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“I’ll Take Commas for $200”:
An Instructional Intervention Using Games to Help Students Master Grammar Skills

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Abstract
Effective writing requires mastering grammar. For journalists, this mastery is critical because research shows poor grammar erodes media credibility. College writing instructors say students do not understand basic grammar concepts, and greater numbers of students are enrolling in remedial writing classes. This quasi-experimental mixed methods study examines whether using games to teach basic grammar skills helps college students understand and retain grammar concepts. It also examines student perceptions of learning.

Keywords: grammar, games, writing, motivation, journalism, teaching

The ability to use language clearly and correctly is essential for journalism students to succeed. Although digital delivery has transformed journalism, editors still rate traditional journalism skills as the most important element in hiring. The ability to write for multiple platforms is increasingly important, but editors say fundamentals—including appropriate use of grammar—remain a priority.1

Yet college professors say many students are ill-prepared for college writing courses.2 Andrew Lingwall found journalism instructors believe they spend too much time reviewing basic writing skills. Students, in turn, are frustrated by poor grades that result from grammar deficiencies.3
Whether enough attention is spent teaching basic writing and grammar skills in K-12 classrooms is often debated. Constance Weaver says grammar instruction needs to be repeated frequently. The challenge for instructors is determining what best helps students learn and retain essential rules of good grammar and writing.

This exploratory study examines whether playing games helps editing students grasp basic grammar. It relies on scores from grammar tests taken by two groups of students before and after grammar lessons. In each of the three semesters, one group’s instruction involved playing grammar games. The other was taught with traditional lectures and exercises. This quasi-experimental mixed methods study also uses qualitative survey data to gauge students’ perceptions of learning and performance after the grammar lessons.

Literature Review

A 2004 survey of 120 American corporations concludes clear writing is essential in hiring and promotions. Writing is a part of the job for two-thirds of salaried workers. The survey suggests that people who do not know how to write clearly or correctly will not be hired or promoted. Employers spend $3 billion a year teaching employees how to write because so many do not possess what the National Commission on Writing refers to as a “threshold skill.”

In journalism, clear writing is essential. A survey of newspaper editors by Tammyra Pierce and Tommy Miller concludes basic writing skills have remained essential for success despite the industry’s transformation in a digital world.

Perhaps the demand for correct writing is best explained in the context of newspaper credibility, which has declined for decades. In 1984, an American Society of Newspaper Editors study concluded accuracy was tied to credibility. A follow-up study more than a dozen years later suggested the credibility decline was tied to an increasing number of errors. A majority of readers cited spelling and grammar errors in their local newspapers as a reason they lost faith in media.

The demand for grammatical accuracy is not lessened by the digital shift. Andrew Alexander, former ombudsman of The Washington Post, says readers notice basic errors.

Students’ Limited Knowledge of Grammar

In K-12 classrooms, grammar instruction has been de-emphasized, leaving many students unprepared for college writing classes. Katherine Thomas and Marlisa Austin note,
As students enter college, English instructors complain that students lack essential grammar basics to create clear, coherent pieces of writing.\textsuperscript{10}

The 2011 National Assessment of Educational Progress (NAEP) reports that only 27 percent of U.S. twelfth graders scored at or above Proficient levels on a national writing assessment test and 21 percent scored below Basic levels.\textsuperscript{11}

A 2009 national curriculum study by ACT, Inc., describes the disconnect between high school and college writing instructors. College instructors rank usage and punctuation more important for success in English and writing than high school instructors do. High school instructors emphasize topic and idea development. College instructors ranked “ensure straightforward subject/verb agreement” sixth in importance, while high school teachers ranked it No. 46.\textsuperscript{12}

The disparity first appeared in the 2003 ACT curriculum survey. High school teachers ranked grammar and usage as the least important skill students need. College instructors ranked it the most important. In that survey, only 69 percent of high school teachers said they taught grammar and usage skills.\textsuperscript{13} The upshot: Amy Martinsen writes,

Grammar is no longer being taught in junior high and high school, and students are moving into academic discourse communities (i.e., college) not knowing how to write a complete sentence.\textsuperscript{14}

For writers to succeed, grammar’s complexities must be taught at every level. Weaver suggests one cannot assume grammar lessons stick.

Grammatical concepts must often be taught and retaught, to individuals as well as to groups or classes, and students may long afterwards continue to need guidance in actually applying what they have, in some sense or to some degree, already learned. There is no quick fix.

\textbf{Motivation for and Perceptions of Student Learning}

With little question about the importance of understanding grammar, the question becomes how students learn basic concepts. Research shows intrinsically motivated students have a higher appreciation for learning. Simon A. Lei says such students succeed at academic assignments because they find them “enjoyable and interesting.” Participation provides its own reward. Intrinsically motivated students “experienced a sense of self-efficacy for learning and are not burdened with anxiety and boredom.”\textsuperscript{15}

Part of the difficulty in motivating students to learn grammar rules may stem from the nature of classroom instruction. Research shows it is difficult to keep students engaged in rote learning. Constructivist theories of cognitive development emphasize social interaction and student-driven knowledge construction as essential to the learning process.\textsuperscript{16} A classroom that fosters a social environment in which students actively participate in a game with their peers may help students take responsibility for constructing their own knowledge. A contrasting classroom scenario in which a teacher directly transmits information to passive student-receptors is thought, from a constructivist perspective, to be inferior for
fostering meaningful learning. Grammar itself is considered inherently boring, perhaps making student involvement even more imperative. Kelly Poniatowski, who studied the efficacy of online grammar instruction, notes students do not like sitting in classrooms studying grammar. By making grammar instruction interactive, students assume responsibility for learning.

**Games as a Method of Engagement**

In a study on learning vocabulary, Florence W. M. Yip and Alvin C. M. Kwan conclude games provide continuous motivation.

Vocabulary building is a long process. If the games are fun, relaxing, motivating and confidence boosting, the learner’s interest is more likely to be aroused.

The same principle applies to grammar. Katherine M. Thomas and Mar-lisa Austin argue students are more apt to embrace learning grammar by playing games. Playing games in groups enhances learning, they argue. Grammar games add interest to a class that previously was bogged down with repetitious exercises. Students greet games with excitement rather than dread when faced with another round of exercises.

Although there is no guarantee that all students will learn through games, ample evidence shows games can engage. Nicola Whitton says fun is not the central point of educational games, but it may be a by-product. The factors contributing to engagement, Whitton suggests, are an ability to see improvement quickly and the perceived feeling of being good at something.

A study by Robyn Hromek and Sue Roffey concludes that games not only are fun but also are a motivating tool for learning.

They provide the potential for transformative learning through social interaction, social connectedness, cooperation and collaboration, and possess many of the features that encourage well-being and resilience.

Students who play games have another motivation for learning. They know that their teammates depend on them. They do not want to disappoint their peers or be embarrassed. Corinne Auman suggests active learning through games requires students to pay attention in class. Increased motivation and engagement, she suggests, leads to better retention and deeper understanding of material.

**The Current Study**

Presemester multiple choice tests in Beginning Editing classes at a Midwestern journalism college showed students often struggle with basic grammar and usage. Yet clear writing is essential to student success. Whether they ultimately work as reporters, editors, advertising copywriters, or public relations executives, students must use language clearly and correctly. However, students in the course’s preassessment often missed basic grammar questions, pointing to the need for considerable attention to grammar lessons. The purpose of this quasi-experimental mixed methods study is to determine whether students’ mastery and
retention of basic grammar improves more by playing games than by instruction through a traditional lecture format. The study also examines students’ perception of learning to determine whether they are more motivated to learn and more interested in the lesson when playing games.

**Research Questions**

**RQ1:** Do grammar test scores improve significantly from the presemester assessment to the postsemester assessment?

**RQ2:** Do scores of students in the games-playing group improve more than scores of students in the no-games group?

**RQ3:** Is playing games more beneficial for students who scored lowest on the presemester assessment?

**RQ4:** How do students’ perceptions of their learning differ between the gamesplaying group and the no-games group?

**Method**

Students in different sections of the same Beginning Editing course were taught basic grammar using different methods. In each of the three semesters, students in one section of the course \( n = 47 \) were taught grammatical concepts using a traditional lecture aided by PowerPoint presentations and followed with exercises. In a different section each semester, students \( n = 45 \) played grammar games based on such games as *Jeopardy* and *20 Questions* instead of completing traditional exercises. Students in all sections of the course \( n = 92 \) took the same twenty-five-question multiple choice pretest before the grammar unit began. All students also took a twenty-five-question multiple choice posttest after the grammar unit. In all sections, the pretest and posttest were worth one hundred points (four points per question), and students knew the posttest scores would be included in their end-of-semester grades. After the unit, students in all six sections completed a self-assessment, administered anonymously through Survey Monkey. The six-question survey asked students to rate the grammar lesson in several ways. Students were asked how interesting they found the lesson, how clear they found it, how effective it was in helping them understand and retain grammar knowledge, and how useful it was in helping them learn the material. Students were asked two open-ended questions: What was most helpful about the lesson and how could the lesson be improved? None of the survey questions mentioned games.

The students enrolled in the two-hundred-level course were primarily journalism or advertising/public relations majors. Most were sophomores or juniors. The course is required for journalism majors but is an elective for advertising majors. Grade point averages for each group (games and no games) were similar.

**Procedure**

At the start of each semester, an Institutional Review Board (IRB)–trained lecturer in the journalism college informed participants that the course instructor
was investigating the effectiveness of various teaching methods. Students were told participation would take place during regular class periods and involve assignments completed in class. The lecturer administered the informed consent forms, which made clear participation was voluntary and students could opt out of having their work or results used in the study without penalty. The course instructor (the principal investigator and first author) was not present when the consent forms were administered. Students were told their names would not be used with the study and that part of the study involved an anonymous survey. They also were told test scores would be used anonymously.

**A Typical Day**

In classes without games, students hear a lecture on common grammar errors. Next, they complete grammar exercises. Some exercises are done collaboratively in groups, others are done individually. The exercises focus on such elements as subject-verb agreement or pronoun or punctuation use. Some exercises have choice options; others require students to correct grammatical problems. Here is an example of a typical forced choice question:

*Either the reporter or photographer has/have gotten the name wrong.*

Here is an example from an exercise that requires students to correct errors:

*The car costs $3,000, he wants to buy it.*

After the exercises, the instructor discusses the answers with the class.

In the games sections, students also hear a lecture on common grammar errors, but instead of completing traditional exercises afterward, students play games. One game, as an example, is based on the TV show *Jeopardy*. Students are divided into teams of four. Categories are such elements as commas, agreement, who/whom, and wrong words. Each question has a point value. Teams ring in if they think they know an answer. Teams earn points for correct answers and lose points for incorrect answers. A typical *Jeopardy* game statement might be as follows:

*One of the boxes is/are open.*

Students must answer in the form of a question: What is “is”? The instructor explains why an answer is correct or incorrect after each turn. Typically, the play is animated and competitive, and winners earn prizes such as candy.

**Data Collection and Analysis**

Data were collected during spring and fall 2012 and spring 2013. Grammar test scores were analyzed using the mixed procedure in SAS 9.3. A two-way analysis of variance (ANOVA) examined the effect of Time (pretest, posttest) and Instruction Type (games, no games) on test scores. A Time × Instruction Type interaction term was added to the model to account for possible differences between the groups at the pretest and the posttest. Table 1 includes cell means and standard deviations for each condition.

There was not a significant difference between the two groups’ pretest scores, $t(171) = −0.06$, $p = .95$, indicating both groups showed similar levels of grammar
knowledge at the beginning of the semester. The main effect of Time was significant, $F(1, 92) = 106.12$, $p < .01$, indicating that the mean grammar test score for both groups was significantly greater for posttest scores than for pretest scores. The interaction of Time and Instruction Type was not significant, $F(1, 92) = 0.20$, $p = .66$, but the difference between the groups was in the expected direction with the games group scoring 1.37 points higher on the posttest than the no-games group. The failure to detect a significant difference between the groups on the posttest may have resulted from insufficient power owing to the small sample size. Further study with larger groups is warranted.

To examine whether lower scoring students benefited more from the games instruction type, the differences between pretest scores and posttest scores were analyzed. Students ($n = 41$) who scored below 70 on the pretest showed large gains between the pretest and the posttest. A 20.76-point increase was observed among low-scoring students in the no-games group, while low-scoring students in the games group increased their scores by 24.4 points. The small sample size again makes statistically significant differences difficult to detect. Among the students ($n = 51$) who scored above 70 on the pretest, those in the no-games group increased their scores 7.69 points, while those in the games group increased their scores 7.04 points. Although ceiling effects meant students who scored above 70 on the pretest had less room to improve (the maximum score was 100 points), only three of those students in the no-games group scored 100 on the posttest while six students in the games group scored above 70 on the pretest and 100 on the posttest. One student in the no-games group and two students in the games group obtained perfect scores on the posttest after scoring below 70 on the pretest.

Data from self-assessment postlesson surveys provide a sharper distinction between groups. Students in games-playing sections rated the lesson’s effectiveness more highly in every category. The difference was especially apparent when students were asked how interesting the lesson was, as shown in Table 2. In the games-playing sections over three semesters, 77 percent of the students who completed the survey rated the lesson extremely interesting or very inter-

Table 1. Cell Means and Marginal Means (Standard Deviations) by Condition.

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
<th>Marginal Mean (Standard Deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No games</td>
<td>71.24 (10.41)</td>
<td>84.77 (10.27)</td>
<td>78.00 (12.33)</td>
</tr>
<tr>
<td>Games</td>
<td>71.38 (13.32)</td>
<td>86.14 (10.04)</td>
<td>78.76 (13.88)</td>
</tr>
<tr>
<td></td>
<td>71.31 (11.85)</td>
<td>85.45 (10.13)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Response to Anonymous Survey Question: How Interesting Did You Find Last Week’s Lesson? The values are given in percentages.

<table>
<thead>
<tr>
<th></th>
<th>Games group</th>
<th>No-games group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely interesting</td>
<td>14.5</td>
<td>2</td>
</tr>
<tr>
<td>Very interesting</td>
<td>62.5</td>
<td>44</td>
</tr>
<tr>
<td>Somewhat interesting</td>
<td>22.9</td>
<td>49.4</td>
</tr>
<tr>
<td>Mostly boring</td>
<td>0</td>
<td>4.4</td>
</tr>
<tr>
<td>Totally boring</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
esting. In the no-games section, only 46 percent of the students who responded rated it extremely interesting or very interesting. Students in games-playing sections also believed their lesson helped them understand and retain basic grammar rules more than students in the no-games sections. In games sections, 77 percent rated the lesson extremely or very effective in helping them understand and retain knowledge. In the no-games sections, only 60 percent of students rated it extremely or very effective. More of the games-playing students also said their lesson was useful in helping them to learn basic grammar concepts. In the games-playing sections, 94 percent of students rated the lesson extremely or very useful versus 84 percent of students in the no-games sections. In the games sections, 83 percent rated the lesson extremely or very clear, while nearly 78 percent rated it extremely or very clear in the no-games sections.

Although the small sample size in this study limits researchers' abilities to draw conclusions, greater understanding of the participants' experiences was sought through qualitative data collection and analysis.23 At the end of the survey, an open-ended question asked students what they found most helpful about the grammar lesson. Although the survey never used the term “games,” forty-eight students who completed the survey in the games-playing section mentioned games twenty-one times. Typical was this response: “I enjoyed Jeopardy and the other game. They made the lesson more interesting.” Another student wrote, “Playing the game made grammar fun and helped me remember the rules that I was mixing up.” Although these are college students, their answers to open-ended questions made it clear they were not put off by playing games. One student said, “I like playing games in class even though I am in college.” Another said, “I really enjoy hands-on learning and getting to play interactive games was a treat.”

By contrast, a student in the no-games section responded, “We have all had grammar lessons for many years, so it can get a little boring. But it’s still an important part of journalism, so we need to learn it.” Students in the games sections mentioned the word “fun” eighteen times in their responses. One student said, “I like how learning grammar was turned into a fun activity. I was learning, but it didn’t feel like it.” Another said, “I thought the games were a great tool for learning. It made learning fun!” The only student who used the word “fun” in the no-games sections said, “I don’t think grammar is very fun to learn about . . .” Students in the games sections said they were engaged. Working competitively in teams, participating in the game, and visualizing information by playing a game all helped them understand grammar concepts. One student wrote, “Instead of a boring lecture, you made grammar more interesting.” When asked how the lesson could be improved, a few students in games sections suggested more games or more time on games to allow for lengthier rule explanations. By contrast, more students in the no-games sections said it was hard to stay interested in the lesson. When asked how it could be improved, at least one student in a no-games section suggested playing games would help. In postlesson surveys, some students still seemed unsure of their grasp of grammar, mentioning the need for more practice.

**Limitations**

This exploratory study has limitations. Editing classes are limited to no more than sixteen students each semester. A larger sample size would increase power
to detect statistically significant differences. This study’s surveys were administered anonymously, so answers cannot be tied to test scores. Future studies might identify survey respondents so researchers can determine whether satisfaction with grammar lessons is correlated with higher scores. Future studies also might examine whether any effect of games intervention differs by gender. Male students score lower on high school writing tests. Identifying students by gender might determine whether games are especially effective with male students.

**Discussion and Conclusion**

In response to RQ1, students in all sections clearly improved their grasp of grammar concepts based on their posttest scores. The test score gains in both groups were statistically significant. With regard to RQ2, scores of students in the games sections did increase more than scores of students in the no-games sections; however, the group difference was not statistically significant. More research with a larger sample size is warranted to examine whether beneficial effects from the games intervention will be seen. It is clear that playing games did not detract from learning. Students showed significant gains from pretest to posttest with games and without games. In the first semester of the study, both a games-playing student and a no-games-playing student increased test scores by 36 points. Top gains were similar for students in every semester. Clearly, students are learning whether it is because of games or despite games.

The answer to RQ3 shows promise but needs more study. Students who scored lowest on the pretest showed more improvement on average in the games sections than in the no-games sections. Every low-scoring student (under 70) improved his or her score from pretest to posttest. In the games sections, students who scored less than 70 points on the pretest showed score gains that were 3.64 points higher than those who scored less than 70 on the pretest in the no-games group. Among students who scored above 70 on the pretest, students in the games group scored 0.65 points higher on the posttest than students in the no-games group. Some showed remarkable progress. In the final semester, one student in a games-playing section scored 44 on the pretest and 96 on the posttest, a 52-point gain. The largest gain among a no-games playing low-scoring student in any semester was 36 points. It is possible that motivation affected test scores at both time points. Pretest scores did not count toward students’ semester grades but posttest scores did. Therefore, students may have been more motivated for the posttest. However, for reasons that are unclear, a few students’ scores decreased in both groups; six students in the games group and four students in the no-games groups demonstrated score declines between pretest and posttest.

Perhaps the most significant finding lies in student self-assessments and perceptions of learning, which address RQ4. Students in games-playing sections believe they are learning more and that they will remember what they learned. Said one student: “You taught the information in a way that will stick. It was much better than sitting down and reading the rules.” Students said playing games made the lessons more interesting and kept them motivated. “I actually retained things better . . . these lessons helped,” wrote one student in the games-playing group. Added another: “I thought the game format helped me retain information because it put it in actual scenarios that we might see in real life that we could
compare the rules with.” By contrast, students in the no-games playing classes were less certain of their mastery of grammar. Said one: “I don’t know if there was anything in the lesson that would make it stand out from other lectures.”

The ability to write clearly is a fundamental skill required of journalists and many other professionals. It is a core competency spelled out by the Accrediting Council on Education in Journalism and Mass Communications. Although a transformational shift has occurred in news delivery in the digital age, Johanna Cleary and Meredith Cochie find that the skill set desired in most journalism job ads remains the same. Writing was the No. 1 skill mentioned in a 2009 study, just as it was in 2004. Students must learn to write clearly to succeed. Grammar matters. As Marc Seamon noted, mistakes in grammar reduce journalists’ credibility.

Finding innovative ways to engage students is critical. Matthew Schultz and Alan Fisher say games may hold the answer.

Games present students with playfully competitive or problem-solving situations that are enjoyable and relatively stress free . . . They generate a high degree of student involvement, which results in long-form retention of the language forms practiced.

This study, although not conclusive on whether games are more effective at teaching grammar, shows that students believe playing games helps them. More research is necessary to best understand how journalism schools can capitalize on that concept.

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Notes


7. Pierce and Miller, “Basic Journalism Skills Remain Important.”


19. Thomas and Austin, “Fun with Fundamentals.”


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