

Does the Implementation of Web 2.0 Applications in the English Language Arts Classroom  
Improve 7<sup>th</sup> Grade Student Writing Scores?

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### **Abstract**

Over the last ten years, interactive Web 2.0 applications have become widespread and are popular forms of communication among school-aged children. With the gain in popularity of online Web 2.0 applications and being an essential part of a student's everyday life outside of the classroom, teachers should take advantage of the affordances these evolving technologies can bring to the classroom. In particular, can the implementation of Web 2.0 technologies in place of traditional writing methods improve student writing scores as denoted on the STAAR writing test? Does the use of interactive Web 2.0 applications motivate students to share their thoughts through their writing? Currently, there is little evidence that the use of Web 2.0 technologies versus traditional writing methodologies have a significant impact on the improvement of middle school student writing scores. A quantitative study involving classes of 7<sup>th</sup> grade students who utilize Web 2.0 applications during writing assignments compared to classes of 7<sup>th</sup> grade students who practice traditional writing methods could provide more insight about the results of implementing Web 2.0 applications in an English Language Arts classroom.

*Keywords:* Web 2.0, English Language Arts, STAAR test, writing performance

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At times, it is difficult to motivate middle school students to produce a writing sample during class or especially as a homework assignment. They often feel they are writing simply to fulfil a writing assignment in which their teacher will be the only person reading, or so they can receive a grade in the gradebook. These purposes for writing do not always motivate students to write or elicit the best student writing samples. Castleberry ISD has a one-to-one student notebook initiative implemented in 7<sup>th</sup> and 8<sup>th</sup> grades at Irma Marsh Middle School. Traditionally, teachers have students type their writing samples in Microsoft Word and save them in the teacher drop box. Then, the teacher reviews the student documents, scores them, and returns them to the student with their feedback. This process can take up to a week or longer to complete considering there could be anywhere from one hundred and fifty to one hundred and sixty-eight students scheduled in their classes.

In addition, all 7<sup>th</sup> grade students are administered the STAAR writing test which consists either of a personal narrative or an expository writing sample. Currently, student scores are not at the performance level the district would like to achieve. Castleberry would like for the majority of the student responses to be scored a 3 or a 4 according to the STAAR grading rubric to ensure mastery of the test.

Should teachers consider implementing more innovative teaching and learning methods in the language arts classroom such as Web 2.0 technologies as a pedagogical practice with the intent to improve student engagement and increase online collaboration among students?

### **Review of the Literature**

As more and more individuals have obtained mobile devices and have become connected through the Internet, methods for teachers to instruct and communicate with students have changed. Some new methods that have recently become available include Web 2.0 technologies, also known as social networking or social media. Web 2.0 technologies consist of social publishing sites or spaces for sharing information including, blogs, wikis, social bookmarking tools, video sharing sites, brainstorming graphic organizers, and content management environments (Mao, 2014). Social media is further defined by Mao (2014) as any new technology that allows users to actively participate in online environments via the Internet and Web 2.0 technologies for the purpose of communicating, collaborating, and interacting with others.

One way to take advantage of the opportunities that social media can bring to the classroom is to implement blogging. Morgan (2014) states that when students comment in blogs, they often improve their grammar, spelling, word choice, and punctuation, because they now have a purpose for their writing. Their writing is no longer only what the teacher is asking them to produce for a grade. Instead, classroom peers along with students from around the world can read and comment on their thoughts.

Constructing a student writing sample is taught as a writing process that includes brainstorming, creating a draft, revising, and publishing a final copy. The use of another popular social media, a Wiki, permits students to create their own work; but in addition, it allows for others to edit and revise the writing content for the purpose of improving or enhancing the

written work. When students write for the purpose of constructing a Wiki, they naturally experience writing as a social and collaborative process (McPherson, 2006) while advancing through all the stages of the writing process. The implementation of Wiki's in the classroom empowers students to create a product collaboratively; therefore, the end result is better than a product created in isolation (Toledo and Shepard, 2011).

Last, digital storytelling, is another form of Web 2.0 application that can be easily implemented in the writing process. It is a process in which students can tell a story by integrating several other technology applications. For example, a student could insert audio with the use of Audacity, insert pictures from the Internet that support the storyline, or create their personal narrative in a video editing program such as Movie Maker (Mullen and Wedwick, 2008).

### **Significance of the Study**

The advancements in technology, and its use in our everyday lives, have changed how students communicate and learn. In order to keep students engaged in their own learning, teachers must embrace the new technology innovations to optimize the potential that digital devices and their resources can bring to the educational environment (Taranto, Dalbon, and Gaetano, 2011). However, many teachers are still reluctant to implementing new pedagogical approaches such as the integration of Web 2.0 applications into their classrooms because they see such innovations as a distraction to learning. Students interacting amongst one another for the purpose of constructing their own knowledge are often seen as a threat to the control a teacher has when lecturing to the class as a whole.

However, the principles of social media coincide with the social constructivism theory of learning. This theory supports that knowledge is developed within a social environment. Individuals gain knowledge by interacting with one another, providing feedback, extending on ideas, and lending support when needed. Collaboration among individuals is a main principle of the social constructivism theory.

The use of social media for educational purposes naturally lends itself to collaborative activities. Kelm (2011) states that the effects of implementing these innovative strategies enables learners to build on new knowledge, collaborate by sharing knowledge, engage in discourse, receive feedback, and connect learning to real world applications. The affordances that social media can offer supports the practices embedded within the writing process.

### **Research Questions or Hypothesis**

Does the use of interactive Web 2.0 applications motivate students to share their thoughts through their writing? Does the implementation of Web 2.0 technologies in place of traditional writing methods improve student writing scores as denoted on the STAAR writing test?

### **Research Method**

#### **Procedures**

Six classes of students will utilize Web 2.0 applications when creating writing samples in their 7<sup>th</sup> grade English Language Arts classroom while six classes of students will create writing samples using traditional writing methods. The teacher in the treatment group will incorporate blogging, the use of wikis, and digital story telling when teaching the writing process. Students will complete a writing pretest and posttest, and a questionnaire will be administered to students

in which they will indicate the degree in which they agree with statements made about writing habits and perceived learning outcomes.

### **Principle**

The study will investigate whether the use of Web 2.0 applications in a 7<sup>th</sup> grade language arts classroom can motivate students to share their writing. In addition, it will determine if Web 2.0 applications can be utilized as a pedagogical tool at the middle school level for the purpose of improving 7<sup>th</sup> grade student writing skills as assessed on the STAAR writing test.

### **Type of Design**

This proposed quantitative study will be conducted over two semesters and will include a total of 12 seventh grade language arts classes facilitated by two teachers. Six classes will receive the treatment and six classes will be in the control group. The treatment group will share their expository and personal narrative writing samples by posting drafts and writing samples in various Web 2.0 applications, so classmates can provide feedback and peer editing suggestions. The control group will utilize traditional writing methods that include submitting writing samples using pen and paper or typing writing samples in Microsoft Word and then submitting them in the teacher online drop box. One teacher will facilitate the treatment group while the second teacher will facilitate the control group. Each class has an average of 25 to 28 students per class or approximately 150 to 168 students per teacher.

### **Independent and Dependent Variables**

**Independent variables.** Six classes will be instructed to post and share their writing samples in various Web 2.0 applications, and six classes will employ traditional writing methods.

**Dependent variables.** The dependent variables include student STAAR writing scores, and student attitudes/motivation about sharing their writing samples via Web 2.0 applications.

### **Factors Jeopardizing Internal and External Validity**

**Internal validity.** Selection-mortality could be a concern since this study is over a duration of two semesters. A pretest which will consist of a released STAAR writing test will be administered at the beginning of the year. Unfortunately, Irma Marsh has a high transient population. Over the long duration, students with different skills could move in and out of the district during the study; therefore, skewing the results.

**External validity.** Experimentation-Since students previously did not submit writing samples using Web 2.0 applications in the traditional classroom, this change alone could influence students to work harder and be more motivated to complete their writing samples.

### **Sample Selection Method**

The students are not randomly assigned to teachers and classes; therefore, a quasi-experimental sample method will be utilized. Each teacher has one gifted and talented class of students, and English language learners and special education students are mainstreamed into the remaining classes. The teacher and class period in which students are scheduled is often determined based on the availability of other course selections.

### **Data Collection**



Data will be collected using the pretest and posttest model. Students will be administered a 7<sup>th</sup> grade released STAAR writing test within the first three weeks of school. At the end of March, students will be administered the state mandated 7<sup>th</sup> grade STAAR writing test. The test is a two day test which consists of generating a personal narrative and an expository writing sample along with completing multiple choice sections on revision and editing.

In addition, questionnaires will be administered to students, and they will be asked to indicate the degree in which they agree with statements made about writing habits and perceived learning outcomes utilizing a Likert scale response instrument. (For example: 1=strongly disagree to 7=strongly agree)

### **Data Analysis Procedures**

The data analysis attempts to answer if there is a significant difference in test scores between students who shared writing samples in Web 2.0 applications versus students who utilized traditional writing methods. The writing data analysis procedure will include using a t-test to determine if the difference between the two groups of student test averages is likely to represent an actual difference between the treatment group and the control group sample populations.

The analysis of student attitudes about writing and perceived learning outcomes will include a chart listing each survey question and the percentages of participants who selected each score on the Likert scale for the question.

### **Anticipated Results**

Based on previous studies, I anticipate that the use of Web 2.0 applications in the 7<sup>th</sup> grade English Language Arts classroom will improve student writing in some of the key tested areas. For example, Morgan (2014) states that blogging helps students to choose more precise words in their writing as a result of other students reading and interacting with them on their blog posts. One of the tested sections on the STAAR writing test is dedicated to multiple choice questions based on proper word choice. Morgan (2014) goes on to include that when students are posting comments for others to read, it motivates them to use proper grammar, correct punctuation, and syntax. These skills are tested in the revising section of the STAAR writing test.

In another study conducted by Caverly, Nicholson, Battle, and Atkins (2008), they conclude that the use of blogs increases the interest in further learning and the value students place on learning. In addition, McPherson (2006) states that writing wikis motivates students, and they become much more enthusiastic about what they are writing versus when composing a traditional essay.

However, a couple of items to consider in preparation for this study would include teacher technology proficiencies and having an academic purpose for implementing Web 2.0 technologies. If teachers do not understand how to utilize Web 2.0 technologies or buy in to the affordances they can bring to the classroom, then implementing these new technologies will not likely bring about change in the classroom. The innovative student activities should be aligned with the district's writing process and have a clear educational purpose for utilizing the applications. Using a Web 2.0 technology for simply the sake of using it, will not likely improve student writing or have any academic benefits Morgan (2014).

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