Increasing the Critical Level of Peer Revision Comments

Via Student Interaction with a Wiki

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Abstract

The purpose of the study was to determine if student interaction with a wiki for peer revision assignments increased the critical level of peer revisions in a high school Advanced Placement composition class. Fifteen twelfth-grade Advanced Placement composition students enrolled in a Midwestern school district participated in the study. Out of the fifteen students, eight were males and seven were females. Analysis of the data obtained in the study indicated that the critical level of peer revision comments increased throughout the implementation of the intervention.
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Chapter I: Introduction

Introduction

"Looks great!", "Good job!", and "It's better than mine!" were comments students seemed happy to receive from their peers during the revision process; however, these comments did little to actually improve writing skills or performance on any given assignment. As a practicing educator with nine years of teaching experience in the field of language arts, the researcher was dismayed at the results of the peer revision tasks that took place in the Advanced Placement classroom. The majority of peer revision acts exhibited by the researcher’s students consisted of minor editing marks and vague complimentary statements, rather than critical comments and specific suggestions for improvement. Hewett (2000) indicated that when properly executed, the peer revision process was beneficial to both the assessing peer and the assessed peer in terms of overall writing improvement. The professional literature also reported that, increasingly, the process of peer revision was done electronically rather than in the traditional paper and pencil mode (Guardado & Shi, 2007). In accordance with the goal of eliciting more critical and beneficial revisions from students during the peer revision process, the researcher implemented a model of student interaction with a wiki for the purposes of peer revision.

Statement of the Problem

The purpose of this project was to determine if student interaction with a wiki for peer revision assignments increased the critical level of peer revisions in an Advanced Placement composition class. The research questions were: (1) According to the professional literature reviewed, how was the writing process defined? (2) What were the
benefits of peer revision based on the professional literature reviewed? (3) How has peer revision been implemented in the classroom as indicated in the professional literature reviewed? (4) Did student interaction with a wiki increase the critical level of peer revisions in an Advanced Placement composition class?

**Justification**

This project was completed to determine if student interaction with a wiki for peer revision assignments increased the critical level of peer revision in an Advanced Placement composition course. Writing skills, of which revision is a major component, have been considered an important factor in academic success across the disciplines; thus, improving writing skills has been a primary goal of language arts teachers. In addition, today’s student population has grown up in a technologically-rich environment. In order to fully prepare today’s students for success in this technologically advanced society, teachers also have worked to incorporate technology into the classroom.

The results of this study helped the researcher to determine if this methodology was useful in improving the peer revision process, a crucial step in improving writing skills as a whole. Additionally, this project allowed the researcher to determine the effectiveness and feasibility of incorporating a specific technological tool into the classroom setting. If the results showed promise, the project could also be of benefit to other teachers as a model of how to improve the peer revision process with their students. Moreover, this project could provide teachers with a practical example of how technology can be included in the existing curriculum.

**Definition of Terms**

For the purposes of this study, the following definitions applied.
Advanced Placement Composition Class: a class in which fifteen twelfth grade students worked to improve their writing skills in preparation for college writing endeavors and also prepared to take the Advanced Placement English Language and Composition exam.

Critical Level: comments in peer revision reflected the purpose of writing improvement.

Increase: the majority of student comments in peer revision were at a critical level.

Peer Revision: the evaluation of a classmate’s written text for the purposes of the improvement of the text as a whole.

Student Interaction: accessing, posting, commenting, and manipulating text within the wiki space.

Wiki: a “collection of interlinked web pages . . . where each page is easily edited by any user” (Leuf & Cunningham, as cited in Lund, 2008, p. 35)

Writing Assignments: teacher initiated writing tasks which students completed as part of course requirements.

Limitations and Appropriate Use of Results

This research project had several limitations which included a small sample size, a homogenous population, and a limited time during which the project was implemented. The sample size for this project was limited to fifteen twelfth grade students enrolled in an Advanced Placement composition class in a Midwestern school district. Additionally, the population consisted entirely of Caucasian students who were academically similar. Furthermore, the project was conducted within a period of fifteen weeks which limited
the students' experiences with the intervention. Due to these limitations, the results of this project may not be applicable in other settings with other populations.
Chapter II: Review of the Literature

Introduction

The purpose of this project was to determine if student interaction with a wiki for peer revision assignments increased the critical level of peer revisions in an Advanced Placement composition class. The research questions were: (1) According to the professional literature reviewed, how was the writing process defined? (2) What were the benefits of peer revision based on the professional literature reviewed? (3) How has peer revision been implemented in the classroom as indicated in the professional literature reviewed? (4) Did student interaction with a wiki increase the critical level of peer revisions in an Advanced Placement composition class?

Research Question #1: According to the professional literature reviewed, how was the writing process defined?

A review of the professional literature was conducted to determine how the writing process was defined. Early on, composition theorists formulated the concept that the task of writing involved several stages or processes (Emig, 1971; Flower & Hayes, 1981; Graves, 1983). However, these processes were not believed to be linear in their implementation; rather, they were considered to be recursive and embedded (Emig; Hayes & Flower, 1994; Lipson, Mosenthal, & Daniels, 2000; Murray, 2003; Scott & Vitale, 2003). In other words, although there were distinct processes that occurred during writing, the processes did not necessarily occur at distinct times or in a distinct order.

Although some literature indicated that there were three broad processes involved in the writing process (Flower & Hayes, 1981; Graves, 1983; Hayes & Flower, 1994; Murray, 2003; Poindexter & Oliver, 1999), Scott and Vitale (2003) divided the writing...
process into five more specific processes which were associated with those three broader processes. Scott and Vitale's five processes included prewriting/planning, drafting, revising, editing, and publishing.

**Prewriting/Planning**

The professional literature reviewed stated that the prewriting and planning process included exploration of ideas, collection of information, and organization of information (Emig, 1971; Scott & Vitale, 2003). Murray (2003) added that prewriting was also a time of research and identification of an audience. Furthermore, Flower and Hayes (1981) included goal-setting in terms of both writing procedure and writing substance as part of the prewriting and planning process.

**Drafting**

A review of the professional literature highlighted a common understanding of the manner of the drafting process. Essentially, the drafting process entailed development of the ideas and information formulated through prewriting and planning into actual sentences and paragraphs (Flower & Hayes, 1981; Graves, 1983; Murray, 2003; Poindexter & Oliver, 1999; Scott & Vitale, 2003). The literature also indicated that writers were to focus on meaning, rather than mechanics, during the drafting process (Flower & Hayes; Poindexter & Oliver; Scott & Vitale).

**Revising**

The revising process was identified by Scott and Vitale (2003) and Flower and Hayes (1981) as the thorough examination of a text. Additions, deletions, and text reorganization were all acknowledged as part of the revising process (Poindexter & Oliver, 1999; Scott & Vitale). Moreover, Murray (2003) explained that revising was a
time for rethinking, redesigning, and/or rewriting. Emig (1971) concurred that the revising process included the larger scale changes made to a written text.

Editing

The professional literature indicated that the editing process involved proofreading tasks (Poindexter & Oliver, 1999). Scott and Vitale (2003) included attention to the mechanics of writing, spelling, punctuation and grammar as part of these proofreading tasks. Emig (1971) also commented that this process involved the elimination of small errors in a written text.

Publishing

The attention given to the publishing process was minimal, yet the literature suggested that final drafts of writing products should be shared with an audience to instill pride in the writer and to provide motivation and purpose for the writing process as a whole (Graves, 1983; Poindexter & Oliver, 1999; Scott & Vitale, 2003).

Summary

The writing process was presented in the literature as a set of recursive processes conducted during the task of writing (Emig, 1971; Flower & Hayes, 1981). These recursive processes included prewriting/planning, drafting, revising, editing, and publishing (Scott & Vitale, 2003).

Research Question #2: What were the benefits of peer revision based on the professional literature reviewed?

The literature indicated that peer revision was an essential element of the writing process (Brammer & Rees, 2007). Thus, a review of the professional literature was conducted to determine the benefits of peer revision. There were a number of benefits of
peer revision noted in the professional literature reviewed, some of which included enhanced student collaboration, strengthened sense of audience which led to increased effort in writing, deepened understanding of assignment criteria, and improved writing skills.

**Student Collaboration**

The review of the professional literature revealed that the process of peer revision enhanced student collaboration. Hansen and Liu (2005) stated that peer revision not only increased communication among students, but also contributed to a sense of community among students. Furthermore, Topping (1998) added that participation in peer revision promoted teamwork and social skills. Topping, Smith, Swanson, and Elliot (2000) confirmed this and further explained that peer revision increased negotiation skills and verbal communication skills.

**Sense of Audience**

A strengthened sense of audience which led to increased effort in writing was also discussed in the literature as a benefit of peer revision. Both Rieber (2006) and Lin, Liu, and Yuan (2001) expressed that students submitted better writing samples when they knew their peers would read their work. In addition, Gerdeman, Russell, and Worden (2007) and Brammer and Rees (2007) agreed and stated that it was a sense of accountability to an audience other than the teacher that served as the impetus for students to improve their writing.

**Understanding of Criteria**

An additional benefit of peer revision cited in the literature was a deepened understanding of assignment criteria. Reese-Durham (2005) reported that the peer
revision process allowed students to assess both their own personal understanding of an assignment as well as the understanding of their peers. In addition, Topping (1998) and Topping et al. (2000) claimed that the thinking processes involved when students attended to assignment criteria during peer revision clarified and solidified those criteria for the assessing student. In other words, the peer revision process forced students to focus on the crucial aspects of the assignment. In fact, Rieber (2006) claimed that in this aspect peer revision was more beneficial for the revising student than for the student whose paper was revised.

**Writing Skills**

The professional literature acknowledged improved writing skills as another benefit of peer revision. Gerdeman et al. (2007), Cho and Schunn (2007), and Xiao and Lucking (2008) all reported that writing skills in general increased when peer revision was implemented. Additionally, Rieber (2006) found that when students participated in peer review of their writing, they received higher grades than when they did not participate in peer review. Furthermore, Kindzierski (2009) noted that students' papers had better organization when reviewed by peers. Interestingly, Topping (1998) claimed that peer revision produced gains in writing skills that matched those produced by revision carried out by teachers.

**Summary**

The professional literature reviewed suggested several benefits of peer revision. Those benefits of peer revision most often referred to in the literature included enhanced student collaboration (Topping, 1998), strengthened sense of audience which led to increased effort in writing (Rieber, 2006), deepened understanding of assignment criteria
(Topping et al., 2000), and improved writing skills (Xiao & Lucking, 2008). All of these benefits solidified the importance of peer revision to the writing process as a whole.

Research Question #3: How has peer revision been implemented in the classroom as indicated in the professional literature reviewed?

As suggested by the literature, when peer revision was implemented in the classroom, there were a number of benefits for students. Therefore, a review of the literature was conducted to determine how peer revision had been implemented in the classroom in order to achieve those benefits. The professional literature revealed that peer revision was implemented in the classroom in a variety of ways (Topping, 1998). Also indicated by the literature was the fact that there were a number of variables involved in the various peer revision implementation methods (Topping). The variables of peer revision referred to most often in the professional literature included mode, structure, organization, and level of privacy.

Mode

The professional literature indicated that one of the variables of the peer revision methods implemented in the classroom was the mode of peer revision. Hansen and Liu (2005) provided explanations for several modes of peer revision which were referred to in the professional literature reviewed. One mode of peer revision was oral peer revision in which all revisions were only discussed orally. Written peer revision, an additional mode of peer revision, was explained as written revisions which were then returned to the student writer for consideration. Hansen and Liu described the written plus oral mode of peer revision as written revisions which were then discussed orally with the student writer. The synchronous computer-mediated mode of peer revision was characterized by
Hansen and Liu as peer revisions that took place with the aid of a computer and were completed while student writers and revisers interacted simultaneously via computers, usually through some type of discussion feature. Finally, Hansen and Liu described the asynchronous computer-mediated mode of peer revision as peer revisions that took place with the aid of a computer, but without simultaneous interaction of student writers and revisers. Instead, in the asynchronous computer-mediated mode of peer revision, student writers accessed revision comments only after the student reviser had completely finished the peer revision process.

Structure

Another variable of the peer revision methods implemented in the classroom as discussed in the professional literature was the structure of the peer revision. The structure variable of peer revision indicated the degree of teacher guidance that peer revisers were given. In a discussion of this variable, Rieber (2006) stated that open-ended peer revision required the lowest degree of teacher guidance. In open-ended peer revision, students were simply instructed to revise the work of their peers. This type of peer revision was most often used with higher ability students. Rieber explained guided peer revision as a type of peer revision that had a moderate degree of teacher guidance. Guided peer revision required students to consider a list of questions to guide their revisions. The type of peer revision which included the highest degree of teacher guidance was referred to as directed peer review. Rieber indicated that directed peer review provided students with a checklist of assignment criteria on which student revisers merely indicated whether or not the criteria was met.
Organization

Organization was also addressed in the professional literature as an additional variable of the peer revision methods implemented in the classroom. Rieber (2006) indicated that the way in which students were organized for peer revision was a necessary consideration when peer revision was implemented in the classroom. Rieber labeled as individual peer revision, that in which a student individually revised one or more of their peer’s papers. Reciprocal peer revision was a specific type of individual peer review in which two students exchanged their papers only with one another for peer revision (Topping, 1998). Rieber also discussed group peer revision which involved a group of students who mutually discussed the papers of peers outside the group.

Privacy Level

A final variable recognized in the peer revision implementation methods was the level of privacy in the peer revision. Cho and Schunn (2007) differentiated between open peer revision and anonymous peer revision. Open peer revision included full disclosure of the identities of both the student writer and the reviser. Anonymous peer revision was classified as when student writers did not know who revised their paper and revisers did not know whose paper they revised.

Summary

The professional literature indicated that there were a multitude of methods by which peer revision was implemented in the classroom (Topping, 1998). These methods incorporated various combinations of specific variables often reflected in peer revision (Topping). These variables included the mode, structure, organization, and level of privacy of the peer revision method.
Conclusion

A review of the literature was conducted in order to answer the research questions for this project. The literature indicated that the writing process, a model used for writing instruction, was a recursive and embedded process (Emig, 1971). The writing process was reported to include five specific processes which included prewriting/planning, drafting, revising, editing, and publishing (Scott & Vitale, 2003).

The literature also suggested that peer revision was a crucial part of the writing process as a whole (Brammer & Rees, 2007). Four benefits of peer revision were discussed. One of these benefits was enhanced student collaboration (Topping, 1998). A strengthened sense of audience which led to increased writing effort was also noted as a benefit of peer revision (Rieber, 2006). The literature further discussed that an increased awareness of assignment criteria was a benefit often obtained through peer revision (Topping et al., 2000). Finally, peer revision was said to improve writing skills (Xiao & Lucking, 2008).

Additionally, the professional literature reviewed indicated that there were a variety of methods for the implementation of peer revision in the classroom (Topping, 1998). These peer revision methods incorporated a number of variables (Topping). These variables reflected the mode in which peer revision was completed, the degree of teacher guidance offered in the peer revision method, the organization of students for peer revision, and the level of privacy present in the peer revision method.

In conclusion, the professional literature reviewed offered insight into the writing process as a whole and provided evidence for the peer revision process as a beneficial
practice for implementation in the classroom. Furthermore, the professional literature supplied information regarding how peer revision was implemented in the classroom.
Chapter III: Methods and Procedures

The purpose of this project was to determine if student interaction with a wiki for peer revision assignments increased the critical level of peer revisions in a high school Advanced Placement composition class. The research questions were: (1) According to the professional literature reviewed, how was the writing process defined? (2) What were the benefits of peer revision based on the professional literature reviewed? (3) How has peer revision been implemented in the classroom as indicated in the professional literature reviewed? (4) Did student interaction with a wiki increase the critical level of peer revisions in an Advanced Placement composition class?

Participants

The participants in this project were students enrolled in a high school Advanced Placement composition class at a small public high school in the Midwest. There were a total of fifteen twelfth grade students enrolled in the class. Out of the fifteen students, eight were males and seven were females. All participants were Caucasian and were of similar academic ability.

Treatment/Intervention

The intervention for this research project was the implementation of a model of student interaction on a wiki. Students were given a visual demonstration regarding how to access the wiki, how to navigate the wiki, how to manipulate content on the wiki, how to create a new page on the wiki, how to view page histories on the wiki, and how to participate in discussions on the wiki. Students were given a handout which also provided instruction for completing these tasks (see Appendix A for Wiki Instructions for Basic Operations). Students were then assigned user names and passwords for the
purposes of accessing the wiki. During a period of five weeks, students completed small assignments on the wiki which included participation in discussions, contributions to a hotlist, and modification of existing wiki pages. Students were informed that the wiki was also available for any other classroom purpose, including those not generated by the researcher. Students were encouraged to interact with the wiki to become familiar with its various features prior to the peer revision sessions.

Prior to student interaction with the wiki for peer revision, the writing process was orally reviewed with students. In accordance with the Ohio Department of Education’s Academic Content Standards for English Language Arts, students have been working with the writing process throughout their formal education, beginning in kindergarten. Thus, students were already familiar with the various processes of the writing process. Despite this familiarity, students were reminded that the writing process included prewriting/planning, drafting, revising, editing, and publishing. Special emphasis was given to revising. Students were specifically reminded of the function and purpose of revision and were also reminded of the ways the wiki could aid in the facilitation of revision, which included the ability to easily modify as well as comment on existing text.

The researcher developed the Peer Revision Rubric (see Appendix B for Peer Revision Rubric) prior to implementing the intervention. This rubric was used to analyze the critical level of peer revision comments on four writing assignments. One day prior to the first revision session on the wiki, the students received the Peer Revision Rubric. The researcher read through the rubric categories and descriptions with the students and provided clarification when necessary. Students were informed that their peer revision score would count as part of their course grade.
As homework, before completing each of the four peer revision assignments with the wiki, each student posted the first draft of his or her essay on a new wiki page. In class, students were assigned another student’s username and were required to perform peer revision on that student’s paper. After the first peer revision session, care was taken to ensure students were not assigned to peer revise the same peer’s paper in any subsequent peer revision session. Students were instructed to consult the Peer Revision Rubric to guide their peer revisions. Students were also instructed to make revision comments using the edit page function and were asked to complete their revisions in a colored font rather than in black.

Instruments/Protocols

The instruments used to collect data in order to answer research question number four were the Peer Revision Rubric (see Appendix B for Peer Revision Rubric), which was devised by the researcher and was used to analyze the peer revision comments on four writing assignments, and the teacher log, which was used to record observations during the four peer revision sessions.

Peer Revision Rubric

The Peer Revision Rubric (see Appendix B for Peer Revision Rubric) was used by the researcher to assess the critical level of the peer revision comments. The rubric was used to assign a numerical score to student revision comments on four writing assignments. This score counted as part of the students’ course grade. The rubric consisted of three categories for assessment. These categories included specificity of comments, holistic nature of comments, and attention to assignment criteria. Each category on the rubric corresponded with three levels of achievement with scores ranging
from one to three. A score of one in any of the categories on the peer revision rubric indicated a student’s achievement in that category was deficient. A score of two in any of the categories on the rubric indicated a student’s skill in that category was emerging. A score of three in any of the categories indicated a student achievement level of proficient in that category.

In the category of specificity, a score of three indicated that the student’s revision comments were thorough and clear and provided specific examples for changes and/or improvements. A score of two in the specificity category denoted that the student’s revision comments were thorough and clear. A score of one in the specificity category indicated that the student’s revision comments lacked specificity.

In the assessment of the holistic nature of the revision comments, a score of three indicated that the student’s comments focused on holistic matters such as the relationship of the thesis to supporting arguments, overall style of writing, organization of the essay, and development of the essay topic. A score of two in this category indicated that the student’s revision comments were somewhat focused on these same holistic matters. A score of one in this category indicated that a student’s revision comments were editing based and focused on discrete matters such as spelling, punctuation, and/or grammar.

In the category of attention to assignment criteria, a score of three indicated that the student’s revision comments directly referenced assignment criteria. A score of two in this category indicated that a student’s revision comments revealed an awareness of assignment criteria. A score of one in this category indicated that the student’s revision comments revealed little awareness of assignment criteria.
Teacher Log

The teacher log was used to record field notes and observations during students’ interaction with wiki-based peer revision activities. The teacher log was completed in conjunction with each wiki-based peer revision activity (four times during the intervention). The field notes from each peer revision session were recorded in a notebook. The field notes consisted of a record of students’ questions directed to the researcher, the researcher’s observations regarding students’ working habits during the peer revision sessions, and a record of general comments made by students during each session.

Procedures

Consent

Prior to the implementation of the intervention, consent was obtained from the principal for the teacher to implement the intervention in the classroom. Parental consent forms, which required a parent signature for participation, were sent home during the first week of school to explain the project (see Appendix C for Parental Consent Letter). These forms were returned to the researcher.

Peer Revision Rubric

After students completed each of the four peer revision assignments, the researcher copied the students’ essays with revision comments from the wiki to a Word document in order to assess the critical level of the peer revision comments. All revisions comments were read by the researcher. For each peer revision assignment, the Peer Revision Rubric (see Appendix B for Peer Revision Rubric) was used to assess the peer revision comments made on the wiki.
Teacher Log

Additionally, observations were recorded on a teacher log during the completion of each of the four peer revision assignments. A notebook was used to record observations during each peer revision session. These observations assisted in determining themes emerging during the students’ use of the wiki for peer revision.

Timeline

The research design and the data collection instruments for this project were completed in July. Permission to conduct the study was obtained from the school principal and the student participants in late August. Students were instructed on how to use the wiki and began interacting with the wiki in early September. The researcher collected data for a period beginning in early October and continuing through the middle of December. After this period, the researcher analyzed the data that was collected.

Data Analysis

Peer Revision Rubric

The researcher analyzed and recorded the information from the Peer Revision Rubric (see Appendix B for Peer Revision Rubric). A rubric was used to score each students’ peer revision comments for four assignments of peer revision with the wiki. The scores from each student for all wiki peer revision assignments were entered on a spreadsheet. Scores for all students were averaged for each peer revision assignment on the wiki. The average scores were compared to determine if the average student score increased over the duration of the implementation of student interaction with a wiki for peer revision.
Teacher Log

The researcher read and analyzed each log entry to identify emerging themes for each peer revision assignment. These themes were recorded in a four column chart to aid in comparing themes across all log entries (see Appendix D for Teacher Log Themes). Themes were compared across all log entries to both identify themes and to determine shifts or changes in themes. The comparison of these themes was used to determine if student interaction with a wiki increased the critical level of peer revision comments. The critical level of peer revision comments was determined by noting the students’ questions directed towards the researcher, students’ working habits during the peer revision sessions, and general comments made by the students during the peer revision sessions.

Conclusion

Data collection instruments were designed and collection methods implemented in order to determine if student interaction with a wiki increased the critical level of peer revision comments for the participants involved.
Chapter IV: Results

The purpose of this project was to determine if student interaction with a wiki for peer revision assignments increased the critical level of peer revisions in a high school Advanced Placement composition class. The researcher wanted to determine if interaction with a wiki would improve the peer revision comments students made when they reviewed another student's paper for the purpose of writing improvement. The research questions were: (1) According to the professional literature reviewed, how was the writing process defined? (2) What were the benefits of peer revision based on the professional literature reviewed? (3) How has peer revision been implemented in the classroom as indicated in the professional literature reviewed? (4) Did student interaction with a wiki increase the critical level of peer revisions in a high school Advanced Placement composition class?

The review of literature that was completed to answer the research questions provided support for the pedagogical methods which were implemented in this project. The literature explained that the writing task involved several stages or processes (Emig, 1971; Flower & Hayes, 1981; Graves, 1983). Specifically, the literature indicated that the writing process consisted of the stages of prewriting/planning, drafting, revising, editing, and publishing (Scott & Vitale, 2003). The literature also suggested that peer revision was a crucial part of the writing process as a whole (Brammer & Rees, 2007). Specifically, peer revision was reported to elicit four benefits which included enhanced student collaboration (Topping, 1998), a strengthened sense of audience which led to increased writing effort (Rieber, 2006), an increased awareness of assignment criteria (Topping et al., 2000), and improved writing skills (Xiao & Lucking, 2008).
Additionally, the literature provided information regarding the variables involved in the implementation of peer revision. These variables included the mode in which peer revision was completed, the degree of teacher guidance offered in the peer revision method, the organization of students for peer revision, and the level of privacy present in the peer revision method (Topping).

Through the review of the professional literature, the researcher obtained the information necessary to develop data collection instruments to measure the critical level of peer revision comments when students interacted with a wiki. The data collection instruments included the Peer Revision Rubric and the Teacher Log.

*Peer Revision Rubric*

The Peer Revision Rubric (see Appendix B for Peer Revision Rubric) was used by the researcher to assess the critical level of peer revision comments in four peer revision sessions with a wiki. The rubric consisted of three categories for assessment. These categories included specificity of comments, holistic nature of comments, and attention to assignment criteria. Each category on the rubric corresponded with three levels of achievement with scores ranging from one to three. A score of one in any of the categories on the Peer Revision Rubric indicated a student’s achievement in that category was deficient. A score of two in any of the categories on the rubric indicated a student’s skill in that category was emerging. A score of three in any of the categories indicated a student achievement level of proficient in that category.

Individual student scores were recorded for each of the four peer revision sessions. Student scores for each individual peer revision session were added together and that number was divided by the number of students to compute an average score for
each peer revision session. The average score for the first peer revision session was 6.13 out of a possible 9 points. Students scored an average of 7.53 on the second peer revision session. On both the third and fourth peer revision sessions, students had an average score of 8.2 out of a possible 9 points. Figure 1 represents the comparison of the average score for each peer revision session.

![Average Peer Revision Scores](image)

*Figure 1: Average Student Scores for Each Peer Revision Session*

A comparison of the average scores on the four peer revision sessions indicated an increase in the average score over the course of the implementation. This increase in average scores confirmed an increase in the critical level of peer revision comments for students interacting with a wiki for peer revision assignments.

**Teacher Log**

The Teacher Log was used to record observations made by the researcher during each of the four peer revision sessions. The observations reflected general comments made by students as they worked, notations regarding work habits, and questions generated by students as they performed peer revision. The observations were reviewed
in order to determine themes that emerged and were analyzed to determine changes in themes across the four peer revision sessions. Three consistent themes were identified across all four peer revision sessions. These themes included references to the Peer Revision Rubric (see Appendix B for Peer Revision Rubric) or to the various writing assignment sheets, frustration with the functions of the wiki, and positive work habits and comments other than referencing the Peer Revision Rubric or the various assignment sheets. Each of the notations made in the teacher log corresponded with one of these three themes.

The number of notations in each of the four Teacher Log entries for each of the three themes were counted and recorded. Notations that were counted as a reflection of the theme of references made to the Peer Revision Rubric or to the various writing assignment sheets included the following.

"Student asked, 'What are the three criteria on the rubric?'

"Student asked, 'Does this comment address the criteria?'

"Several students are referring to the rubric as they work."

"Student asked, 'Does anyone have the packet of sources?'

"Student asked a question regarding his own essay in response to the paper he was proofing."

In the first peer revision session, the researcher made only six notations that indicated students were referencing their rubrics or assignment sheets during the peer revision session. There were sixteen notations regarding this theme in the second peer revision session and twelve in the third peer revision session. In the fourth peer revision session, the researcher made fifteen notations regarding this theme. Figure 2 presents a
comparison across the four peer revision sessions of the number of notations in the teacher log that corresponded to the theme of references made to the Peer Revision Rubric or to the various writing assignment sheets.

![Bar chart showing references to rubric or assignment sheets across sessions](image)

*Figure 2: Number of Notations Regarding References to the Peer Revision Rubric or Assignment Sheets in Each Peer Revision Session*

A comparison of the number of notations regarding references to the rubric or various assignment sheets indicated that there was a general increase in this behavior over the course of the four peer revision sessions. This increase indicated that as students interacted with a wiki for peer revision assignments they began to reference the rubric and assignment sheets with increasing frequency.

The second theme indicated by the entries in the teacher log was frustration with the functions of the wiki itself. Notations that were counted as a reflection of this theme included the following.

“Student said, ‘This is ridiculous.’”

“Student said, ‘I can’t take this.’”
"Student said, 'I feel like I am out of my league.'"

"Student said, 'From the very beginning, this wiki has been nothing but trouble.'"

"Student said, 'I hate the wiki.'"

In the first peer revision session, the researcher made fourteen notations regarding frustration with the wiki. Two notations regarding frustration with the wiki were made during the second peer revision session. In the third and fourth peer revision sessions, the researcher made only one notation regarding frustration in each session. Figure 3 presents a comparison across the four peer revision sessions of the number of notations in the teacher log that corresponded to the theme of frustration with the functions of the wiki.

![Frustrations with Functions of Wiki](image)

**Figure 3: Number of Notations Regarding Frustration with the Functions of the Wiki in Each Peer Revision Session**

A comparison of the number of notations regarding frustration with the functions of the wiki indicated a decrease in this behavior over the course of the four peer revisions.
sessions. This decrease revealed that over the course of the four peer revision sessions, frustration with the functions of the wiki decreased.

The third theme indicated by the entries in the teacher log was positive work habits and comments other than referencing the Peer Revision Rubric or the various assignment sheets. Notations that were counted as a reflection of this theme included the following.

“Student said, ‘I’ll know how to use a wiki for the rest of my life.’”

“Students are typing longer comments.”

“Fewer questions overall.”

“Many students are getting right to work.”

“Students are working quietly.”

In the first peer revision session, the researcher made three notations indicating other positive work habits and comments. The researcher made five notations regarding this theme in the second peer revision session. The researcher made two notations regarding this theme in both the third and fourth peer revision sessions. Figure 4 presents a comparison across the four peer revision sessions of the number of notations in the teacher log that corresponded to the theme of positive work habits and comments other than referencing the Peer Revision Rubric or the various assignment sheets.
A comparison of the number of notations regarding other positive work habits indicated an initial increase in these behaviors from the first peer revision session to the second. After the second peer revision session, the comparison indicated a drop in the third and fourth peer revision sessions in the number of notations regarding other positive work habits and comments.

**Conclusion**

The purpose of this project was to determine if student interaction with a wiki for peer revision assignments increased the critical level of peer revisions in a high school Advanced Placement composition class. Data was gathered for this project with the Peer Revision Rubric (see Appendix B for Peer Revision Rubric) and the Teacher Log. The results indicated that average student scores on the Peer Revision Rubric increased over the course of the four peer revision sessions. Additionally, the number of notations made in the teacher log regarding each of the consistent themes revealed shifts across the four
peer revision sessions. The comparison of the number of notations regarding the theme of references to the rubric or various assignment sheets indicated that there was a general increase in this behavior over the course of the four peer revision sessions. A comparison of notations regarding the theme of frustration with the functions of the wiki showed a decrease in this behavior over the course of the four peer revisions sessions. Finally, the comparison of the number of notations regarding the theme of other positive work habits indicated an initial increase in these behaviors from the first peer revision session to the second; a decrease in the number of notations regarding this theme was seen over the third and fourth peer revision sessions.
Chapter V: Discussion

The purpose of this project was to determine if student interaction with a wiki for peer revision assignments increased the critical level of peer revisions in a high school Advanced Placement composition class. The research questions were: (1) According to the professional literature reviewed, how was the writing process defined? (2) What were the benefits of peer revision based on the professional literature reviewed? (3) How has peer revision been implemented in the classroom as indicated in the professional literature reviewed? (4) Did student interaction with a wiki increase the critical level of peer revisions in a high school Advanced Placement composition class?

Meaning of Findings

The research instruments used to gather data were the Peer Revision Rubric (see Appendix B for Peer Revision Rubric) and the Teacher Log. The data suggested that the implementation of student interaction with a wiki for peer revision might have increased the critical level of peer revision comments.

Analysis of the student scores on the Peer Revision Rubric indicated an increase in scores over the course of the four peer revision sessions. This increase might suggest that as students continued to interact with the wiki for peer revision, the critical level of their peer revision comments improved. The data from the Peer Revision Rubric scores did not provide a clear indication of why this improvement occurred.

The analysis of the notations in the Teacher Log provided more information related to why the increase in scores on the Peer Revision Rubric may have occurred. One of the themes gleaned from the analysis of the Teacher Log notations was that as students continued to interact with the wiki for peer revision, students also increased their
references to the Peer Revision Rubric and to various assignment sheets. With more frequent references to these materials, students likely became more familiar with assignment criteria and, most importantly, with the characteristics of critical peer revision comments. This familiarity, in turn, likely led to increased capability in the performance of critical peer revision.

Additionally, a second theme that emerged from the analysis of the notations in the Teacher Log was a change in the level of apparent frustration with the functions of the wiki. As students continued to interact with the wiki for peer revision, the number of comments indicating frustration with the functions of the wiki dwindled significantly. This likely indicated a decrease in frustration, and conversely, an increase in skill and comfort in working with the functions of the wiki. As skill and comfort increased, students were likely able to focus efforts on the task of peer revision rather than on the task of interfacing with the wiki. The increased effort and focus on the task of peer revision allowed for improved performance on this task, which therefore, led to higher scores on the Peer Revision Rubric.

Finally, a third theme that emerged from the notations in the Teacher Log also had bearing on the increase in scores on the Peer Revision Rubric. This theme was concerned with notations related to evidence of positive student work habits and comments, other than referencing the Peer Revision Rubric or other assignment sheets. Interestingly, the notations in the Teacher Log indicated a slight decrease in this area. This could mean that as students continued to interact with the wiki for peer revision that their positive work habits and comments decreased. However, when viewed in light of the nature of the notations that were related to this theme, it is possible that as students
grew accustomed to the process of interaction with a wiki for the purpose of peer revision that they exhibited general positive work habits that did not lead to frequent notation by the researcher. For example, the Teacher Log entry from the third peer revision session included a notation which read, “Fewer questions overall.” In addition, the Teacher Log entry from the fourth peer revision session included a notation which read, “Very quiet overall.” These notations indicated that students were engaged in positive work behaviors that persisted for some duration of time; therefore, it is possible that even though the number of notations regarding positive work habits may have decreased, the number of positive work habits did not decrease and may have actually increased.

Summary

The purpose of this project was to determine if student interaction with a wiki for peer revision assignments increased the critical level of peer revisions in a high school Advanced Placement composition class. The research was conducted in a small public high school in the Midwest. The participants in the research were fifteen twelfth grade students. Out of the fifteen students, eight were males and seven were females. Research data was collected over a period of approximately four months using the Peer Revision Rubric (see Appendix B for Peer Revision Rubric) and the Teacher Log.

The researcher began by introducing students to the wiki and the Peer Revision Rubric. Students posted papers to the wiki and engaged in peer revision of those papers. The Peer Revision Rubric was used to assess the critical level of peer revision comments made in a total of four peer revision sessions. The rubric allowed the researcher to assess the peer revision comments in terms of specificity of comments, holistic nature of the peer revision comments, and attention to assignment criteria evidenced in the peer
revision comments. Additionally, the researcher used the Teacher Log to record observations during each of the four peer revision sessions. The observations included notations regarding references to the Peer Revision Rubric or to assignment sheets, other positive work habits or comments, and frustration with the functions of the wiki.

The data gathered suggested that the critical level of peer revision comments increased during the course of the study. The Teacher Log revealed that as students continued to engage in peer revision with the wiki they exhibited an increase in referencing the Peer Revision Rubric and related assignment sheets. Furthermore, a decrease in frustration with the functions of the wiki over the course of the peer revision sessions was highlighted by the notations in the Teacher Log. The observations noted in the Teacher Log also indicated an initial increase in other positive work habits and comments with a subsequent decrease after the second peer revision session. Based on the data collected, the researcher concluded that student interaction with a wiki might have resulted in increases in the critical level of peer revisions in a high school Advanced Placement composition class.

Recommendations

Several recommendations should guide future related studies. First, the researcher would recommend that more time be spent familiarizing students with the functions of the wiki prior to the peer revision sessions. The amount of frustration with the wiki evidenced in the first peer revision session forced students to devote less energy to the actual task of peer revision. If some of this frustration were eliminated before students began the peer revision process, students would possibly score higher on the
Peer Revision Rubric (see Appendix B for Peer Revision Rubric) in initial peer revision sessions.

Additionally, the researcher would recommend a longer period of study as well as a larger and broader study population. This increased time and sample size would permit the results to extend further than allowed by the current study. The study of other populations may provide insight into the effectiveness of student interaction with a wiki for peer revision for other grade and ability levels.

The researcher would also recommend administering a post-intervention survey to glean information from participants regarding their opinions on why and how the wiki affected their peer revision comments. This would provide additional insight into the effectiveness of having students interact with a wiki for peer revision of writing assignments.

Finally, future studies should also consider testing the effects of student interaction with a wiki for peer revision when students are not provided with the Peer Revision Rubric, as well as using the Peer Revision Rubric to assess the traditional paper and pencil mode of peer revision. These alterations in study design would provide clearer insight into the effectiveness of student interaction with a wiki for peer revision, as well as the effectiveness of providing a rubric to guide peer revision.

Conclusion

In light of the data gathered, the results suggested an increase in the critical level of peer revision comments as a result of the implementation of student interaction with a wiki for peer revision. However, it was also concluded that a number of alterations would be needed to increase the validity of the findings.
References


Accessing the Wiki

Go to the high school web page. Click on classes. Click on my name. This will take you to the wikispaces sign in page.

Or

Go to wikispaces.com and click on sign in.

Enter your username and password. Click on NHS-APComp.

Navigating the Wiki

To navigate among and around the pages of the wiki, simply click on a page listed on the left hand side of the screen.

Creating a New Page

To create a new page, simply click on new page on the left hand side of the screen. You will be prompted to enter a name for the new page. After doing this, click create. You are then ready to begin typing on the new page.

Begin Editing

To begin, click "Edit This Page."

Basic Formatting

Our visual page editor is as easy to use as a word processor. It lets you format your text, insert images and files, and link to other pages using a simple toolbar. To change the format of your text, simply highlight the text you would like to change, and click on the desired formatting button in the toolbar. You can format text in bold, italics, underline, various headings, and numbered and unnumbered bullets. You can also add a horizontal line break.

Discussion Tab

Each page has its own discussion area. The discussion tab is similar to a forum in that people can post a message or question and other members can respond to it. Each discussion thread, along with its number of replies and views, will be visible on this page.

To post a new discussion topic:

1. Go to the "discussion" tab at the top of the page you'd like to post on.
2. Put in a subject and begin composing your message.
3. Click "Post" when you are finished with your message.
To respond to a previous discussion topic:

1. Click on the topic on the discussion page.
2. Write your reply message.
3. Click "Post" when you are finished.

History

Each time someone edits a page, we take a visual snapshot of the changes so you can see at a glance how much has changed in each revision. Was it one line or the whole page? Click on 'history' at the top of any page to see all versions of a page. Then click on the specific version you would like to review and you'll see a visual representation of the changes. You can compare versions and revert back to a previous copy if necessary.

To revert a page:

- Click on 'history' on top of the page you want to revert
- Select the version you would like to go back to, by clicking on the revision in the date column
- Click 'revert to this version' at the top of the page
- Enter a comment and click the Revert button

Other Information you May Need

Linking

When you create a new page in your wiki, you'll want to create a link to that page. You can create links by highlighting the text you wish to link and clicking the earth icon ™ in the toolbar. You can link pages within your wiki or to locations outside of your wiki. To remove a link in the visual editor, put the cursor on the link, or highlight the link, and hit the broken link earth icon ® .

Messaging System

Wikispaces.com has a private messaging system that members can use to communicate with each other. You can use it to send messages to all members of your wiki or to an individual user. By clicking on the envelope at the top of the page, you will be brought to your message Inbox. You can see who has sent you a message as well as compose your own message. As always, your e-mail address will remain private. Individuals can only use this system to send messages to usernames, not to e-mail addresses.

Notifications

By clicking on the "notify me" tab for a page, you will be able to be notified of any changes to that page or to the entire wiki. You can receive page change notifications via e-mail, or both page and discussion changes through RSS Feeds.

To receive e-mail notifications, make sure you have confirmed your e-mail address. If you would like to receive notifications for the entire wiki, click on the "wiki-wide notification page" link. To turn off your notifications, return to this page.

If you have other questions, see me or use the help area on the wiki.
Appendix B

Peer Revision Rubric

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Proficient 3</th>
<th>Emerging 2</th>
<th>Deficient 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specificity</td>
<td>Revision comments are thorough and clear and provide specific examples for changes/improvements</td>
<td>Revision comments are thorough and clear</td>
<td>Revision comments lack specificity</td>
</tr>
<tr>
<td>Holistic nature</td>
<td>Revision comments focus on holistic matters such as relationship of thesis to supporting arguments, style, organization, and development</td>
<td>Revision comments are somewhat focused on holistic matters</td>
<td>Revision comments are editing based and focus on discrete matters such as spelling, punctuation, and/or grammar</td>
</tr>
<tr>
<td>Attention to assignment criteria</td>
<td>Revision comments directly reference assignment criteria</td>
<td>Revision comments reveal awareness of assignment criteria</td>
<td>Revision comments reveal little awareness of assignment criteria</td>
</tr>
</tbody>
</table>
Appendix C

Parental Consent Letter

August 27, 2009

Dear Parents/Guardians,

My name is Cori Niese and I will be your student’s Advanced Placement composition teacher. I am looking forward to working with your student this year as we study and practice the art of composition.

I am writing this letter to inform you that as part of my requirements for obtaining my Master of Arts in Education degree at Defiance College I will be conducting an action research project with the Advanced Placement composition students. This action research project will focus on the use of technology in relation to revision of writing. Your student will not be identified in the records and written documentation stemming from this action research project. However, their work samples may be included and published in the results of the study. In this case, all identifying material will be omitted.

Please sign below acknowledging your consent for your student to participate in this study, and have your student return the form to me. If you should have any questions or concerns, please feel free to contact me at nap_aca_cn@nwoca.org or call 419-599-1050.

Sincerely,

Cori S. Niese

Parent/Guardian Signature ___________________________ Date __________
Appendix D

Teacher Log Themes

<table>
<thead>
<tr>
<th>Themes</th>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
<th>Session 4</th>
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</thead>
<tbody>
<tr>
<td>References to Peer Revision Rubric or other Assignment Sheets</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Positive Work Habits and Comments</td>
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<tr>
<td>Frustrations with Functions of the Wiki</td>
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