital divide that has profound implications for the persistent technological marginalization of economically disadvantaged students” (p. 189). On the surface, access to ICT is largely an economical issue: those who can afford computers and internet access are at an advantage. However, Reinhart et al. (2011) discuss another, more subtle inequity regarding technology in education, a concept they dub the “second level digital divide” (p. 181). This SLDD refers to the types of activities students are likely to engage in for school using computer and internet technology. Reinhart et al. (2011) find that teachers in schools with a higher percentage of economically disadvantaged students are less likely to use computer and internet technology in ways that will foster critical thinking skills or develop 21st century computer technology skills (p. 183-190).

Closing the digital divide involves more than providing access to computers and an internet connection. Teachers, specifically teachers of socio-economically disadvantaged students, must acquire the skills necessary to use available technology in ways that will promote both developing ICT skills in students along with higher-level thinking skills. Blended instruction provides teachers with one way to use ICT to develop critical thinking and internet communication and technology skills. However, it would be wrong to assume that recent efforts to provide all students with computers, laptops, or tablets to access the internet has fixed the problem of the digital divide in terms of physical equipment. Need and lack still exist, perpetuating a digital divide that feeds an achievement and opportunity gap which must be addressed before equity for students of all ethnicities and socio-economic statuses can be considered a reality.

Conclusion

The design and implementation of a blended instructional unit proved more challenging than I had expected. I wanted to know how blended instruction would impact student learning, and I am not sure I have a clear answer to that particular question. However, I do know that students learned how to use an online learning management system; even those students who did not enjoy the online classroom were able to learn how to use it. The ability to navigate learning in an online classroom will help those students who enroll in post-secondary programs as increasingly more post-secondary institutions offer fully online, hybrid, and blended certification and degree programs.

I learned several practical concepts about utilizing blended instruction which I will put into place the next time I use Coursesites.com. First, I will ensure equal student computer and internet access within the classroom from the first day of the unit to the last. iPods and iPhones may be adequate for quizzes and surveys, but they are impractical for reading and writing in an online classroom. It is essential that each student can access the internet on a computer, laptop, netbook or tablet during class meeting times for the duration of the unit.
Second, I will use a more specific pre-unit computer and internet availability survey. It is vital to know whether students have an appropriate device, for example a desktop computer, laptop computer, or tablet upon which they can regularly access the internet when outside of school. This knowledge will help me to pace the unit more practically and in a manner that is fair to all students. If even one student does not have an appropriate device with internet access available outside of school, then planning should not include computer and/or internet related homework tasks.

With clear knowledge of the amount of time students will have available to work in the online classroom, I will be able to set firm deadlines for completion of online learning activities. The lack of deadlines was a serious drawback in my project, a mistake that should not be repeated. When in doubt, set long deadlines; in any case, do set deadlines to which students must adhere.

Finally, in considering deadlines and pacing, four weeks did not give students enough time to complete the many activities I had created within the unit. This is evidenced by the many students who were unable to complete all of the unit activities. In future, I will both allot more time overall in the classroom for students to complete the unit but also hold students to stricter deadlines for both online and offline learning assignments.

I think that there were some students who took ownership of their learning, and whose experienced was enhanced by using the online classroom. However, I would have liked to see more students take advantage of the opportunities for learning in the online classroom. I hope that the changes outlined above, when applied to future blended instructional units, will make the experience more rewarding for all students, not just a handful.

The action research study described in this report is admittedly small in size and scope, focusing as it does on one class of high school juniors. However, the lessons I learned during its design and implementation will hopefully guide my own and other high school teachers’ future ventures into blended instruction. The results of this study may prompt further and larger studies with similar goals of determining how blended instruction affects secondary learners and how to design blended instruction so that it is appropriate to and effective for enhancing the learning experiences of secondary school students.

**Update**

Two things of note have occurred since I completed this action research study last year. First, one of my students, now a senior, recently asked if we would be using the online classroom again. On further conversation, he expressed that he had enjoyed the experience, and was eager to try online learning again. Second, our use of the netbooks has led to other teachers taking advantage of them. The library media specialist can barely keep up with teachers who want to use the netbooks in their own classrooms.

**References**


Appendix A

Chapter One Pre-Reading Survey Questions

Students chose: strongly disagree, disagree, agree, or strongly agree

1. When two people get married, they should stay together no matter what.
2. Wealthy people are happier than poor people.
3. It is never all right for a man to hit a woman.
4. A person can feel alone, even in the middle of a crowd of people.
5. If you truly love someone, you will take the blame for a crime that person committed.
6. A criminal can be handsome and charming.
7. You should only go to a party if you have been invited.
8. People get married because they love one another.
10. Men drive better than women do.

These questions were devised as they address specific issues and events in the novel. If you are not familiar with The Great Gatsby, some issues include: marital infidelity; marriage for money; social division based upon socio-economic status; physical violence in relationships; isolation of the individual; protecting loved ones, even from themselves; deceptive appearances; motivations for criminal activities. The events in the novel include numerous affairs, an accidental death, Gatsby’s rags-to-riches story, a murder, and Gatsby’s countless and mysterious business dealings.
Chapter One Discussion Board Question

In Chapter 1 of Gatsby, you met four of the main characters: Nick Carraway, Tom Buchanan, Daisy Buchanan, and Jordan Baker. For each of these characters, based ONLY on what you read in Chapter One, respond to the following:

1. Is this character a complex character? Answer “yes” or “no”, then explain your decision.
2. What is this character’s conflict?
3. What motivates this character?

You may revisit the video or refer to your notes.

Students were expected to address the discussion board question for each chapter by writing a 100 to 150 word original post that was both accurate and detailed. This post should demonstrate that the student both read and understood the chapter as well as the literary concept assigned to that chapter. Students were expected to write correctly according to the conventions of good grammar and spelling, and they were expected as well to respond respectfully to one another. After publishing their initial post to the forum, students were expected to respond to the postings of two students in class. Students were encouraged to respond in ways that would further the discussion.

Examples of Discussion Forum Posts to the Chapter One Prompt

Student A.

Nick Carraway.

1: No, Nick is not a complex character and rightfully so considering the fact that so far I have only read one chapter. He more over seems to be the doll of everyone’s problems. Someone the other characters can vent to. An example is when Daisy pours her guts out to Nick, about how unhappy her marriage is. Nick does not seem to undergo any sort of change in personality.

2: Nick so far does not have a conflict in the story, or at least not one based off of what I read that is highlighted or touched on in the story. He seems to be a very neutral party so far.

3: Nick isn’t said to have much real motivation as far as the story goes and, as said early, seems to be a very neutral character.

Tom Buchanan.

1: I do think Tom is a complex character because not only does he contribute to one of the few plots that the story has revealed so far, but he undergoes changes in the story based off of his interactions with each character. Tom
speaks respectfully to Nick, as if trying to impose his own views on the character, however he talks to Daisy as if she’s an ignorant female, even to the point where cheating on her is deemed acceptable.

2: I don’t believe that Tom has much of a conflict because so far he deems what he does ok, and so far has not been challenged by any of the characters on his actions. This is evident by the fact that Daisy has not left him even though it is clear he is cheating on her.

3: Tom’s motivation is not quite clear in the story, however it can be implied that he wants to be more powerful and richer than those around him. Money seems to be his motivation as he is rather supercilious and cocky towards the other characters that have less than he does, though he has not come in contact with those that are upper class like him in the story yet.

Daisy Buchanan.

1: Yes Daisy is a complex character because not only does she contribute to one of the stories plots, but she also shows multiple personalities, as she acts differently towards certain characters. When around Tom she tends to act docile, and not challenge his decisions. However when around Nick, she was able to spill her guts out about her marriage and just how poor it had been.

2: Daisy’s conflict is spawned by her want to be a sophisticated female, who can make her own decisions but not being able to. Her husband Tom is an imposing force who has complete control over her life to the point that its almost suffocating. Furthermore, she wants the best life for her daughter, however knows that under Tom she will end up much like herself, and even though she claims she wants her to grow up as a “beautiful little fool” you can imply as a mother and based of her conflict she doesn’t want this and simply knows what’s coming.

3: Daisy does not have much positive motivation in the story besides the urge to be her own person, she seems more motivated to stay with Tom and the reason for that has not been highlighted yet. I can imply though that the reason for this is because she will have nothing without him, she has really spawned most of her life with him, and it would be hard to start over. There is also the fact that Tom might get the daughter, or even, the fact if she left, that her daughter might have a difficult life.

Jordan Baker.

1: No Jordan is not a complex character because she does not contribute to any of the plots in the story so far, she seems to just be “there” so far. Though she does seem to have some background roots.

2: Jordan Baker does not have an illustrated conflict as of yet. She is somewhat neutral
3: Jordan Baker does not seem to have much motivation that has been illustrated, it is said she plays a sport however not why she is motivated to do so, or even why she is around Tom and Daisy.”

Student B.

“Honestly I think that Nick is a complex character because he seems to have problems within himself... Well maybe he doesn't have problem but he just act weirdly around the other characters. He doesn't really have a conflict at this point. Tom Buchanan is a complex character because he is a white supremacist. That might be me putting him in high because of my opposition towards that view. He has a mistress while he has a wife. He is also violent and abuses his wife. Daisy Buchanan is another complex character she has to deal with a violent husband and his mistress. I think she is motivated by the fact that she has a very controlling husband and she wants to be as free as a bird. Jordan is just a spectator as of this point.”

One response to Student B’s post. “I agree with Jordan being a spectator at this point in the story. They don’t really illustrate much change with her, nor does the story show any sort of conflict she may have or why she is even in the story so far. However Nick to me is just a supporting character, he does not contribute to the plot and instead just seems to tell the story. Not to say he is not important but, his worth to the story besides telling it and supporting other characters by letting them vent to him (an example is Daisy) has not been distinguished at this point.”

A second response to Student B’s post. “I agree with you that Tom and Daisy are complex characters. Problems are a huge role in a marriage. In their marriage Tom is having an affair with his mistress and Daisy wants does not want to be seen as a fool. However, she is has a daughter so she has no other choice.”
Human-Computer Interaction Factors in Designing Educational Video Games

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